COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC AND GAS RATES, A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO DEPLOY ADVANCED METERING INFRASTRUCTURE, APPROVAL OF CERTAIN REGULATORY AND ACCOUNTING TREATMENTS, AND ESTABLISHMENT OF A ONE-YEAR SURCREDIT	**))))))))))**	**CASE NO. 2020-00350**

RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY
TO
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION
DATED JANUARY 8, 2021

FILED: JANUARY 22, 2021

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Daniel K. Arbough**, being duly sworn, deposes and says that he is Treasurer for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Daniel K. Arbough

Daniel K. Arbough

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 18th day of January 2021.

Judy Schooler

Notary Public

Notary Public ID No. **603967**

My Commission Expires:

July 11, 2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Lonnie E. Bellar**, being duly sworn, deposes and says that he is Chief Operating Officer for Louisville Gas and Electric Company and Kentucky Utilities Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Lonnie Bellar

Lonnie E. Bellar

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 18th day of January 2021.

Judy Schooler

Notary Public

Notary Public ID No. 603967

My Commission Expires:

July 11, 2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Kent W. Blake**, being duly sworn, deposes and says that he is Chief Financial Officer for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

KtWBlake
____
Kent W. Blake

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20th day of January 2021.

Judy Schooler
____
Notary Public

Notary Public ID No. **603967**

My Commission Expires:

July 11, 2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Robert M. Conroy**, being duly sworn, deposes and says that he is Vice President, State Regulation and Rates, for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Robert M. Conroy

Robert M. Conroy

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20th day of January 2021.

Judy Schooler

Notary Public

Notary Public ID No. 603967

My Commission Expires:

July 11, 2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Christopher M. Garrett**, being duly sworn, deposes and says that he is Controller for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

DocuSigned by:
Christopher M. Garrett
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Christopher M. Garrett

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 18th day of January 2021.

Judy Schooler
Notary Public

Notary Public ID No. 603967

My Commission Expires:

July 11, 2022

VERIFICATION

STATE OF TEXAS)
)
COUNTY OF TRAVIS)

The undersigned, **Adrien M. McKenzie**, being duly sworn, deposes and states that he is a President of FINCAP, Inc., and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Adrien M. McKenzie

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 19 day of January 2021.

(SEAL)
Notary Public

MYRA ANN HAYDEN
NOTARY PUBLIC STATE OF TEXAS
MY COMM. EXP. 05/24/2023
NOTARY ID 12456360-4

Notary Public ID No. 12456360-4.

My Commission Expires:
5/24/2023

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Gregory J. Meiman**, being duly sworn, deposes and says that he is Vice President, Human Resources for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Gregory J. Meiman
Gregory J. Meiman

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 21st day of January 2021.

Judy Schooler
Notary Public

Notary Public ID No. 603967

My Commission Expires:

July 11, 2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Eileen L. Saunders**, being duly sworn, deposes and says that she is Vice President, Customer Services for Louisville Gas and Electric Company and Kentucky Utilities Company and an employee of LG&E and KU Services Company, and that she has personal knowledge of the matters set forth in the responses for which she is identified as the witness, and the answers contained therein are true and correct to the best of her information, knowledge and belief.

Eileen L. Saunders

Eileen L. Saunders

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20th day of January 2021.

Notary Public

Notary Public ID No. KYNP4577

My Commission Expires:

April 1, 2024

VERIFICATION

COMMONWEALTH OF NORTH CAROLINA)
)
COUNTY OF BUNCOMBE)

The undersigned, **William Steven Seelye**, being duly sworn, deposes and states that he is a Principal of The Prime Group, LLC, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

____
William Steven Seelye

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 16 day of January 2021.

____________________________(SEAL)
Notary Public

Notary Public ID No. ____________

My Commission Expires:
9/22/2025

Ryan Meagher
Notary Public
Henderson County, NC
My Commission Expires 9/22/25

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **David S. Sinclair**, being duly sworn, deposes and says that he is Vice President, Energy Supply and Analysis for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

David S. Sinclair

David S. Sinclair

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20th day of January 2021.

Judy Schooler

Notary Public

Notary Public, ID No. **603967**

My Commission Expires:

July 11, 2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Paul W. Thompson**, being duly sworn, deposes and says that he is Chief Executive Officer and President for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Paul W. Thompson

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20th day of January 2021.

Notary Public

Notary Public, ID No. 603967

My Commission Expires:

July 11, 2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **John K. Wolfe**, being duly sworn, deposes and says that he is Vice President, Electric Distribution for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

J.K. Wolfe
John K. Wolfe

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 18th day of January 2021.

Judy Schooler
Notary Public

Notary Public ID No. **603967**

My Commission Expires:

July 11, 2022

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 1

Responding Witness: Eileen L. Saunders

Q-1. Refer to the Application, Tab 4, P.S.C. No. 13, Original Sheet No. 43, LG&E's proposed Electric Vehicle Fast Charging Service Tariff (Rate EVC-Fast).

a. Describe how a customer under Rate EVC-Fast will receive service.

b. Assuming the Commission approves the proposed Rate EVC-Fast, describe how LG&E will promote the service and how often the rate will be updated.

A-1.

a. The Company expects to place charging stations that provide service under Rate EVC-Fast in publicly accessible areas, primarily parking lots. Locations of the stations will be listed on the Company website and other charging location mobile apps and websites, such as PlugShare and Google Maps.

While a specific charging station vendor and network provider has not yet been selected for the EVC-Fast service, we expect the user experience to be similar to that of the EVC-L2 program, which utilizes ChargePoint's hardware and network. Under the EVC-L2 program, the tariffed fee is shown on the charger's LCD display. Customers set up an account with the site's network operator, or with another network provider within the site's roaming network, to access the station via a key fob or a smart phone app. Customers who have not set up an account may call a toll-free number posted on the station to pay by card over the phone. While not available on the Company's EVC-L2 stations, the Company may select a vendor who allows access via inserting or swiping a credit card on site, similar to the user experience at a gas station.

Once access is granted, the charging holster will be released, and the customer plugs it into the electric vehicle. The user will be charged a per kWh fee based on the amount of charging session electricity delivered. Customers can expect to receive session information, including the fee assessed and amount of energy delivered, by e-mail and/or on the network provider's mobile app and website.

b. The Company will publicize the locations of EVC-Fast stations on its own website, as well as leading charging station location aggregators such as PlugShare. The Company may also utilize advertising designed to provide education about the Company's tariff offerings and ensure its customers are aware of the service. The Company plans to update Rate EVC-Fast annually.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 2

Responding Witness: Robert M. Conroy

Q-2. Refer to the Application, Tab 4, P.S.C. Electric No. 13, Original Sheet No. 108 through P.S.C. Electric No. 13, Original Sheet No. 108.5, which contain the proposed Net Metering Service Interconnection Guidelines. With the current Net Metering Service Interconnection Guidelines as the starting point, provide a copy of the proposed Net Metering Service Interconnection Guidelines indicating proposed additions by underscoring and striking over proposed deletions.

A-2. See attached.

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Louisville Gas and Electric Company

P.S.C. Electric No. 1~~3~~2, Original Sheet No. 108~~57.1~~

~~Standard Rate Rider~~ ~~NMS~~ Terms and Conditions

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Net Metering Service Interconnection Guidelines

N

~~NET METERING SERVICE INTERCONNECTION GUIDELINES~~GENERAL

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Net metering service shall be measured using a single meter or, as determined by Company, additional meters and shall be measured in accordance with standard metering practices by metering equipment capable of registering power flow in both directions for each time period defined by the applicable rate schedule. This net metering equipment shall be provided without any additional cost to Customer. This provision does not relieve Customer's responsibility to pay metering costs embedded in Company's Commission-approved base rates. Additional meters, requested by Customer, will be provided at Customer's expense. ~~General –~~

Customer shall operate the generating facility in parallel with Company's system under the following conditions and any other conditions required by Company where unusual circumstances arise not covered herein:

1. Customer to own, operate, and maintain all generating facilities on their premises for the primary purpose of supplying all or part of the customer's own electricity requirements. Such facilities shall include, but not be limited to, necessary control equipment to synchronize frequency, voltage, etc., between Customer's and Company's system as well as adequate protective equipment between the two systems. Customer's voltage at the point of interconnection will be the same as Company's system voltage.
2. Customer will be responsible for ~~operating all generating facilities owned by Customer, except as specified hereinafter. Customer will maintain its system in synchronization with Company's system.~~ensuring an anti-islanding safety feature is in place as required by applicable codes and standards.
3. Customer ~~will be responsible for any damage done to Company's equipment due to failure of Customer's control, safety, or other equipment.~~will ensure that all generating facilities comply with the Company's Interconnection Requirements for Customer-Sited Distributed Generation. Those requirements are available on line at www.lge-ku.com and upon request.
4. Customer ~~agrees to inform Company of any changes it wishes to make to its generating or associated facilities that differ from those initially installed and described to Company in writing and obtain prior approval from Company.~~shall allow data communications between the Customer's distributed generation equipment and the Company's control systems or other assets, where required by the Company for planning, coordination, reliability, or power quality purposes.
5. Customer will be responsible for operating all generating facilities owned by Customer, except as specified hereinafter. Customer will maintain its system in synchronization with Company's system.~~Company will have the right to inspect and approve Customer's facilities described herein, and to conduct any tests necessary to determine that such facilities are installed and operating properly; however, Company will have no obligation to inspect, witness tests, or in any manner be responsible for Customer's facilities or operation thereof.~~
6. Customer will be responsible for any damage done to Company's equipment due to failure of Customer's control, safety, or other equipment.~~Customer assumes all responsibility for the electric service on Customer's premises at and from the point of delivery of electricity from Company and for the wires and equipment used in connection therewith, and will protect and save Company harmless from all claims for injury or damage to persons or property occurring on Customer's premises or at and from the point of delivery of electricity from Company, occasioned by such electricity or said wires and equipment, except where said injury or damage will be shown to have been occasioned solely by the negligence or willful misconduct of Company.~~
7. Customer agrees to inform Company of any changes it wishes to make to its generating or associated facilities that differ from those initially installed and described to Company in writing to obtain approval from Company.
8. Company will have the right to inspect and approve Customer's facilities described herein, and to conduct any tests necessary to determine that such facilities are installed and operating properly; however, Company will have no obligation to inspect, witness tests, or in any manner be responsible for Customer's facilities or operation thereof.
9. Customer assumes all responsibility for the electric service on Customer's premises at and from the point of delivery of electricity from the Company and for the wires and equipment used in connection therewith, and will protect and save Company harmless from all claims for injury or damage to persons or property occurring on Customer's premises or at and from

the point of delivery of electricity from Company, occasioned by such electricity or said wires and equipment, except where said injury or damage will be shown to have been occasioned solely by the negligence or willful misconduct of Company.

~~Level 1 – A Level 1 installation is defined as an inverter-based generator certified as meeting the requirements of Underwriters Laboratories Standard 1741 and meeting the following conditions:~~

~~1. The aggregated net metering generation on a radial distribution circuit will not exceed 15% of the line section's most recent one hour peak load. A line section is the smallest part of the primary distribution system the generating facility could remain connected to after operation of any sectionalizing devices.~~
~~2.~~1. ~~The aggregated net metering generation on a shared singled-phase secondary will not exceed 20 kVA or the nameplate rating of the service transformer.~~
~~3.~~1. ~~A single-phase net metering generator interconnected on the center tap neutral of a 240 volt service shall not create an imbalance between the two sides of the 240 volt service of more than 20% of the nameplate rating of the service transformer.~~

DATE OF ISSUE: ~~May 14, 2019~~November 25, 2020

DATE EFFECTIVE: With Service Rendered
On and After ~~July 1, 2015~~January 1, 2021

ISSUED BY: /s/ Robert M. Conroy, Vice President
State Regulation and Rates
Louisville, Kentucky

Issued by Authority of an Order of the
Public Service Commission in Case No.
~~2014~~2020-00350~~372~~ dated ~~June 30, 2015~~XXXX

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Louisville Gas and Electric Company

P.S.C. Electric No. 1~~3~~2, Original Sheet No. ~~57.2~~108.1

~~Standard Rate Rider~~ ~~NMS~~ Terms and Conditions
Net Metering Service Interconnection Guidelines

~~NET METERING SERVICE INTERCONNECTION GUIDELINES~~GENERAL (continued)

~~10~~4. ~~A net metering generator interconnected to Company's three-phase, three-wire primary distribution lines, shall appear as a phase-to-phase connection to Company's primary distribution line.~~Customer recognizes that Company may or may not have adequate facilities to serve customer's total load at the time of any partial or full failure of customer's self-generation. Company will work with the customer to serve their load requirements which may be at additional cost to the customer.

Level 1 – A Level 1 installation is defined as an inverter-based generator certified as meeting the requirements of Institute of Electrical and Electronics Engineers (IEEE) Standard 1547, Underwriters Laboratories (UL) Standard 1741, and meeting the following conditions:~~Underwriters Laboratories Standard 1741 and meeting the following conditions:~~

1. The aggregated net metering generation on a radial distribution circuit will not exceed 15% of the line section's most recent one hour peak load. A line section is the smallest part of the primary distribution system the generating facility could remain connected to after operation of any sectionalizing devices.
2. The aggregated net metering generation on a shared singled-phase secondary will not exceed 20 kVA or the nameplate rating of the service transformer.
   A single-phase net metering generator interconnected on the center tap neutral of a 240 volt service shall not create an imbalance between the two sides of the 240 volt service of more than 20% of the nameplate rating of the service transformer.
3.
~~4.~~ A net metering generator interconnected to Company's three-phase, three-wire primary distribution lines, shall appear as a phase-to-phase connection to Company's primary distribution line.
4.
5. A net metering generator interconnected to Company's three-phase, four-wire primary distribution lines, shall appear as an effectively grounded source to Company's primary distribution line.
6. A net metering generator will not be connected to an area or spot network.
7. There are no identified violations of the applicable provisions of IEEE 1547, "Standard for Interconnecting Distributed Resources with Electric Power Systems".
8. Company will not be required to construct any facilities on its own system to accommodate the net metering generator.

~~5. A net metering generator interconnected to Company's three-phase, four-wire primary distribution lines, shall appear as an effectively grounded source to Company's primary distribution line.~~
~~6. A net metering generator will not be connected to an area or spot network.~~
~~7. There are no identified violations of the applicable provisions of IEEE 1547, "Standard for Interconnecting Distributed Resources with Electric Power Systems".~~
~~8. Company will not be required to construct any facilities on its own system to accommodate the net metering generator.~~

Customer desiring a Level 1 interconnection shall submit a "LEVEL 1 - Application for Interconnection and Net Metering." Company shall notify Customer within 20 business days as to whether the request is approved or, if denied, the reason(s) for denial. If additional information is required, Company will notify Customer, and the time between notification and submission of the information shall not be counted towards the 20 business days. Approval is contingent upon an initial inspection and witness test at the discretion of Company. Following Company approval of an application, any deviations in the installation from the submitted plan must be re-submitted to the Company for approval. This includes, but is not limited to: modifications in generation capacity, equipment selection, installation methods, and installation of additional equipment. Any modification in generation capacity related to existing customers taking service under NMS-1 will cause their service to be transitioned to NMS-2.

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~~Level 2 – A Level 2 installation is defined as generator that is not inverter-based; that uses equipment not certified as meeting the requirements of Underwriters Laboratories Standard 1741; or that does not meet one or more of the conditions required of a Level 1 net metering generator. A Level 2 Application will be approved if the generating facility meets Company's technical interconnection requirements. Those requirements are available on line at www.lge-ku.com and upon request.~~

~~Customer desiring a Level 2 interconnection shall submit a "LEVEL 2 - Application for Interconnection and Net Metering." Company shall notify Customer within 30 business days as to whether the request is approved or, if denied, the reason(s) for denial. If additional information is required, Company will notify Customer, and the time between notification and submission of the information shall not be counted towards the 30 business days. Approval is contingent upon an initial inspection and witness test at the discretion of Company.~~

~~Customer submitting a "Level 2 - Application for Interconnection and Net Metering" will provide a non-refundable inspection and processing fee of $100, and in the event that Company determines an impact study to be necessary, shall be responsible for any reasonable costs of up to $1,000 of documented costs for the initial impact study.~~

~~Additional studies requested by Customer shall be at Customer's expense.~~

DATE OF ISSUE: ~~May 14, 2019~~November 25, 2020

DATE EFFECTIVE: With Service Rendered
On and After ~~May 1, 2019~~January 1, 2021

ISSUED BY: /s/ Robert M. Conroy, Vice President
State Regulation and Rates
Louisville, Kentucky

Issued by Authority of an Order of the Public Service Commission in Case No. 2020~~18~~-00350~~295~~ dated ~~April 30, 2019~~XXXX

Louisville Gas and Electric Company

P.S.C. Electric No. 1~~3~~2, Original Sheet No. ~~57.3~~108.2

~~Standard Rate Rider~~ ~~NMS~~Terms and Conditions
Net Metering Service Interconnection Guidelines

Level 2 – A Level 2 installation is defined as generator that does not meet one or more of the conditions required of a Level 1 net metering generator; that is not inverter-based; or that uses equipment not certified as meeting the requirements of IEEE 1547 and UL 1741.

Customer desiring a Level 2 interconnection shall submit a "LEVEL 2 - Application for Interconnection and Net Metering." Company shall notify Customer within 30 business days as to whether the request is approved or, if denied, the reason(s) for denial. If additional information is required, Company will notify Customer, and the time between notification and submission of the information shall not be counted towards the 30 business days. Approval is contingent upon an initial inspection and witness test at the discretion of Company. Following Company approval of an application, any deviations in the installation from the submitted plan must be re-submitted to the Company for approval. This includes, but is not limited to: modifications in generation capacity, equipment selection, installation methods, and installation of additional equipment.

Customer submitting a "Level 2 - Application for Interconnection and Net Metering" will provide a non-refundable inspection and processing fee of $100, and in the event that Company determines an impact study to be necessary, shall be responsible for any reasonable costs of up to $1,000 of documented costs for the initial impact study.

Additional studies requested by Customer shall be at Customer's expense.

~~**CONDITIONS OF INTERCONNECTION**~~

~~Customer may operate his net metering generator in parallel with Company's system when complying with the following conditions:~~

1. ~~Customer shall install, operate, and maintain, at Customer's sole cost and expense, any control, protective, or other equipment on Customer's system required by Company's technical interconnection requirements based on IEEE 1547, NEC, accredited testing laboratories, and the manufacturer's suggested practices for safe, efficient and reliable operation of the net metering generating facility in parallel with Company's system. Customer bears full responsibility for the installation, maintenance and safe operation of the net metering generating facility. Upon reasonable request from Company, Customer shall demonstrate compliance.~~
2. ~~Customer shall represent and warrant compliance of the net metering generator with:~~
   a. ~~any applicable safety and power standards established by IEEE and accredited testing laboratories;~~
   b. ~~NEC, as may be revised from time to time;~~
   c. ~~Company's rules and regulations and Terms and Conditions, as may be revised by time to time by the Kentucky Public Service Commission;~~
   d. ~~the rules and regulations of the Kentucky Public Service Commission, as may be revised by time to time by the Kentucky Public Service Commission;~~
   e. ~~all other local, state, and federal codes and laws, as may be in effect from time to time.~~
3. ~~Any changes or additions to Company's system required to accommodate the net metering generator shall be Customer's financial responsibility and Company shall be reimbursed for such changes or additions prior to construction.~~
4. ~~Customer shall operate the net metering generator in such a manner as not to cause undue fluctuations in voltage, intermittent load characteristics or otherwise interfere with the operation of Company's electric system. Customer shall so operate the generating facility in such a manner that no adverse impacts will be produced thereby to the service quality rendered by Company to any of its other Customers or to any electric system interconnected with Company's electric system.~~
5. ~~Customer shall be responsible for protecting, at Customer's sole cost and expense, the net metering generating facility from any condition or disturbance on Company's electric system, including, but not limited to, voltage sags or swells, system faults, outages, loss of a single phase of supply, equipment failures, and lightning or switching surges, except that Company shall be responsible for repair of damage caused to the net metering generator resulting solely from the negligence or willful misconduct on the part of Company.~~
6. ~~Following the initial testing and inspection of the generating facility and upon reasonable advance notice to Customer, Company shall have access at reasonable times to the~~

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~~generating facility to perform reasonable on-site inspections to verify that the installation, maintenance and operation of the net metering generator comply with the requirements of this rider.~~

DATE OF ISSUE: ~~May 14, 2019~~November 25, 2020

DATE EFFECTIVE: With Service Rendered
On and After ~~May 1, 2019~~January 1, 2021

ISSUED BY: /s/ Robert M. Conroy, Vice President
State Regulation and Rates
Louisville, Kentucky

Issued by Authority of an Order of the
Public Service Commission in Case No.
2020~~18~~-00350~~295~~ dated ~~April 30, 2019~~XXXX

Louisville Gas and Electric Company

P.S.C. Electric No. 1~~3~~2, Original Sheet No. ~~57.4~~108.3

~~Standard Rate Rider NMS~~Terms and Conditions
Net Metering Service Interconnection Guidelines

CONDITIONS OF INTERCONNECTION

Customer may operate ~~his~~ net metering generator(s) in parallel with Company's system when complying with the following conditions:

1. Customer shall install, operate, and maintain, at Customer's sole cost and expense, any control, protective, or other equipment on Customer's system required by Company's Interconnection Requirements for Customer-Sited Distributed Generation, applicable codes and standards, accredited testing laboratories, and the manufacturer's suggested practices for safe, efficient and reliable operation of the net metering generating facility in parallel with Company's system.~~technical interconnection requirements based on IEEE 1547, NEC, accredited testing laboratories, and the manufacturer's suggested practices for safe, efficient and reliable operation of the net metering generating facility in parallel with Company's system.~~ Customer bears full responsibility for the installation, maintenance and safe operation of the net metering generating facility. Upon reasonable request from Company, Customer shall demonstrate compliance.
2. Customer shall represent and warrant compliance of the net metering generator with:
   a. any applicable safety and power standards established by IEEE, UL and other ~~and~~ accredited testing laboratories;
   b. NFPA 70, National Electric Code (NEC), as may be revised from time-to-time;~~NEC, as may be revised from time-to-time;~~
   c. Company's Interconnection Requirements for Customer-Sited Distributed Generation;
   d~~c~~. Company's rules and regulations and Terms and Conditions, as may be revised by time-to-time by the Kentucky Public Service Commission;
   e~~d~~. the rules and regulations of the Kentucky Public Service Commission, as may be revised by time-to-time by the Kentucky Public Service Commission;
   f~~e~~. all other local, state, and federal codes and laws, as may be in effect from time-to-time.
3. Any changes or additions to Company's system required to accommodate the net metering generator shall be Customer's financial responsibility and Company shall be reimbursed for such changes or additions prior to construction.
4. Customer shall operate the net metering generator in such a manner as not to cause undue fluctuations in voltage, intermittent load characteristics or otherwise interfere with the operation of Company's electric system. Customer shall so operate the generating facility in such a manner that no adverse impacts will be produced thereby to the service quality rendered by Company to any of its other Customers or to any electric system interconnected with Company's electric system.
5. Customer shall be responsible for protecting, at Customer's sole cost and expense, the net metering generating facility from any condition or disturbance on Company's electric system, including, but not limited to, voltage sags or swells, system faults, outages, loss of a single phase of supply, equipment failures, and lightning or switching surges, except that Company shall be responsible for repair of damage caused to the net metering generator resulting solely from the negligence or willful misconduct on the part of Company.
6. Following the initial testing and inspection of the generating facility and upon reasonable advance notice to Customer, Company shall have access at reasonable times to the generating facility to perform reasonable on-site inspections to verify that the installation, maintenance and operation of the net metering generator comply with the requirements of this rider.

~~**CONDITIONS OF INTERCONNECTION** (continued)~~

~~7. Where required by Company, Customer shall furnish and install on Customer's side of the point of interconnection a safety disconnect switch which shall be capable of fully disconnecting Customer's net metering generator from Company's electric service under the full rated conditions of Customer's net metering generator. The external disconnect switch (EDS) shall be located adjacent to Company's meters or the location of the EDS shall be noted by placing a sticker on the meter, and shall be of the visible break type in a metal enclosure which can be secured by a padlock. If the EDS is not located directly adjacent to the meter, Customer shall be responsible for ensuring the location of the EDS is properly and legibly identified for so long as the net metering generator is operational.~~

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~~The disconnect switch shall be accessible to Company personnel at all times. Company may waive the requirement for an external disconnect switch for a net metering generator at its sole discretion, and on a case by case basis.~~

8. ~~Company shall have the right and authority at Company's sole discretion to isolate the generating facility or require Customer to discontinue operation of the net metering generator if Company believes that:~~
   a. ~~continued interconnection and parallel operation of the net metering generator with Company's electric system creates or contributes (or may create or contribute) to a system emergency on either Company's or Customer's electric system;~~
   b. ~~the net metering generator is not in compliance with the requirements of this rider and the non-compliance adversely affects the safety, reliability or power quality of Company's electric system; or~~
   c. ~~the net metering generator interferes with the operation of Company's electric system.~~

   ~~In non-emergency situations, Company shall give Customer notice of noncompliance including a description of the specific noncompliance condition and allow Customer a reasonable time to cure the noncompliance prior to isolating the Generating Facilities. In emergency situations, where Company is unable to immediately isolate or cause Customer to isolate only the net metering generator, Company may isolate Customer's entire facility.~~
9. ~~Customer agrees that, without the prior written permission from Company, no changes shall be made to the generating facility as initially approved. Increases in net metering generator capacity will require a new "Application for Interconnection and Net Metering" which will be evaluated on the same basis as any other new application. Repair and replacement of existing generating facility components with like components that meet UL 1741 certification requirements for Level 1 facilities and not resulting in increases in net metering generator capacity is allowed without approval.~~
10. ~~Customer shall protect, indemnify and hold harmless Company and its directors, officers, employees, agents, representatives and contractors against and from all loss, claims, actions or suits, including costs and attorneys' fees, for or on account of any injury or death~~

DATE OF ISSUE: ~~May 14, 2019~~November 25, 2020

DATE EFFECTIVE: With Service Rendered
On and After ~~May 1, 2019~~January 1, 2021

ISSUED BY: /s/ Robert M. Conroy, Vice President
State Regulation and Rates
Louisville, Kentucky

Issued by Authority of an Order of the Public Service Commission in Case No. 2020~~18~~-00350~~295~~ dated ~~April 30, 2019~~XXXX

Louisville Gas and Electric Company

P.S.C. Electric No. 1~~3~~2, Original Sheet No. ~~57.5~~108.4

~~Standard Rate Rider~~ ~~NMS~~ Terms and Conditions

Net Metering Service Interconnection Guidelines

CONDITIONS OF INTERCONNECTION (continued)

7. Where required by Company, Customer shall furnish and install on Customer's side of the point of interconnection a safety disconnect switch which shall be capable of fully disconnecting Customer's net metering generator from Company's electric service under the full rated conditions of Customer's net metering generator. The external disconnect switch (EDS) shall be located adjacent to Company's meters or the location of the EDS shall be noted by placing a sticker on the meter, and shall be of the visible break type in a metal enclosure which can be secured by a padlock. If the EDS is not located directly adjacent to the meter, Customer shall be responsible for ensuring the location of the EDS is properly and legibly identified for so long as the net metering generator is operational.

   The disconnect switch shall be accessible to Company personnel at all times. Certain installations meeting a list of requirements specified in the Company's Interconnection Requirements for Customer-Sited Distributed Generation may be exempt from the EDS requirement. Company may waive the requirement for an external disconnect switch for a net metering generator at its sole discretion, and on a case by case basis.

8. Company shall have the right and authority at Company's sole discretion to isolate the generating facility or require Customer to discontinue operation of the net metering generator if Company believes that: ~~T~~
   a. continued interconnection and parallel operation of the net metering generator with Company's electric system creates or contributes (or may create or contribute) to a system emergency on either Company's or Customer's electric system; ~~T~~
   b. the net metering generator is not in compliance with the requirements of this rider and the non-compliance adversely affects the safety, reliability or power quality of Company's electric system; or ~~T~~N
   c. the net metering generator interferes with the operation of Company's electric system.

   In non-emergency situations, Company shall give Customer notice of noncompliance including a description of the specific noncompliance condition and allow Customer a reasonable time to cure the noncompliance prior to isolating the Generating Facilities. In emergency situations, where Company is unable to immediately isolate or cause Customer to isolate only the net metering generator, Company may isolate Customer's entire facility.

9. Customer agrees that, without the prior written permission from Company, no changes shall be made to the generating facility as initially approved. Increases in net metering generator capacity will require a new "Application for Interconnection and Net Metering" which will be evaluated on the same basis as any other new application. Repair and replacement of existing generating facility components with like components that meet all applicable codes and standards certification requirements, including but not limited to IEEE 1547 and UL 1741, for Level 1 facilities and not resulting in increases in net metering generator capacity is allowed without approval.

~~10.~~ Customer shall protect, indemnify and hold harmless Company and its directors, officers, employees, agents, representatives and contractors against and from all loss, claims, actions or suits, including costs and attorneys' fees, for or on account of any injury or death ~~of persons or damage to property caused by Customer or Customer's employees, agents, representatives and contractors in tampering with, repairing, maintaining or operating Customer's net metering generator or any related equipment or any facilities owned by Company, except where such injury, death or damage was caused or contributed to by the fault or negligence of Company or its employees, agents, representatives or contractors. The liability of Company to Customer for injury to person and property shall be governed by the tariff(s) for the class of service under which Customer is taking service.~~

~~11. Customer shall maintain general liability insurance coverage (through a standard homeowner's, commercial or other policy) for generating facilities. Customer shall upon request provide Company with proof of such insurance at the time that application is made for net metering.~~

~~12. By entering into an Interconnection Agreement, or by inspection, if any, or by non-rejection, or by approval, or in any other way, Company does not give any warranty, express or implied, as to the adequacy, safety, compliance with applicable codes or requirements, or~~

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~~as to any other characteristics, of the generating facility equipment, controls, and protective relays and equipment.~~

~~13. Customer's generating facility is transferable to other persons or service locations only after notification to Company has been made and verification that the installation is in compliance with this tariff. Upon written notification that an approved generating facility is being transferred to another person, Customer, or location, Company will verify that the installation is in compliance with this tariff and provide written notification to the Customer(s) within 20 business days. If the installation is no longer in compliance with this tariff, Company will notify Customer in writing and list what must be done to place the facility in compliance.~~

~~14. Customer shall retain any and all Renewable Energy Credits (RECs) generated by Customer's generating facilities.~~

~~TERMS AND CONDITIONS~~

~~Except as provided herein, service will be furnished under Company's Terms and Conditions applicable hereto.~~

10.

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DATE OF ISSUE: ~~May 14, 2019~~November 25, 2020

DATE EFFECTIVE: With Service Rendered
On and After ~~May 1, 2019~~January 1, 2021

ISSUED BY: /s/ Robert M. Conroy, Vice President
State Regulation and Rates
Louisville, Kentucky

Issued by Authority of an Order of the Public Service Commission in Case No. 2020~~18~~-00350~~295~~ dated ~~April 30, 2019~~XXXX

Louisville Gas and Electric Company

P.S.C. Electric No. 1~~3~~2, Original Sheet No. ~~57.6~~108.5

~~Standard Rate Rider~~ ~~NMS~~Terms and Conditions
Net Metering Service Interconnection Guidelines

N

CONDITIONS OF INTERCONNECTION (continued)

of persons or damage to property caused by Customer or Customer's employees, agents, representatives and contractors in tampering with, repairing, maintaining or operating Customer's net metering generator or any related equipment or any facilities owned by Company, except where such injury, death or damage was caused or contributed to by the fault or negligence of Company or its employees, agents, representatives or contractors. The liability of Company to Customer for injury to person and property shall be governed by the tariff(s) for the class of service under which Customer is taking service.

11. Customer shall maintain general liability insurance coverage (through a standard homeowner's, commercial or other policy) for generating facilities. Customer shall upon request provide Company with proof of such insurance at the time that application is made for net metering.
12. By entering into an Interconnection Agreement, or by inspection, if any, or by non-rejection, or by approval, or in any other way, Company does not give any warranty, express or implied, as to the adequacy, safety, compliance with applicable codes or requirements, or as to any other characteristics, of the generating facility equipment, controls, and protective relays and equipment.
13. Customer's generating facility is transferable to other persons or service locations only after notification to Company has been made and verification that the installation is in compliance with this tariff. Upon written notification that an approved generating facility is being transferred to another person, Customer, or location, Company will verify that the installation is in compliance with this tariff and provide written notification to the Customer(s) within 20 business days. If the installation is no longer in compliance with this tariff, Company will notify Customer in writing and list what must be done to place the facility in compliance.
14. Customer shall retain any and all Renewable Energy Credits (RECs) generated by Customer's generating facilities.

TERMS AND CONDITIONS

Except as provided herein, service will be furnished under Company's Terms and Conditions applicable hereto.

~~**LEVEL 1**~~

~~Application for Interconnection and Net Metering~~

~~*Use this application form only for a generating facility that is inverter based and certified by a nationally recognized testing laboratory to meet the requirements of **UL 1741**.*~~

~~Submit this Application to:~~

~~Louisville Gas and Electric Company, Attn: Customer Commitment,~~
~~P. O. Box 32010, Louisville, KY 40232~~

~~If you have questions regarding this Application or its status, contact LG&E at:~~

~~502-627-2202 or Customer.commitment@lge-ku.com~~

~~Customer Name:~~ ______ ~~Account Number:~~ ______

~~Customer Address:~~ ______

~~Customer Phone No.:~~ ______ ~~Customer E-mail Address:~~ ______

~~Project Contact Person:~~ ______

~~Phone No.:~~ ______ ~~E-mail Address (Optional):~~ ______

~~Provide names and contact information for other contractors, installers, or engineering firms involved in the design and installation of the generating facilities:~~

______

~~Energy Source:~~ ____~~Solar~~ ____~~Wind~~ ____~~Hydro~~ ____~~Biogas~~ ____~~Biomass~~

~~Inverter Manufacturer and Model #:~~ ______

~~Inverter Power Rating:~~ ______ ~~Inverter Voltage Rating:~~ ______

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~~Power Rating of Energy Source (i.e., solar panels, wind turbine):~~ ____________________

~~Is Battery Storage Used: ____No _____Yes If Yes, Battery Power Rating:~~ ____________________

~~Attach documentation showing that inverter is certified by a nationally recognized testing laboratory to meet the requirements of UL 1741.~~

~~Attach site drawing or sketch showing location of Utility's meter, energy source, ***(optional: Utility accessible disconnect switch)*** and inverter.~~

~~Attach single line drawing showing all electrical equipment from the Utility's metering location to the energy source including switches, fuses, breakers, panels, transformers, inverters, energy source, wire size, equipment ratings, and transformer connections.~~

~~Expected Start-up Date:~~ ____________________

DATE OF ISSUE: ~~May 14, 2019~~November 25, 2020

DATE EFFECTIVE: With Service Rendered
On and After ~~November 1, 2010~~January 1, 2021

ISSUED BY: /s/ Robert M. Conroy, Vice President
State Regulation and Rates
Louisville, Kentucky

Issued by Authority of an Order of the Public Service Commission in Case No. 20~~09~~20-00~~549~~350 dated ~~July 30, 2010 and~~ XXXX
~~2010-00204 dated September 30, 2010~~

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LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 3

Responding Witness: Lonnie E. Bellar / Robert M. Conroy

Q-3. Refer to the Application, Tab 4, P.S.C. Gas No. 13, Original Sheet No. 107 and P.S.C. No. 13, Original Sheet No. 107.1, LG&E's Gas Service Restrictions. Explain whether there are portions of LG&E's gas system that do not have adequate system capacity or gas supply to provide gas service and if so, explain the steps, if any, LG&E is taking to rectify the situation.

A-3. The proposed tariff language clarifies LG&E's ability to implement demand restrictions where it may be necessary in order to ensure safe and reliable service to its existing firm gas customers.

LG&E has in place robust gas system planning processes pursuant to which it undertakes routine assessments of its gas system. These assessments are used to determine the ability of LG&E's existing infrastructure to serve current and prospective customer demands under design conditions. When an inability to serve (either current or prospective) is identified, enhancement projects are identified. These enhancements are then used to develop LG&E's capital spending plans.

However, it may not always be possible to execute LG&E's approved capital spending plans on a timely basis. Often these delays are occasioned by events outside of LG&E's control, and include, for example, lawsuits, permitting issues, or the inability to obtain rights-of-way. One such region of LG&E's gas system where restrictions are currently in place is a portion of LG&E's gas distribution system located in and around Bullitt County. LG&E is actively pursuing legal and other challenges to its approved enhancement project needed to serve gas demand in the area.

Circumstances may arise that inhibit LG&E's ability to implement identified gas system enhancements to achieve adequate capacity and/or supply. In that event, LG&E must be able to address the current or expected supply/demand imbalance by limiting prospective demand in order to achieve the desired balance and maintain reliable service for existing customers.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 4

Responding Witness: Robert M. Conroy

Q-4. Refer to the Application, Tab 5, Determination of Load Section on P.S.C. Electric No. 12, First Revision of Original Sheet No. 10 and P.S.C. Electric No. 13, Original Sheet No. 10.1, General Service Tariff. Explain the removal of the phrase "from the standpoint of both parties," and explain whether this revision will alter how this section is administered.

A-4. The current tariff text states, "Service hereunder will be metered except when, by mutual agreement of Company and Customer, an unmetered installation is more satisfactory **from the standpoint of both parties**."

Removing "from the standpoint of both parties" eliminates redundancy; requiring mutual agreement ensures an unmetered installation is satisfactory to both parties.

The Company will not administer the application and determination of load any differently than current practices.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 5

Responding Witness: Eileen L. Saunders

Q-5. Refer to the Application, Tab 5, Term of Contract Section on P.S.C. Electric No. 12, Original Sheet No. 15.1 and P.S.C. Electric No. 13, Original Sheet No. 15.1, Power Service Tariff (Rate PS). Explain the reasoning for changing the word "shall" to "may" in this section.

A-5. This proposed change conforms to the Company's current business practices and allows the Company more flexibility to determine when contracts are necessary.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information Dated January 8, 2021

Case No. 2020-00350

Question No. 6

Responding Witness: John K. Wolfe

Q-6. Refer to the Application, Tab 5, Unauthorized Attachments Section on P.S.C. Electric No. 12, Original Sheet No. 40.18 and P.S.C. No. 13, Original Sheet No. 40.18, Pole and Structure Attachment Charges Tariff (Tariff PSA). Confirm that any system-wide audit commenced prior to May 1, 2019, has been completed and that no Attachment customer has or will be charged the $25 penalty for any Unauthorized Attachment found in such audit.

A-6. Confirmed. The system-wide audit commenced prior to May 1, 2019 has been completed and no customer has or will be charged the $25 penalty for any Unauthorized Attachment found in such audit.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 7

Responding Witness: John K. Wolfe

Q-7. Refer to the Application, Tab 5, Termination Section on P.S.C. No. 12, Original Sheet No. 40.19 and P.S.C. No. 13, Original Sheet No. 40.19, Tariff PSA.

a. Explain the reasoning for removing the language regarding how an Attachment customer can terminate a contract.

b. Confirm that there are no changes to the second paragraph of this section other than it being moved down within that section. If not confirmed, explain the changes that were made.

A-7.

a. The removed language required the Attachment Customer to provide written notice to the Company at least sixty (60) days prior to the termination date. This requirement imposed a burden on the Attachment Customer without appreciable benefit to the Company. Under the revised provision, an Attachment Customer may terminate the Contract upon written notice only and must remove its facilities from Company Structures within 180 days.

b. Confirmed.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Second Request for Information
Dated January 8, 2021**

Case No. 2020-00350

Question No. 8

Responding Witness: Eileen L. Saunders

Q-8. Refer to the Application, Tab 5, P.S.C. Electric No. 12, Original Sheet No. 41.1 and P.S.C. Electric No. 13, Original Sheet No. 41.1, Electric Vehicle Supply Equipment Tariff (Rate EVSE). Provide the justification for the reduction in the annual kilowatt-hours used to determine the applicable fuel clause charge or credit.

A-8. The reduction in annual kWh reflects the most recent station usage information from each of the Companies' three (3) EVSE-R charging stations. This information includes data on each station's actual hours of use per day, station utilization, and average kWh per hour consumption.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 9

Responding Witness: Robert M. Conroy

Q-9. Refer to the Application, Tab 5, Terms and Conditions number 3 on P.S.C. No. 12, Original Sheet No. 69.3 and P.S.C. No. 13, Original Sheet No. 69.3, Green Tariff. Explain the reasoning for removing the phrase "or withdrawing" from number 3 of the terms and conditions.

A-9. This Term relates to customers who have arrearages or failure to pay being removed from Option #1 of the "Green Tariff" for one year. Customers withdrawing from Option #1 on their own accord will no longer have to wait one year to reenter the program.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 10

Responding Witness: Robert M. Conroy

Q-10. Refer to the Application, Tab 5, P.S.C. No. 12, Original Sheet No. 71.2 and P.S.C. No. 13, Original Sheet No. 71.2, Economic Development Rider. Explain the reasoning for the deletion of the following sentence: "Neither the demand charge reduction nor any unjustified capital investment in facilities will be borne by Company's other Customers during the term of the EDR contract."

A-10. The "nor any unjustified capital investment in facilities will be borne by the Company" is now covered by the new Term 12 that states, "All EDR contracts will provide for the recovery of EDR customer-specific fixed costs over the life of the contract." Any costs associated with the EDR contract outside of the Company's ordinary course of business will be addressed either through the utilization of the Excess Facilities rider or an additional special contract. This will prevent other customers from covering these costs.

"Neither the demand charge reduction" was removed because it is unnecessary. By definition, EDR customers can receive demand charge reductions only when the revenues they provide are net additive and benefit all customers. Therefore, there is nothing for other customers to "bear" resulting from EDR customers' temporarily discounted demand charges.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 11

Responding Witness: Robert M. Conroy

Q-11. Refer to the Application, Tab 5, P.S.C. Electric No. 12, Original Sheet No. 72.2, P.S.C. Electric No. 12, Original Sheet No. 72.3, P.S.C. Electric No. 13, Original Sheet No. 72.2 and P.S.C. Electric No. 13, Original Sheet No. 72.3, Solar Share Program Rider. Confirm that the only changes to these pages are the reordering of the terms and conditions.

A-11. Confirmed. The Company reordered the terms and conditions to more logically arrange for easier understanding by customers.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 12

Responding Witness: Robert M. Conroy

Q-12. Refer to the Application, Tab 5, Definition section on P.S.C. Electric No. 12, First Revision of Original Sheet No. 87 and P.S.C. Electric No. 13, Original Sheet No. 87, Environmental Cost Recovery Surcharge Tariff (Tariff ECR). Explain the change from EAS (total proceeds from emission allowance sales) to BAS (total proceeds from by-product and allowance sales).

A-12. The purpose of this proposed change in the ECR Tariff is to ensure the tariff definitions for the components of E(m) align with the current Commission approved Environmental Surcharge Forms.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information Dated January 8, 2021

Case No. 2020-00350

Question No. 13

Responding Witness: Robert M. Conroy

Q-13. Refer to the Application, Tab 5, Definition section on P.S.C. Electric No. 12, First Revision of Original Sheet No. 87.1 and P.S.C. Electric No. 13, Original Sheet No. 87.1, Tariff ECR. Explain the reasoning for the addition of the Off System Sales Adjustment Clause to definition number 3.

A-13. The purpose of this proposed change in the ECR Tariff is to clarify that the Group 1 R(m) (i.e., revenues for the current month applicable to the ECR Surcharge) includes the offsetting credits to customers pursuant to the Off-System Sales ("OSS") Adjustment Clause rather than rely on the notation in the OSS Adjustment Clause Tariff Sheet that states the OSS Adjustment Clause is "[m]andatory to all electric rate schedules that are subject to Adjustment Clause FAC".

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information Dated January 8, 2021

Case No. 2020-00350

Question No. 14

Responding Witness: Robert M. Conroy

Q-14. Refer to the Application, Tab 5, Meter Readings and Bills section on P.S.C. Electric No. 12, First Revision of Original Sheet No. 101.1 and P.S.C. Electric No. 13, Original Sheet No. 101.1, Billing Terms and Conditions. Explain the reasoning for the removal of the phrase "including credit scoring, both internally and externally."

A-14. The sentence at issue sates, "There will be no adverse credit impact on Customer's payment and credit record, **including credit scoring, both internally and externally**, and the account will not be considered delinquent for any purpose if Company receives Customer's payment within fifteen (15) day after the date on which Company issued Customer's bill."

The proposed deletion eliminates redundancy in this sentence because the concept "including credit scoring, both internally and externally" is already contained within the concept "payment and credit record" earlier in the sentence.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 15

Responding Witness: Robert M. Conroy

Q-15. Refer to the Application, Tab 5, P.S.C. Gas No. 12, Original Sheet Nos. 36.11–36.13 and P.S.C. Gas No. 13, Original Sheet Nos. 36.11–36.13, Local Gas Delivery Service Tariff. Confirm that there are no changes on these tariff pages. If not confirmed, explain the changes that were made.

A-15. The only change the Company proposed was to change the "Low" and "High" column headings on the table to "Minimum" and "Maximum" at the top of P.S.C. Gas No. 13, Original Sheet No. 36.11.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 16

Responding Witness: Robert M. Conroy

Q-16. Refer to the Application, Tab 5, Meter Readings and Bills section on P.S.C. Gas No. 12, Original Sheet No. 101.1 and P.S.C. Gas No. 20, Original Sheet No. 101.1, Billing Terms and Conditions. Explain the reasoning for the removal of the phrase "including credit scoring, both internally and externally."

A-16. The sentence at issue sates, "There will be no adverse credit impact on Customer's payment and credit record, **<u>including credit</u> scoring, both internally and externally**, and the account will not be considered delinquent for any purpose if Company receives Customer's payment within fifteen (15) day after the date on which Company issued Customer's bill."

The proposed deletion eliminates redundancy in this sentence because the concept "including credit scoring, both internally and externally" is already contained within the concept "payment and credit record" earlier in the sentence.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 17

Responding Witness: Daniel K. Arbough

Q-17. Refer to the Application, Tab 19 and Case No. 2018-00295[2] (2018 Rate Case), Application, Tab 19.

a. For electric operations, explain the $30,790,115 increase in the 2020 capital budget.

b. For electric operations, explain the $2,396,578 decrease in the 2021 capital budget.

c. For gas operations, explain the $54,142,292 increase in the 2020 capital budget.

d. For gas operations, explain the $22,165,861 increase in the 2021 capital budget.

e. Provide the capital budget related to the Gas Line Tracker for 2020 and 2021.

A-17.

a. Approximately $10.7 million of the increase is associated with major construction projects, much of which is due to a shift in timing of the planned expenditures The increase includes:
    - Delays in execution of the CCR Ruling pond closure $6.2 million and Process Water Systems construction $10.5 million.
    - The Trimble County Landfill costs were up $5.2 million due to delays in construction
    - ELG projects were up $4.9 million due to delays in the regulations.
    - Delays in completing the masonry refurbishment at Ohio Falls caused 2020 costs to be up by $4.9 million.

[2] *Electronic Application of Louisville Gas and Electric Company for an Adjustment of Its Electric and Gas Rates*, Case No. 2018-00295, Order (Ky. PSC Apr. 30, 2019).

- These increases were partially offset by the removal of the Mill Creek Barge Loading project which was previously budgeted at $21 million.

Transmission spend was up by approximately $7.6 million due to more proactive replacement of aging infrastructure.

Customer Services expenditures were$8.9 million higher than prior budgets due to expansion of the Company's space at the Auburndale facility, and the addition of an on-site medical clinic.

IT spend was higher by $7.9 million due to the addition of an upgrade of the Oracle Financial system totaling $4.8 million and an acceleration of the timing of the GIS Phase 2 project totaling $2.9 million.

b. The variance for 2021 in the totals shown in Tab 19 in this case ($378,652,042) compared to the prior case ($357,958,114) is $20,693,928 (excluding AFUDC) rather than the amount included in the question. This higher amount is explained below.

Power generation spending is $12.4 million more in 2021 than in the prior budget due primarily to:
- Inspection of the Trimble County (TC) CT 5 during a major outage ($2.3 million),
- Purchase of the TC1 Stator Bars ($2.3 million),
- Replacement of the TC1 Absorber Recycle Pump Piping $(2.0 million),
- Work on the Mill Creek 3 boiler waterwall ($2.1 million), and
- Reconstruction of the Mill Creek 2 Cooling Tower ($3.5 million).

Major construction projects are higher by $15.1 million due primarily to:
- Delays in the Ohio Falls masonry refurbishment ($9.4 million),
- Delays and scope refinement on the Trimble County Landfill construction ($7.7 million), and
- Delays in regulations resulting in an increase in the 2021 spend for the Effluent Limitations Guidelines projects ($8.9 million),
- Offset by decreases in CCR Closure Ruling construction due to shifts in schedules ($11.1 million).

These increases are partially offset by Electric Distribution reductions totaling $9.9 million in 2021. This is the result of a reduction in the assumed level of new business and lower distribution automation spending.

c. The spend in gas operations increased primarily as a result of:

- Increased costs for the Preston-Piccadilly project ($22.9 million), the Penile-Preston project ($17.7 million), and the Penile-Blanton Lane project ($17.3 million). The cost increases were driven by the significant volume and hardness of rock encountered, and additional costs for vegetation removal, easements and property, and contract and inspection labor as much of the route for these projects is located within congested areas.
- Timing of spend associated with the St. Helens regulator station ($4.9 million), the Magnolia Road Crossings ($4.1 million), and the Witherspoon relocation project ($3.4 million) also contributed to the increase,
- These increases were partially offset by a $24.5 million reduction in the scope and timing of the Western Kentucky B Pipeline project.

d. The 2020 Rate Case cost is higher for 2021 due to the higher cost experienced on the on the Preston-Piccadilly project ($24.1 million), the Penile-Blanton Lane project ($21.4 million), and the Penile-Preston project ($3.7 million) as described in the response to part c. above. These higher costs were partially offset by a $31.1 million reduction in the scope and timing of the Western KY A Pipeline project.

e. See the information below.

Projects Remaining in GLT

Project	**2020**	**2021**
DWNTWN LRG SCALE MAIN	$1,004	
INST CUST SRV - MAGNOLIA	$10,985	$25,143
NB CUST SRV LINE & GAS RISER	$5,001,273	$4,842,999
NB INST CUST SERV LINE & RSR	$64,819	$23,769
REP CO GAS SERV 419	$3,134,865	$3,135,169
REPL EXIST CS & RISER-4485	$161,804	$98,912
REPL EXIST CS WITH RISER-MUL	$40,485	$40,286
REPL EXIST CUST SRV W RISER	$2,359,901	$2,636,365
Serv Line Repl-Muldraugh	$987,301	$290,295
Total	$11,762,437	$11,092,938

Projects Rolled into Base Rate

Project	**2020**	**2021**
REPLACE STEEL SERVICES 2019	$(20,509)	

REPLACE STEEL SERVICES 2020	$11,724,762	
REPLACE STEEL SERVICES 2021		$10,645,087
TMP PENILE-BLANTON LN	$17,456,045	$21,356,087
TMP PENILE-PRESTON	$17,742,815	$3,739,122
TMP PRESTON-PICCADILLY	$23,038,378	$24,143,039
TMP PROPERTY PENILE-BLANTON	$4,019	
Total	$69,945,510	$59,883,335

Note: For the GLT projects being rolled into base rates, the 2021 amounts include the full year capital spend.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 18

Responding Witness: Daniel K. Arbough

Q-18. Refer to the Application, Tab 56, Schedule C 2.2 at 4.

a. For electric operations, provide an itemized breakdown of the $1,201,025 total for Account 909 - Informational and Instructional Advertising Exp.

b. For electric operations, provide an itemized breakdown of the $17,066,021 total for Account 923 - Outside Services.

c. For gas operations, provide an itemized breakdown of the $681,896 total for Account 909 - Informational and Instructional Advertising Exp.

d. For gas operations, provide an itemized breakdown of the $5,688,674 total for Account 923 - Outside Services.

A-18.

a. See attached.

b. See attached.

c. See attached.

d. See attached.

Louisville Gas & Electric Company
Case No. 2020-00350
Itemized Breakout of Account 909

Account	Account Description	Expenditure Type	Expenditure Type Descriptions	Forecast Jul-21	Forecast Aug-21	Forecast Sep-21	Forecast Oct-21	Forecast Nov-21	Forecast Dec-21	Forecast Jan-22	Forecast Feb-22	Forecast Mar-22	Forecast Apr-22	Forecast May-22	Forecast Jun-22	TOTAL
909	INFORMATIONAL AND INSTRUCTURAL ADVERTISING EXP	0301	O/S - OTHER-LABOR-3RD PARTY*	715	667	336	372	573	244	376	677	2,212	806	542	2,765	10,286
909	INFORMATIONAL AND INSTRUCTURAL ADVERTISING EXP	0488	ADV - EVENTS & OUTREACH	398	398	398	398	398	398	398	398	398	398	398	398	4,774
909	INFORMATIONAL AND INSTRUCTURAL ADVERTISING EXP	0491	ADV - DIRECT MAIL	21,103	21,103	21,103	21,103	21,103	21,103	21,103	21,103	21,103	21,103	21,103	21,103	253,233
909	INFORMATIONAL AND INSTRUCTURAL ADVERTISING EXP	0494	ADV - OTHER	95,788	96,093	76,226	70,914	70,915	72,060	69,879	69,720	77,570	77,746	78,689	77,132	932,733
																1,201,025

*Other 3rd Party Labor includes work provided by a contractor for limited duration or ad-hoc specialized tasks at one or more LKE sites.

Louisville Gas & Electric Company
Case No. 2020-00350
Itemized Breakout of Account 923

Account	Account Description	Expenditure Type	Expenditure Type Descriptions	Forecast Jul-21	Forecast Aug-21	Forecast Sep-21	Forecast Oct-21	Forecast Nov-21	Forecast Dec-21	Forecast Jan-22	Forecast Feb-22	Forecast Mar-22	Forecast Apr-22	Forecast May-22	Forecast Jun-22	TOTAL
923	Outside Services	0301	O/S - OTHER-LABOR-3RD PARTY*	326,032	228,678	292,042	287,116	228,237	236,626	204,021	156,580	169,764	227,832	267,708	255,629	2,880,265
923	Outside Services	0304	O/S SUPPLEMENTAL CONTRACTOR**	164,535	164,535	164,535	164,535	174,324	172,912	169,231	168,879	168,879	168,879	168,879	169,231	2,019,351
923	Outside Services	0305	O/S - MGMT CONSULTING FEES & EXPENSES	73,241	80,450	79,002	49,152	65,315	55,163	83,239	84,694	79,312	44,179	47,216	70,632	811,597
923	Outside Services	0312	O/S - AUDIT FEES	-	-	-	-	171,668	35,215	-	67,856	206,283	-	-	197,753	678,774
923	Outside Services	0313	CONTRACTOR PER DIEM REIMBURSEMENT	378	378	378	378	378	378	378	378	378	378	378	378	4,532
923	Outside Services	0314	O/S - ACCOUNTING SERVICES	-	-	661	-	-	661	-	-	661	-	-	661	2,644
923	Outside Services	0320	CONTRACTOR PURCHASED SOFTWARE (NON TAXABLE)	-	-	-	-	-	-	-	1,431	-	-	-	-	1,431
923	Outside Services	0321	O/S - LEGAL-3RD PARTY	94,718	304,244	487,939	123,420	192,306	447,756	20,091	157,863	278,413	169,344	218,137	376,000	2,870,231
923	Outside Services	0335	O/S - PHYSICAL AND MEDICAL EXAMS	10,479	10,479	10,479	10,479	10,479	10,479	10,479	10,479	10,479	10,479	10,479	10,479	125,745
923	Outside Services	0381	BURDENED LABOR FROM PPL	102,172	101,870	98,888	111,127	98,220	104,313	86,254	77,195	104,138	94,102	94,744	89,678	1,162,701
923	Outside Services	0624	COMPUTER PREWRITTEN SOFTWARE OR UPGRADES/UPDATES MTCE - TAXABLE	238,035	238,040	238,084	238,910	240,395	240,990	250,572	250,687	250,684	250,575	250,400	250,534	2,937,907
923	Outside Services	0638	COMPUTER HARDWARE MTCE - NONTAXABLE	101,334	97,655	97,961	98,213	98,213	98,259	104,284	104,343	104,343	104,377	104,505	103,986	1,217,473
923	Outside Services	0639	COMPUTER CUSTOM SOFTWARE OR SERVICES/MTCE - NONTAXABLE	190,051	190,051	190,549	190,835	190,892	190,892	200,636	200,683	200,685	201,398	201,555	205,144	2,353,372
																17,066,022

*Other 3rd Party Labor includes work provided by a contractor for limited duration or ad-hoc specialized tasks at one or more LKE sites.

**A Supplemental contractor is a position that can be used interchangeable with internal labor (the work could be done by either party), or the work is of a recurring nature necessary to maintain the day to day business operations but the company has strategically decided to out-source it.

Louisville Gas & Electric Company
Case No. 2020-00350
Itemized Breakout of Account 909

Account	Account Description	Expenditure Type	Expenditure Type Descriptions	Forecast Jul-21	Forecast Aug-21	Forecast Sep-21	Forecast Oct-21	Forecast Nov-21	Forecast Dec-21	Forecast Jan-22	Forecast Feb-22	Forecast Mar-22	Forecast Apr-22	Forecast May-22	Forecast Jun-22	TOTAL
909	INFORMATIONAL AND INSTRUCTURAL ADVERTISING EXP	0301	O/S - OTHER-LABOR-3RD PARTY*	27,500	29,650	65,000	37,500	5,000	-	-	7,500	27,500	45,500	90,000	25,000	360,150
909	INFORMATIONAL AND INSTRUCTURAL ADVERTISING EXP	0488	ADV - EVENTS & OUTREACH	112	112	112	112	112	112	112	112	112	112	112	112	1,346
909	INFORMATIONAL AND INSTRUCTURAL ADVERTISING EXP	0491	ADV - DIRECT MAIL	4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,777	57,321
909	INFORMATIONAL AND INSTRUCTURAL ADVERTISING EXP	0494	ADV - OTHER	27,017	27,103	21,501	20,001	20,001	20,325	19,710	19,665	21,878	21,930	22,195	21,755	263,079
																681,896

*Other 3rd Party Labor includes work provided by a contractor for limited duration or ad-hoc specialized tasks at one or more LKE sites.

Louisville Gas & Electric Company
Case No. 2020-00350
Itemized Breakout of Account 923

Account	Account Description	Expenditure Type	Expenditure Type Descriptions	Forecast Jul-21	Forecast Aug-21	Forecast Sep-21	Forecast Oct-21	Forecast Nov-21	Forecast Dec-21	Forecast Jan-22	Forecast Feb-22	Forecast Mar-22	Forecast Apr-22	Forecast May-22	Forecast Jun-22	TOTAL
923	Outside Services	0301	O/S - OTHER-LABOR-3RD PARTY*	108,677	76,226	97,347	95,705	76,079	78,875	68,007	52,193	56,588	75,944	89,236	85,210	960,088
923	Outside Services	0304	O/S SUPPLEMENTAL CONTRACTOR**	54,845	54,845	54,845	54,845	58,108	57,637	56,410	56,293	56,293	56,293	56,293	56,410	673,117
923	Outside Services	0305	O/S - MGMT CONSULTING FEES & EXPENSES	24,414	26,817	26,334	16,384	21,772	18,388	27,746	28,231	26,437	14,726	15,739	23,544	270,532
923	Outside Services	0312	O/S - AUDIT FEES	-	-	-	-	57,223	11,738	-	22,619	68,761	-	-	65,918	226,258
923	Outside Services	0313	CONTRACTOR PER DIEM REIMBURSEMENT	126	126	126	126	126	126	126	126	126	126	126	126	1,511
923	Outside Services	0314	O/S - ACCOUNTING SERVICES	-	-	220	-	-	220	-	-	220	-	-	220	881
923	Outside Services	0320	CONTRACTOR PURCHASED SOFTWARE (NON TAXABLE)	-	-	-	-	-	-	-	477	-	-	-	-	477
923	Outside Services	0321	O/S - LEGAL-3RD PARTY	31,573	101,415	162,646	41,140	64,102	149,252	6,697	52,621	92,804	56,448	72,712	125,333	956,744
923	Outside Services	0335	O/S - PHYSICAL AND MEDICAL EXAMS	3,493	3,493	3,493	3,493	3,493	3,493	3,493	3,493	3,493	3,493	3,493	3,493	41,915
923	Outside Services	0381	BURDENED LABOR FROM PPL	34,057	33,957	32,963	37,042	32,740	34,771	28,751	25,732	34,713	31,367	31,581	29,893	387,567
923	Outside Services	0624	COMPUTER PREWRITTEN SOFTWARE OR UPGRADES/UPDATES MTCE - TAXABLE	79,345	79,347	79,361	79,637	80,132	80,330	83,524	83,562	83,561	83,525	83,467	83,511	979,302
923	Outside Services	0638	COMPUTER HARDWARE MTCE - NONTAXABLE	33,778	32,552	32,654	32,738	32,738	32,753	34,761	34,781	34,781	34,792	34,835	34,662	405,824
923	Outside Services	0639	COMPUTER CUSTOM SOFTWARE OR SERVICES/MTCE - NONTAXABLE	63,350	63,350	63,516	63,612	63,631	63,631	66,879	66,894	66,895	67,133	67,185	68,381	784,457
																5,688,674

*Other 3rd Party Labor includes work provided by a contractor for limited duration or ad-hoc specialized tasks at one or more LKE sites.

**A Supplemental contractor is a position that can be used interchangeable with internal labor (the work could be done by either party), or the work is of a recurring nature necessary to maintain the day to day business operations but the company has strategically decided to out-source it.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 19

Responding Witness: Daniel K. Arbough

Q-19. Refer to the Application, Tab 63, Schedule J.

a. Refer to Schedule J-2, page 3 of 3. Explain why LG&E is forecasting an increase in short-term debt from $15.7 million in June 2021, to $199.8 million in November 2021, and then to $77.4 million in June 2022.

b. Refer to Schedule J-3.

(1) For the projected $300 million issuance of long-term debt, explain how LG&E estimated that the issuance will be June 30, 2021, and provide support for the projected 3.70 percent interest rate.

(2) Provide support for the projected 2.05 percent interest rate for the reset of the $35.0 million Jefferson County 2001 Series B bonds.

(3) Provide support for the projected 2.25 percent interest rate for the reset of the $128.0 million Louisville Metro 2003 Series A bonds.

(4) Provide support for the projected 0.36 percent interest rate for the reset of the $35.2 million Louisville Metros 2007 Series B bonds.

(5) Provide support for the projected 0.36 percent interest rate for the reset of the $31.0 million Louisville Metro 2007 Series A bonds.

(6) Provide support for the projected 2.05 percent interest rate for the reset of the $35.0 million Trimble County 2001 Series B bonds.

(7) Provide support for the projected 1.69 percent interest rate for the reset of the $27.5 million Trimble County 2001 Series A bonds.

A-19.

a. The relatively low short-term debt balance in June 2021 reflects the use of funds from the projected issuance of the $300 million of long-term debt to paydown short-term debt. The short-term debt balance accumulates through November 2021 due to expenditures on capital projects and working capital needs. The short-term debt balance then decreases through June 2022 as cash from operations exceeds spending on capital projects.

b.

(1) With a commercial paper borrowing limit of $350 million, LG&E converts this short-term debt to long-term debt once the commercial paper balance consistently exceeds $300 million. LG&E's commercial paper balances are estimated to exceed $300 million in June 2021. The rate of this long-term debt is based on the 30-year forward Treasury curve at June 30, 2020 (1.80%) plus a credit spread for 30-year bonds provided by a bank (185 basis points).

(2) Because no reliable forward curve for tax-exempt bonds exists, it was assumed that the interest rate would be the forward Treasury curve multiplied by the Municipal Market Data (MMD)/Treasury ratio plus credit and an alternative minimum tax (AMT) spreads provided by a bank. At June 30, 2020, the forward Treasury rate for a bond with 6.5 years to maturity (0.98%) was multiplied by the MMD/Treasury percentage ratio (97%) which calculates to a rate of 0.95%.To this rate a credit and AMT spreads of 87 and 24 basis points, respectively, were added

(3) The interest rate reset for the $128.0 million Louisville Metro 2003 Series A bonds was calculated in manner consistent with (2) above except that this bond is not subject to AMT and therefore did not include an AMT spread. At June 30, 2020, the forward Treasury rate for a bond with 12.5 years to maturity (1.23%) was multiplied by the MMD/Treasury percentage ratio (91%) which calculates to a rate of 1.12%. To this rate a credit spread of 113 basis points was added.

(4) The interest rate reset for the $35.2 million Louisville Metros 2007 Series B variable rate bonds is based on 75% of the one-month forward LIBOR curve at June 2022 (0.16%) plus 20 basis points representing the credit spread and remarketing fee.

(5) The interest rate reset for the $31.0 million Louisville Metro 2007 Series A bonds was calculated in manner identical with (4) above.

(6) The interest rate reset for the $35.0 million Trimble County 2001 Series B bonds was calculated in manner identical with (2) above.

(7) The interest rate reset for the $27.5 million Trimble County 2001 Series A bonds was calculated in manner consistent with (2) above except that this bond is not subject to AMT and therefore did not include an AMT spread. At June 30, 2021, the forward Treasury rate for a bond with 5 years to maturity (0.90%)

was multiplied by the MMD/Treasury percentage ratio (100%) which calculates to a rate of 0.90%. To this rate a credit spread of 79 basis points was added.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 20

Responding Witness: Paul W. Thompson / David S. Sinclair

Q-20. Refer to the Direct Testimony of Paul W. Thompson, page 19. Mr. Thompson refers to the PPL corporate goal to reduce CO2 emissions, from 2010 levels, by 70 percent by 2040 and a total of 80 percent by 2050. Explain whether, in establishing this corporate goal, PPL considered the unique setting of LG&E in a state that is heavily reliant on coal both in economics and in the general generation fleet of LG&E.

A-20. PPL's CO_2 reduction goals are an outgrowth of the 2017 PPL Climate Assessment Report ("Report") which, in part, evaluates potential reductions in CO_2 based on various generating resources and load forecasts.[3] These generation and load forecasts are derived from LG&E and KU's normal long-term planning process.

PPL's CO_2 reduction goals are consistent with the expected economic life and subsequent retirement of LG&E and KU's existing coal fleet. For example, the Report states, "The economic operating life of existing coal units is the key driver for the timing and magnitude of reductions (in CO_2), which result either from economics and technology, or by regulations, depending on the policy scenario."[4]

The Report used the same economic life for coal units (55 years to 65 years) as was used in the 2018 Integrated Resource Plan: "On average between 2005 and 2017, coal-fired power plants in the U.S. were retired after 52 years of operation. PPL's experience with the recent retirement of some of its own coal units is consistent with the national experience."[5]

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[3] Available at: https://www.pplweb.com/wp-content/uploads/2017/12/PPL-Corporation-Climate-Assessment-Report.pdf.
[4] Report at 13.
[5] *Id*.

Below is Figure 15 from the Report, which shows the percentage of LG&E and KU's current coal fleet that would reach the end of its operating life by decade.

Coal Capacity Retirements Based on Operating Life Assumptions *(Figure 15)*

Coal Retired	at 55-Year Life		at 65-Year Life	
	MW	% of Coal	MW	% of Coal
2030	1,753	35%	272	5%
2040	4,065	82%	1,753	35%
2050	4,435	89%	4,065	82%

Because the existing coal fleet will be economically retired in the coming decades, CO_2 emissions are forecasted to decline as coal generation is replaced with lower CO_2-emitting technologies such as natural gas and renewables. This assumption is consistent with recent IRP filings with the Commission wherein new resources are forecasted to be natural gas, wind, solar, and storage due to their more favorable economics compared to new coal-fired generation. The last time a new coal-fired generation resource was part of a recommended expansion plan was the 2008 IRP. In fact, new coal-fired generation has not even made it past the initial screening process due to its higher costs since the 2011 IRP. The more attractive economics of new combined-cycle natural gas compared to new coal-fired generation is why the Companies selected Cane Run unit 7 to replace retiring coal units in its 2011 CPCN and sought a CPCN for Green River 5 in 2014 which would have been similar to Cane Run unit 7 but was canceled when the municipal customers terminated later that same year.

For these reasons, PPL's CO_2 reduction goals are consistent with the economic retirement of LG&E and KU's existing coal fleet over time and the Companies' obligations to provide reliable energy at the lowest reasonable cost to our customers.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 21

Responding Witness: Daniel K. Arbough

Q-21. Refer to the Direct Testimony of Kent W. Blake (Blake Testimony), page 6. Regarding the proposed Economic Relief Surcredit. Provide any impacts the proposed surcredit will have on LG&E's credit metrics.

A-21. As the surcredit only partially mitigates the impact of the rate case for one year, it would not adversely impact the Company's credit metrics. In isolation, the surcredit lowers the Company's coverage ratios by about 1% for that year.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 22

Responding Witness: Kent W. Blake

Q-22. Refer to the Blake Testimony, pages 11–12 and 15, and 18 CFR Part 101, instructions for Account 107, Construction Work in Progress.

a. Confirm that the AMI meters would be placed in service during the construction period. If confirmed, explain how LG&E's proposal to include the entire AMI project in Construction Work in Progress (CWIP) until the entire project is in service will comply with the direction that work orders shall be cleared from this account as soon as practicable after completion of the job. Further, if a project, such as a hydroelectric project, a steam station or a transmission line, is designed to consist of two or more units or circuits that may be placed in service at different dates, any expenditures that are common to and will be used in the operation of the project as a whole shall be included in electric plant in service upon the completion and the readiness for service of the first unit. Any expenditures that are identified exclusively with units of property not yet in service shall be included in this account.

b. Confirm that, while the full benefits of the AMI project will not commence until the entire project is in service, the basic function of providing meter data will commence as each section is placed into service. If this cannot be confirmed, explain.

A-22.

a. The Companies believe its proposal to treat the AMI project as one project for accounting and ratemaking purposes, including accrual of AFUDC, is consistent with FERC's Order dated December 19, 2019, in Docket No. AC19-75-000. In that proceeding, FERC granted Duke Energy Corporation's accounting request to treat its Cybersecurity Informational Technology – Operational Technology Program as a single project for purposing of calculating AFUDC due to the inter-dependency of the component parts of the program. The same is true for the Companies' AMI project as shown in the implementation timeline at page 29 of Exhibit LEB-3. While meters are deployed across the project timeline, those meters will not be automatically read until the MDMS system is put in place in 2023 and will not be capable of remote service (disconnect and re-connect) until early 2024. Moreover, the reliability benefits from their integration into electric distribution systems will not be complete until later in 2024, and the CVR benefits will not begin until 2026. The Company intends to submit an accounting request with FERC to treat the AMI project as a single project for purposes of calculating AFUDC, and therefore requiring all project costs to be captured within CWIP until the project is completed. Once the project is completed, amounts will be cleared from CWIP and placed into service as soon as practicable after completion of the job, in accordance with the FERC Uniform System of Accounts. This accounting treatment provides the best matching of costs and benefits. Based on current projections as shown in Exhibit KWB-2, this allows the Companies to implement AMI and all associated customer benefits without increasing the combined revenue requirement of the Companies while, at the same time, providing the Companies full cost recovery of the project.

b. The Companies confirm that meters will be read as placed in service; however, the full functionality associated with the AMI project will not be available until all associated systems and network communications are built out and placed in service as discussed above.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 23

Responding Witness: Kent W. Blake

Q-23. Refer to the Blake Testimony, page 13 and 15–17. Explain whether LG&E proposes to include the AMI regulatory asset and liability in rate base in future proceedings or to record carrying costs in the AMI regulatory asset balance.

A-23. While the Company is not seeking any cost recovery associated with the AMI project in this proceeding, it would be the Companies' intention to include the cash outlays and receipts associated with these AMI regulatory assets and liabilities in capitalization in future rate cases. The Companies' have utilized capitalization rather than rate base for purposes of setting base rates for more than 40 years. The Companies have not traditionally shown regulatory assets and liability balances in its rate base schedules during those proceedings as it did not directly impact the Companies' revenue requirement. However, in the unlikely event the Companies moved or were moved from capitalization to rate base in future rate case proceedings, the Companies would likely reassess this as there would be no reason why these prudently incurred costs of providing utility service should not be recovered by the Companies. That is especially true in the case of the proposed AMI ratemaking where the Company is proposing to return regulatory liabilities earlier and at a faster rate than it is proposing to recover the regulatory assets in order to avoid customers having to pay higher costs in the early years of AMI only to see more than offsetting benefits in future years.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 24

Responding Witness: Kent W. Blake

Q-24. Refer to the Blake Testimony, pages 14–15. Confirm that Kentucky-American Water Company's accounting is not governed by the FERC Uniform System of Accounts. If confirmed, state whether LG&E is aware of this Commission approving an AFUDC rate based on the WACC for a utility that uses the FERC Uniform System of Accounts.

A-24. Confirmed. Kentucky-American Water Company's accounting is not governed by the FERC Uniform System of Accounts, but follows the National Association of Regulatory Utility Commissioners' ("NARUC") Uniform System of Accounts for Class A/B Water Companies. Kentucky-American Water's NARUC Uniform System of Accounts, and LG&E's FERC Uniform System of Accounts use identical language, stating that AFUDC should include "the net cost for the period of construction of borrowed funds used for construction purposes and a **reasonable rate** on other funds when so used," with this "reasonable rate" being subject to regulatory approval (emphasis added). As discussed in Blake Testimony pp. 12-13, the Companies believe the WACC to be the more reasonable rate as it represents the Companies' actual cost of capital rather than the prescribed FERC formula rate. As shown in Exhibit KWB-1, failure to use WACC for purposes of calculating AFUDC results in the Companies not recovering \$11.3 million of prudently incurred capital costs on a project providing significant net benefits for customers with no projected increase in the Companies' combined revenue requirement. While the Companies are not aware of other investor owned utilities in the state recording AFUDC using the WACC, the Companies are aware that both Duke Kentucky and Kentucky Power have included AFUDC in rate base and thus have earned the full WACC on their associated AFUDC.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 25

Responding Witness: Kent W. Blake

Q-25. Refer to the Blake Testimony, page 15. Confirm that the listed utilities, which LG&E indicates have been granted Commission approval to record a regulatory asset for the remaining net book value of retired meters, are rural electric cooperatives. If confirmed, state whether LG&E is aware of this Commission approving similar accounting treatment for an investor-owned utility.

A-25. Confirmed. However, the Companies do not understand why the distinction in the request is being made nor why it would impact the recovery of prudently incurred costs for any utility under the Commission's jurisdiction. Having said that, in addition to the utilities noted in Mr. Blake's testimony, the Commission approved regulatory asset treatment for the remaining net book value of retired meters and related inventory as part of the Commission's approval of Duke Energy Kentucky, Inc.'s AMI deployment in Case No. 2016-00152. In that case, Duke Energy Kentucky had initially requested such regulatory asset treatment and eventually entered into a stipulation agreeing to such treatment, which stated, "The Parties agree that Duke Energy Kentucky shall establish a regulatory asset for the actual costs of the balance of the undepreciated value of the existing metering infrastructure upon retirement, including related inventory, as a result of the Metering Upgrade."[6] The Commission approved the stipulation with certain conditions that did not affect the regulatory asset treatment provision.[7]

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[6] *Application of Duke Energy Kentucky, Inc., for (1) a Certificate of Public Convenience and Necessity Authorizing the Construction of an Advanced Metering Infrastructure; (2) Request for Accounting Treatment; and (3) All Other Necessary Waivers, Approvals, and Relief*, Case No. 2016-00152, Order at Appx. page 3 (Ky. PSC May 25, 2017).

[7] Case No. 2016-00152, Order at 16 (Ky. PSC May 25, 2017).

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 26

Responding Witness: Eileen L. Saunders

Q-26. Refer to the Blake Testimony, page 16.

a. Regarding the status quo, provide a breakdown of the number of meters in LG&E's service territory that are manual read, radio read or AMR, or pilot AMI meters.

b. Regarding the status quo, provide the total number and types of meters that LG&E currently has in stock to serve as replacements for its existing system.

c. Regarding the status quo, for the models of meters currently in place in LG&E system, confirm that the models are still manufactured and readily available.

A-26.

a. The table below provides a breakdown of electric meters in LG&E's service territory as of 1/2/20 rounded to the nearest thousand.

Meters in Service	Number of meters
Manual read (non-communicating electromechanical and electronic meters)	382,000
Radio read or AMR	37,000
AMI meters[8]	12,000
Total	431,000

b. The below values show inventory values as of 1/12/21 rounded to the nearest thousand.

[8] AMI meters include meters in the AMS Opt-In Program, downtown network, as well as those used for the Company's Solar Share offering. AMI meters are currently manually read.

Meters in Inventory	Number of meters
Manual read (non-communicating electromechanical and electronic meters)	9,000
Radio read or AMR	3,000
AMI meters[9]	3,000
Total	15,000

c. Approximately 75% of the 431,000 total electric meters currently in place in LG&E's system are electromechanical, obsolete, and are no longer being manufactured or available. When these electromechanical meters require replacement, the Company routinely uses non-communicating electronic meters, which along with AMR and AMI meters, are available at this time.

[9] AMI meters include meters in the AMS Opt-In Program as well as those used for the Company's Solar Share offering. AMI meters are currently manually read.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 27

Responding Witness: Kent W. Blake

Q-27. Refer to the Blake Testimony, pages 24–25. Quantify each of the efficiencies and increased productivity measures LG&E has taken within the financial and administrative area.

A-27. Explicit quantification of LG&E's portion of the efficiency and productivity measures cited within the financial and administrative areas are as follows:

Description	Estimated Amount
Legal department estimated labor savings	$217,000
Implementation of robotic process automation– labor savings	$74,316
Reduction of income tax expenses – Federal Credits:	
Research and Development Credit	$245,000
Hydro Credit	$400,000
Reduction of income tax expenses – State Credits:	
Kentucky Coal Credit	$285,000
Kentucky Inventory Property Tax Credit	$260,000
Property Tax Exemption – Certain Software Costs	$700,000
Lower Bank Fees	$49,000
Corporate Guaranty replacement of surety bonds	$25,000

The other productivity measures did not result in explicity headcount reductions or other direct savings. However, both the quantified and unquantified efficiency and productivity measures have been embedded into the efficient cost of the Companies' finance and administrative areas embedded in the forecast test year in this proceeding.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 28

Responding Witness: Daniel K. Arbough

Q-28. Refer to the Blake Testimony, page 25. Provide the cost of upgrading the following financial systems:

a. PowerPlan;

b. Utilities International; and

c. Oracle E-Business Suites.

A-28.

a. LG&E's share of the PowerPlan upgrade was $1,723,972.

b. LG&E's share of the Utilities International upgrade is forecasted at $1,213,911.

c. LG&E's share of the Oracle E-Business Suites upgrade is forecasted at $9,599,052.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 29

Responding Witness: Kent W. Blake

Q-29. Refer to the Blake Testimony, pages 26–29. Quantify each of the efficiency measures in the area of Information Technology.

A-29. Louisville Gas and Electric Company share of the estimated costs to be mitigated due to the initiative taken to move to less expensive information technology solutions are as follows:

Product	**Avoided Costs**
Netezza Replacement	$ 133,255
Implementation of RabbitMQ	$ 209,881
Implementation of FoxIT	$ 145,220
Appsense replaced with FSLogix	$ 25,440
Session Initiation Protocol Implementation (Telecom cost savings)	$ 185,500
Microsoft Enterprise Agreement and Server and Cloud Enrollment	$ 95,615
RedHat Support	$ 6,183
EMC Transformational License Agreement	$ 284,080
Oracle Universal License Agreement	$ 134,090
	$ 1,219,264
Estimated potential labor costs mitigated	$ 178,875

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 30

Responding Witness: Lonnie E. Bellar

Q-30. Refer to the Direct Testimony of Lonnie E. Bellar (Bellar Testimony), page 4, lines 21–22. Provide the industry DART average as tracked by Edison Electric Institute for 2019.

A-30. The EEI industry DART average for 2019 was 0.74.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 31

Responding Witness: David S. Sinclair

Q-31. Refer to the Bellar Testimony, pages 11–12, and Case No. 2020-00061,[10] Exhibit SAW-1 at 22. Explain how a retirement date of 2028 for Mill Creek Unit 2 impacts the cost-effectiveness of Project 31. Provide supporting calculations.

A-31. Of the total Project 31 cost, $9 million is needed to have enough water treatment capacity to operate Mill Creek Unit 2 beyond 2025. The analysis summarized in Exhibit SAW-1 demonstrated that Project 31 is least-cost even if Mill Creek Unit 2 is retired on January 1, 2029. See discussion in Exhibit SAW-1 following Table 22 on page 22.

[10] Case No. 2020-00061, *Electronic Application of Louisville Gas and Electric Company for Approval of an Amended Environmental Compliance Plan and a Revised Environmental Surcharge* (Ky. PSC Sept. 29, 2020).

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 32

Responding Witness: Lonnie E. Bellar / Robert M. Conroy

Q-32. Refer to the Bellar Testimony, pages 13–14.

a. For each generation capital investment project, if Commission approval was sought, provide the case number. If Commission approval was not sought, provide support for LG&E's decision to not seek Commission approval.

b. Provide the components of the other capital investment category.

A-32.

a. The Companies have not sought Commission approval for any of the generation capital investments as the projects are ordinary extensions in the usual course of business. The Companies review all capital projects to determine whether a Certificate of Public Convenience and Necessity ("CPCN") or any other regulatory approval is required. In determining whether a CPCN is required, the Companies consider whether a project is duplicative, competes with the facilities of other utilities, or will materially affect the Company's financial conditions. Particularly regarding materiality, the Companies abide by the Commission's recent requirement that "any capital expenditure that exceeds $100 million" will be considered material.[11] The LG&E generation capital investment projects are not duplicative, do not compete with the facilities of other utilities, and do not materially affect LG&E's financial condition. The table on pages 13-14 of the Bellar testimony shows projects in the aggregate. None of the projects individually exceeds the $100 million threshold or otherwise materially affects LG&E's financial condition.

b. See attached.

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[11] *Electronic Application of Louisville Gas and Electric Company for Approval of an Amended Environmental Compliance Plan and a Revised Environmental Surcharge*, Case No. 2020-00061, Order (Ky. PSC Sept. 29, 2020).

Category	Project No.	Project Description	$M
Other	132756	GS GE Lab Equip	$0.05
Other	132931	GS CDM Lrg Format	$0.03
Other	133076	GS GE Dam Impnd	$0.07
Other	133653LGE	TC SAFETY & ERT EQUIP	$0.03
Other	133671	EFFLUENT WATER STUDY-MC	($5.44)
Other	133679	EFFLUENT WATER STUDY-TC LGE	($2.05)
Other	136480	GS GE Test Equipment Pool LGE	$0.14
Other	136565	GS SL Oil Dlctrc Test LGE	$0.03
Other	136566	GS SL Oil Pwr Fact Test LGE	$0.04
Other	138411	TC1 PULVERIZED GEAR BOX	$0.92
Other	139726	TC1 REPLACE BOILER ROOM ROOF	$0.52
Other	140342LGE	MISC TOOLS	$0.01
Other	144494	GS GE PDM Equip Upgrade	$0.01
Other	144503	GS CDM GMD Protection	$0.00
Other	144514	GS CDM CIP Ver 8.0 LGE	$0.05
Other	144531	CR7 Misc Project (multi-year)	$0.20
Other	148083	OF Bridge Resurface	$1.34
Other	148132	GS GE CV Landfill Instrum	$0.04
Other	148135	GS GE CV GIS	$0.08
Other	148155	GS CDM CIP Ver 9.0	$0.06
Other	151005	TC1 OXIDATION AIR BLOWERS	$0.47
Other	151857	MC Landfill Closure	$1.52
Other	152330	MC Gypsum	$0.41
Other	153009	TC1 CEM SHELTER REPL	$0.15
Other	153056LGE	TC IMPOUNDMENT IMPROVEMENTS	$0.04
Other	153072LGE	TC FUEL HANDLING DOZER	$0.22
Other	154324	MC Flyash Silo "A" Baghouse	$0.52
Other	154325	MC Flyash Silo "B" Baghouse	$0.58
Other	154388	MC Turbine Room LED Lighting	$0.09
Other	154389	MC1 Fire Protection	$0.15
Other	154390	MC1 LED Lighting	$0.27
Other	154391	MC2 Fire Protection	$0.10
Other	154392	MC2 LED Lighting	$0.27
Other	154393	MC3 Fire Protection	$0.15
Other	154394	MC3 LED Lighting	$0.30
Other	154396	MC4 Fire Protection	$0.15
Other	154397	MC4 LED Lighting	$0.60
Other	154463	MC1 Turbine Room Roof Drains	$0.18
Other	154464	MC2 Turbine Room Roof Drains	$0.18
Other	154465	MC3 Turbine Room Roof Drains	$0.20
Other	154547	MC Bottom Ash Hndlg Cap Spares	$0.28
Other	154548	MC GPP Capital Spares	$0.28
Other	154723LGE	TC COAL HANDLING D6 DOZER	$0.19
Other	154753	TC VEHICLES	$0.10
Other	154831	CR7 UV LIGHTING	$0.05
Other	155124	GS GenEng MHM Software	$0.23
Other	155126	GS GenEng Vibration Monitor	$0.08
Other	155127	GS GenEng Transformer Protection	$0.14
Other	156665	MC3 TDBFP Fire Protection	$0.10

Category	Project No.	Project Description	$M
Other	156667	MC4 TDBFP Fire Protection	$0.10
Other	156717	MC3 Boiler Room Louvers	$0.18
Other	156718	MC3 SCR Roofing	$0.03
Other	156719	MC4 Boiler Room Louvers	$0.18
Other	156722	MC4 SCR Roofing	($0.00)
Other	156723	MC CH Diesel Fuel Tank	$0.17
Other	157239	MC Ammonia Fogging System	$0.00
Other	157470CR	GS SL CCR WELL MONITOR CR 2019	$0.01
Other	157471CR	GS SL CCR WELL MONITOR CR 2020	$0.08
Other	157472CR	GS SL CCR WELL MONITOR CR 2021	$0.15
Other	157804	GS CR7 Bus Tie	$0.00
Other	158152	MC SynMat Plant RETIREMENT	($0.03)
Other	158153	MC Beneficial Reuse RETIREMENT	($0.03)
Other	158560	MC Admin Bldg Card Readers	$0.04
Other	158836LGE	TC RESTROOM 3FL WOMEN	$0.00
Other	158876	CR7 Ket Boil Upgrade	$0.51
Other	158878	CR7 Waterbox Lining	$0.05
Other	158921	GS Transformer Prot TC1	$0.00
Other	158929	GS Transformer prot CR7	$0.03
Other	158938LGE	TC 5TH FLR RESTROOM UPGRADE	$0.01
Other	158941	BRCT GT24 Crane Controls Upgr	$0.01
Other	159048LGE	TC LED LIGHTING 2019	$0.05
Other	159056LGE	TC LAB EQUIPMENT 2019	$0.03
Other	159058LGE	TC LAB MONITORS-2019	$0.01
Other	159060LGE	TC WASTE SLUDGE PUMPS	$0.10
Other	159065LGE	TC SAFETY ERT 2019	$0.07
Other	159139	CR7 EQ BLDG SECUR	($0.00)
Other	159172LGE	TC MOORING CELL REFURB 2019	$0.00
Other	159296LGE	TC BREAKER TRAINING UPGD	$0.00
Other	159431	CR7 Lightning Arrestors	$0.00
Other	159438	OF Roof Replacement	$0.07
Other	159440	PR11 Aux Breaker Replace	$0.06
Other	159441	PR12 Aux Breaker Replace	$0.06
Other	159442	PR13A Aux Breaker Replace	$0.03
Other	159444	PR13B Aux Breaker Replace	$0.03
Other	159586	MC2 Hydro Feed Pump	$0.02
Other	159625	CR7 Clarifier Inlet Valve	$0.01
Other	159692	MC Shipley Ln Prop	$0.16
Other	159966	MC4 WATERWALL PANEL	$1.58
Other	159972	MC3 WATERWALL PANEL	$2.48
Other	159974	MC Cybersecurity 2020	$0.10
Other	159994	MC Xfrmr Fire Protection	$0.20
Other	159996	MC3 Spare GSU Transformer	$1.50
Other	160323	MC Elevator Controls	$0.30
Other	160416	OF MASNRY AND TRASHRK UPGRADES	$12.84
Other	160557	MC Screen Wash BP A&B	$0.01
Other	160558	MC CHG LIGHTING	$0.02
Other	160559	CR7 Wtrtrmt Catwalk	$0.01
Other	160575LGE	TC PRED MAINT DEVICE 2019	$0.05

Category	**Project No.**	**Project Description**	**$M**
Other	160677LGE	TC MATERIAL HAND OFFICE UPGD	$0.04
Other	160688	CR7 Training Simulation Bldg	$0.00
Other	160714	MC #1 Fire Pump	$0.01
Other	160716	CR7 ISS Housing	$0.12
Other	160741LGE	TC HAUL ROAD PAVING 2019	$0.17
Other	160744	GS SL Discrete Analyzer	($0.02)
Other	160755	OF Forklift	$0.00
Other	160758	GS SL Office HVAC	($0.00)
Other	160760	GS SL Mercury 1631	$0.00
Other	160765	CR7 Training Modules	$0.02
Other	160776LGE	TC WET PIT LIFT STATION UPGD	$0.10
Other	160794	MC C Coal Conv Belt Repl	$0.13
Other	160811	CR7 Emerson Start	$0.11
Other	160847	GS GL Coal Mstr Ash Anlzr	$0.04
Other	160907	OF Air Compressor	$0.03
Other	160913	BRCT 6&7 HVAC Repl	$0.01
Other	160956	MC Skid Steer Loader 2019	$0.05
Other	160969LGE	TC ALL TERRAIN FORKLIFT	$0.05
Other	160971	TC WATER TRUCK	$0.16
Other	160972	TC VACCUM TRUCK	$0.38
Other	160973	CSS Port Pwr Dist	$0.02
Other	160994	MC Utility Vehicle 2019	$0.03
Other	161003	CR7 ICM Expansion 2019	$0.01
Other	161027	CSS Abrasive Wtr Jet	$0.26
Other	161028	CSS Cont Milling Mach	$0.18
Other	161029	CSS Blanche Grinder	$0.17
Other	161030	CSS Horiz Boring Mill	$0.30
Other	161031	MC3E&G CT Fan Gearbox 2019	$0.06
Other	161047	GS CDM MC GE SecST	$0.17
Other	161062	OF Station Battery Charger	$0.03
Other	161067	MC Vacuum Truck 2019	$0.38
Other	161069	MC Air Handling Unit #7	$0.07
Other	161075	MC Telehandler Forklift 2019	$0.12
Other	161076	MC Carry Deck Crane 2019	$0.18
Other	161104LGE	TC GYPSUM LOADOUT TRANSFORMER	$0.02
Other	161111	GS GE M Viscometer	$0.02
Other	161121	GS GE M Spark OES	$0.02
Other	161123	GS CDM Panduit Blcks	$0.02
Other	161124	MC G1 Conv Blt Replace	$0.03
Other	161153	CR7 Emerson TREX Commun	$0.00
Other	161155	PR13 CEMS Data Controller	$0.01
Other	161177	GS Transformer Prot MC2	$0.17
Other	161180	MC4A Mechanical Exhauster 2019	$0.07
Other	161236	GS CDM TCA Switch	$0.00
Other	161263	MC Stacker/Reclaimer Boom Belt	$0.03
Other	161303	CR7 WARTY SHORTAGE LGE	$0.06
Other	161310	MC Forklift 2019	$0.06
Other	161315LGE	GS CDM KIP Printer LGE	$0.01
Other	161463LGE	TC LAB EQUIPMENT 2020	$0.02

Category	Project No.	Project Description	$M
Other	161466LGE	TC LAB MONITORS 2020	$0.09
Other	161478	TC1 SALE OF GEHL TELEHANDLER	($0.02)
Other	161482LGE	TC LED LIGHTING 2020	$0.11
Other	161484LGE	TC SAFETY & ERT 2020	$0.03
Other	161488	TC VEHICLES 2020	$0.10
Other	161709	MC1&2 Absorber Mechanical Seal	$0.12
Other	161711	MC 1A Hydrocyclone Feed Pump	$0.08
Other	161877	CR7 Cool Towr Wall	$0.01
Other	161900	CR7 Aux Stm Heater	$0.00
Other	161948	OF PARKING EXPANSION	$0.02
Other	161952	OF HEADWORKS CONCRET	$0.48
Other	162218LGE	TC CT INSTALL LED LIGHTING	$0.01
Other	162240	Gypsum PST Replacement	$2.98
Other	162328	MC Landfill Closure 2020	$0.31
Other	162330	CSS TPO Roofing System	$1.29
Other	162331	CSS CNC Lathe	$0.33
Other	162332	CSS Hexgon Arm	$0.10
Other	162333	CSS Pri P90 Ironworker	$0.07
Other	162343	OF Site Paving	$0.26
Other	162344	OF Sump Oil Detection	$0.03
Other	162345	CR7 Condensor Clean	$0.03
Other	162363	CSS Water Jet Drill Head	$0.02
Other	162364	CSS Lift Truck	$0.04
Other	162366	CSS ROTARY AIR COMPRES	$0.06
Other	162419	MC PERSONEL CARRIER	$0.02
Other	162521	MC3 Boiler Room Roofing	$0.39
Other	162546	1 AQCS Air Compressor O/H 21	$0.04
Other	162547	MC2 AQCS Air Compress OH 21	$0.04
Other	162548	MC1A PJFF Air Compress OH 21	$0.03
Other	162549	MC1B PJFF Air Compress OH 21	$0.03
Other	162551	MC2B PJFF Air Compress OH 21	$0.03
Other	162556	MC1 Inst Air Compress OH 21	$0.04
Other	162604	MC Warehouse Dock Cover	$0.12
Other	162607	MC Battery Room HVAC	$0.09
Other	162608	MC2 Clg Twr Svc Bldg HVAC	$0.08
Other	162609	MC#1 Uninterruptable Power Sup	$0.05
Other	162626LGE	TC MTCE CLEAN SHOP ADDITION	$0.04
Other	162688	CR7 ISS Housing Rebuild	$0.06
Other	162782	KU SOLAR SHARE ARRAY 3	$0.13
Other	162859	CR7 Spare CEM Analyzer	$0.01
Other	162866	MC3 Nox Probe Replacement 2021	$0.40
Other	163148	OF Service Water Intake Screen	$0.02
Other	163149	OF Gen Protection Relay	$0.06
Other	163150	OF Site Utility Vehicle	$0.01
Other	163152	OF Elev 408 Lighting	$0.13
Other	163269	SOLAR SHARE ARRAY 3	$0.31
Other	163276	SOLAR SHARE ARRAY 4 LGE	$0.37
Other	163313	CR7 Air Compressor 2020	$0.01
Other	163382	CR RIVERBANK STABILIZATION	$0.30

Category	**Project No.**	**Project Description**	**$M**
Other	163497	Screenhouse Bromide Conveyor	$0.02
Other	163508	CR7 Sump Pumps 2020	$0.02
Other	163522	OF TRASH RACK GUIDES	$1.50
Other	163523	CR7 Site Utility Vehicles 2020	$0.05
Other	163655	CR7 Plant Vehicle 2020	$0.07
Other	GSCACONTL	ACCESS CONTROL OT	$0.01
Other	GSCASMGTL	ASSET MANGMT OT LGE	$0.32
Other	GSCCONFGL	CONFIGURATION OT LGE	$0.02
Other	GSCDRBCL	DISASTER RECOVER OT LGE	$0.01
Other	GSCINV20L	GS CDM OT Inv Mgmt- 2020	$0.15
Other	GSCIPV8L	GS CDM CIP Version 8 LGE	$0.04
Other	GSCOTNWKL	NETWORK MONITORING OT LGE	$0.11
Other	GSCOTSEGL	NETWORK SEGMENTATION OT LGE	$0.17
Other	GSCVULMGL	VULNERABILITY MANGMT OT LGE	$0.02
Other	GSESPICTL	SPIR CT TRIMBLE COUNTY LGE	$0.00
Other	GSESPIOFL	SPIR OHIO FALLS LGE	$0.04
Other	GSESPIRTL	SPIR TRIMBLE COUNTY LGE	$0.00
Other	GSETCMATL	TC1 MAT DGA monitor LGE	$0.07
Other	GSMVMEL	GS GE Vibration Monitor Equip	$0.08
Other	GSSLABTCL	SYSTEM LAB TRIMBLE COUNTY- LGE	$0.41
Other	GSSLALRML	GS SL Smart Alarms LGE	$0.01
Other	GSSLBTUCL	GS SL BTU Calorimeter - LGE	$0.03
Other	GSSLLABEL	GS GE Lab Equip 2020	$0.06
Other	GSSLOPCTL	GS SL Oil Particle Counter-LGE	$0.02
Other	GSSLPWCRL	GS SL Ash Pond Wells - CR	$0.12
Other	GSSLRENOL	GS SL Lab Renovation 2021 LGE	$0.04
Other	GSSLRWTRL	GS SL Reagent Water Sys - LGE	$0.02
Other Total			**$42.03**

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 33

Responding Witness: Lonnie E. Bellar / Robert M. Conroy

Q-33. Refer to the Bellar Testimony, page 20, regarding the Southeast Energy Exchange Market (SEEM).

a. Explain how all costs associated with SEEM will be accounted for.

b. Provide all studies supporting how participation in SEEM would be favorable to LG&E and ratepayers.

c. Provide an update on all FERC filings.

d. Explain whether any costs associated with SEEM membership or start-up are included in the test year. State whether LG&E plans to recover membership or start-up costs. If so, state the mechanism through which LG&E would recover such costs (i.e., base rates, Off-System Sales tracker).

A-33.

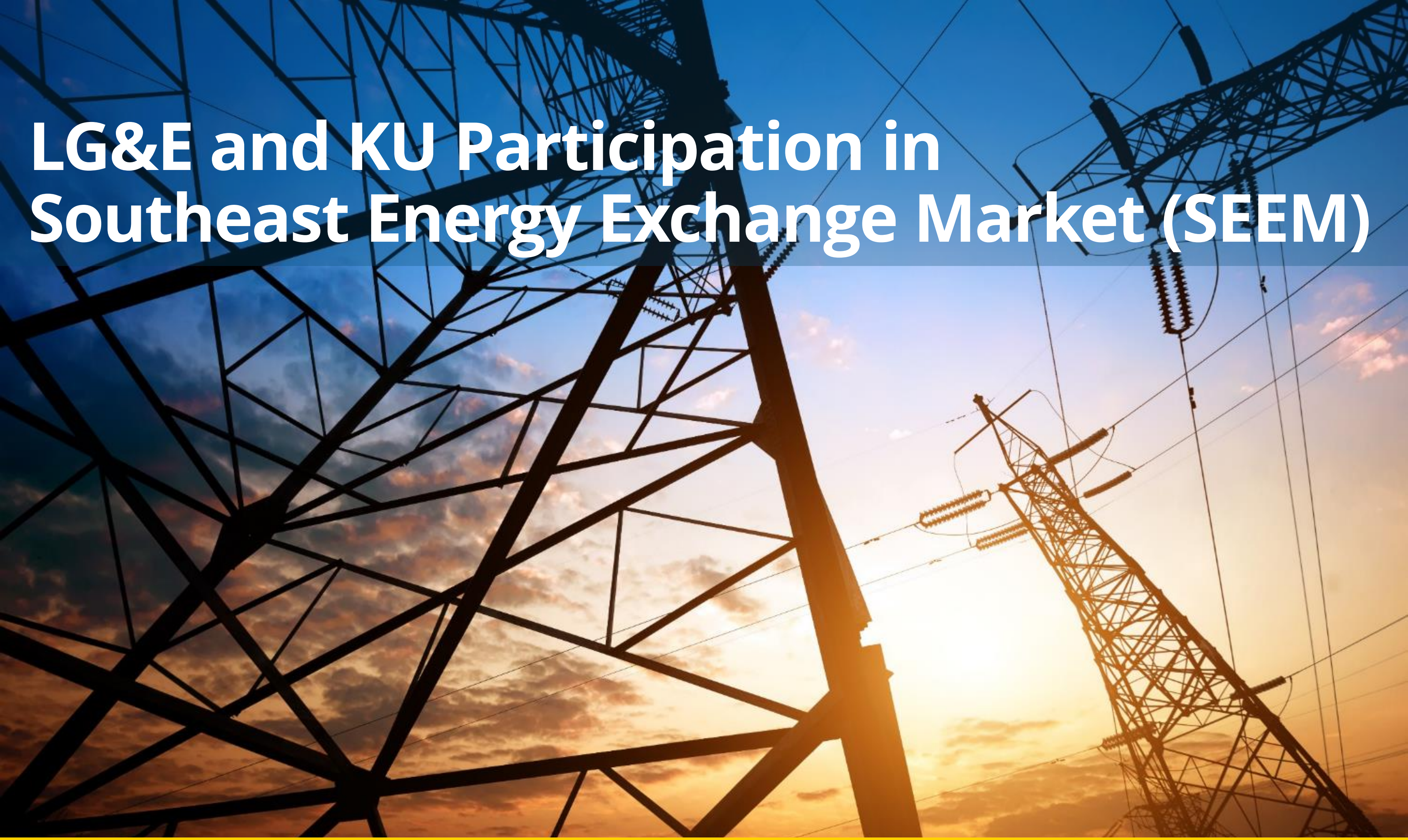
a. The forward test year costs were budgeted to O&M FERC account 556 and are included in the base rate revenue request in this case.

b. See the attached presentation provided to the Commission and Attorney General at the September 17, 2020 meeting regarding SEEM. Also see the attached cost-benefit analysis that was subsequently provided to the Commission and Attorney General following the referenced meeting.

c. No FERC filings have been made and the timing of any such filings is uncertain at this time.

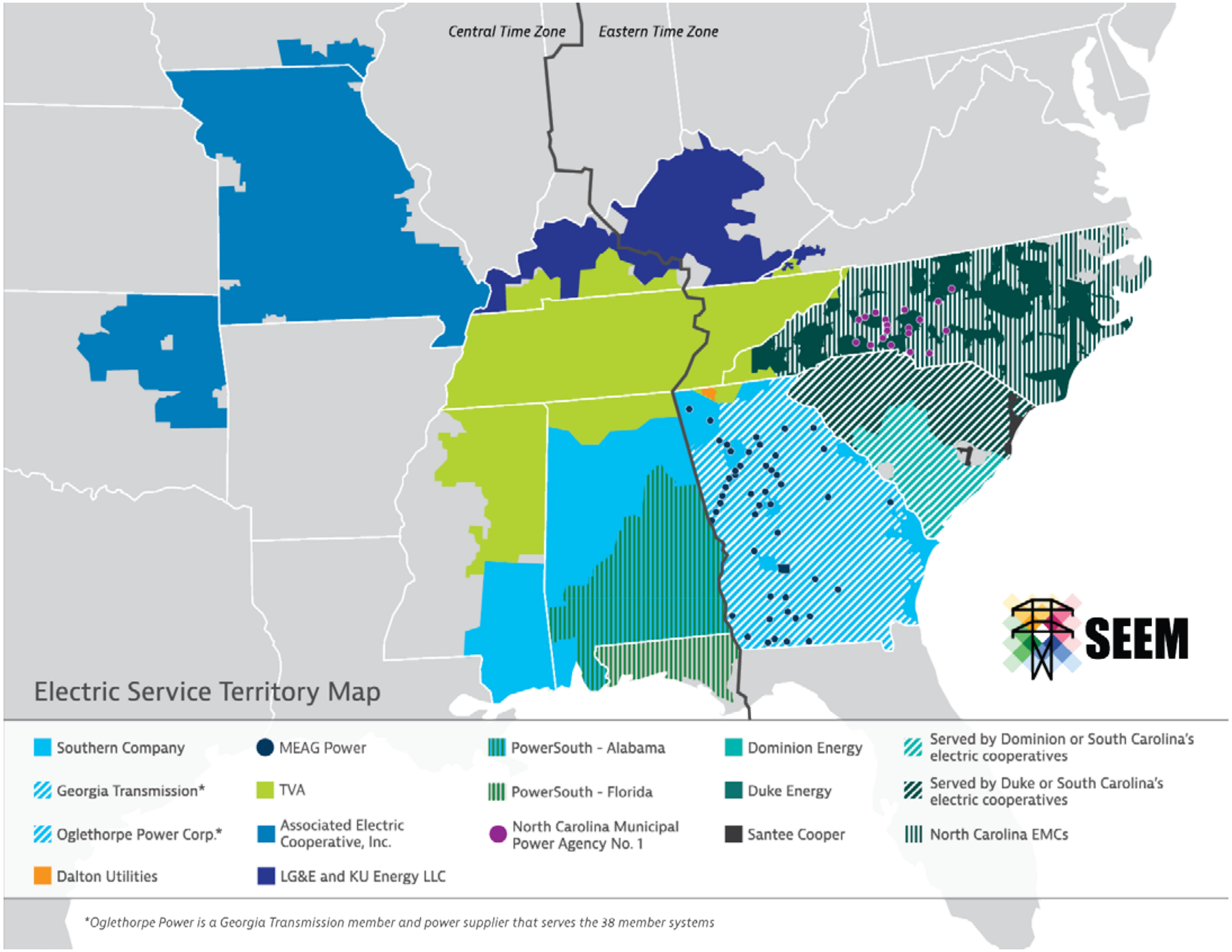
d. Yes, $9,660 is included in the test year. Any future costs associated with SEEM membership would be included as part of normal generation and transmission operating expenses in base rates.

LG&E and KU Participation in Southeast Energy Exchange Market (SEEM)



Kentucky Public Service Commission Meeting (#952)
September 17, 2020

SEEM Footprint



Case No. 2020-00350
Attachment 1 to Response to PSC-2 Question No. 33(b)
Page 2 of 10
Bellar/Conroy

SEEM Core Principles

Our objective is to create a Southeastern Energy Exchange Market enabling the region to be the most stable, affordable, reliable, and cleanest in the United States.

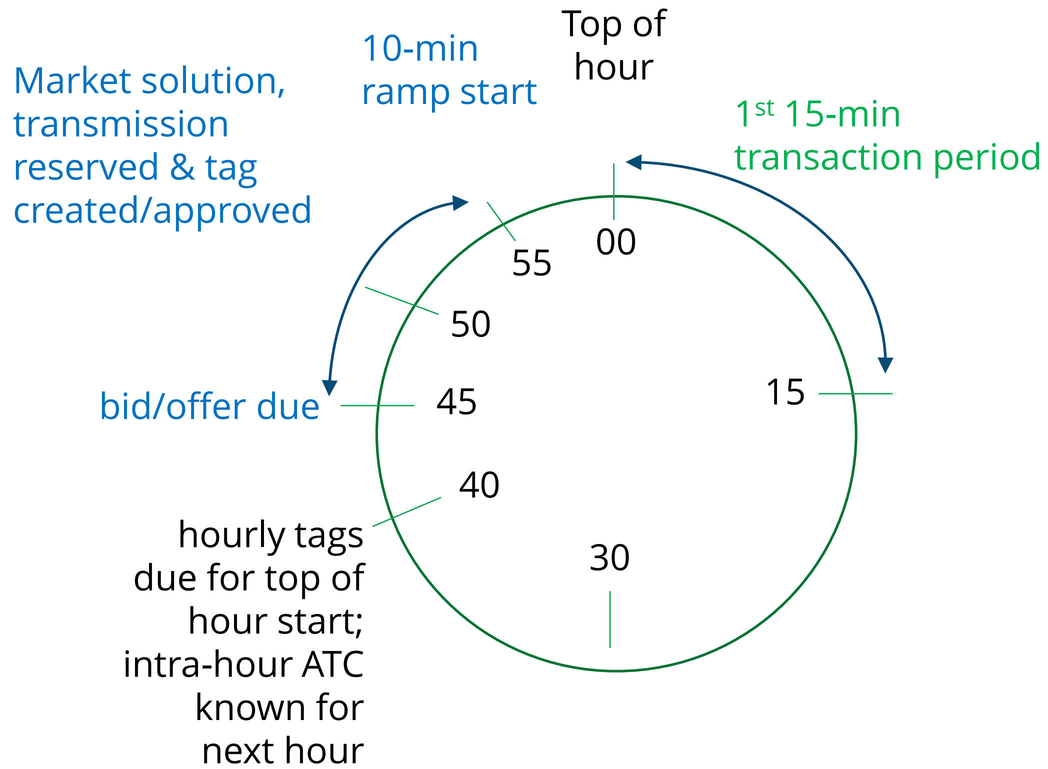
- Each utility/state maintains control of generation and transmission investment decisions
- Each Transmission Provider remains independent with its own transmission tariff
- Each Balancing Authority remains independent
- Minimize bureaucracy while maximizing benefits to customers
- Participation is voluntary
- Market benefits to exceed cost, collectively and for each market participant
- Ensure transparency in best governance and best operations while maintaining member confidentiality

Operations and Implementation Overview

- The Southeast Energy Exchange Market (SEEM) is a centralized, region-wide, automated intra-hour market, with the goal of **sub-hourly trading between utilities utilizing left over transmission** to achieve additional cost savings in the region.
- Provides participants with **an additional voluntary market** to optimize assets and provide value to customers.
- Decisions to establish SEEM are driven by a focus on **minimal changes to the existing bilateral market**.

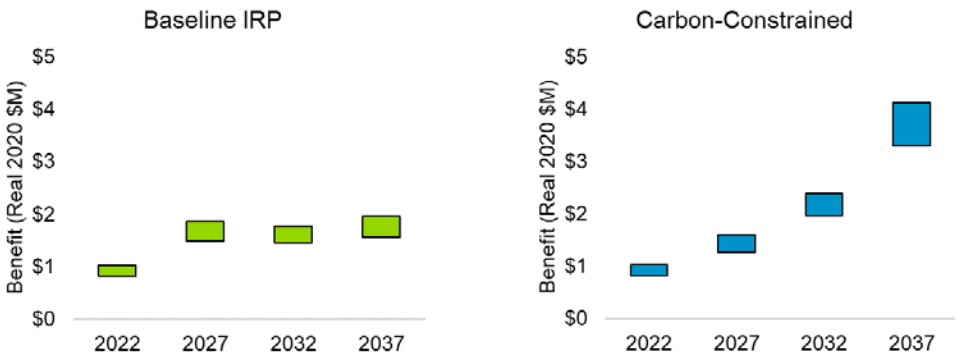
Market Structure

- 15 Minute Bilateral Market (Phase 1)
  - Four 15-minute intra-hour increments
  - Standard (“normal”) electronic tags
  - Standard 10-min “across the top” ramping
  - Deadline for bid/offer submission is 15 minutes prior to schedule start
  - Change e-tag deadline from 20-minutes ahead to 10-minutes ahead



Navigant Predicts Benefits for LG&E and KU; Additional Value in a Carbon Constrained Scenario

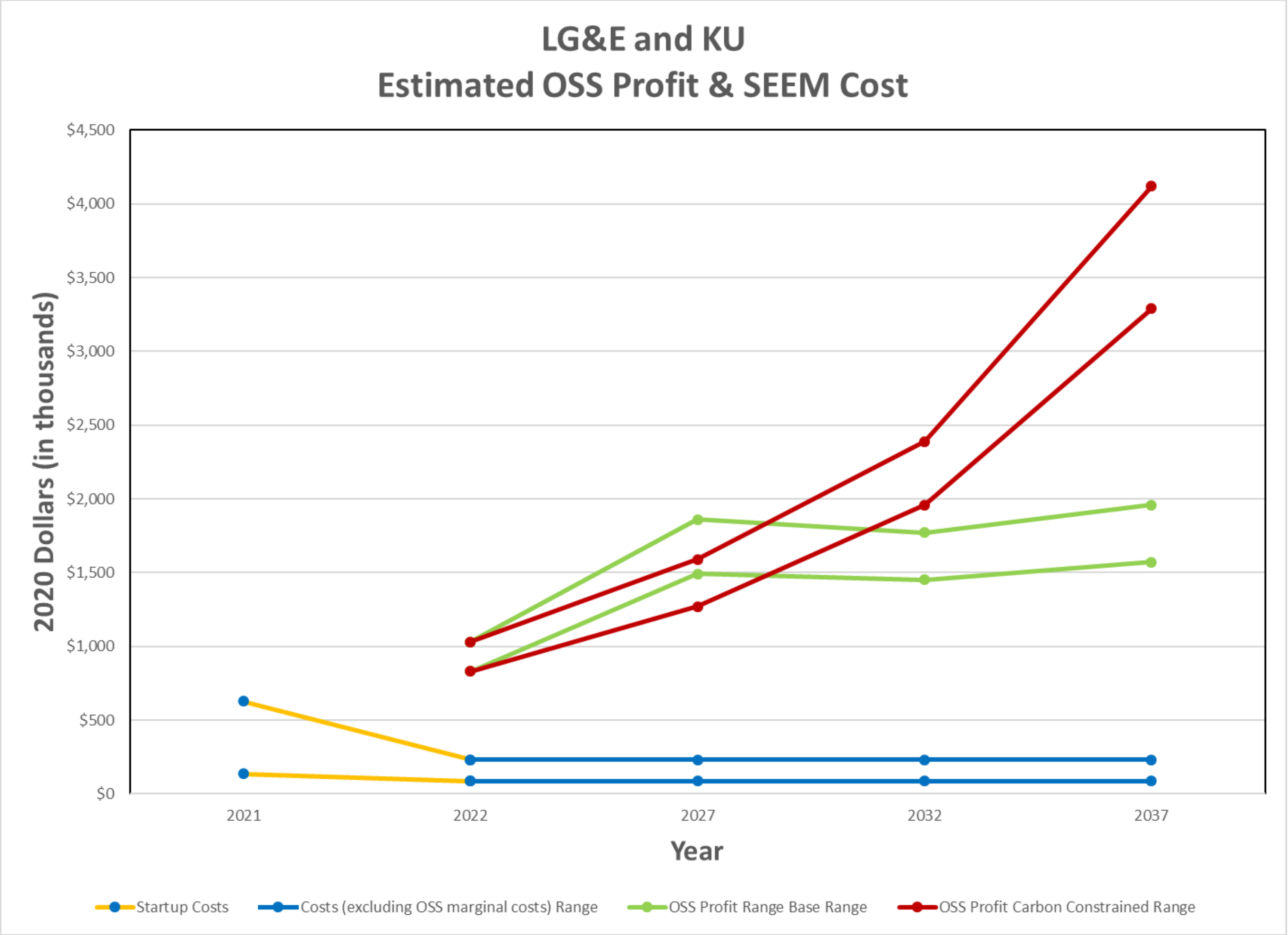
- Navigant performed a study under a baseline IRP outlook and a future carbon constrained scenario.
  - Navigant forecasts LG&E and KU benefits (i.e., economic purchases and OSS profit) of approximately $1.5 million per year on average in the baseline IRP outlook, with benefits increasing slightly on an annual basis prior to stabilizing around $2 million.
  - Under a carbon-constrained scenario, LG&E and KU benefits almost double by the 2030s and peak around $4 million.



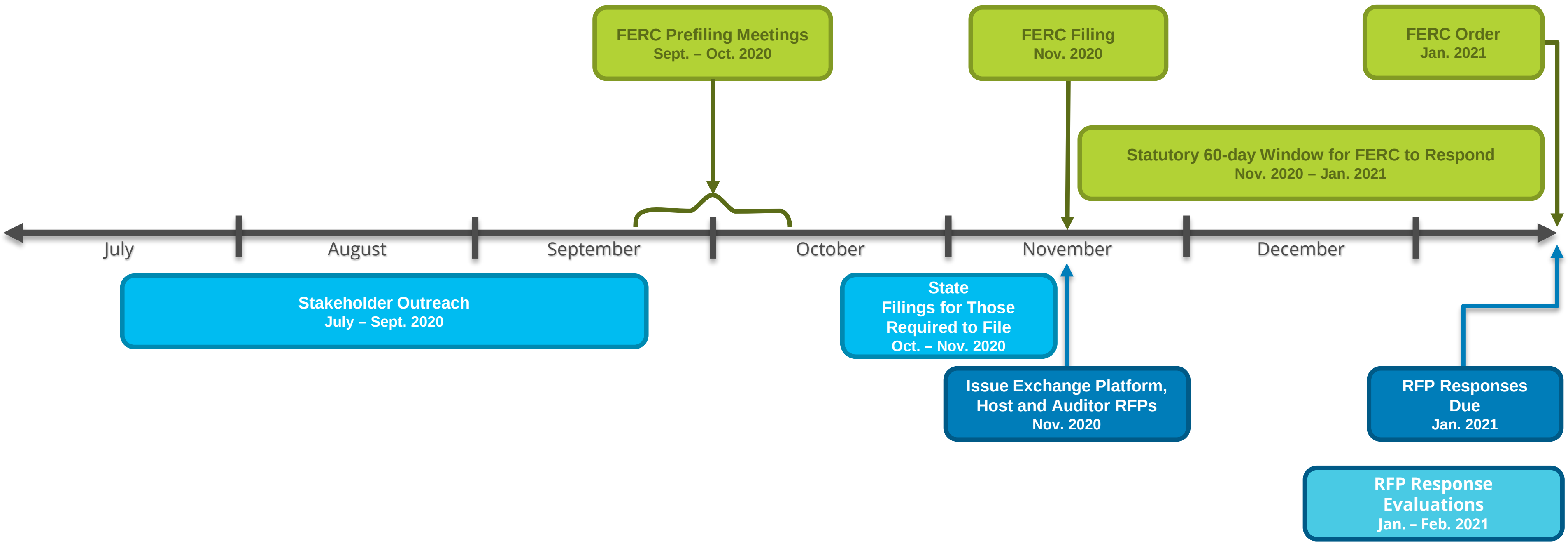
LG&E and KU Incremental Costs are Expected to be Insignificant

- Limited startup costs primarily for development of the trading platform; outside legal fees for FERC filings.
- Low ongoing annual costs are expected.
  – LG&E and KU's share of trading platform maintenance, administration, and auditing plus limited specific LG&E and KU costs.
  – No additional headcount is required.
- Cost estimates are based on "ballpark" ranges (allocation to LG&E and KU of approximately 6%).
- Designed for easy exit.

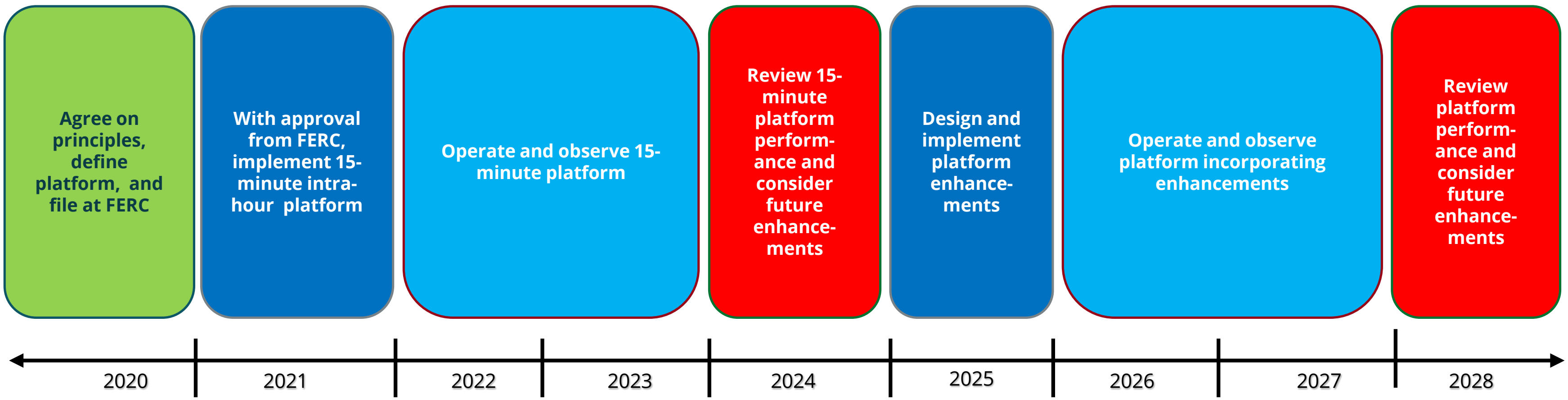
Low Startup and Ongoing Costs Relative to Expected Off-System Sales Profit



2020 FERC Filing Timeline



SEEM Long Term Plan



Southeast EEM Benefits and Non-Centralized Costs

Prepared for:

Participants in Southeast Energy Exchange Market

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July 6, 2020

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DISCLAIMER

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[1] Guidehouse LLP completed its acquisition of Navigant Consulting, Inc. and its operating subsidiaries on October 11, 2019. For more information, see: https://guidehouse.com/news/corporate-news/2019/guidehouse-completes-acquisition-of-navigant.

EXECUTIVE SUMMARY

Study Scope and Purpose

A coalition of Southeast utilities, cooperatives, and municipalities engaged Guidehouse and Charles River Associates (collectively referred to as Guidehouse/CRA) to examine the potential benefits of forming a Southeast Energy Exchange Market (Southeast EEM). The proposed Southeast EEM is a centralized automated market for trading energy between electric utilities in the Southeast U.S. on an intra-hour basis. Southeast EEM participants include Associated Electric Cooperative Inc., Central Electric Power Cooperative, Dalton Utilities, ElectriCities of North Carolina, Inc., Dominion Energy South Carolina, Duke Energy Carolinas, Duke Energy Progress, Georgia System Operations Corporation, Georgia Transmission Corporation, LG&E and KU Energy, MEAG Power, NC Electric Membership Corporation, Oglethorpe Power Corporation, Santee Cooper, Southern Company, and TVA. In aggregate, the prospective Southeast EEM participants have over 160 GW of capacity serving over 640 TWh of energy for load. As an intra-hour market, the Southeast EEM would supplement the existing day/hour-ahead bilateral market in the Southeast making use of any remaining available transfer capability (ATC) to obtain additional savings in energy costs and improved renewable integration in the region.

Guidehouse/CRA estimated Southeast EEM benefits against a status quo of no intra-hour interface trading, with two market outlooks evaluated: an *IRP Baseline Outlook* and a *Carbon-Constrained Outlook*. The *IRP Baseline Outlook* is based on the Guidehouse Reference Case outlook on North American power markets, supplemented by each Southeast EEM participant's most recent integrated resource plan (IRP). The *Carbon-Constrained Outlook* is an alternative market outlook that explores a high renewable future in the Southeast with ambitious carbon reduction goals. For purposes of the benefits analysis, Southeast EEM operations are assumed to begin in 2021 and benefits are assessed over the 20-year period from 2021 to 2040.

Based on the Guidehouse/CRA analysis, Southeast EEM benefits across the Southeast EEM footprint are projected to be over $40 million (2020$) per year in the *IRP Baseline Outlook*. In the *Carbon-Constrained Outlook*, with much higher renewable and energy storage penetration in the out-years, Southeast EEM benefits increase substantially over time to reach over $100 million (2020$) per year by 2037.

In addition to the benefits analysis, Guidehouse/CRA assisted each potential Southeast EEM participant in estimating the internal non-centralized costs, such as additional labor and software, that would be incurred for each participant to start-up and operate in the proposed Southeast EEM market. The aggregate sum of these Southeast EEM participant internal non-centralized costs are approximately $3.1 million per year (2020$) when levelized in real terms over the 2021-2040 period.[2]

[2] These internal member costs do not include the costs of operating the Southeast EEM trading platform, and the costs of other centralized Southeast EEM administrative and monitoring expenses.

Southeast EEM Overview

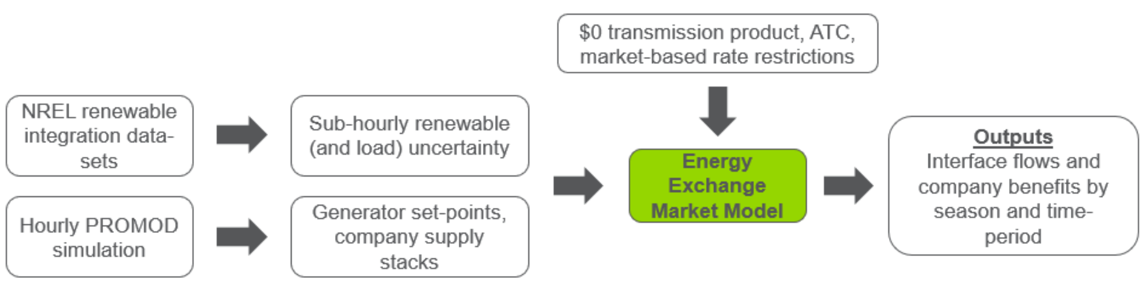
Under the proposed Southeast EEM, there will be 15-minute intra-hour trading across Southeast EEM participant interfaces, making use of any remaining non-firm ATC, with bids and offers matched through a platform to be developed by a third-party vendor with access provided to each of the Southeast EEM participants for supplying their input information.

In the Southeast EEM, there will be a new $0/MWh transmission product which can only be procured in the intra-hour market for any remaining non-firm ATC and represents the lowest level priority of non-firm transmission service. All resulting Southeast EEM transactions are between two parties, with the point of sale for each transaction at the buyer's BA interface. Southeast EEM trade prices are calculated using a bilateral "split savings" approach between the matched bid and offer. Each Balancing Authority ("BA") would be responsible for continuing to ensure adequate resource plans for meeting reserve requirements and would continue to oversee its generation and load balancing.

Modeling Approach

A combination of production cost modeling and linear programming optimization was used to estimate Southeast EEM benefits. Guidehouse uses PROMOD, a commercially available software, to develop its wholesale energy market price and plant performance forecasts.[3] In this study, PROMOD is first used to simulate regional system operations under status quo conditions, including the daily and hourly bilateral trading that takes place today. The hourly PROMOD data (e.g., output of each generating unit in the footprint) is then pulled into the Southeast EEM Model to analyze whether additional economic intra-hour trades can be made among Southeast EEM participants. This sub-hourly model incorporates load and renewable generation uncertainty, ATC, and the $0/MWh non-firm transmission product.[4] The modeling process is illustrated in Figure 1

Figure 1. Southeast EEM Modeling Flow Diagram



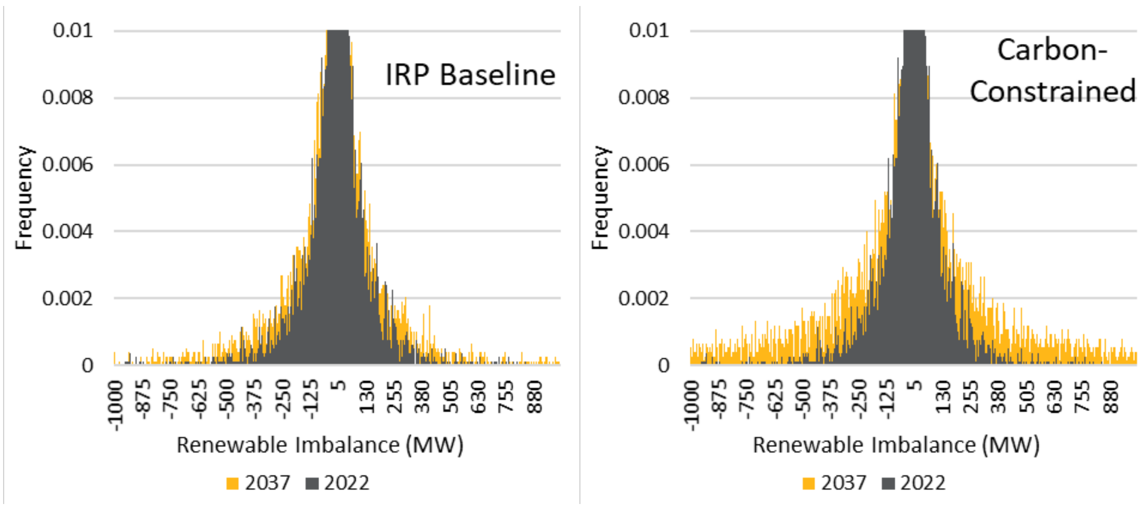
One Southeast EEM objective is to assist utilities in the Southeast with lowering energy cost for customers and renewable integration. With solar capacity representing the predominant renewable technology in the Southeast, the largest sub-hourly imbalances are observed during "solar hours" (hours ending 8:00 am to 7:00 pm). A distribution of the aggregated 15-minute renewable imbalances during solar hours for the Southeast EEM participants is shown in Figure 2 for 2022 and 2037. As shown, in approximately 16% of these 15-minute periods during solar hours, imbalances exceed +/- 130 MW for the participating BAs, with certain 15-minute periods having much larger imbalances.

[3] PROMOD is a detailed energy production cost model used to simulate hourly chronological operation of generation and transmission resources on a nodal basis.

[4] As discussed in Section 1.3.2, any market-based rate restrictions for sales within BAs that were identified in discussions with Southeast EEM participants are incorporated in the sub-hourly bilateral trade modeling. Financial transmission losses are considered in the model.

In the *Carbon-Constrained Outlook*, the significant renewable expansion by the late 2030s results in the larger imbalances becoming much more frequent. It should be noted that the Southeast EEM can help participants manage periods of excess energy and high net demand ramping created by renewable integration. However, the EEM will not be able to address minute-to-minute renewable volatility and intermittency due to the 15-minute schedule transaction update frequency.

Figure 2. Distributions of 15-Minute Renewable Imbalances During Solar Hours



Note: distribution frequency truncated at 0.01 for illustrative purposes; each bar in the histogram represents a 5 MW bin; higher imbalances attributed to Balancing Authorities with higher renewable penetration

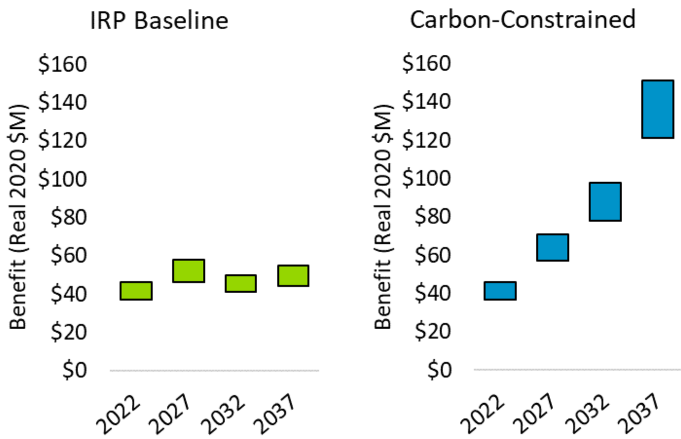
Southeast EEM Benefits

As shown in Figure 3, Southeast EEM benefits (prior to netting any Southeast EEM start-up or operating costs) average $47M per year (2020$) in the *IRP Baseline Outlook*. Benefits increase slightly in the mid-term largely as a result of higher renewable penetration, before stabilizing for the remainder of the forecast.[5]

In the *Carbon-Constrained Outlook*, benefits increase significantly in the out-years driven by increasing sub-hourly uncertainty from higher renewable penetration and increased flexibility from the expansion of battery storage. While benefits are considerably higher in the *Carbon-Constrained Outlook*, they are also more uncertain, as the resource mix and power system operation in the 2030s represents a significant change from today.

[5] The annual benefits are represented as a range in these charts to reflect the uncertainty primarily associated with market participation and ATC, and to a lesser degree, ramping capability of gas and storage assets and permissible renewable curtailment.

Figure 3. Southeast EEM Benefits



The Southeast EEM benefits are derived from fuel cost savings, as the Southeast EEM gives participants access to a lower cost, more efficient pool of resources in managing subhourly load and renewable uncertainty. As shown in Table 1, annual benefits represent approximately 0.3% to 0.4% of total annual production costs in the Southeast EEM footprint in the *IRP Baseline Outlook*. Benefits as a proportion of total production costs are much higher in the *Carbon-Constrained Outlook*, reaching 1.1% by 2037.

Table 1. Southeast EEM Benefits Relative to Southeast EEM Footprint Production Costs

Year	Southeast EEM Footprint Production Costs ($2020)		Southeast EEM Gross Benefit ($2020)	
	IRP Baseline	Carbon-Constrained	IRP Baseline	Carbon-Constrained
2022	$10.8B		$37M - $46M	
2027	$12.0B	$11.4B	$46M - $58M	$57M - $71M
2032	$13.0B	$11.7B	$41M - $50M	$78M - $98M
2037	$14.1B	$12.1B	$44M - $55M	$121M - $151M

In an average hour, 15-minute sub-hourly trades represent approximately 1-2% of the total energy for load within the Southeast EEM participant footprint. In effect, the PROMOD hourly output of individual generating units in the Southeast EEM footprint is modified by plus/minus 1 to 2% on average through sub-hourly trading.

Renewable imbalance is a large driver of the Southeast EEM benefits. While it is difficult to attribute an exact proportion, Southeast EEM benefits seem to be roughly evenly split between renewable integration benefits and the benefits from taking advantage of interface price differentials with zero-cost sub-hourly transmission. A number of parameter tests were conducted to better understand the source of the benefits. Southeast EEM benefits are robust across all years, both market outlooks, and all model parameter tests.

There are several key uncertainties and risks associated with the value of the Southeast EEM:

- The study assumes a well-functioning, and relatively high-participation market. Limited participation by members is the largest risk to Southeast EEM benefits.
- The $0 transmission rate sub-hourly trading could eventually cannibalize some hourly trading yielding a reduction in non-firm transmission revenues.
- The resource mix in the *Carbon-Constrained Outlook* represents a significant change from today for the Southeast making results much more uncertain.

The Southeast EEM can also set the stage for more complex markets that could unlock even greater benefits for its members. For example, while a 5-minute market would be more complex and costly, it would likely facilitate greater renewable integration benefits and possibly a reduction in reserves held for balancing.

Non-Centralized (Internal) Costs

In forming the Southeast EEM, two separate and distinct cost streams would be incurred: shared Southeast EEM costs and internal member costs. The former costs are those incurred to facilitate the central market and settlement process and the latter are incurred at the member level to interface with the market and manage the process locally through scheduling and processing transactions. Guidehouse/CRA focused on the latter cost category (internal member costs) through an interview process with each prospective Southeast EEM participant.

Non-centralized internal costs can be segregated into two categories. The first are "start-up" costs, one-time costs related to the initial market development period. Start-up costs are primarily comprised of costs associated with meeting initial operational requirements, governance requirements, and regulatory filings, but may include other non-recurring costs as well. The second category of costs are the ongoing ones required to facilitate participation in the market. These ongoing costs are primarily labor for schedulers and traders as well as ongoing regulatory costs.

The Southeast EEM benefits modeling assumes that all economic intra-hour trades will be made; thus, members estimated internal costs robust enough to actively optimize bids every 15 minutes. For purposes of this analysis, the costs considered are incremental, meaning that only out-of-pocket expenses for software, outside legal support, additional staffing, etc. were considered. Use of existing in-house capabilities and existing staff were excluded from consideration. The collective amount of internal non-centralized costs is shown in Table 2.

Table 2. Southeast EEM Member Aggregate Non-Centralized Start-up and Operating Costs

(*millions of dollars*)

Category	Total	20-year Real Levelized ($2020)
Start-up Costs	$3.8 (one time)	$0.3
Operating Costs	$2.8 (per year, growing at inflation)	$2.8
	Total:	**$3.1**

Costs are summarized in terms of a 20-year real levelized annual amount in aggregate across all Southeast EEM members. Internal non-centralized start-up costs total to $3.8 million across the members and are approximately $0.3 million per year (2020$) if recovered over 20 years. On-going internal operating costs across the members are estimated to be $2.8 million per year. In sum, total costs levelized over 20 years total to $3.1 million (2020$).

1. STUDY BACKGROUND, ASSUMPTIONS, AND METHODOLOGY

1.1 Study Scope and Purpose

A coalition of Southeast utilities, cooperatives, and municipalities engaged the Guidehouse/CRA team to examine the potential benefits of forming a Southeast Energy Exchange Market (Southeast EEM). The proposed Southeast EEM is a centralized automated market for trading energy between electric utilities in the Southeast U.S. on an intra-hour basis. As an intra-hour market, the Southeast EEM supplements the existing day/hour-ahead bilateral market in the Southeast U.S. by making use of any remaining available transfer capability (ATC) to obtain further savings in energy costs and improved renewable integration in the region.

Southeast EEM participants include Associated Electric Cooperative Inc., Central Electric Power Cooperative, Dalton Utilities, ElectriCities of North Carolina, Inc., Dominion Energy South Carolina, Duke Energy Carolinas, Duke Energy Progress, Georgia System Operations Corporation, Georgia Transmission Corporation, LG&E and KU Energy, MEAG Power, NC Electric Membership Corporation, Oglethorpe Power Corporation, Santee Cooper, Southern Company, and TVA.

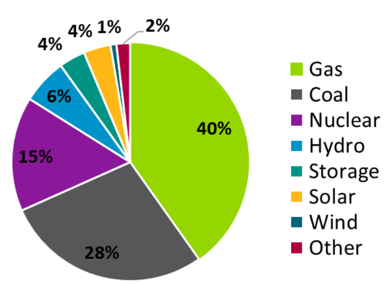
Guidehouse/CRA estimated Southeast EEM benefits against a status quo case of no intra-hour interface trading, with two market outlooks evaluated: an *IRP Baseline Outlook* and a *Carbon-Constrained Outlook*. For purposes of the benefits analysis, Southeast EEM operations are assumed to begin in 2021, and benefits are assessed over the 20-year period from 2021 to 2040.

In addition to the benefits analysis, Guidehouse/CRA assisted each potential Southeast EEM participant in estimating the internal costs, such as additional labor and software, that would be incurred for each participant to start-up and operate in the proposed Southeast EEM market. The aggregate sum of these Southeast EEM participant internal costs are presented in this report.[6]

1.2 Market Outlooks

In aggregate, the proposed Southeast EEM participants collectively have over 160 GW of capacity serving over 640 TWh of energy for load. Collectively, the current capacity mix by technology type is captured in Figure 4. Today, coal and gas-fired facilities represent 68% of Southeast EEM footprint capacity, with the remainder made up of nuclear and renewable power.

Figure 4. Southeast EEM Footprint 2020 Capacity Mix



[6] These internal member costs do not include the costs of the entity that would operate the Southeast EEM trading platform, and the costs of other centralized Southeast EEM administrative and monitoring expenses.

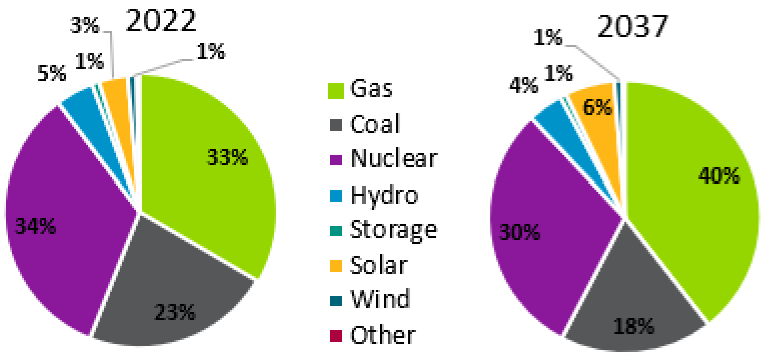
The two market outlooks considered in the study represent two plausible futures of how the Southeast power system could evolve over the next two decades and give insight into how benefits may change as the resource mix evolves.

1.2.1 IRP Baseline Outlook

The *IRP Baseline Outlook* is based on each participant's projected load and generation capacity plan. Some of these plans have been shared publicly through IRP filings and some of which have not been made public. Broader assumptions such as long-term fuel prices are based on Guidehouse's semi-annually updated Reference Case outlook on North American power markets, which is used for transaction support and is widely accepted by both financial institutions and market participants throughout the Eastern Interconnect. Guidehouse's Reference Case relies on the involvement of numerous subject matter experts with specific knowledge and understanding of such items as fuel pricing, generation development, transmission infrastructure expansion, asset operation, environmental regulations, and technology deployment.

Figure 5 shows the forecasted energy generation mix for the Southeast EEM footprint in the *IRP Baseline Outlook*. While the share of gas and solar generation increases at the expense of coal, the generation mix in 2037 is largely similar to that of today's system.

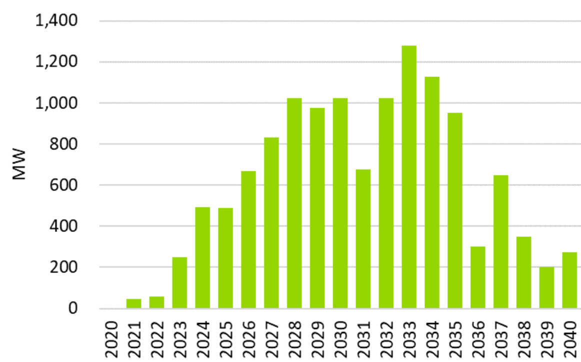
Figure 5: Southeast EEM Footprint Forecasted Generation Mix, IRP Baseline Outlook



1.2.2 Carbon-Constrained Outlook

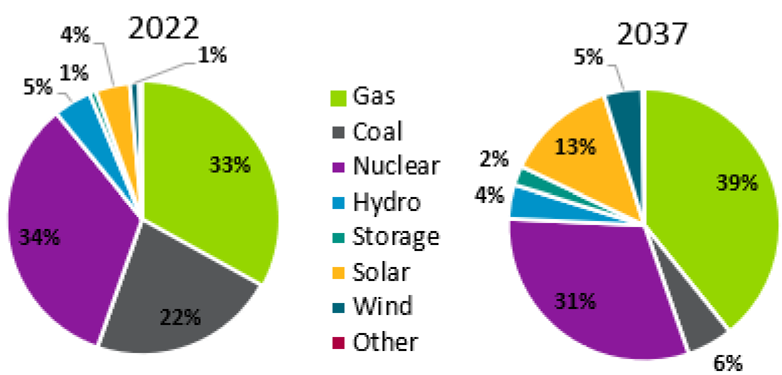
The *Carbon-Constrained Outlook* is an alternative market outlook that explores a high renewable future in the Southeast with ambitious carbon reduction goals. The future resource mix in this outlook was determined using participant's IRP carbon reduction plans if available. If not, the outlook was developed using reasonable assumptions of what a high-renewable and storage, low-carbon future may look like in the Southeast. For companies with IRP timeframes that end before the study period (ending in 2040), the remaining years of the IRP carbon plan were extrapolated to 2040 assuming no coal generation in 2040 (unless a participant provided Guidehouse/CRA with an alternate resource mix). As coal retires, energy storage, rather than natural gas, is projected to be the primary means of meeting peak reliability requirements. The expansion of battery storage throughout the Southeast EEM footprint is shown in Figure 6.

Figure 6. Southeast EEM Footprint Battery Storage Additions – Carbon-Constrained Outlook



As shown in Figure 7, the proportion of solar and wind generation in 2037 is three times that in the *IRP Baseline Outlook*, resulting in a much more variable system with greater imbalances, larger morning and evening ramping needs, reduced carbon emissions, and more zero-marginal cost hours.

Figure 7. Southeast EEM Footprint Forecasted Generation Mix, Carbon-Constrained Outlook



1.3 Study Methodology

1.3.1 Southeast EEM Overview

Under the proposed Southeast EEM, there will be 15-minute intra-hour trading across Southeast EEM participant interfaces subject to there being any remaining ATC at the interface, with bids and offers matched through a central software platform to be developed by a third-party vendor with access provided to each of the Southeast EEM participants for supplying their input information.

In the proposed Southeast EEM, there will be a new $0/MWh transmission product which can only be used in the intra-hour market and represents the lowest level of non-firm transmission using any remaining ATC. All resulting Southeast EEM transactions are between two parties, with the point of sale for each transaction at the buyer's BA interface. Each Southeast EEM bid to buy, and offer to sell, must provide the MW size, the price in terms of $/MWh, and the source for offers and the sink for bids.

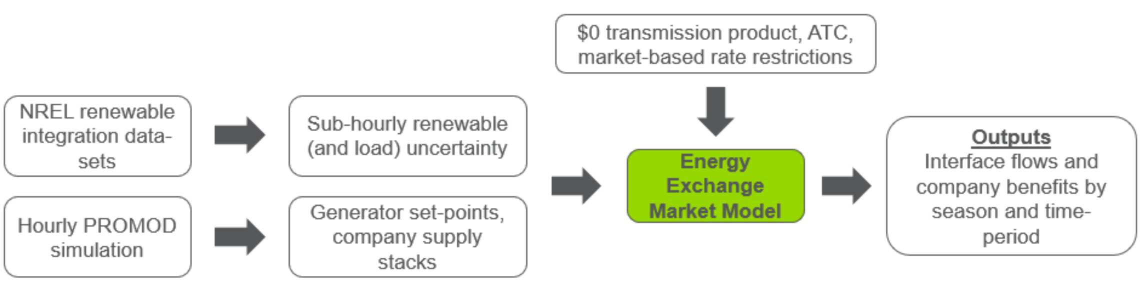
Southeast EEM trade prices are calculated using a bilateral “split savings” approach between the matched bid and offer that maximizes EEM benefits. Each Balancing Authority (“BA”) would be responsible for continuing to ensure adequate resource plans for meeting reserve requirements and would continue to oversee its generation and load balancing. There is no reserve sharing and participants cannot rely on the Southeast EEM for its balancing needs. No sub-hourly bilateral trading is assumed to take place with entities outside of the Southeast EEM footprint.

1.3.2 Modeling Approach

Guidehouse used a combination of production cost modeling and linear programming optimization to estimate Southeast EEM benefits. Guidehouse uses PROMOD, a commercially available software, to develop its wholesale energy market price and plant performance forecasts. PROMOD is a detailed energy production cost model used to simulate hourly chronological operation of generation and transmission resources on a nodal basis throughout the Eastern Interconnect. Within PROMOD, production costs are calculated based upon heat rate, fuel cost, and other operating costs, expressed as a function of output.[7]

PROMOD is first used to simulate regional system operations under status quo conditions, including the daily and hourly bilateral trading that takes place today, but not including the intra-hour trading that would take place in the Southeast EEM. As an intra-hour market, the Southeast EEM cannot be fully captured in the PROMOD hourly modeling. The hourly PROMOD data (e.g., output of each generating unit in the footprint) is pulled into the Southeast EEM Model to analyze whether additional economic intra-hour trades can be made among Southeast EEM participants. This sub-hourly model takes into account load and renewable generation uncertainty, ATC, and the $0/MWh transmission product.[8] Bilateral trading friction hurdles between BAs modeled in PROMOD[9] are also eliminated in the sub-hourly modeling to reflect the Southeast EEM centralized bid matching. The modeling process is illustrated in Figure 8.

Figure 8. Southeast EEM Modeling Flow Diagram



[7] Detailed production cost modeling assumptions used in this study, including capacity additions and retirements, natural gas price forecasts, emissions price forecasts and load growth, are provided in Appendix A.

[8] Any market-based rate restrictions for sales within BAs that were identified in discussions with Southeast EEM participants are incorporated in the sub-hourly bilateral trade modeling, including the TVA “fence” (TVA, under the 1959 Bond Act, is prohibited from selling electricity outside its congressionally mandated territory, with the exception of 14 power generators on TVA`s borders with whom it already was exchanging electricity as of July 1, 1957).

[9] Energy transfers between balancing authorities are subject to economic and transactional barriers referred to as hurdle rates in production cost modelling. These hurdle rates comprise transmission fees based on Open Access Transmission Tariffs in addition to bilateral-trading friction which represent other barriers to trading such as minimum trading margins and/or administrative charges.

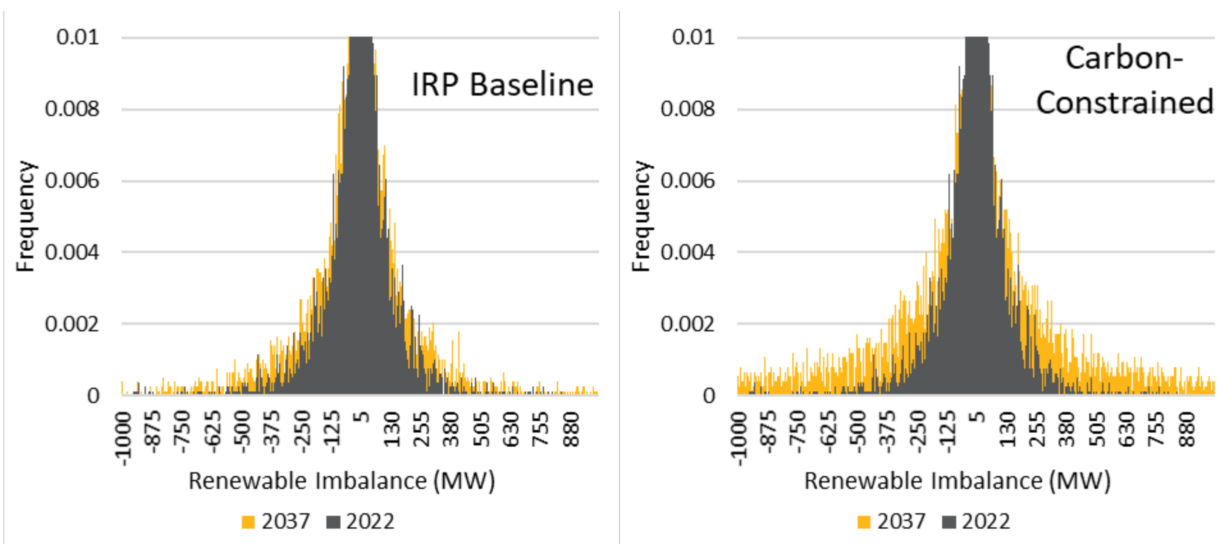
1.3.3 Load and Renewable Uncertainty

To estimate sub-hourly renewable imbalances, Guidehouse relied on NREL's geospatial Solar and Wind Integration Data Sets to simulate random days of renewable operations. These random days simulate historical operation of renewable resources including impacts of regional weather and geographic diversity. This approach ensures that the cross-correlation of the renewable generation over the entire Southeast EEM footprint is considered by randomizing the time period being drawn and pulling the operation of each resource from this period.

Each NREL solar dataset includes one year of historical simulated 5-minute data and each NREL wind dataset includes over five years of historical simulated 5-minute data. Renewable sites are selected to represent the geographic diversity of each Southeast EEM participant's current and future renewable portfolio. NREL also provides corresponding hourly schedules for each simulated solar plant, from which the area-control-error (ACE) contribution due to renewable uncertainty can be calculated (ACE ~ Output – Schedule). The ACE contributions of individual sites are scaled appropriately based on the actual capacity assumed to be at the given location, which is based on each participant's resource build-out plan.

With solar the predominant renewable technology deployed in the Southeast; the largest sub-hourly imbalances are observed during solar hours (hours ending 8:00 am to 7:00 pm). A distribution of the aggregated 15-minute renewable imbalances during solar hours for the Southeast EEM participants is shown in Figure 9 for 2022 and 2037. In the *Carbon-Constrained Outlook*, the significant renewable expansion by the late 2030s results in much higher imbalances, as shown by the much larger tails in the imbalance distributions.

Figure 9. Distributions of 15-Minute Renewable Imbalances During Solar Hours



Note: distribution frequency truncated at 0.01 for illustrative purposes; each bar in the histogram represents a 5 MW bin; higher imbalances attributed to Balancing Authorities with higher renewable penetration

In addition to renewable uncertainty, load-uncertainty is also considered and estimated using a normal distribution with a standard deviation proportional to each participant's average load.

1.3.4 Short-term Bid and Offer Curves

Typical days[10] of hourly PROMOD operation provide a set point from which hourly supply curves are created for each of the Southeast EEM members that consider what online resources are available, and able to ramp up or down to meet their 15-minute obligations. The renewable and load uncertainty discussed in Section 1.3.3 is subsequently applied to create the 15-minute net generation that must be met. At a high level, the baseline assumption is that each member will meet their 15-minute requirements with their own available resources. The Southeast EEM model analyzes the alternative case in which each participant bids in their resources and the market can make trades that reduce overall costs on the 15-minute time frame. To construct the bid and offer curves for each Southeast EEM participant, the following assumptions are made:

- Online combined-cycle plants (CCs) and simple-cycle combustion turbines (CTs) can ramp down to minimum generation limits or ramp up to their max capability
- Storage resources, including batteries and pumped-hydro, can ramp up or down at the marginal cost of energy
- Some renewable curtailment is permitted

Generally, each member holds spinning reserves or offline quick-start CTs for renewable balancing. While offline CTs are not brought online to trade in the 15-minute Southeast EEM, there are rare instances (though more prevalent in the later years of the *Carbon-Constrained Outlook*) where these offline CTs would need to ramp up to correct for large negative imbalances if the Southeast EEM market did not exist. Rather than ramping these offline units, a member can use Southeast EEM trading instead and avoid the associated costs of starting a new unit.

[10] Typical days are chosen in each month for the selected test years (2022, 2027, 2032, and 2037) in order to capture seasonal patterns to trading volumes and benefits.

1.4 Key Study Assumptions

Key study assumptions and their impacts on Southeast EEM benefits are summarized in Table 3.

Table 3. Key Study Assumptions

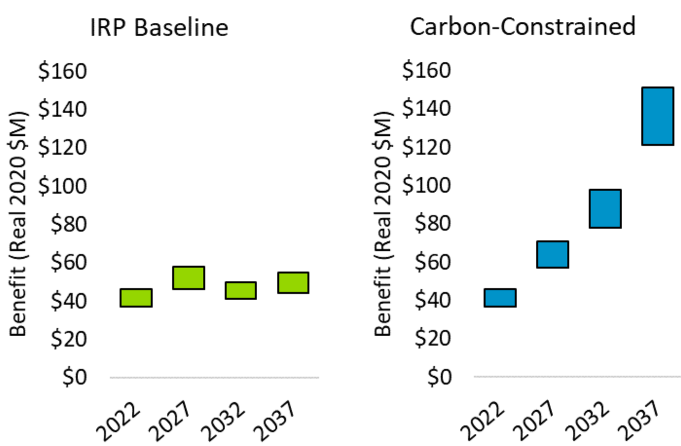
Topic	Assumption Description	Impact
Market Participation	While the study generally assumes the Southeast EEM is a high-participation, well-functioning market, modeled participation is somewhat limited to reflect that some imbalance will be handled internally as opposed to being met with the market. Sensitivity analysis on market participation was conducted to determine an appropriate range on the benefit results.	High
Transmission Representation	While the hourly PROMOD baseline operation simulates system operation nodally with a full transmission representation, potential transmission constraints are not considered in the sub-hourly trades.	Low
Transmission Losses	The study assumes 2% losses with pancaking.	Low
$0/MWh Transmission Service Cost	The study assumes zero cost intra-hour transmission service available for EEM transactions.	High
Trading Friction	Bilateral trading friction hurdles between BAs modeled in PROMOD are eliminated in the Southeast EEM. The Southeast EEM Model will execute any trade, regardless of margin, that has a global benefit to the Southeast EEM participants.	Medium
Bid/Offer Behavior	The study assumes that participants are submitting bids and offers at true costs. The impact of more complex bidding strategies was not accessed.	High
ATC	Trades are limited to 2019 average ATC, however this may be conservative if actual market operation could result in more transmission capacity being released.	Low
Fuel Prices	Guidehouse develops a fundamental gas price forecast fully integrated with the power market forecasts. In general, lower gas prices reduces benefits of the Southeast EEM.	Medium

2. SOUTHEAST EEM BENEFITS

2.1 Southeast EEM Gross Benefits

As shown in Figure 10, Southeast EEM gross benefits (prior to netting any Southeast EEM start-up or operating costs) average $47M per year (real 2020 dollars) in the *IRP Baseline Outlook*, with benefits increasing slightly in the mid-term largely as a result of higher renewable penetration, before stabilizing for the remainder of the forecast. In the *Carbon-Constrained Outlook*, there is significant upside to benefits driven by increasing sub-hourly uncertainty from higher renewable penetration and increased flexibility from the expansion of battery storage. While benefits are considerably higher in the *Carbon-Constrained Outlook*, they are also more uncertain, as the resource mix and power system operation in the 2030s represents a significant deviation from today.

Figure 10. Southeast EEM Gross Benefits



2.2 Benefits Discussion

The Southeast EEM benefits are derived from fuel cost savings as the Southeast EEM gives participant's access to a lower cost, more efficient pool of resources to manage subhourly load and renewable uncertainty.[11] As shown in Table 4, in the *IRP Baseline Outlook*, annual benefits represent approximately 0.3% to 0.4% of total production costs within the Southeast EEM participant footprint. Benefits as a proportion of total production costs are much higher in the Carbon-Constrained Outlook, reaching 1.1% by 2037.

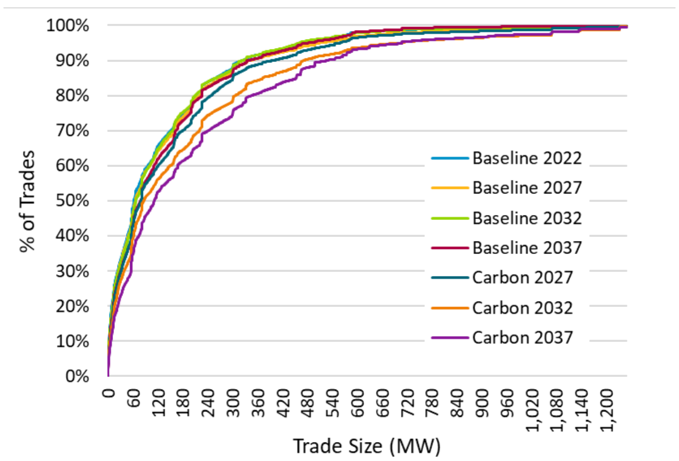
[11] As a simple example, if Company X has a negative 300 MW sub-hourly imbalance due to renewable variability; instead of ramping up its own combined-cycle unit at an incremental cost of $28/MWh, Company X will purchase energy in the Southeast EEM from Company Y which is able to ramp up at $24/MWh. The split-savings trading price of $26 provides benefits to both Company X and Y.

Table 4. Southeast EEM Benefits Relative to Southeast EEM Footprint Production Costs

Year	Southeast EEM Footprint Production Costs ($2020)		Southeast EEM Gross Benefit ($2020)	
	IRP Baseline	Carbon-Constrained	IRP Baseline	Carbon-Constrained
2022	$10.8B		$37M - $46M	
2027	$12.0B	$11.4B	$46M - $58M	$57M - $71M
2032	$13.0B	$11.7B	$41M - $50M	$78M - $98M
2037	$14.1B	$12.1B	$44M - $55M	$121M - $151M

In the *IRP Baseline Outlook*, approximately 60% of Southeast EEM trades are less than 100 MW, 90% are less than 350 MW, and 98% are less than 600 MW, yielding a weighted average of about 130 MW. With its higher underlying renewable imbalances, average trade size increases in the *Carbon-Constrained Outlook*, with approximately 60% of trades less than 150 MW, 90% less than 475 MW, and 98% less than 1,000 MW. Cumulative distributions of trading volumes are shown in Figure 11. In a typical hour there are projected to be 40 to 50 15-minute trades (or wheel-throughs) in the Southeast EEM. In 2022, the average is 41 trades (or wheel-throughs) within each hour at an average of 130 MW per trade, yielding an average hourly trade volume of 1,323 MWh.[12] As noted above, there are about $45 million (2020$) of annual Southeast EEM benefits on average in the *IRP Baseline Outlook*. If there are 41 15-minute trades within each hour on average then each trade results in approximately $2/MWh benefit for each company participating in the transaction.[13]

Figure 11. Cumulative Distribution of Southeast EEM Trading Volume



[12] 129 MW x 1/4th hour x 41 trades per hour = 1,323 MWh

[13] [$45,000,000 / (129 MW * 1/4th hour * 41 trades per hour * 8760 hours per year)] * 50% split = 1.94 $/MWh

Responding to imbalance resulting from renewables is a primary driver of benefits. While it is difficult to attribute an exact proportion, annual Southeast EEM benefits seem to be roughly evenly split between renewable integration benefits and the benefits from taking advantage of interface price differentials with zero-cost sub-hourly transmission. As shown in Figure 12 through Figure 14, during periods where renewable integration is most difficult (i.e. morning and evening ramps), Southeast EEM benefits tend to be higher as Southeast EEM participants can leverage lower cost resources elsewhere within the Southeast EEM participant footprint to correct imbalances. Overall, benefits during solar hours (hours ending 9:00 am to 7:00 pm) are nearly double those of non-solar hours.

Figure 12. Average Summer Season Benefits Aggregated by Time of Day – IRP Baseline

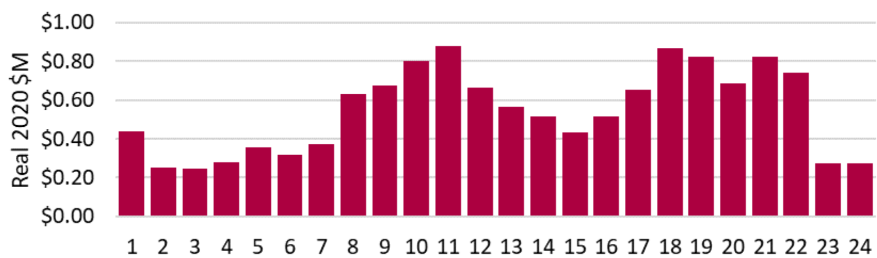


Figure 13. Average Winter Season Benefits Aggregated by Time of Day – IRP Baseline

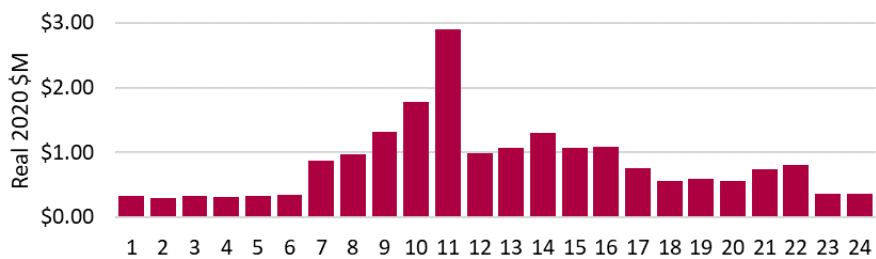
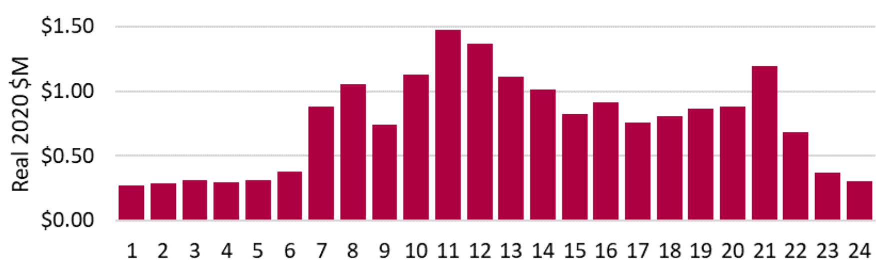


Figure 14. Average Shoulder Season Benefits Aggregated by Time of Day – IRP Baseline



2.3 Sensitivities and Parameter Testing

Several model parameters were varied to give insight into the uncertainty and robustness of the results. These parameters included market participation, ramping capability of gas and storage assets, permissible renewable curtailment, and ATC.

Without observing historical market operation, it is difficult to estimate the expected degree of market participation, making this the single largest uncertainty. Several sensitivities were run to determine the impact that would result from participants managing imbalances internally as opposed to using the Southeast EEM. It is reasonable to expect benefits to be on the lower end of the estimates in the early years of the Southeast EEM as participants become comfortable with the market. The model sensitivities show that there is considerable room for upside to benefits if participants go “all-in” with their bid/offer curves and aggressively use their storage resources as well.

For ATC, the study assumes average 2019 levels, however this may be conservative if actual market operation could result in more transmission capacity being released. To determine the impact of ATC on the results, a test was conducted where ATC was capped at 200 MW (which is significantly less than what was observed in 2019 for some pathways). Despite the large reduction in ATC, benefits only decreased by about 10% for the year. Other parameters such as ramping capability and permissible renewable curtailment were much less consequential.

2.4 Conclusions

Southeast EEM benefits are robust across all years, both market outlooks, and all model parameter tests. Southeast EEM gross benefits average $47M per year (real 2020 dollars) in the *IRP Baseline Outlook*, with forecasted annual benefits nearly triple in the *Carbon-Constrained Outlook* by the late 2030s.

There are several key uncertainties and risks associated with the benefits of the Southeast EEM:

- The study assumes a well-functioning, and relatively high-participation market. Limited participation by members is the largest risk to Southeast EEM benefits.
- The $0 transmission rate sub-hourly trading could eventually cannibalize some hourly trading yielding a reduction in non-firm transmission revenues.
- The resource mix in the *Carbon-Constrained Outlook* is unclear for the Southeast making results much more uncertain.

3. SOUTHEAST EEM NON-CENTRALIZED COSTS

3.1 Approach to Estimating Costs

3.1.1 Cost Categories

In forming the Southeast EEM, two separate and distinct cost streams would be incurred: central entity costs and internal member costs. The former costs are those incurred to facilitate the central market and settlement process and the latter are incurred at the member level to interface with the central entity and manage the process locally through scheduling and processing transactions. Guidehouse/CRA focused on the latter cost category (internal member costs) related to non-centralized costs associated with the development and operation of the market.

Non-centralized costs can be segregated into two categories. The first are "start-up" costs, one-time costs related to the initial market development period. Start-up costs are primarily comprised of regulatory and one -time software expenditures but may include other non-recurring costs as well. The second category of costs are the ongoing ones required to facilitate participation in the market. These ongoing costs are primarily labor for schedulers and traders as well as ongoing regulatory costs. Ongoing labor costs also include IT and other support activities. Ongoing, non-labor costs may include direct hardware and software costs plus raining and other recurring support costs.

It is important to note that the costs aggregated in this analysis are incremental costs – that is, costs that are not otherwise embedded in the participants existing cost structure. The Guidehouse/CRA team aggregated the cost estimates following one-on-one interviews with each prospective Southeast EEM participant. The costs estimated are categorized as shown in Table 5.

Table 5. Cost Categories Estimated

Start-up Costs	Ongoing Costs

• Legal and Regulatory Costs
• Meetings, Travel, and Training
• Hardware and Software Costs
	• Labor (addition of full-time employees)
	  ○ Rates and Regulatory
	  ○ Traders
	  ○ Schedulers
	  ○ IT
	  ○ Other
	• Non-labor
	  ○ Travel and Training
	  ○ Hardware and Software
	• Other

As noted, costs considered for the purposes of this analysis are incremental, meaning that only out-of-pocket expenses for software, outside legal support, additional staffing, etc. were considered. Use of in-house capabilities and existing staff were expressly excluded from consideration. As a result, to the extent individual market participants are able to leverage existing staff and internal resources those costs were not included in the cost benefit analysis.

3.1.2 Interview Approach

Cost assumptions were developed using a standardized spreadsheet tool and interviews with member teams (see Appendix B.1). For confidentiality purposes, the interview process was conducted in a series of individual member meetings. To the extent possible, Guidehouse/CRA provided guidance on the cost development but did not share confidential member information with other market participants. In addition, the working team did not share ranges or level of magnitude estimates of costs to any member during the interview process so as not to bias the information collected through the process.

The cost team first distributed a cost template to each individual Member. Member representatives provided start-up and on-going operation costs. Members provided their own unique estimates for each cost category described in Table 5. To accommodate for cases where there was uncertainty or dependencies related to individual costs, members were permitted to input a range of estimated cost values: “High,” “Low,” and “Median.” We used “Median” values for our final cost estimates.

One-on-one interviews were conducted with each individual Southeast EEM participant. The cost team worked with member representatives from various operations functions; roles within the membership that participated in the interview process included Managers or Directors of Transmission, Resource Operations, Bulk Power, Operations Interface, or similar. See Appendix B for further details regarding the interview process.

3.1.3 Costs Levelization and Adjustment for Inflation

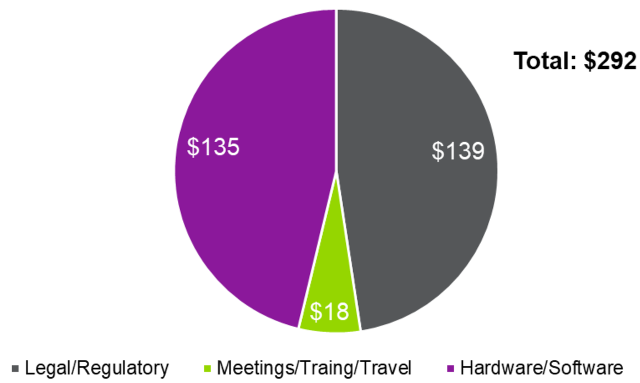
The resultant costs reflect the total, 20-year levelized annual start-up and ongoing costs across all Southeast EEM participants. Cost values are expressed in real 2020 dollars (assuming 2.0% annual inflation). All start-up and ongoing costs are presented on a levelized basis to facilitate a comparison versus the modeled market benefits. However, the lump sum start-up costs would be $3.8 million across all market participants excluding central entity costs.

3.2 Start-up Costs

Aggregate start-up costs stated on a 20-year annual levelized basis are shown in Figure 15. Individual member costs and representative ranges are not presented in this report to ensure member confidentiality.

Estimated costs are split about equally between infrastructure costs and regulatory requirements with some provision for incremental administrative costs. Some potential market participants expressed uncertainty regarding the level of software costs depending on the vendor selected for the central clearinghouse function. The driver of uncertainty was related to compatibility with existing software systems and infrastructure.

Figure 15. Breakout of Real 2020$ Levelized EIM Startup Costs by Function ($000)



3.3 On-going Costs

As with startup costs, ongoing costs are aggregated to maintain each Member's confidentiality. Results on a 20-year annual levelized basis are displayed in Figure 16 and Figure 17. The majority of the annualized costs are labor-related and of those, the costs are heavily weighted towards trading activity. Non-labor costs are largely related to hardware and software requirements.

Figure 16. Real $2020 Levelized Annual Labor Cost by Function ($000)

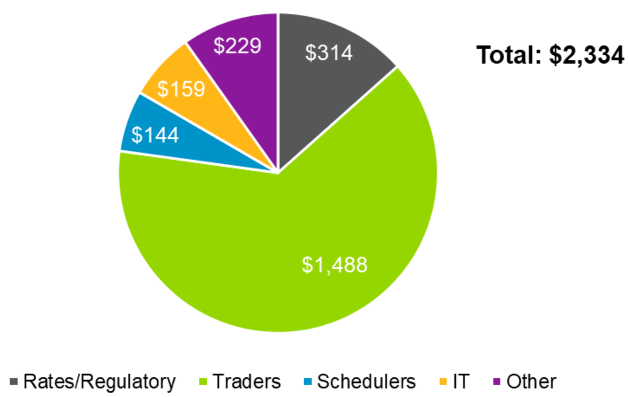
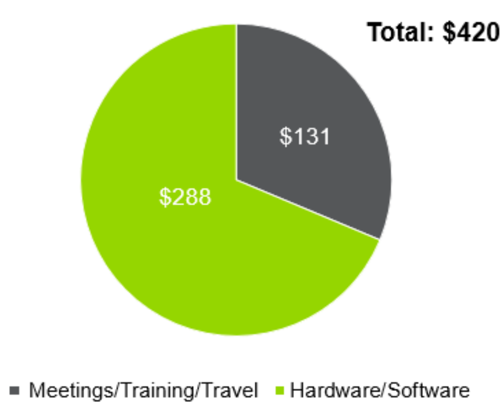


Figure 17. Real 2020$ Levelized Annual Non-Labor Costs ($000)



3.4 Insights and Conclusions

The primary uncertainty identified by potential market participants relates to the compatibility between the existing software systems in house with the software provided by the selected central entity. This uncertainty may be mitigated through coordination among market participants during vendor selection.

The anticipated ability of individual market participants to rely on tools and resources that already exist in house varies across potential market members. As a result, the cost benefit equation for individual members needs to be examined individually even though the benefits of the market in aggregate appear to significantly outweigh the aggregate market costs.

APPENDIX A. SUPPORTING DATA

A.1 Assumptions

Table A-1. Natural Gas Price Forecasts ($2020/MMBtu)

	Columbia Gas - Appalachia	Texas Eastern, M-1 (Kosi)	Transco, Zone 4	Transco, Zone 5 Delivered	Dominion South Point
2021	$2.35	$2.45	$2.55	$2.59	$2.15
2022	$2.47	$2.58	$2.68	$2.65	$2.22
2023	$2.51	$2.66	$2.75	$2.70	$2.26
2024	$2.67	$2.90	$2.99	$2.94	$2.41
2025	$2.76	$3.11	$3.20	$3.15	$2.48
2026	$2.76	$3.19	$3.29	$3.25	$2.43
2027	$2.77	$3.27	$3.40	$3.35	$2.40
2028	$2.82	$3.38	$3.50	$3.45	$2.42
2029	$2.90	$3.48	$3.60	$3.55	$2.47
2030	$2.93	$3.53	$3.66	$3.61	$2.48
2031	$2.93	$3.58	$3.71	$3.64	$2.46
2032	$3.02	$3.64	$3.77	$3.72	$2.54
2033	$3.07	$3.70	$3.83	$3.77	$2.58
2034	$3.10	$3.76	$3.90	$3.84	$2.61
2035	$3.14	$3.83	$3.95	$3.88	$2.62
2036	$3.17	$3.88	$4.00	$3.92	$2.63
2037	$3.21	$3.93	$4.06	$3.98	$2.66
2038	$3.25	$3.98	$4.10	$4.02	$2.68
2039	$3.30	$4.03	$4.16	$4.07	$2.71
2040	$3.35	$4.08	$4.20	$4.12	$2.74

Table A-2. Southeast EEM Participants Aggregated Additions (MW) – *IRP Baseline Outlook*

	CC	CT Gas	Nuclear	Pumped Hydro	Battery	Wind	Offshore Wind	Solar
2020	0	15	0	0	0	472	0	1,751
2021	0	0	1,108	65	48	159	0	2,630
2022	475	0	1,117	65	58	0	0	2,307
2023	0	100	15	65	50	0	0	762
2024	726	1,336	15	65	93	0	0	1,202
2025	1,338	0	4	0	90	0	0	305
2026	0	470	0	0	119	0	0	558
2027	1,838	0	0	0	83	0	0	768
2028	0	905	6	0	23	0	0	648
2029	600	3,055	0	0	27	0	0	654
2030	0	300	10	0	24	0	0	694
2031	0	3,040	0	0	25	0	0	731
2032	600	0	0	0	23	0	0	606
2033	0	3,432	0	0	30	0	0	810
2034	968	3,114	0	0	28	0	0	647
2035	1,324	523	0	0	0	0	0	552
2036	1,260	18	0	0	0	0	0	575
2037	1,984	934	0	0	0	0	0	224
2038	2,468	18	0	0	50	0	0	381
2039	870	18	0	0	0	0	0	287
2040	1,830	934	0	0	75	0	0	393

Table A-3. Southeast EEM Participants Aggregated Additions (MW) – *Carbon-Constrained Outlook*

	CC	CT Gas	Nuclear	Pumped Hydro	Battery	Wind	Offshore Wind	Solar
2020	0	15	0	0	0	472	0	1,751
2021	0	0	1,108	65	48	159	0	3,105
2022	475	300	1,117	65	58	100	0	4,082
2023	0	100	15	65	250	100	0	2,962
2024	726	1,336	15	65	493	150	0	3,002
2025	1,838	50	4	0	490	200	0	2,705
2026	600	1,070	0	0	669	250	200	2,658
2027	2,438	200	0	0	833	150	200	2,718
2028	1,338	1,555	6	0	1,023	525	200	2,498
2029	2,144	2,415	0	0	977	350	200	2,679
2030	500	800	10	0	1,024	250	500	2,519
2031	1,338	2,200	0	0	675	250	400	2,531
2032	840	300	0	0	1,023	325	200	2,606
2033	0	1,902	0	0	1,280	250	200	2,910
2034	968	1,434	0	0	1,128	250	200	2,697
2035	500	1,363	0	0	950	350	200	2,652
2036	0	18	0	0	300	75	400	2,025
2037	2,468	1,434	0	0	650	275	700	1,874
2038	1,500	18	0	0	350	75	0	1,931
2039	1,838	18	0	0	200	75	0	2,087
2040	1,830	934	0	0	275	75	0	1,893

Table A-4. Southeast EEM Participants Aggregated Retirements (MW) – *IRP Baseline Outlook*

	CC	CT Gas	ST / IC Gas	ST Coal	Nuclear	Other Renewable	Other
2020	0	(780)	0	(1,017)	0	0	0
2021	0	(16)	0	0	0	0	0
2022	0	(14)	0	0	0	0	0
2023	0	0	0	0	0	0	0
2024	0	0	0	(2,056)	0	0	(232)
2025	0	(97)	(254)	(300)	0	(53)	0
2026	0	0	(243)	(362)	0	0	0
2027	0	0	0	(570)	0	0	0
2028	0	0	0	(1,579)	0	0	0
2029	0	0	0	0	0	0	0
2030	0	0	(173)	0	0	0	(65)
2031	0	0	0	0	0	0	0
2032	0	0	0	(546)	0	0	0
2033	0	0	0	(1,409)	0	0	0
2034	0	0	0	(4,166)	(876)	0	0
2035	0	(494)	0	(1,162)	0	0	0
2036	0	(390)	0	(734)	(851)	0	0
2037	0	0	0	(476)	(883)	0	0
2038	0	0	0	(3,092)	0	0	0
2039	(209)	0	0	(842)	0	0	0
2040	(519)	0	0	(342)	(860)	0	0

Table A-5. Southeast EEM Participants Aggregated Retirements (MW) – *Carbon-Constrained Outlook*

	CC	CT Gas	ST / IC Gas	ST Coal	Nuclear	Other Renewable	Other
2020	0	(780)	0	(1,017)	0	0	0
2021	0	(16)	0	0	0	0	0
2022	0	(14)	0	(1,234)	0	0	0
2023	0	0	0	0	0	0	0
2024	0	0	0	(2,176)	0	0	(232)
2025	0	(97)	(254)	(2,077)	0	(53)	0
2026	0	0	(243)	(1,684)	0	0	0
2027	0	0	0	(3,047)	0	0	0
2028	0	0	0	(3,860)	0	0	0
2029	0	0	0	(3,774)	0	0	0
2030	0	0	(173)	(1,598)	0	0	(65)
2031	0	0	0	(1,022)	0	0	0
2032	0	0	0	(1,014)	0	0	0
2033	0	0	0	(4,378)	0	0	0
2034	0	0	0	(4,665)	0	0	0
2035	0	(494)	0	(1,340)	0	0	0
2036	0	(390)	0	(2,078)	0	0	0
2037	0	0	0	(2,925)	0	0	0
2038	0	0	0	(631)	0	0	0
2039	(209)	0	0	(2,431)	0	0	0
2040	(519)	0	0	(1,382)	0	0	0

A.2 Southeast EEM Results

Table A-6. Southeast EEM Gross Benefits ($2020 Millions) – IRP Baseline

Year	Summer		Winter		Shoulder		Total
	Solar	Non-Solar	Solar	Non-Solar	Solar	Non-Solar	
2022	$7M - $8.8M	$3.8M - $4.7M	$7.5M - $9.3M	$3.6M - $4.5M	$9.5M - $11.9M	$5.8M - $7.3M	**$37.1M - $46.4M**
2027	$7M - $8.8M	$3.6M - $4.5M	$13.2M - $16.5M	$4.7M - $5.9M	$12.8M - $16M	$4.9M - $6.1M	**$46.2M - $57.7M**
2032	$6.7M - $8.2M	$4.2M - $5.1M	$12.7M - $15.5M	$4.2M - $5.2M	$8.8M - $10.8M	$4.7M - $5.7M	**$41.3M - $50.5M**
2037	$5.7M - $7.1M	$5.1M - $6.4M	$14.2M - $17.7M	$6M - $7.5M	$8.4M - $10.5M	$4.9M - $6.2M	**$44.3M - $55.3M**

Table A-7. Southeast EEM Gross Benefits ($2020 Millions) – Carbon-Constrained

Year	Summer		Winter		Shoulder		Total
	Solar	Non-Solar	Solar	Non-Solar	Solar	Non-Solar	
2022	$7M - $8.8M	$3.8M - $4.7M	$7.5M - $9.3M	$3.6M - $4.5M	$9.5M - $11.9M	$5.8M - $7.3M	**$37.1M - $46.4M**
2027	$11.1M - $13.9M	$4.7M - $5.9M	$15.7M - $19.6M	$5.5M - $6.9M	$13.5M - $16.9M	$6M - $7.6M	**$56.6M - $70.8M**
2032	$18.6M - $23.3M	$5.6M - $7M	$24.7M - $30.9M	$7.6M - $9.5M	$16.2M - $20.2M	$5.5M - $6.8M	**$78.3M - $97.9M**
2037	$29.2M - $36.6M	$10.9M - $13.6M	$32.7M - $40.9M	$14.5M - $18.2M	$20.7M - $25.9M	$12.6M - $15.7M	**$120.6M - $150.8M**

Table A-8. Cumulative Distribution of Southeast EEM Trading Volumes

Transaction Size (MW)	IRP Baseline Outlook				Carbon-Constrained Outlook		
	2022	2027	2032	2037	2027	2032	2037
10	19.9%	18.2%	18.3%	16.1%	15.0%	14.1%	11.7%
25	30.2%	29.5%	29.4%	27.1%	26.7%	24.2%	20.2%
50	40.8%	39.9%	39.4%	36.3%	36.6%	32.7%	28.1%
75	54.6%	52.6%	51.9%	49.0%	48.6%	45.2%	40.1%
100	60.5%	59.7%	59.9%	57.3%	56.1%	52.2%	47.2%
200	76.4%	76.0%	77.2%	75.1%	72.0%	66.7%	62.9%
300	87.9%	86.7%	87.5%	86.2%	84.5%	78.3%	74.5%
400	92.7%	91.8%	92.9%	92.1%	90.0%	85.9%	82.3%
500	95.9%	94.9%	96.0%	95.5%	93.5%	91.1%	89.4%
750	98.9%	98.1%	99.0%	99.3%	97.8%	95.7%	95.7%
1000	99.5%	99.1%	99.4%	99.7%	98.6%	97.1%	97.4%
1250	100.0%	99.9%	100.0%	100.0%	100.0%	99.7%	99.6%

APPENDIX B. SOUTHEAST EEM PARTICIPANT COST INTERVIEW PROCESS

The purpose of each individual interview was to:

1. Familiarize ourselves with each prospective Southeast EEM member's current capabilities and procedures for scheduling, settlement, and marketing; and,
2. Review the cost template each Southeast EEM member had completed prior to the call.

Table 6. Prospective Southeast EEM Member Interview Schedule

April 17th, 2020	April 20th, 2020	April 21st, 2020	April 22nd, 2020	April 23rd, 2020	April 24th, 2020	April 27th, 2020
Dominion Energy South Carolina Duke Energy Progress and Carolinas	PowerSouth	GTC, GSOC, OPC	ElectriCities MEAG and TEA	LG&E and KU Southern Company	AECI Tennessee Valley Authority	Santee Cooper and TEA

Sample questions posed to each prospective Southeast EEM member during their one-on-one interview included:

- What is your current procedure for power marketing, scheduling, and settlements?
  - Are settlements made on an hourly or sub-hourly level?
  - Are trades entered manually or automatically?
- What are your current software capabilities for these functions?
- Do you anticipate adding any full-time employees to interface with the new Southeast EEM?
- Will you need to file an update to your current transmission tariff?
- Will you require additional metering?

B.1 Cost Template

The cost template used to develop the non-centralized costs for each prospective Southeast EEM member is shown in Figure 18.

Figure 18. Cost Template

Prospective Member: BLANK

Internal Staffing and Equipment Costs in Joining Interface EIM for Individual Members (K$)
Assumed Market Start Date: January 2021

Sheet does not include costs incurred for central EIM start-up and operations (e.g., bidding system operator, market monitor, etc.)

Inflation	2.0%
PV Factor	6.5%

Single value estimate
Low value estimate
High value estimate

		2020 K$/FTE EST.	2020 K$/FTE LOW	2020 K$/FTE HIGH	2020 PV	2020	2020 LOW	2020 HIGH	2021	2021 LOW	2021 HIGH
One-Time Start-up Costs (K$)											
Legal/Regulatory	(a)				200	200					
Meetings/Training/Travel	(b)				50	50					
Hardware/Software	(c)				100	100					
Total	(d)				350	350			0		
Estimate Uncertainty	20%				70	70			0		
Total					420	420			0		
On-going Costs (K$)											
Additional (Reduced) FTE											
Rates/Regulatory	(e)	180				0			0.25		
Traders	(f)	180				0			0.5		
Schedulers	(g)	180				0			0.5		
IT	(h)	180				0			0.25		
Other	(i)	180				0			0		
Total Additional FTE						0			1.5		
K$/FTE Inflation Factor						1.000			1.020		
Total Additional FTE (K$)					3,539	0			275		
On-going Non-Labor Costs											
Travel/Training	(j)				643	0			50		
Hardware/Software	(k)				643	0			50		
Other	(l)				0	0			0		
					1,285	0			100		
Total On-Going					4,824	0			375		
Total 1-Time and On-Going					5,244	420			375		

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Rates/Regulatory	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Traders	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Schedulers	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
IT	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Additional FTE	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
K$/FTE Inflation Factor	1.040	1.061	1.082	1.104	1.126	1.149	1.172	1.195	1.219	1.243	1.268	1.294	1.319	1.346	1.373	1.400	1.428	1.457	1.486
Total Additional FTE (K$)	281	287	292	298	304	310	316	323	329	336	342	349	356	363	371	378	386	393	401
Travel/Training	51	52	53	54	55	56	57	59	60	61	62	63	65	66	67	69	70	71	73
Hardware/Software	51	52	53	54	55	56	57	59	60	61	62	63	65	66	67	69	70	71	73
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	102	104	106	108	110	113	115	117	120	122	124	127	129	132	135	137	140	143	146
Total On-Going	383	391	398	406	414	423	431	440	449	458	467	476	486	495	505	515	526	536	547
Total 1-Time and On-Going	383	391	398	406	414	423	431	440	449	458	467	476	486	495	505	515	526	536	547

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 34

Responding Witness: Lonnie E. Bellar / Christopher M. Garrett

Q-34 Refer to the Bellar Testimony, pages 22–23.

a. For the calendar years 2010-2020 and the forecasted test year, provide the O&M expense for generating unit outages and the annual amount in base rates for the same period.

b. Explain why LG&E proposes to continue to both normalize O&M expense for generating unit outages in base rates and defer the difference in actual expenses to a regulatory asset or liability. Include an explanation of whether this arrangement provides any incentive to decrease costs.

c. Refer also to the Bellar Testimony, page 9. Explain whether the change in retirement dates for LG&E's generating units will reduce O&M expense for generating unit outages, and if so, whether those reductions are reflected in the forecasted test year.

A-34.

a. See attachment.

b. LG&E proposes to normalize its outage expense over an eight-year period because generator outages typically fluctuate significantly from year to year. Major outages typically occur on an eight-year cycle making an eight-year average a more accurate and reliable method of normalizing outage expense.

The Stipulation and Recommendation approved by the Commission in LG&E's last rate case authorized the use of regulatory asset and liability accounting related to generator outage expenses that are greater or less than the agreed upon five-year historical average to be included in base rates. Additionally, the Stipulation and Recommendation approved in LG&E's 2016 rate case contained very similar language. LG&E believes the continued use of deferral accounting is not only consistent with and supported by the previous approved-stipulations but is appropriate going forward in this case because it ensures the Company ultimately may collect, or will have to return to customers, through future base rates any amounts that are above or below the average embedded in the electric revenue requirement increases in these proceedings.[12]

The regulatory asset and liability treatment proposed by LG&E allows recovery of only those generator outage expenses actually incurred, while at the same time smoothing out the fluctuations in outage expense due to the inspection cycle. Under this approach, LG&E will recover no more and no less than its prudently incurred cost for planned generation outages. LG&E only seeks to recover prudently incurred outage maintenance expense through the regulatory asset and liability treatment.

LG&E's proposal to continue deferral accounting treatment for outage expense is centered around providing the Company the ability to recover its prudently incurred outage expenses. Absent deferral accounting treatment, LG&E projects it will under-recover its outage expense by $17.5 million as of the start of the forecasted test period. LG&E does not recover its carrying costs associated with additions to the regulatory asset between rate cases which serves to incentivize the Company to reduce its outage costs.

c. The change in the retirement dates will result in a reduction to O&M expenses for generating unit outages. LG&E did consider the change in the retirement dates when preparing the current operating plan. When comparing to the previous operating plan, outage expenses for Mill Creek unit 1 were reduced by $2.9M for the time period from 2021 to 2024. This reduction is reflected in the 8-year average included in the forecasted test year for this case. Additionally, there are no future major overhauls on Mill Creek unit 1 or Mill Creek unit 2 (the LG&E units proposed to retire in this decade) included in the 8-year average for the test year in this case. Generating unit outages are important to maintain safety and reliability of the operating units, so deferrals for a significant period of time could have a detrimental impact on both safety and reliability.

[12] Case No. 2016-00370 and Case No. 2016-00371, Stipulation and Recommendation, Article II, Section 2.2(F) (Ky. PSC Apr. 19, 2017).

Year	LGE		
Outage	Actual Expense	Book Expense	Base Rates
2010	15,661,241	15,661,241	15,064,627
2011	17,848,664	17,848,664	11,724,707
2012	17,680,158	17,680,158	16,176,655
2013	14,706,633	14,706,633	22,409,383
2014	12,113,341	12,113,341	22,409,383
2015	9,428,840	9,428,840	17,799,666
2016	12,895,303	12,895,303	13,189,950
2017	15,527,861	12,484,545	13,659,218
2018	18,501,313	14,128,486	14,128,486
2019	22,833,527	13,790,522	13,569,950
2020	10,828,272	13,290,682	13,290,682
Test Year	14,148,249	17,114,582	17,114,582

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 35

Responding Witness: Lonnie E. Bellar / Robert M. Conroy

Q-35. Refer to the Bellar Testimony, page 40.

a. For each transmission capital investment project, if Commission approval was sought, provide the case number. If Commission approval was not sought, provide support for LG&E's decision to not seek Commission approval.

b. Provide the components of the Other capital investment category.

A-35.

a. The Companies have not sought Commission approval for any of the transmission capital investments as the projects are ordinary extensions in the usual course of business. See the response to Question No. 32(a) for an explanation of the Companies' consideration of the necessity of a CPCN. The transmission capital investment projects are not duplicative, do not compete with the facilities of other utilities, and do not materially affect LG&E's financial condition. The projects shown on the table on page 40 of the Bellar testimony shows projects in the aggregate. None of the projects individually exceeds the $100 million threshold or otherwise materially affects LG&E's financial condition.

b. The components of the Other category are:

$ millions

	KU	**LG&E**	**Total**
Compliance	0.9	0.3	1.2
Emergency Replacement	5.4	1.5	6.9
Native and 3rd Party Requests	8.6	1.3	9.9
Land	7.4	-	7.4
Operations Support	3.6	1.8	5.4
Resiliency	1.0	5.5	6.5
Retirements	0.1	-	0.1
Total All Other	27.0	10.5	37.5

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 36

Responding Witness: Lonnie E. Bellar / Robert M. Conroy

Q-36. Refer to the Bellar Testimony, page 52.

a. For each gas capital investment project, if Commission approval was sought, provide the Case number. If Commission approval was not sought, provide an explanation why.

b. Provide the components of the miscellaneous capital investment category.

A-36.

a. LG&E obtained Commission approval of the Transmission Modernization Program, Gas Service Line Replacement, and Bullitt County pipeline in Case No. 2016-00371. LG&E has not sought Commission approval for any of the other gas capital investments as the projects are ordinary extensions in the usual course of business. See the response to Question No. 32(a) for an explanation of the Companies' consideration of the necessity of a CPCN. The gas capital investment projects are not duplicative, do not compete with the facilities of other utilities, and do not materially affect LG&E's financial condition. None of the projects individually exceeds the $100 million threshold or otherwise materially affects LG&E's financial condition.

b.

Project Number	Name	$000s
406000002	Small Tools 2020 004060	60
406000027	Small Tools 2021 004060	100
419000002	Small Tools 2020 004190	190
419000005	Small Tools 2019 004190	161
419000006	Equipment - backhoe 2020	70
419000009	Small Tools 2021 004190	227
419000015	EQUIPMENT-BACKHOE 2021	117
419000016	AIR FILLING STATION 2020	115
419000017	EQUIPMENT-BACKHOE 2019	65

419000018	TRENCHER PLOW 2019	85
419000025	Plate Truck Replacement	429
419000026	GMI Replacement	248
445000001	SMALL TOOLS 2019	(2)
445000003	Small Tools 2021 004450	30
447000017	Muldraugh Backhoes	170
447000024	Muldraugh Tree Trimming Equip	171
447000026	Mowing Trctr & Rot Cutter	115
447000027	Muldraugh Welding Truck	70
448000024	Small Tools 2020 004480	56
448000038	Small Tools 2021 004480	60
448000041	Purchase Excavator	110
450000008	Small Tools 2020 004500	30
450000011	Small Tools IM&E 2021	30
451000003	Small Tools 2020 004510	30
451000008	Small Tools SR&O 2021	30
460000001	Small Tools 2020 004600	18
460000004	Small Tools 2021 004600	15
	Total	2,800

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
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Case No. 2020-00350

Question No. 37

Responding Witness: Eileen L. Saunders

Q-37. Refer to the Bellar Testimony, page 56, lines 10–15 and page 57, lines 1–6.

a. Regarding the subscribed AMS Opt-In Program, explain if a customer must first request an AMI meter or if LG&E offers a meter to new customers or customers calling in to a CSR representative for another reason.

b. For the last two years, provide any customer service representative dialog scripted regarding AMI meters.

A-37.

a. Since reaching full enrollment levels in 2019, eligible customers must first request participation in the subscribed AMS Opt-In Program to join the waitlist.

Prior to reaching full enrollment levels in 2019, customers could directly request participation online, over the phone, or by mail if they received and returned a business reply card for the AMS Opt-In program. In addition, customer service representatives were trained to discuss advanced meters during customer inquiries such as those listed below.

- New or changed electric service (move ins)
- Billing or credit related questions
- Disconnection or reconnection
- Alternative rates e.g. Residential Time of Day
- Information on how they can better manage their consumption
- Meter access issues
- Solar Share Program

b. Due to the varied nature of customer inquiries, a standardized script is not in place. However, customer service representatives are trained with guidelines and policies on how to handle customer inquiries. Additionally, they have been trained to ask customers during customer contacts, where appropriate, if they are interested in enrolling in the Advanced Meter Program at no additional cost. If the customer requested more information, the representative was trained to share how the advance meter allows access to usage, how that access would help them understand their usage and how the information would be displayed on My Meter through My Account. If the customer is not interested, then the customer service representative was trained to thank the customer for considering an advanced meter and complete the customer transaction.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
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Case No. 2020-00350

Question No. 38

Responding Witness: Eileen L. Saunders

Q-38. Refer to the Bellar Testimony, Exhibit LEB-3, page 13.

a. Explain whether the current meter reading contract provides for annual increases.

b. Provide the term of the current meter reading contract and any terms for annual escalation or renewal.

c. Provide the term for which LG&E issued the RFP for meter reading. If LG&E did not specify a term, provide the term proposed in the responses.

d. State the term of the previous meter reading contracts.

e. Provide a copy of the RFP issued for the meter reading contract and a copy of all responses.

A-38.

a. The current meter reading contract allows for a 2.5% increase each year.

b. Current terms of meter reading contract are July 1, 2019 through June 30, 2024. Annual increases are allowed at service anniversary dates each year.

c. The term stated in the last meter reading RFP was from July 1, 2019 through June 30, 2024.

d. The previous meter reading contract was in effect from June 1, 2014 through May 31, 2019.

e. See attached. The information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection.

The entire attachment is Confidential and provided separately under seal.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
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Case No. 2020-00350

Question No. 39

Responding Witness: Lonnie E. Bellar

Q-39. Refer to the Bellar Testimony, Exhibit LEB-3, page 21. Confirm that this analysis used a 15-year depreciable and useful life for AMI meters. If this cannot be confirmed, provide the depreciable and useful lives of the AMI meters used in this analysis.

A-39. Confirmed.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
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Case No. 2020-00350

Question No. 40

Responding Witness: David S. Sinclair

Q-40. Refer to the Direct Testimony of David S. Sinclair (Sinclair Testimony), page 6, lines 6–12, and page 7, lines 11–13. The 2021 Load Forecast includes the effect of the COVID-19 pandemic on the national and Kentucky economies, projects real Kentucky Output to return to 2019 levels by 2022, and assumes that the economy would begin opening up by fall 2020 and working from home would largely be over. Given the resurgence in cases in the fall of 2020 and the recent stay at home orders from Governor Beshear in November 2020, explain whether LG&E believes that the forecast is overly optimistic, and if so, explain what adjustments need to be made to the LG&E electric and LG&E gas load forecasts.

A-40. Despite the recent resurgence in cases and measures taken to address them, the economy is largely open and remains on a trajectory for the Forecasted Test Period that is consistent with the 2021 Load Forecast. While events may not have evolved precisely as envisioned at the time the 2021 Load Forecast was prepared, nothing has occurred that would require an adjustment to the forecast at this time.

LOUISVILLE GAS AND ELECTRIC COMPANY

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Case No. 2020-00350

Question No. 41

Responding Witness: David S. Sinclair

Q-41. Refer to the Sinclair Testimony, page 19, lines 15–23, and to the Application filing requirements, Tab 16 - 807 KAR 5:001 Sec. 16(7)(c) D. Explain in detail how the forecast adjusted gas volumes and revenues for normal weather, and either provide Excel spreadsheets or indicate in the record where spreadsheets can be found that specifically show the calculation of the adjustments that were made to actual volumes and revenues in the gas forecast as a result of weather normalization.

A-41. Weather adjustments are applied only to historical billed sales to estimate what historical billed sales would have been under normal weather conditions. Along with actual historical billed sales, these weather-normalized billed sales data are used to assess the results of the forecast models for reasonableness.

The forecast uses historical gas volumes and historical weather data, both without adjustment, as inputs to econometric models as explained in Tab 16 - 807 KAR 5:001 Sec. 16(7)(c) D section 4. Normal weather is then calculated as explained in Tab 16 - 807 KAR 5:001 Sec. 16(7)(c) D section 3 and used as the weather input to the gas billed sales forecast models. Therefore, the forecasts are developed based on normal weather and no weather-normalization adjustments are required for forecasted volumes.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
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Case No. 2020-00350

Question No. 42

Responding Witness: David S. Sinclair

Q-42. Refer to the Sinclair Testimony, Exhibit DSS-2, page 1 of 1. Also refer to Case No. 2018-00348,[13] the 2018 Integrated Resource Plan (IRP), pages 5–25, Table 5-7. For the 2018 IRP, the 2021 and 2022 forecasted energy requirements were 12,353 GWh and 12,357 GWh, respectively. Exhibit DSS-2 forecasts 11,354 GWh for the forecasted test period of July 2021–June 2022. Aside from the COVID-19 pandemic, provide any other reason(s) for the lowered forecasted energy sales.

A-42. As stated in the question, the data from the 2018 IRP are energy requirements which include transmission and distribution losses whereas the data in Exhibit DSS-2 are sales which exclude transmission and distribution losses. Adjusting the 2018 IRP energy requirements data to get to sales for the forecasted test period results in a value of 11,634 GWh. Putting the data on a comparable basis means that the 2021 BP forecast of the forecasted test period is 280 GWh lower than in the 2018 IRP. Figure 1 breaks out the variance by class.

As discussed in the response to AG-KIUC 1-113, the likely impact of the COVID pandemic largely disappears by 2022. This means that the main differences relate to i) changes in forecasted improvements in energy efficiency and number of customer for General Service customers and Large Commercial customers (Power Service Secondary and Time-of-Day Secondary), and ii) certain major accounts that make up the bulk of the industrial class (Power Service Primary, Time-of-Day Primary, and Retail Transmission Service).

Table 1 shows the variance in the number of customers and use-per-customer for General Service and Large Commercial. Table 2 uses the variances in Table 1 to calculate the change in sales caused by the variance in customers and use-per-customer.

[13] Case No. 2018-00348, Electronic 2018 Joint Integrated Resource Plan of Louisville Gas and Electric and Kentucky Utilities Company (Ky. PSC Oct. 2, 2020).

Sales to major account customers make up approximately 65 percent of the sales in the Industrial class. Changes to the forecast for three major account customers are the cause for the majority of the change in the Industrial sales class.

Figure 1

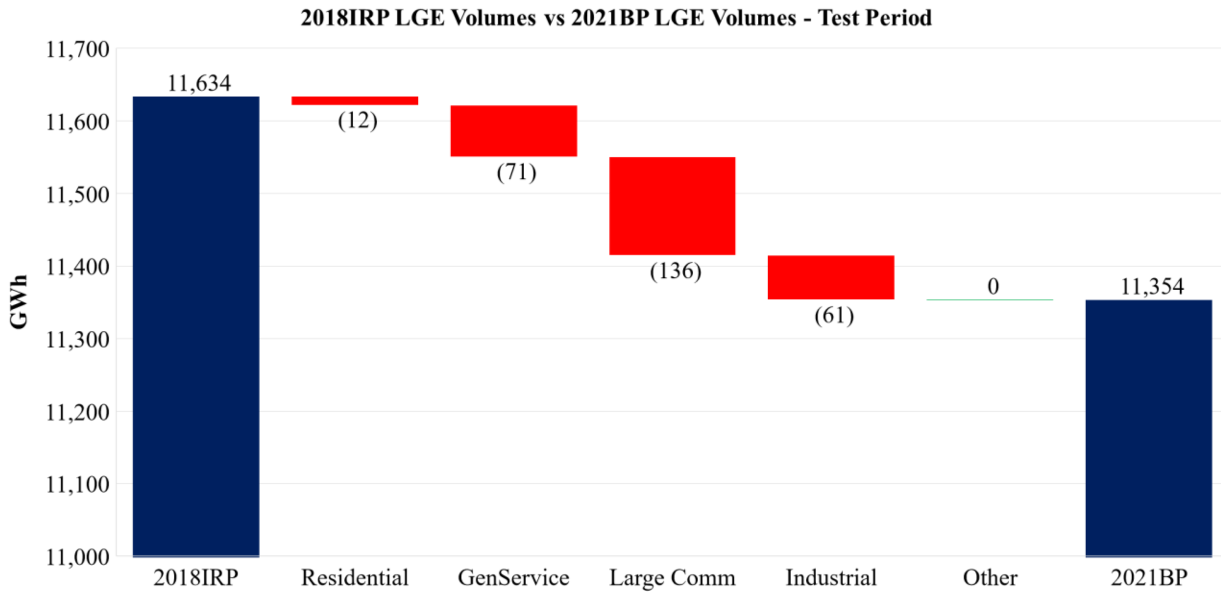

Table 1

Class	Forecast	Energy (GWh)	Customers	Use-per-Customer (MWh/Cust)
General Service	2018 IRP	1,268	46,174	27
	2021 BP	1,197	45,361	26
	Diff (2021 BP less 2018 IRP)	-71	-813	-1
Large Commercial	2018 IRP	2,934	3,366	872
	2021 BP	2,797	3,287	851
	Diff (2021 BP less 2018 IRP)	-136	-78	-21

Table 2

	General Service Energy (GWh)	Large Commercial Energy (GWh)
Change in sales due to change in the number of customers (delta customers x 2018 IRP use/customer)	-22	-68
Change in sales due to change in use/customer (delta use/customer x 2021 BP customers)	-49	-68
Total	-71	-136

LOUISVILLE GAS AND ELECTRIC COMPANY

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Case No. 2020-00350

Question No. 43

Responding Witness: Robert M. Conroy / John K. Wolfe

Q-43. Refer to the Direct Testimony of John K. Wolfe (Wolfe Testimony), page 16.

a. For each capital investment project listed in the table, if Commission approval was sought, provide the case number. If Commission approval was not sought, provide support for LG&E's decision to not seek Commission approval.

b. Provide the components of the miscellaneous capital investment category.

A-43.

a. LG&E obtained Commission approval of the Distribution Automation program in Case No. 2016-00371. The Companies have not sought Commission approval for any of the other capital investments as the projects are ordinary extensions in the usual course of business. See the response to Question No. 32(a) for an explanation of the Companies' consideration of the necessity of a CPCN. The capital investments are not duplicative, do not compete with the facilities of other utilities, and do not materially affect LG&E's financial condition. The table on page 16 of the Wolfe testimony shows projects in the aggregate. None of the projects individually exceeds the $100 million threshold or otherwise materially affects LG&E's financial condition.

b. The following chart provides the components of the miscellaneous capital investment category for both Companies (in millions).

		KU		LGE		Total
Miscellaneous						
Tools and Equipment	$	1.55	$	2.57	$	4.12
Hardware	$	0.35	$	0.28		0.63
Other		0.03		(0.38)		(0.35)
Total Miscellaneous	$	1.94	$	2.47	$	4.41

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
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Case No. 2020-00350

Question No. 44

Responding Witness: John K. Wolfe

Q-44. Refer to the Wolfe Testimony, page 27. Confirm that no additional transformers will need to be placed in service in the course of an AMI rollout.

A-44. Related to the referenced testimony, the data from AMI will be used to identify overload and underutilized transformers. The data to identify and then replace these transformers occurs after AMI rollout and not during the course of the rollout. Transformers replaced are to maintain or improve reliable service to customers and not a part of the AMI rollout.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 45

Responding Witness: Eileen L. Saunders

Q-45. Refer to the Direct Testimony of Eileen L. Saunders (Saunders Testimony), page 8, line 23. For the over $1.0 million of convenience fees absorbed, explain how these are expensed and then accounted for in the forecasted test year.

A-45. The fees were expensed in FERC 903 (customer records and collection expenses) during 2020 and not recovered from customers. No convenience fees are included in the revenue requirement for the forecasted test year, as it is assumed that all such third-party charges are paid by the customer to the service provider.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
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Case No. 2020-00350

Question No. 46

Responding Witness: Eileen L. Saunders

Q-46. Refer to the Saunders Testimony, page 10, lines 20–21. Provide the number of disconnection letters sent since the disconnect moratorium was lifted.

A-46. Since the disconnect moratorium was lifted on October 20, 2020, 163,348 disconnection letters, or "brown bills," have been sent through January 10, 2021. Also since the disconnect moratorium was lifted, residential customers must first be placed on a default payment plan before becoming eligible for disconnection.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
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Case No. 2020-00350

Question No. 47

Responding Witness: Eileen L. Saunders

Q-47. Refer to the Saunders Testimony, page 22, lines 1–16. Provide an itemized list of other cost savings beside the reduction of three full-time positions due to operating efficiencies.

A-47. The other cost savings were the Call Center overtime of $260,000 associated with the automation of time extension calls handled by the Interactive Voice Response System. The LG&E portion of this savings was $119,600.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 48

Responding Witness: Eileen L. Saunders

Q-48. Refer to the Saunders Testimony, page 26, lines 1–11. Provide the average number of costumers that access My Meter per week.

A-48. The 10,000 LG&E participants logged in a total of 35,811 times in 2020 with an average of 685 customer logins to MyMeter per week.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
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Case No. 2020-00350

Question No. 49

Responding Witness: Eileen L. Saunders

Q-49. Refer to the Saunders Testimony, page 28, lines 4–7. Provide the number of customers that have installed their own energy monitoring equipment.

A-49. The Companies do not track the number of customers installing their own energy monitoring equipment.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information Dated January 8, 2021

Case No. 2020-00350

Question No. 50

Responding Witness: Eileen L. Saunders

Q-50. Refer to the Saunders Testimony, page 33, lines 8–11. For the meter readers LG&E will retain, provide the estimated number of employees and state whether these meter readers will be subcontractors or full-time employees.

A-50. The number of employees retained depends on the number of customers who opt out. LG&E expects to retain 8 full-time equivalent (FTE) employees to support the meter reading needs for customers.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 51

Responding Witness: Eileen L. Saunders

Q-51. Refer to the Saunders Testimony, pages 33-34. Witness Saunders states that LG&E will offer a free repair of a meter base that is found to be damaged or is damaged in the process of installing an AMI meter. Provide LG&E's course of action if the meter base were damaged multiple times by an LG&E employee in the course of installing an AMI meter.

A-51. The Companies have not characterized meter base repairs as part of the AMI deployment as "free." The expected costs associated with meter base repairs have been included in the overall deployment costs as a utility revenue requirement and can be found in Table 10 of Bellar Testimony, Exhibit LEB-3 page A-1. The Companies expect that a meter base will need to be accessed only once to successfully install an AMI meter. If the meter base needs repair during this process, the Companies will complete the repair. If the meter base were to be damaged multiple times by an LG&E employee or contractor in the course of installing an AMI meter, the Companies will repair the meter base each time.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 52

Responding Witness: Eileen L. Saunders

Q-52. Refer to the Saunders Testimony, page 35, line 14, through page 38, line 16, which discusses the HomeServe USA (HomeServe) protection plan.

a. Indicate whether LG&E would have any liability related to the HomeServe protection plan.

b. Provide the projected annual revenues to LG&E for the next five years as a result of the HomeServe protection plan.

c. Provide a copy of the agreement between LG&E and HomeServe.

d. Provide a copy of the welcome kit customers would receive after signing up for the HomeServe protection plan.

e. Explain whether a customer's HomeServe premiums would be refunded if it was discovered that the customer's homeowner's insurance policy protects against a loss also covered by HomeServe.

f. Explain whether a customer can cancel their HomeServe protection plan at any time.

g. Explain whether LG&E would have the ability to intervene in and mediate a dispute between one of its customers and HomeServe.

A-52.

a. No. LG&E will not have a liability related with the HomeServe protection Plan as the optional agreement will be between the customer and HomeServe.

b. This is a new voluntary program, therefore it is difficult to determine how many customers may elect to participate.

c. There has not been an execution of an agreement with HomeServe as the tariff for the billing of this service is contingent of KPSC approval in this proceeding.

d. There has not been an execution of an agreement with HomeServe as the tariff for the billing of this service is contingent of KPSC approval in this proceeding. See attached sample welcome kit customers would receive after signing up for the HomeServe protection plan has not been prepared.

e. If a Homeowner's insurance policy covers the repair, the homeowner could cancel their plan and HomeServe would provide them with a refund, less any claims already paid out by HomeServe.

f. Yes, the customer can cancel at any time.

g. LG&E will not intervene or mediate a dispute between one of its customers and HomeServe.

DECLARATION PAGE

IMPORTANT INFORMATION - PLEASE RETAIN FOR YOUR RECORDS

Service Agreement Holder:

[redacted]

Covered property (Home) address:

[redacted]

Email Address:

Not Provided

Coverage:

Exterior Electrical

Service Agreement Number:

[redacted]

[redacted]

[redacted]

Repair Hotline

1-855-709-6268

Call this number for repair assistance. Representatives are available 24 hours a day – 365 days a year – including weekends and holidays.

Customer Service Number:

1-855-709-6268

Available: 8 am - 8 pm Monday-Friday (EST)
10 am - 4 pm Saturday (EST)

Certain items and events are not covered by this Service Agreement.
Please see the "Exclusions" section of the Terms and Conditions.

PAYMENT DETAILS

[redacted]

[redacted] [redacted]

[redacted] [redacted]

PRSRT
FIRST-CLASS MAIL
US POSTAGE
PAID
MAILED FROM
ZIP CODE 02904
PERMIT NO. 1177

Your Plan Documents Enclosed

7134 Lee Hwy
Chattanooga, TN 37421

<Title> <First_Name> <Last_Name>
<Company_Name>
<Bill_To_Address1>
<Bill_To_Address2>
<Bill_To_City>, <Bill_To_State> <Bill_To_Zip_Code>

<<Month DD, YYYY>>

Dear <Title> <First_Name> <Last_Name>,

As a Louisville Gas & Electric/Kentucky Utilities customer, thank you for choosing Exterior Electric Line from HomeServe. Your Service Agreement is enclosed. Keep this information handy in the event of a covered emergency.

To make a service call, simply call the Emergency Repair Hotline and provide your Service Agreement Number. A local, licensed technician will be directed to your property. Once a covered repair has been completed, you will pay nothing up to your benefit amount.

Hopefully you won't be faced with an unexpected emergency, but if you are, prompt, reliable assistance is just one call away.

We're glad you're with us.

Sincerely,

Damien Brady
Customer Service
HomeServe

P.S. Access your account online and go paperless with e-delivery of your plan documents
Go to www.MyHomeServeUSA.com

<Disclosure>

PLEASE KEEP THESE DOCUMENTS SAFE

HomeServe

EXTERIOR ELECTRICAL TERMS AND CONDITIONS

Please read carefully.

This Service Agreement

This Service Agreement provides coverage for Your exterior electrical line ("System"). HomeServe USA Repair Management Corp. ("HomeServe") will administer this Service Agreement. Your Service Agreement ("Service Agreement") consists of these terms and conditions as well as Your Declaration Page, which lists important information about Your coverage ("Declaration Page") and is the entire agreement between You and Us.

HomeServe is Your point-of-contact for all questions or concerns.

How can You contact HomeServe?
7134 Lee Highway, Chattanooga, TN 37421 • Please see Your Declaration Page for HomeServe's phone numbers.

This is not an insurance policy. This Service Agreement is between you, the Service Agreement holder listed on the Declaration Page ("You" or "Your") and us, National Home Repair Warranty, Inc. ("Us", "We", "Our", "NHRW"), the entity obligated to provide service. We are responsible for providing Your benefits.

Eligibility

Who is eligible for this coverage?

Owners of:

- A single structure not intended to be moved ("Home") and the land it is located on ("Property") that is used and zoned only for residential occupancy, including:
  a) Single-family homes
  b) Townhomes
  c) Multi-family homes

Who is not eligible for this coverage?

Owners of:

- Recreational vehicles or homes intended to be moved
- Properties used for commercial purposes

Properties that have:

- A System with a pre-existing condition, defect or deficiency that You are aware of prior to the Start Date of Your first Term
- An entire System shared with a third party or that is covered by a homeowner's, condominium or like association
- A System with an electrical services entrance rated less than 80 amps

Coverage

You must call HomeServe for Covered Repairs. You are responsible for charges beyond Your Benefit Limit.

Under this Service Agreement, normal wear and tear of Your System, as described below, is characterized by deterioration that occurs naturally over time resulting from standard use.

What is a Covered Repair?

Repair or replacement of the following for which You have sole responsibility, that is damaged due to normal wear and tear:

- The broken, failed, or hazardous permanent high voltage overhead or underground wiring and the weatherhead, insulator, riser, meter base, and service entrance conductor located between Your utility's responsibility and the exterior wall of Your Home.

What is the maximum amount We will pay for Covered Repairs?

- Up to $5,000 per Term ("Benefit Limit").
- Multiple Service Calls up to the Benefit Limit. See "What is a Service Call?" below.

What restoration is included?

- Restoration to any area disturbed by the Covered Repair is limited to filling, raking, and reseeding of grass, reinstallation of existing soft landscaping and shrubbery, and patching of paved surfaces.
- Debris will be removed from the restoration area.

Exclusions

What is not covered?

General exclusions:

1. **Damages, losses or expenses, whether from accident, negligence or otherwise, caused by: (a) You or any person or entity other than Us or HomeServe or (b) unusual circumstances, meaning a natural disaster, act of God (such as fires, explosions, earthquakes, drought, tidal waves, extreme weather, and floods), war, riots, hostilities, strikes, work slowdowns, or acts or threats of terrorism.**
2. **Excluded Damages (see "Limits of liability"), for example damages necessary to access the repair area. Your rights and remedies may vary depending on the state where Your Property is located.**
3. **Correction of, or reimbursement for, any repairs or restorations made by You or anyone You hire.**
4. **Any correction, upgrade, or move of Your existing System in order to meet any code, law, regulation, ordinance, if not directly related to the necessary Covered Repair.**
5. **Any section of Your System that is shared with any third party or is covered by a homeowners', condominium or like association.**
6. **Repair or replacement of any sections or parts of Your System that are not stated to be covered in "What is a Covered Repair?".**

System exclusions:

1. **Damage or failure due to disconnection or interruption to the main electrical supply; transformers; repair of low voltage wiring; generators; non-utility supplied power and/or lines, including, but not limited to, windmills, solar, and generators.**
2. **Appliances, pool heaters, or light fixtures and fittings.**

Restoration exclusions:

1. **Replacement of any decorative paving, pathways or landscaping features.**
2. **We cannot guarantee the survival of any living materials.**
3. **Restoration that is not stated to be covered in "What restoration is included?".**

Service calls

What is a Service Call?

A visit to Your Property by one of HomeServe's approved technicians where either work is performed to diagnose and complete a single Covered Repair or it is determined that the repair is not covered ("Service Call").

Do You have to pay anything for a Service Call?

There is no fee to make a Service Call.

When can You request a Service Call?

There is an initial period of 30 days during which You will not be able to request a Service Call ("Waiting Period"), giving You less than 12 full months of coverage in the first Term. Upon renewal (if applicable), there will be no Waiting Period.

How can You request a Service Call?
Call HomeServe and a service representative will schedule a Service Call. You will not be reimbursed for work not authorized by HomeServe. Technicians must have safe and clear access to, and safe working conditions at and around the work area. In order to make a Service Call Your Service Agreement must be active and You must be current with Your payment(s) of the amount You agree to pay for this Service Agreement, as listed on Your Declaration Page ("Price"). Whether Your System is to be repaired or replaced is entirely within the discretion of HomeServe.

What is the Covered Repair Guarantee?
For 12 months, We will arrange at Our expense and choice for repair or replacement of Covered Repairs which are defective in materials or workmanship ("Covered Repair Guarantee"). We disclaim any and all statutory or common law warranties (whether express or implied) other than the Covered Repair Guarantee and any implied warranties that cannot be excluded under applicable law.

Term, cancellation and renewal

When does this Service Agreement start and how long is it?
Your Service Agreement begins on the start date listed on Your Declaration Page ("Start Date") and continues for 12 months ("Term").

Can You cancel?
You may cancel at any time by either calling HomeServe or going online to https://www.homeserveusa.com/cancel.

- If You cancel within 30 days of the Start Date, You will receive a full refund less any claims paid by Us.
- If You cancel more than 30 days after the Start Date, You will receive a pro-rata refund less any claims paid by Us.
- If Your local utility or municipality provides similar coverage to You at no charge and You cancel, We will refund the payments You have made less any claims paid by Us. You may be required to provide evidence of the similar coverage.

Can We cancel?

- We may cancel, with no less than 15 days' notice to You: (a) for non-payment of the Price; (b) if We find that You already have coverage that is the same or similar to the coverage provided by this Service Agreement; (c) if We find that You are ineligible for this coverage; or (d) for Your fraud or misrepresentation of facts that are material to this Service Agreement or benefits provided under it;
- We may cancel for any other reason on 60 days' notice to You.

If We cancel for (a) no refund will be given. If We cancel for (b) or (c), We will refund the payments You have made less any claims paid by Us. In all other cases You will get a pro-rata refund less any claims paid by Us.

You will be notified in writing prior to cancellation. The notice will tell You when Your Service Agreement will be cancelled and why it has been cancelled. The notice periods begin when We send the notice to You.

Will this Service Agreement automatically renew?
Unless You tell Us otherwise, Your Service Agreement will automatically renew at the end of every Term for another 12 months at the then-current renewal price. We may change the price at renewal. We reserve the right to not offer this Service Agreement upon renewal.

Other terms

How can You contact NHRW?

59 Maiden Lane, 43rd Floor, New York, NY 10 -7818

Receiving documents electronically

If You consent to electronic delivery, You can receive Your Service Agreement and all related documents to the email address listed on Your Declaration Page ("Email Address"). To update Your Email Address, or discontinue electronic delivery of Your documents You can call HomeServe or update Your preferences in Your website profile at www.homeserveusa.com.

Privacy policy
HomeServe is serious about the private nature of Your personal data. Please read their Privacy Policy, a link to which can be found at the bottom of every page at www.homeserveusa.com carefully to fully understand how they collect, share, and protect personal data about You. You can also call HomeServe to request a copy.

Assignment/Amendment
We may assign this Service Agreement, in whole or in part, at any time without prior notice to You. We may change this Service Agreement (including the Price) and delegate any of Our obligations at Our sole discretion and without Your consent provided We give You 30 days' prior written notice of the changes. The changes will become effective 30 days after We send You the notice. You may not change this Service Agreement or delegate any of Your obligations.

Transfer
You may not transfer this Service Agreement.

General
Should any of these terms and conditions conflict with the laws of Your state they shall be deemed amended so as to comply with those laws. Should certain terms or conditions be held to be invalid or unenforceable, the remainder of these terms and conditions shall remain valid.

Responsibility for benefits owed to You
Our obligations under this Service Agreement are insured under a service contract reimbursement insurance policy. If We fail to pay or to deliver service on a claim within 60 days after proof of loss has been filed, or in the event You cancel and We fail to issue any applicable refund within 60 days after cancellation, You are entitled to make a claim against the insurer, Wesco Insurance Company at 59 Maiden Lane, 43rd Floor, New York, NY 10038, 1-866-505-4048.

Limits of liability
To the fullest extent permitted by applicable law, (1) You agree that We and HomeServe, and both of Our respective parents, successors, affiliates, approved technicians and Our and their officers, directors, employees, affiliates, agents, contractors or similar parties acting on behalf of either Us or HomeServe shall not be liable to You or anyone else for: (a) any actual losses or direct damages that exceed the lowest applicable per repair benefit limit set out above relating to any repairs performed by Us, HomeServe or on behalf of either Us or HomeServe or services provided hereunder giving rise to such loss or damage; or (b) any amount of any form of indirect, special, punitive, incidental or consequential losses or damages, damages based on anticipated or lost profits, wages, or revenue, or damages based on diminution in value or a multiple of earnings, including those caused by any fault, failure, delay or defect in providing any repairs performed by Us, HomeServe or on behalf of either Us or HomeServe or services provided under this Service Agreement, regardless of whether such damages were foreseeable and whether or not We or HomeServe or anyone acting on behalf of either Us or HomeServe have been advised of the possibility of such damages (the damages listed in clauses (a)

and (b), collectively the "Excluded Damages"); and (2) these limitations and waivers shall apply to all claims and all liabilities and shall survive the cancellation or expiration of this Service Agreement. You may have other rights that vary from state to state.

Arbitration: YOU, NHRW AND HOMESERVE ALL AGREE TO RESOLVE DISPUTES BY BINDING ARBITRATION as follows:

A. **ANY DISPUTE THAT ARISES OUT OF OR RELATES TO THIS SERVICE AGREEMENT OR FROM ANY OTHER AGREEMENT BETWEEN US, OR SERVICES OR BENEFITS YOU RECEIVE OR CLAIM TO BE OWED FROM NHRW OR HOMESERVE, WILL BE RESOLVED BY ARBITRATION ON AN INDIVIDUAL BASIS.** This arbitration agreement applies to disputes no matter when they arose, including claims that arose before You and We entered into this Service Agreement. This arbitration agreement also applies to disputes involving the officers, directors, managers, employees, agents, affiliates, insurers, technicians, successors or assigns of NHRW or HomeServe. In addition, this arbitration agreement covers any claims or causes of action against NHRW or HomeServe that You may assign or subrogate to an insurer. The American Arbitration Association ("AAA") will administer the arbitration under its Consumer Arbitration Rules. The Federal Arbitration Act applies.

B. Any party bringing a claim may choose to bring an individual action in small claims court instead of arbitration, so long as the claim is pursued on an individual rather than a class-wide basis.

C. **THIS ARBITRATION AGREEMENT DOES NOT PERMIT CLASS ACTIONS AND CLASS ARBITRATIONS.** By entering into this Service Agreement, all parties are waiving their respective rights to a trial by jury or to participate in a class or representative action. **THE PARTIES AGREE THAT EACH MAY BRING CLAIMS AGAINST THE OTHER ONLY IN ITS INDIVIDUAL CAPACITY, AND NOT AS A PLAINTIFF OR CLASS MEMBER IN ANY PURPORTED CLASS, REPRESENTATIVE, OR PRIVATE ATTORNEY GENERAL PROCEEDING.** You may bring a claim only on Your own behalf and cannot seek relief that would affect other parties.

D. HomeServe will pay any filing fee, administration, service or case management fee, and arbitrator fee that the AAA charges You for arbitration of the dispute.

E. **IF FOR ANY REASON A CLAIM OR DISPUTE PROCEEDS IN COURT RATHER THAN THROUGH ARBITRATION, YOU, NHRW AND HOMESERVE UNCONDITIONALLY WAIVE ANY RIGHT TO TRIAL BY JURY.** This jury trial waiver also applies to claims asserted against any of the officers, directors, managers, employees, agents, affiliates, insurers, technicians, approved technicians, successors or assigns of NHRW or HomeServe.

State variations

The following shall apply if inconsistent with any other terms and conditions of this Service Agreement:

[Please click here to see if any state specific variations apply to You.]

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 53

Responding Witness: Eileen L. Saunders

Q-53. Refer to the Saunders Testimony, page 36, lines 6–9. Provide the average cost of customer-owned exterior equipment damage in 2019.

A-53. LG&E does not track what a homeowner spends to repair their portion of repairs to the exterior electric lines.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 54

Responding Witness: Eileen L. Saunders

Q-54. Refer to the Saunders Testimony, page 37.

a. Explain whether any expenses or revenues related to the proposed arrangement with HomeServe are included in the test year. If so, identify these expenses or revenues.

b. If not provided in the response to subpart (a), provide the estimated annual cost of marketing and billing related to the proposed arrangement with HomeServe.

A-54.

a. No revenues related to the proposed arrangement with HomeServe are included in the test year. There are $22,500 of expenses in the test year for labor associated with setting up HomeServe.

b. There are no estimated annual costs of marketing and billing related to the proposed arrangement with HomeServe. See the response to Question No. 58.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information Dated January 8, 2021

Case No. 2020-00350

Question No. 55

Responding Witness: Eileen L. Saunders

Q-55. Refer to the Saunders Testimony, page 37, lines 15–16, which discusses notice to customers of the availability of the HomeServe protection plan. Explain what entity will provide notice to LG&E customers.

A-55. LG&E will work with HomeServe to create the marketing piece that will be fully executed and paid for by HomeServe. The marketing piece will make clear that the protection plan is voluntary, not a condition for receiving service, indicate that their bills for electric service will not be shut-off for a customer's failure to pay the HomeServe monthly fee, and that HomeServe, not LG&E, is providing the protection plan.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 56

Responding Witness: Eileen L. Saunders

Q-56. Refer to the Saunders Testimony, page 37, lines 16–19, which discusses LG&E performing billing and collection services for HomeServe. For customers who sign up for the HomeServe protection plan, indicate whether their bills will state that electric service will not be shut-off for a customer's failure to pay the HomeServe monthly fee.

A-56. No. The marketing plan will state that the electric service will not be shut-off for failure to pay the HomeServe monthly fee. If a customer does not pay, they will be removed from the HomeServe Program and they will be notified by HomeServe. The customer's electric service will not be shut-off for their failure to pay the HomeServe monthly fee.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information Dated January 8, 2021

Case No. 2020-00350

Question No. 57

Responding Witness: Eileen L. Saunders

Q-57. Refer to the Saunders Testimony, page 37, lines 16–19, which discusses LG&E performing billing and collection services for HomeServe. Explain whether LG&E has a cost allocation manual for use in allocating time spent by LG&E employees on the HomeServe activities as nonregulated and not as part of LG&E's regulated activities.

A-57. Time spent by LG&E employees for HomeServe activities will be de minimus and included as part of regulated activities.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 58

Responding Witness: Eileen L. Saunders

Q-58. Refer to the Saunders Testimony, page 37, lines 19–21, which indicates that LG&E will retain 15 percent of the collected HomeServe fees for marketing and billing services. Explain whether LG&E will market the HomeServe protection plan. If so, provide a copy of the marketing materials that will be sent to customers.

A-58. No. LG&E will not market the HomeServe protection plan. Subject to KPSC approval of the billing service, LG&E/KU and HomeServe will jointly develop all voluntary marketing materials. HomeServe will execute the planned marketing to customers. No such marketing materials exist at this time.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 59

Responding Witness: Eileen L. Saunders

Q-59. Refer to the Saunders Testimony, page 41, lines 13–15, which discusses that four total direct current fast charging (DCFC) stations would be installed if matching funding from the Environment Mitigation Trust was not received. Explain how many of the four DCFC stations will be in LG&E's service territory.

A-59. All four DCFC stations would be located in LG&E service territory.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 60

Responding Witness: Eileen L. Saunders

Q-60. Refer to the Saunders Testimony, page 41, lines 14–15, which lists the preliminary estimated cost of each DCFC station. Indicate whether the preliminary estimated cost listed is the total cost of each station or just the half LG&E would be responsible for.

A-60. The preliminary estimated cost listed is the total cost of each station.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 61

Responding Witness: Gregory J. Meiman

Q-61. Refer to the Direct Testimony of Gregory J. Meiman (Meiman Testimony), page 5. Mr. Meiman states that the independent studies provided by the company illustrate that LG&E's compensation and benefits package is competitive in the utility market. Provide any studies comparing compensation to the metro Louisville, Kentucky area.

A-61. As indicated in testimony, LG&E believes it is competitive in compensation and benefits when compared to the utility market. As a general matter, the Company does not attempt to benchmark against specific municipal markets. However, the benefits and compensation studies utilized comparator groups that included a number of Kentucky entities.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 62

Responding Witness: Gregory J. Meiman

Q-62. Refer to the Meiman Testimony, page 12.

a. Confirm that LG&E's Team Incentive Award (TIA) incentive compensation is in no way tied to or predicated upon LG&E financial performance.

b. Confirm that the TIA plan includes executive employees.

A-62.

a. Confirmed.

b. In general, executives are not covered by the TIA plan. However, for the officers that are covered by the TIA plan, the Companies have historically and again in this proceeding excluded such TIA incentive compensation from its requested revenue requirement.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information Dated January 8, 2021

Case No. 2020-00350

Question No. 63

Responding Witness: Gregory J. Meiman

Q-63. Refer to the Meiman Testimony, page 15. Confirm that the forecasted expense totals for 401(k) matching include the reduction from 70 percent to 35 percent for employees who also participate in the defined benefit plan that was made effective January 1, 2020.

a. Provide the amount of 401(k) matching contributions for employees who participate in both a defined contribution plan and have matching 401(k) contributions from LG&E.

b. Provide the amount of 401(k) matching contributions for employees who participate in both a defined benefit plan and have matching 401(k) contributions from LG&E.

A-63. Confirmed.

a. See attached. To clarify, the Companies have one defined contribution plan, of which the employer 70 percent match of employee contributions up to 6% is a component.

b. See attached.

	LGE Base Period	LGE Test Period
a. Post-2006 (employees matching savings plan contribution)	2,740,518	2,991,030
b. Pre-2006 (employees matching savings plan contribution)	1,065,239	877,375
Savings Plan Company Matching Contribution Total	*3,805,756*	*3,868,405*

The Savings Plan match amounts above are the totals that are allocated to the company's operating and maintenance expenses. It includes amounts that are allocated from LKS Services Company and allocations between the utilities for joint owned assets.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 64

Responding Witness: Gregory J. Meiman

Q-64. Refer to the Meiman Testimony, page 18, lines 17–22. Provide information on the medical clinic including location, offerings, and purpose.

A-64. The primary clinic is located at our Auburndale Service Center and a satellite location is at our Broadway Office Complex. The clinics provide primary care to employees, spouses and dependents covered by the Company's medical plan. The clinics also provide occupational care services for all employees. The purpose of the clinics is to provide more efficient and cost-effective medical services relative to that provided by third-party providers.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 65

Responding Witness: Gregory J. Meiman

Q-65. Refer to the Meiman Testimony, page 21, line 1. Provide a breakdown of the 31.2 percent of total medical and prescription costs paid for by employees by premium costs, deductible, co-insurance, co-payments, medical, dental, vison, and prescription cost percentages.

A-65. The 31.2 percent reflects total medical and prescription drug out-of-pocket costs. It is broken down by 20.3 percent for premium costs and 10.9 percent for employee's other out-of-pocket costs (2.4 percent deductibles, 2.3 percent coinsurance, and 6.2 percent copays).

Employees pay 32.2 percent of premium costs and 38.3 percent of other out-of-pocket costs (3.6 percent deductibles and 34.7 percent coinsurance) for dental.

Vision is 100% employee paid.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information
Dated January 8, 2021

Case No. 2020-00350

Question No. 66

Responding Witness: Daniel K. Arbough

Q-66. Refer to the Direct Testimony of Daniel K. Arbough (Arbough Testimony), Exhibit DKA-6, page 1 of 1. Explain whether the peer group against which LG&E compares its debt costs is selected by LG&E, by another party on LG&E's behalf, or by an independent third party.

A-66. The peer group against which the Companies compare their debt costs was selected by the Companies. The Companies have used this same peer group since 2006. The group includes most of the major utilities in the region.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Second Request for Information Dated January 8, 2021

Case No. 2020-00350

Question No. 67

Responding Witness: Adrien M. McKenzie

Q-67. Refer generally to the Direct Testimony of Adrien M. McKenzie Direct Testimony (McKenzie Testimony). Provide the Exhibits and associated workpapers in excel format with all cells unprotected and formulas accessible and intact.

A-67. See the response to PSC 1-56 for Mr. McKenzie's exhibits and schedules provided in Excel format that were prepared in LG&E's rate application. See attached for Mr. McKenzie's workpapers.

NO.	Title
WP-1	Moody's Investors Service, "Regulation Will Keep Cash Flow Stable As Major Tax Break Ends," *Industry Outlook* (Feb. 19, 2014).
WP-2	S&P Global Ratings, *Assessing U.S. Investors-Owned Utility Regulatory Environments*, RatingsExpress (Aug. 10, 2016).
WP-3	Value Line Investment Survey, *Water Utility Industry* (January 13, 2017) at p. 1780.
WP-4	Moody's Investors Service, *Louisville Gas & Electric Company*, Credit Opinion (Oct. 25, 2019).
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WP-39	Zacks Source Documents – Non-Utility Group
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MOODY'S
INVESTORS SERVICE

US Regulated Utilities

Regulation Will Keep Cash Flow Stable As Major Tax Break Ends

Our outlook for the US regulated utility industry is stable. This outlook reflects our expectations for the fundamental business conditions in the industry.

» **Cost-recovery mechanisms, coupled with annual base-rate increases, will keep the ratio of industry-wide cash flow to debt at about 18%, within our range for a stable outlook.** Favorable rate orders are part of what we view as a broader shift toward stronger regulatory support for the industry, all the more important this year given the end of bonus depreciation. Industry regulation is the most important driver of our outlook.

» **Ratemaking mechanisms, such as revenue decoupling and riders, allow utilities to recover costs faster and improve the quality, predictability and stability of cash flow.** The ratio of cash flow to gross profit for a peer group of 122 US operating companies has been more stable on a year-over-year basis since 2009, as the use of riders in regulatory agreements has become more commonplace.

» **We are also seeing signs of improved regulatory support in historically contentious states, such as Connecticut and Illinois.** Stronger recovery mechanisms put in place last year for Connecticut Natural Gas Corp. (A3 stable) and Commonwealth Edison Co. (Baa1 stable) in Illinois will likely make cash flow more predictable for utilities in each state. This marks a turnaround in both states, where regulatory support was lacking for certain cost-recovery provisions in the past.

» **Stagnant customer demand is leading some utilities to pursue shareholder growth through financial engineering.** Some companies are restructuring their businesses by creating master limited partnerships and "yieldcos" to defend their historically high equity multiples. For now, credit risks are limited but so are any benefits for bondholders, and these structures may weaken sponsor credit quality over time.

» **What could change our outlook.** We could shift our outlook to positive if the ratio of cash flow to debt rose toward 25% on a sustainable basis, which could happen if return on equity rises or utilities deleverage significantly. A more contentious regulatory environment that resulted in a material deterioration in cash flow, such that the ratio fell to 13%, could cause us to have a negative outlook.

Supportive regulatory relationships drive our stable outlook

Regulatory support will help US electric and gas utilities maintain stable credit profiles in 2014, even with stagnant customer demand and without the cash-flow boost from bonus depreciation.

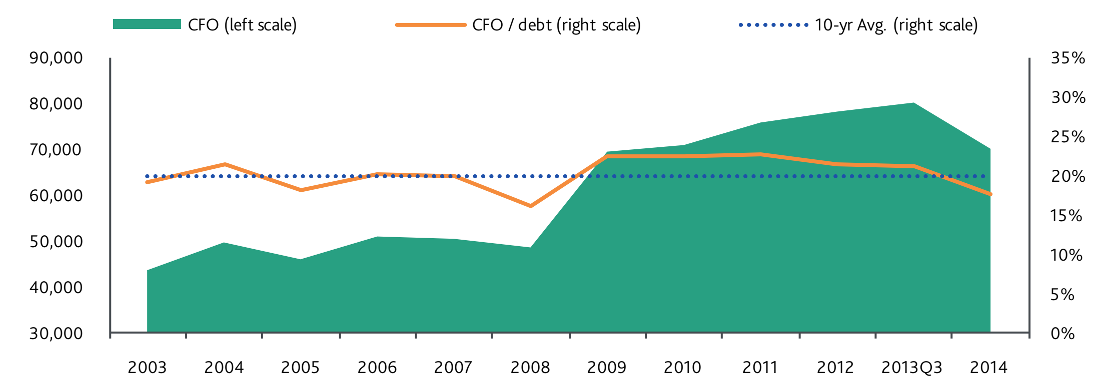
Fundamentally, the regulatory environment is the most important driver of our outlook because it sets the pace for cost-recovery. Favorable rate orders, even in states where utilities have had contentious regulatory relationships in the past, are part of what we view as a broader shift toward stronger regulatory support for the industry.

The improved regulatory framework, led by special cost-recovery mechanisms and annual base-rate increases, is all the more important this year for two reasons. First is the end of bonus depreciation, a temporary tax break that expired on December 31. We incorporate a view that bonus depreciation will not be extended; however, various corporate sectors are currently lobbying for the extension in 2014. Second is stagnant customer demand, which is also leading some utilities to pursue shareholder growth through financial engineering (please see page 6).

As Exhibit 1 shows, the ratio of cash flow to debt will decline this year to 18%, just below the 10-year trend line but within our range for a stable outlook. The decline is largely because of higher cash taxes, but utilities can still get some tax relief in 2014 by applying net operating loss carry-forwards (from factors unrelated to bonus depreciation) from past years to this year's tax payments—an option they didn't use when bonus depreciation was in effect.

We would likely shift our outlook to positive if the ratio of cash flow to debt rose to 25%, although that would take a marked increase in regulatory-allowed ROE levels or steps by utilities to scale back their dividend and stock-repurchase plans. A more contentious regulatory environment or a widespread adoption of more-aggressive financial strategies resulting in a material deterioration in cash flow, such that the ratio fell to 13%, would likely lead to a negative outlook.

EXHIBIT 1
Cash Flow to Debt Will Hover Below the 10-Year Average



Notes: Figures are in thousands of US dollars. A list of the 122 utilities included in our analysis starts on page 7. Data for the third quarter of 2013 are the latest available. Data for 2014 are our estimates.
Source: Moody's Investors Service

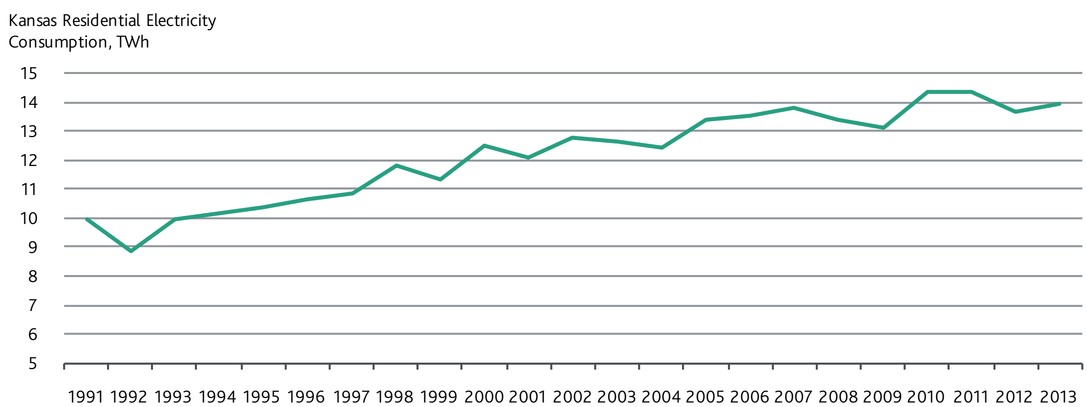
Improved regulatory environment means stable, more predictable cost-recovery

The US regulatory environment has improved significantly in the past year, providing for faster and more-certain cost-recovery in 2014.

Puget Sound Energy Inc.'s (PSE; Baa1 stable) June 2013 rate order is a good example. Its regulator, the Washington Utilities and Transportation Commission, approved the decoupling of electric and gas revenue from sales volume, and a property-tax tracker that provides more-efficient recovery of property-tax expense. The commission acknowledged a need to reduce regulatory lag times by expediting the utility's rate filings and offering more real-time true-up of costs during rate filings. The regulator also provided the company with forward-looking annual revenue adjustments (about 3% for electric and 2% for gas) over the next three years. As a result of these changes, we expect that Puget Sound's cash-flow-to-debt ratio will continue to surpass 20%, exceeding the industry average, even without the cash-flow benefit of bonus depreciation.

Another example is Westar Energy Inc.'s (Baa1 stable) 2013 abbreviated rate case with the Kansas Corporation Commission. In addition to providing incremental cost-recovery for environmental upgrades, the regulator allowed Westar to increase its monthly fixed charge on customer bills. This movement in rate design will allow Westar to recover a greater portion of its fixed costs through fixed rates, rather than volumetric rates, thereby reducing Westar's dependency on selling higher volumes to recover fixed costs. The shift to a $12 residential monthly fixed charge from $9 will be a benefit amid flat customer demand in Kansas over the past three years (see Exhibit 2).

EXHIBIT 2
Demand for Electricity Has Been Stagnant in Kansas
Actual Consumption



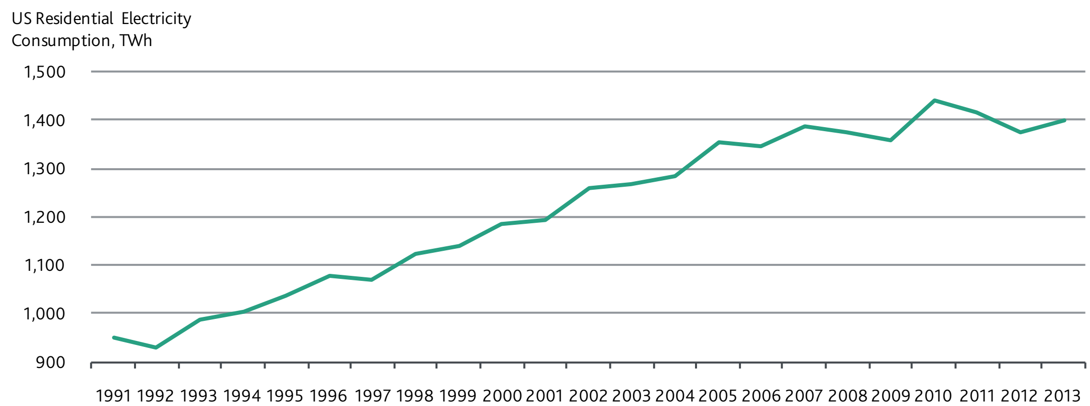
Notes: TWh stands for terawatt hour. 2013 US Energy Information Administration (EIA) data are through October 2013. Our estimates for November and December 2013 are based on historical trends.
Source: US Energy Information Administration

As demand for electricity wanes, rate structures that are tied more closely to volumetric charges than to fixed charges will threaten the gross profits of most electric and gas utilities. Exhibit 3 below shows the drop-off in US electricity demand since 2010, largely attributable to weather and slow economic growth as well as conservation and efficiency measures.

EXHIBIT 3

Demand for Electricity Is Slow to Rebound

Actual Consumption



Note: 2013 EIA data is through October 2013. Our estimates for November and December 2013 are based on historical trends.
Source: US Energy Information Administration

The industry's financial profile is becoming more predictable and steady because of these special recovery mechanisms that supplement cash recovery between general rate cases. As Exhibit 4 shows, the average ratio of cash flow from operations to gross profit had a standard deviation of 2.4% on a year-over-year basis between 2003 and 2008. This compares with a 1.1% standard deviation on average between 2009 and the third quarter of 2013, the latest data available, a period marked by a more pervasive use of cost-recovery mechanisms throughout the US.

EXHIBIT 4

Cost-Recovery Mechanisms Make Cash Flow More Predictable

Year	CFO / Gross Profit	Standard Deviation Rolling Two-Year Average	Average Standard Deviation
2003	30.9%		
2004	37.0%	4.3%	
2005	34.0%	2.1%	
2006	37.3%	2.4%	
2007	34.9%	1.7%	
2008	32.9%	1.4%	2.4%
2009	44.9%		
2010	42.5%	1.7%	
2011	44.8%	1.6%	
2012	44.3%	0.3%	
3Q13	43.0%	0.9%	1.1%

Note: The latest data available are for the third quarter of 2013.
Source: Moody's Investors Service

Cost-recovery improves, but not without exceptions

Most regulated electric and gas utilities in the US have shown evidence of improved regulatory relationships. Apart from Puget Sound's and Westar's cost-recovery improvements, we have seen regulatory improvement in Illinois and Connecticut, states in which the relationships between regulators and utilities have been somewhat contentious.

Stronger recovery mechanisms put in place late last year in both Illinois and Connecticut will make utility cash flow more predictable. For example, in Illinois, **Commonwealth Edison**'s (ComEd) cash flow to debt coverage will start improving in 2014, supported by the adoption of a version of formula ratemaking (i.e., the Energy Infrastructure Modernization Act, or "EIMA," which helps define various aspects of rate structure and cost-recovery in Illinois). The implementation of EIMA will make cost-recovery more tied to factors determined by a formula and less tied to rate-case negotiations (the results of which are less predictable).

Similarly, the Connecticut legislature in 2013 passed the Comprehensive Energy Strategy, which encourages the use of decoupling mechanisms and infrastructure replacement riders (i.e., the Distribution Integrity Management Program, or DIMP), while promoting growth of local distribution companies (LDCs) through customer conversions. These measures are subject to approval by the Public Utilities Regulatory Authority in rate-case proceedings, but were approved in **Connecticut Natural Gas**'s (CNG; A3 stable) December 2013 rate case. We expect decoupling, DIMP and conversion incentives to be applied to all LDCs in the state going forward.

These moves mark a turnaround in both states from past years, when regulatory support was lacking for certain cost-recovery provisions and when general rate case outcomes were deemed less than favorable from an investor perspective. For example, the Illinois legislature passed the EIMA in 2011, but the Illinois Commerce Commission did not fully implement it, initially, which made future cost-recovery for ComEd uncertain. Likewise, Connecticut LDCs had few tracking mechanisms and were exposed to declining customer usage in rate design. Now, through the adoption of EIMA in ComEd's rate structure (clarified by Senate Bill 9 in 2013) and CNG's implementation of decoupling and the DIMP, the financial profiles of both companies will likely improve.

These cost-recovery improvements are part of the broader trend we are seeing in the industry, but there are a few high-profile exceptions. Entergy Corp. (Baa3 stable), which has a history of contentious regulatory relationships in Arkansas and Texas, is one example.

Last year, Entergy Arkansas Inc. (Baa2 stable) put forth a nearly $145 million rate request but received about $81 million (the Arkansas Public Service Commission did allow a new cost-recovery rider for certain regional transmission expenses, however). Entergy Texas Inc. (Baa3 stable) requested about $53 million in rate increases for 2014, but the Texas Public Utilities Commission's (PUC) staff recommended a rate increase of a little more than $3 million. The PUC has not issued a final decision.

Another high-profile exception is Consolidated Edison of New York's (A2 stable) pending rate settlement, which calls for a two-year freeze on electric rates and a three-year rate freeze on gas and steam rates. Although the rate freeze would curb Consolidated Edison of New York's earnings, the settlement is credit neutral because of the provision for reasonable recovery of deferred storm costs related to Hurricane Sandy and other investments.

This year, one utility that might also buck the positive trend is Jersey Central Power & Light Co. (JCP&L; Baa2 negative). JCP&L has been the target of public criticism over its handling of outages related to Hurricane Sandy, besides allegations of over-earning. The staff of the New Jersey Board of Public Utilities has proposed that base rates be cut by $207 million (not considering recovery of storm costs, which will be addressed in a separate rate proceeding). This compares with the company's request for an increase of $11 million (again, not considering storm costs).

JCP&L's financial flexibility and financial metrics have already been weakened by costs associated with Hurricane Sandy, so a material rate reduction could hurt JCP&L's rating. If JCP&L can bring its ratio of cash flow to debt to at least 14% despite a rate decrease, then our rating outlook could stabilize. JCP&L had 12% cash flow to debt through the 12 months ended the third quarter of 2013.

More utilities are turning to financial engineering

Against a backdrop of stagnant demand, some utility holding companies are turning to forms of financial engineering, such as creating master limited partnerships (MLPs) and so-called yieldcos, to defend their historically high equity multiples. For the few companies that have proceeded with these strategies so far, the credit impact is neutral because the vehicles are small relative to the corporate sponsor's consolidated credit profile. But longer term, credit risks could increase if these companies eventually lose too much cash flow from their most stable assets and don't reduce debt enough to rebalance their capital structures.

We expect some more companies to go public with these financial-engineering vehicles this year. The joint venture among OGE, CenterPoint and ArcLight—the Enable Midstream Partners MLP—plans to complete an initial public offering in the first quarter. Dominion Resources Inc. (Baa2 stable) expects to publicly offer its MLP by mid-year. In addition, NextEra Energy Inc. (Baa1 stable) expects to make a decision whether to form a yieldco by then.

Meantime, several companies have pursued acquisitions outside of their core utility holdings and service territories, like MidAmerican Energy Holdings Co. (A3 stable), TECO Energy Inc. (Baa1 stable), and Avista Corp. (Baa1 stable). This trend is bound to continue as companies try to expand their regulated footprint and achieve regulatory diversity. We expect that most M&A activity in 2014 will be conservatively financed much like these transactions, which included equity financings.

EXHIBIT 5

Regulated Utilities: M&A Activity

	Acquirer			Acquiree				
Acquirer / Acquiree	Revenue	CFO	Debt	Revenue	CFO	Debt	Financing	Credit Implication
MidAmerican Energy Holdings Co. / NV Energy, Inc.	$12,373	$505	$4,255	$2,930	$794	$5,125	$5.6 billion in debt & equity	Positive; no ratings actions
TECO Energy, Inc. / New Mexico Gas Company	$2,851	$680	$3,156	$332	$65	$250	$950 million in debt, equity, & cash	Affirmed TECO Energy ratings
Avista Corp / Alaska Energy and Resources Company (AERC)	$1,581	$295	$1,739	$42	$20	$115	$170 million in equity	Neutral for Avista
Fortis, Inc. / UNS Energy Corporation	$3,654	$976	$5,783	$1,483	$400	$ 1,937	$4.3 billion in debt & equity	Slightly positive for UNS Energy Corporation; no ratings action

Notes: Financials are in millions, as of the 12 months ended September 30, 2013. AERC financials are based on Alaska Electric Light and Power Co. (AELP) 2012 FERC Form 1 data. Fortis and New Mexico Gas financials are as reported as of fiscal 2012. We expect TECO Energy will assume $200 million of debt already existing at New Mexico Gas Company. We expect Fortis to assume approximately $1.8 billion of debt already existing at UNS Energy Corporation. In addition, we expect Fortis to finance the UNS acquisition in a manner similar to historical precedent, with a balanced mix of debt and equity issued upstream from the utility (we expect Fortis to keep UNS's current capital structure in place).
Sources: Fortis Inc. Annual Report, AELP 2012 FERC Form 1, SNL, Moody's Financial Metrics

Appendix: Peer Group

Moody's Financial Metrics

	Entity Name	LT Rating	Outlook	CFO/Debt (3-Yr Avg) LTM 3Q11-LTM3Q13
Integrated	Alabama Power Company	A1	Stable	26%
	ALLETE, Inc.	A3	Stable	22%
	Appalachian Power Company	Baa1	Stable	17%
	Arizona Public Service Company	A3	Stable	28%
	Avista Corp.	Baa1	Stable	18%
	Black Hills Power, Inc.	A3	Stable	22%
	Cleco Power LLC	Baa1	Positive	19%
	Consumers Energy Company	(P)A3	Stable	27%
	Dayton Power & Light Company	Baa3	Stable	34%
	DTE Electric Company	A2	Stable	24%
	Duke Energy Carolinas, LLC	A1	Stable	23%
	Duke Energy Corporation	A3	Stable	15%
	Duke Energy Florida, Inc.	A3	Stable	21%
	Duke Energy Indiana, Inc.	A2	Stable	16%
	Duke Energy Kentucky, Inc.	Baa1	Stable	23%
	Duke Energy Ohio, Inc.	Baa1	Stable	25%
	Duke Energy Progress, Inc.	A1	Stable	23%
	El Paso Electric Company	Baa1	Stable	25%
	Empire District Electric Company (The)	Baa1	Stable	20%
	Entergy Arkansas, Inc.	Baa2	Stable	19%
	Entergy Louisiana, LLC	Baa1	Stable	17%
	Entergy Mississippi, Inc.	Baa2	Stable	16%
	Entergy New Orleans, Inc.	Ba2	Stable	20%
	Entergy Texas, Inc.	Baa3	Stable	14%
	Florida Power & Light Company	A1	Stable	32%
	Georgia Power Company	A3	Stable	25%
	Gulf Power Company	A2	Stable	26%
	Hawaiian Electric Company, Inc.	Baa1	Stable	17%
	Idaho Power Company	A3	Stable	16%
	Indiana Michigan Power Company	Baa1	Stable	21%
	Interstate Power and Light Company	A3	Stable	18%
	Kansas City Power & Light Company	Baa1	Stable	18%
	Kansas City Power & Light Company - Greater MO	Baa2	Stable	22%
	Madison Gas and Electric Company	A1	Stable	30%
	MidAmerican Energy Company	A1	Stable	24%
	Mississippi Power Company	Baa1	Stable	14%
	Nevada Power Company	Baa1	Stable	18%

	Entity Name	LT Rating	Outlook	CFO/Debt (3-Yr Avg) LTM 3Q11-LTM3Q13
	Northern States Power Company (Minnesota)	A2	Stable	25%
	Northern States Power Company (Wisconsin)	(P)A2	Stable	30%
	NorthWestern Corporation	A3	Stable	19%
	Ohio Power Company	Baa1	Stable	32%
	Oklahoma Gas & Electric Company	A1	Stable	27%
	Otter Tail Power Company	A3	Stable	24%
	Pacific Gas & Electric Company	A3	Stable	25%
	PacifiCorp	A3	Stable	23%
	Portland General Electric Company	A3	Stable	25%
	Public Service Co. of North Carolina, Inc.	A3	Stable	25%
	Public Service Company of Colorado	A3	Stable	23%
	Public Service Company of New Hampshire	Baa1	Stable	20%
	Public Service Company of New Mexico	Baa2	Positive	21%
	Public Service Company of Oklahoma	A3	Stable	27%
	Puget Sound Energy, Inc.	Baa1	Stable	21%
	San Diego Gas & Electric Company	A1	Stable	21%
	Sierra Pacific Power Company	Baa1	Stable	16%
	South Carolina Electric & Gas Company	Baa2	Stable	17%
	Southern California Edison Company	A2	Stable	30%
	Southern Indiana Gas & Electric Company	A2	Stable	28%
	Southwestern Electric Power Company	Baa2	Stable	18%
	Southwestern Public Service Company	Baa1	Stable	21%
	Tampa Electric Company	A2	Stable	32%
	Tucson Electric Power Company	Baa1	Stable	19%
	Union Electric Company	(P)Baa1	Stable	22%
	UNS Energy Corporation	Baa2	Stable	19%
	Virginia Electric and Power Company	A2	Stable	27%
	Westar Energy, Inc.	Baa1	Stable	16%
	Wisconsin Electric Power Company	A1	Stable	17%
	Wisconsin Power and Light Company	A1	Stable	31%
	Wisconsin Public Service Corporation	A1	Stable	26%
T&Ds	AEP Texas North Company	Baa1	Stable	22%
	Ameren Illinois Company	(P)Baa1	Stable	26%
	Atlantic City Electric Company	Baa2	Stable	15%
	Baltimore Gas and Electric Company	A3	Stable	19%
	CenterPoint Energy Houston Electric, LLC	A3	Stable	16%
	Central Hudson Gas & Electric Corporation	A2	Stable	29%
	Central Maine Power Company	A3	Stable	27%
	Cleveland Electric Illuminating Company (The)	Baa3	Stable	15%
	Commonwealth Edison Company	Baa1	Stable	21%

	Entity Name	LT Rating	Outlook	CFO/Debt (3-Yr Avg) LTM 3Q11-LTM3Q13
	Connecticut Light and Power Company	Baa1	Stable	13%
	Consolidated Edison Company of New York, Inc.	A2	Stable	23%
	Delmarva Power & Light Company	Baa1	Stable	17%
	Duquesne Light Company	A3	Stable	26%
	Jersey Central Power & Light Company	Baa2	Negative	18%
	New York State Electric and Gas Corporation	A3	Stable	26%
	Niagara Mohawk Power Corporation	A3	Stable	23%
	NSTAR Electric Company	A2	Stable	29%
	Ohio Edison Company	Baa2	Stable	25%
	Oncor Electric Delivery Company LLC	Baa3	Stable	20%
	Orange and Rockland Utilities, Inc.	A3	Stable	21%
	PECO Energy Company	A2	Stable	30%
	Pennsylvania Electric Company	Baa2	Stable	18%
	Pennsylvania Power Company	Baa2	Stable	37%
	Potomac Edison Company (The)	Baa3	Stable	19%
	Potomac Electric Power Company	Baa1	Stable	16%
	Public Service Electric and Gas Company	A2	Stable	25%
	Rochester Gas & Electric Corporation	Baa1	Stable	26%
	Texas-New Mexico Power Company	Baa1	Positive	26%
	Toledo Edison Company	Baa3	Stable	8%
	United Illuminating Company	Baa1	Stable	20%
	West Penn Power Company	Baa2	Stable	25%
	Western Massachusetts Electric Company	A3	Stable	23%
LDCs	Atlanta Gas Light Company	A2	Stable	30%
	Atmos Energy Corporation	A2	Stable	23%
	Berkshire Gas Company	Baa1	Stable	29%
	Connecticut Natural Gas Corporation	A3	Stable	26%
	DTE Gas Company	Aa3	Stable	24%
	Indiana Gas Company, Inc.	A2	Stable	27%
	Laclede Gas Company	(P)A3	Stable	26%
	New Jersey Natural Gas Company	(P)Aa2	Stable	19%
	Northern Illinois Gas Company	A2	Stable	49%
	Northwest Natural Gas Company	(P)A3	Stable	20%
	Piedmont Natural Gas Company, Inc.	A2	Stable	23%
	Questar Gas Company	A2	Stable	25%
	SEMCO Energy, Inc.	Baa1	Stable	15%
	SourceGas LLC	Baa2	Stable	14%
	South Jersey Gas Company	A2	Stable	21%
	Southern California Gas Company	A1	Stable	32%
	Southern Connecticut Gas Company	Baa1	Stable	22%

Entity Name	LT Rating	Outlook	CFO/Debt (3-Yr Avg) LTM 3Q11-LTM3Q13
UGI Utilities, Inc.	A2	Stable	27%
UNS Gas, Inc.	Baa1	Stable	27%
Washington Gas Light Company	A1	Stable	35%
Wisconsin Gas LLC	A1	Stable	28%
Yankee Gas Services Company	Baa1	Stable	18%

Source: Moody's Investors Service

Moody's Related Research

Industry Outlooks:

» US Regulated Utilities: Regulation Provides Stability as Business Model Faces Challenges, July 2013 (156754)

» US Regulated Utilities: Regulatory Support, Low Natural Gas Prices Maintains Stability, February 2013 (149379)

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Assessing U.S. Investor-Owned Utility Regulatory Environments

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Assessing U.S. Investor-Owned Utility Regulatory Environments

Regulatory advantage is the most heavily weighted factor when S&P Global Ratings analyzes a regulated utility's business risk profile. One significant aspect of regulatory risk that influences credit quality is the regulatory environment in the jurisdictions where a utility operates. A utility management team's skill in dealing with regulatory risk can sometimes overcome a difficult regulatory environment. Conversely, companies' regulatory risk can increase even with supportive regulatory regimes if management fails to devote the necessary time and resources to the important task of managing regulatory risk. We modify our assessment of regulatory advantage to account for this dynamic in our ratings methodology (for the criteria we use to rate utilities, see "Corporate Methodology," and "Key Credit Factors For The Regulated Utilities Industry," published Nov. 19, 2013, on RatingsDirect.)

There are specific factors we use in the U.S. to assess the credit implications of the numerous regulatory jurisdictions here that help us determine the "preliminary regulatory advantage" in our credit analysis of each investor-owned regulated utility. We organize the subfactors of regulatory advantage into four categories:

- Regulatory stability,
- Tariff-setting procedures and design,
- Financial stability, and
- Regulatory independence and insulation.

Regulatory Stability

The foundation of our opinion of a jurisdiction is the stability of its approach to regulating utilities, encompassing transparency, predictability, and consistency. Given the maturity of the U.S. investor-owned utility industry, the long history of utility regulation (going back to the early 20th century) and the well-established constitutional protections accorded to utility investments, we emphasize the principle of consistency when weighing regulatory stability. We also incorporate the degree to which the regulatory framework either explicitly or implicitly considers credit quality in its design.

Regulatory Change Can Bring Stability, Or Take It Away

While stability is one of the four pillars of our approach to evaluating regulatory risk, experience shows us that it's not an absolute positive or negative for creditors. Change can boost or lessen risk, and any improvement in a regulatory regime will overcome any negative connotations of instability. A good example is Michigan, which in about 2008 revamped its whole approach to utility regulation. As implemented in subsequent years by the Michigan Public Service Commission, the reforms have almost completely transformed the regulatory environment in that state.

However, during any period of change, we see the uncertainties surrounding the process and the outcome as possible major causes of risk. A more recent and still ongoing example is New York, where the Public Service Commission's (NYPSC) Reforming the Energy Vision (REV) proceeding is possibly revving up risk for utilities. While the NYPSC seemed at first to be focusing more on high-minded policy questions than on making a lot of changes to day-to-day operations, the current phase could eventually disrupt the way utilities make money and affect their ability to earn the authorized return. If the end result is greater operating risk with no opportunity to earn greater returns, our assessment of the regulatory environment could change.

Durability of regulatory system

An established, dependable approach to regulating utilities is a hallmark of a credit-supportive jurisdiction. Creditors lend capital to utilities over long periods to fund the development of long-lived assets. A firm understanding of the basic "rules" that will govern how the utility will recover its costs, including servicing its debt and the return on its capital over an extended period, is essential to accurately assess credit risk. Major or frequent changes to the regulatory model invariably raise risk due to the possibility of future changes. Steady application of transparent, comprehensible policies and practices lowers risk.

How long a regulatory framework has been in place is the most important factor in this area. We view jurisdictions as most supportive when there have been no major changes or where the approach has been consistent for a long time and is not prone to further changes. Jurisdictions that have undergone a major, fundamental change in the regulatory paradigm that seems to be working well are a little less supportive, and less so a jurisdiction that is transitioning to a new regulatory approach. Credit risk rises if the transition attracts political attention. The less-supportive jurisdictions are those that frequently alter the basic regulatory approach. We also view the framework's development less favorably if policy disputes or legal actions cause contention, indicating that the political consensus regarding utility regulation is fragile.

Some jurisdictions permit competitive markets to prevail for some important functions of the delivery of utility services, notably wholesale markets for electricity and retail markets for electric or gas service. In others, vertical integration is the norm. A jurisdiction's credit-supportiveness is more prone to suffer if market forces directly influence major cost items that utilities could otherwise control through cost-based regulation because of the potential volatility it creates. The risk inherent in a market-based model is straightforward: utility rates are more volatile when markets influence them rather than fully embedded costs, and regulators are apt to resist full and timely recovery when market price changes are abrupt and substantial (and perhaps misunderstood). We observe less support for credit quality in jurisdictions that are in the midst of deregulating important parts of the utility framework. The uncertainty of the timing of reaching the outcome--and what the result will be--is a negative factor from a credit perspective. Utilities are also prone to financial stress when the transition to competition causes potential "rate shock" for customers that regulators could resist.

Transparency of regulatory framework and attitude toward credit quality

We believe regulation works best when it is rule-based. Creditor interests are better protected by the presence of and adherence to a pre-set code of rules and procedures that we can look to when assessing risk. Risk is lower when the rules are more transparent and when they take into account a utility's financial integrity. We regard jurisdictions that require regulators to protect utilities' financial soundness and have transparent policies and procedures as the most credit-supportive. We ascribe higher risk in jurisdictions where policies and procedures support financial integrity, but where inconsistency can selectively arise. We believe a jurisdiction provides even less support when transparency merely exists. We see less support when any of these credit factors are absent, or if the regulator's record on following precedent is poor.

Tariff-Setting Procedures

We review rate decisions as part of our surveillance on each U.S. utility. We focus on the jurisdiction's overall approach to setting rates and the process it uses to establish base rates (practices pertaining to separate tariff provisions for large expenses are in the "Financial Stability" part of our analysis). We focus on whether base rates, over time, fairly reflect a utility's cost structure and allow a fair opportunity to earn a compensatory return that provides creditors with a financial cushion that supports credit quality. If the process is geared toward an incentive-based system, our analysis centers on the risks related to the incentive mechanisms. If the jurisdiction has vertically integrated utilities, we review the resource procurement process and assess how it affects regulatory risk.

Rate Cases Can Affect Creditworthiness

Although not common, rate case outcomes can sometimes lead directly to a change in our opinion of creditworthiness. Often it's a case that takes on greater importance because of the issues being litigated. For example, in 2010, we downgraded Florida Power & Light and its affiliates following a Florida Public Service Commission rate ruling that attracted attention due to drastic changes to settled practices on rate case particulars like depreciation rates. More recently, in June 2016, we downgraded Central Hudson Electric & Gas due to our revised opinion of regulatory risk. While that reflected the company's own management of regulatory risk, it was prompted in part by other rate case decisions in New York that highlighted the overall risk in the state.

Sometimes change comes from outside the usual rate case process. The aforementioned improvement in Michigan (see the previous sidebar) came from legislative changes that reformed rate case procedures such as interim rate increases and time limits on rate decisions. In March 2016, we affirmed our ratings on Entergy Corp. and kept the outlook positive based on the prospect of lower regulatory risk as the company pursues strategic changes in its various jurisdictions. For instance, legislation in Arkansas allowing for formula rates could better enable Entergy to manage regulatory lag and earn its authorized return.

Ability to timely recover costs

We review authorized returns and capital structures in our analysis, but we focus mainly on actual earned returns. Examples abound of utilities with healthy authorized returns that have no meaningful expectation of earning those returns due to, for example, rate case lag (i.e., the relationship between approved rates and the age of the costs used to set those rates) or expense disallowances. Also, the stability of the returns is as important as the absolute level of financial returns, and we note the equity component in the capital structure used to generate the revenue requirement in rate proceedings. Higher authorized and earned returns and thicker equity ratios translate into better credit measures and a more comfortable equity cushion for creditors. We consider a regulatory approach that allows utilities the opportunity to consistently earn a reasonable return as a positive credit factor.

A very credit-supportive jurisdiction is one in which all of the utilities it regulates consistently earn above-average returns. We assess jurisdictions lower if only some of them do, and lower still if the earnings records are below average or highly variable from year to year. We deem jurisdictions as weaker when all utilities earn well-below-average returns, and we consider jurisdictions where all utilities consistently earn exceedingly poor returns, including years with negative returns, as weakest.

We consider "regulatory lag" along with the record of earned returns to assess timeliness. Credit-supportive jurisdiction typically have a track record of little regulatory lag, indicating that responsibility for a poor or uneven earnings history lies more with management than its regulators. In addition to the regulator's efficiency in completing rate cases, we consider the obsolescence of the costs on which the rates are based, the timing of interim rates, and other practices (such as allowing rates to automatically change in a future period based on inflation) that affect a utility's ability to earn its authorized return.

If a jurisdiction uses incentives as the primary ratemaking tool and institutes a comprehensive incentive program that allows revenues and costs to diverge, we evaluate the incentive mechanisms' effect on a utility's earnings capability and stability. A common approach features an extended period between base rate reviews, during which rates change according to a formula based on inflation, a predetermined productivity factor, and capital spending. An incentive-based program can be close to credit-neutral compared with systems that permit more frequent and dynamic rate changes if the risk is symmetrical (i.e., an equal opportunity to earn over or under the authorized return and equivalent reward or penalty for doing so) and limited (a maximum or minimum earnings band). The effect on regulatory risk depends on whether we believe the efficiency targets are realistic and achievable, the regulator's treatment of disparities in actual versus authorized spending, and the framework's flexibility to adjust returns for capital market conditions. If there are operating standards, we determine whether they fairly reward or punish utilities if performance deviates from expectations.

There is a muted effect on regulatory risk in jurisdictions where incentives are not central, but are instead used only to augment cost-of-service regulation. A moderate amount of incentives that carry symmetrical risks can even modestly support better credit quality. For example, a fuel-adjustment and purchased-power clause with a sharing mechanism that affects less than 10% of the total fuel costs and cuts both ways when commodity markets change can modestly reduce risk by offering the utility a mild incentive for effective procurement and efficient operations, without unduly exposing it to commodity price risk.

We typically view jurisdictions as credit-supportive if regulators use symmetrical incentive mechanisms sparingly in the rate-setting process. When incentives play a larger role in the rate-setting approach, but are well-designed to evenly allocate risk, we see less support for credit quality. We regard still lower jurisdictions where incentives dominate and are poorly designed. Jurisdictions where incentives significantly degrade risk and are part of a comprehensive incentive regime harbor the most risk for creditors.

Financial Stability

When we evaluate U.S utility regulatory environments, we consider financial stability to be of substantial importance. Cash takes precedence in credit analysis. A regulatory jurisdiction that recognizes the significance of cash flow in its decision-making is one that will appeal to creditors.

Creative Ratemaking Can Help...If Used Correctly

The ability of financial stability factors to help a utility maintain and smooth its cash flow gives prominence to this area of our analysis. In addition to the near-ubiquitous fuel clauses, we see utilities give more attention to obtaining so-called "disc" mechanisms (DSIC, for distribution system investment charge, is a common acronym for this kind of rate adjustment) that accelerate and stabilize cash flow realization when a utility pursues a strategy of boosting rate base to fuel earnings growth.

For instance, Duquesne Light recently filed for a DSIC mechanism in Pennsylvania in conjunction with a long-term plan to improve its distribution system. Approval, requested for October, would enhance our view of Duquesne's ability to manage regulatory risk, because it would consequently be joining the other Pennsylvania utilities that already benefit from this mechanism. On the other end of the spectrum, Mississippi Power's ongoing travails in obtaining rate relief for its Kemper coal-fired plant, which has experienced significant cost and schedule problems, points to how regulatory risk can deteriorate under stress when well-established procedures for handling large and risky capital projects are absent or not followed.

Treatment of significant expenses

When utilities have major expenses such as fuel and purchased power/gas/water, the presence of separate tariff provisions to facilitate full and contemporaneous recovery is the most prominent factor in this part of our analysis. The timely adjustment of rates in response to changing commodity prices and other expenses that are largely out of management's control is a key feature of a credit-supportive regulatory jurisdiction. The analysis centers on the special tariff mechanisms to determine their effectiveness in producing the cash flow stability they are designed to achieve. The frequency of rate adjustments, the ability to quickly react to unusual market volatility, and the control of opportunities to engage in hindsight disallowances of costs could affect our analysis almost as much as whether the tariff provisions exist at all. The record of disallowances plays a part when we assess regulatory advantage.

We consider jurisdictions to be very credit-supportive if utilities can recover all high-expense items through an automatic tariff clause that is based on projected costs, adjusts frequently, and has no record of any significant disallowances. We see more risk if separate mechanisms exist, but lack some of the above features. We view jurisdictions that lack independent rate mechanisms for large expenses and have a record of significant disallowances as weakest.

Treatment of capital spending

When applicable, a jurisdiction's willingness to support large capital projects with cash during construction is an important aspect of our analysis. This is especially true when the project represents a major addition to rate base and entails long lead times and technological risks that make it susceptible to construction delays. Broad support for all capital spending is the most credit-sustaining. Support for only specific types of capital spending, such as specific environmental projects or system integrity plans, is less so, but still favorable for creditors. Allowance of a cash return on construction work-in-progress or similar ratemaking methods historically were extraordinary measures for use in unusual circumstances, but when construction costs are rising, cash flow support could be crucial to maintain credit quality through the spending program. Even more favorable are those jurisdictions that present an opportunity for a higher return on capital projects as an incentive to investors.

Very supportive jurisdictions offer a separate recovery mechanism for all capital spending, a mandated current cash return during construction, and a bonus return for some or all capital projects. We deem a jurisdiction weaker if there is a separate mechanism for only certain kinds of spending and the cash return and higher return are subject to the regulator's discretion. We view jurisdictions that don't allow separate recovery or a current return as being lower on the scale. We assess a jurisdiction as weaker still when it doesn't have independent rate mechanisms for capital projects, and we view it as most risky when full recovery occurs only after a utility's assets become operational.

Cash-smoothing mechanisms

We have a more positive view of jurisdictions that use innovative regulatory provisions that help to smooth cash flow from period to period. For a jurisdiction that focuses on incentives in its basic approach to ratemaking, through multiyear rate plans or a formula rate plan, we view the availability of "reopeners" (to adjust rates for unexpected events out of the utility's control) as key to this part of our analysis. The utility's ability to petition for a rate increase when unexpected or uncontrollable costs arise in the midst of a long-term rate plan is a critical risk mitigant.

Other examples of risk-dampening regulatory policies include hedging program approvals, and decoupling (the separation of a utility's profits from sales) or weather-related mechanisms. If a utility seeks approval of a hedging program to manage exposure to commodity prices, it can reduce risk if there's a clearly stated hedging policy that its regulator has endorsed, and a track record of activity that conforms to the policy that has not been subject to regulatory second-guessing. A well-designed decoupling or weather-normalization mechanism that efficiently adjusts rates to offset the sales effect of economic conditions, customer usage trends, or weather will soften earnings and cash flow volatility to the benefit of creditors. If applicable, we view a record of regulatory responsiveness to extreme events for utilities that are prone to violent or disruptive weather (like hurricanes) as favorable for credit quality.

A jurisdiction is more credit-supportive if it makes extensive use of extraordinary and credit-supportive rate mechanisms. Also favorable are jurisdictions that use innovative mechanisms selectively, or have regulators that are receptive to reopeners where incentives are the main ratemaking method.

Regulatory Independence And Insulation

The role of politics in U.S. utility regulation is often misunderstood. In most jurisdictions, the regulator's function is to set and regulate rates and service standards with due regard not only for the interests of those who advance the capital needed to provide safe and reliable utility service, but for other constituents as well. Creditors should recognize that utility regulation harbors political as well as economic risks. Therefore, how politics could influence regulation helps us evaluate a regulatory environment.

Political Influence On Utility Regulation Can Yield Unexpected Results

This is often the most variable area of our analysis and the most difficult to assess. The most dramatic, fairly recent reminder of how political forces can influence regulatory risk was last year's unexpected reversal by the popularly elected Mississippi Supreme Court of a significant rate increase granted for Mississippi Power to help pay for a major power plant under construction. Regulators, who were ordered to roll back rates and issue refunds, struggled to make decisions amid the strained political atmosphere and extra scrutiny that the Court's action had created. The episode also highlighted the greater regulatory risk that attends jurisdictions that expose regulators (and in this case the appellate court) to direct political accountability.

Another more recent example of political influence on regulation underscores the complexity of this area of analysis, because it featured many participants at both the federal and state level. Electric utilities in Ohio had a credible strategy for dealing with rising competitive risks in their merchant generation portfolios by offering the output to retail customers at pre-set prices on a long-term basis, which the state regulator approved. The federal regulator (Federal Energy Regulatory Commission, or FERC), responding to complaints by other generators that the plan would inhibit the operation of the competitive electricity market, essentially overruled the Ohio regulators and blocked the utilities from pursing the strategy that would have reduced its risk profile. It essentially decided that its political interest in and ideological commitment to efficient electricity markets overrode the state's political interest in stable electric rates. The saga is still continuing with attempts to bypass the FERC's ruling through other means, but no matter what the ultimate result, we see how political considerations can increase risk.

Political independence of regulator

The primary factor in this part of our analysis is the regulators' (and, when relevant, the judicial body that reviews the regulators' decisions) political independence. We think it's more credit-supportive when the regulator is substantially independent of the political process. Jurisdictions are somewhat less favorable when insulation is strong, such as when the executive branch of government appoints regulators subject to legislative approval. We consider jurisdictions to be further down the scale when the same voters who pay utility bills directly elect the regulators, but institutional efforts have been made to erect some shield for regulators from transient political concerns. We view jurisdictions that arrange for direct political accountability of regulators that persistently influences regulatory decisions as less supportive.

Record of direct political intervention

The overall atmosphere that a regulator operates in can affect its ability to deliver sound, fair, and timely rate decisions and set prudent regulatory policies that assist utilities in managing business and financial risk. In this part of our evaluation, we may consider the tone that politicians set, the history of political insulation given to the regulatory body and the courts that review its actions, and the behavior of important constituencies that intervene in utility proceedings. We also track the public visibility of utility issues, because we believe that the likelihood of constructive regulatory behavior increases with the comparative obscurity of utility issues.

We view a jurisdiction as having a lower risk if the regulatory environment is marked by cooperative attitudes and constructive interventions in important matters before the regulator. We assess a jurisdiction lower when the atmosphere is more combative and restricts the regulator's ability to act in the long-term best interests of all parties. We consider jurisdictions as weaker if the regulatory environment is so infused with short-term political influence over regulatory decisions that the regulator can't effectively consider investor interests in its decisions.

Related Criteria And Research

Related Criteria

- Criteria | Corporates | General: Corporate Methodology, Nov. 19, 2013
- Criteria | Corporates | Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013

Only a rating committee may determine a rating action and this report does not constitute a rating action.

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Stocks in the Water Utility Industry have traditionally been purchased by income-oriented investors for their yield and dividend growth prospects. Accounts interested in these equities typically are willing to sacrifice capital appreciation in return for a well-defined income stream and a reduced amount of risk. This may be changing, however, as the yields of many water utility stocks are now lower than the *Value Line* median.

Five of the eight regulated utility stocks we follow outperformed the market averages since we last reviewed the group three months ago. Of these, the best performers were the small capitalization equities.

From an operational standpoint, the group continued to post decent earnings. Much of this is the result of positive regulatory climates in many states around the country.

Capital spending in the industry is significant as the water infrastructure in the United States had long been neglected. Utilities are now investing heavily to replace aging pipelines and valves, and to modernize wastewater facilities.

Consolidation remains an ongoing trend in the industry. Smaller municipally run water districts do not have sufficient funds to bring their plant and equipment up to EPA-mandated standards. As a result, they are being merged with larger utilities that have better access to capital. In addition, because this industry is plagued with redundancies, mergers are leading to economies of scale.

Are Water Utility Stocks Still Yield Plays?

The average dividend yield on the eight regulated water utilities we follow is currently 2.1%, or exactly the same as the median for all stocks in the *Value Line* universe. Historically, the yield on these stocks has been much higher. As an example, the typical yield on an electric utility equity is about 3.6%, or 150 basis points higher than the water utility industry. Why is this? One reason is that when taken as a whole, the market capitalization of the group is very modest. Thus, it doesn't take a large shift into the sector by institutional investors to drive the price of these stocks higher and their yields lower. Indeed, the three stocks with the best returns over the past three months were all small cap stocks. *York Water* and *SJW* each surged 30% while *Middlesex Water* rose about 25%. Before these moves, the market capitalization of each individual stock was $375 million, $850 million, and $550 million, respectively. The spike in prices has also left the equities with respective yields of 1.7%, 1.5%, and 2.1%. Taking a look at the three biggest members of the group, only *American Water Works* performed well, while *Aqua America* and *American States Water* both only rose a meager 1%.

Operations And Earnings Are Solid

For the most part, water companies have been experiencing reasonable earnings growth. This comes despite a nationwide trend aimed at getting households to reduce their consumption of water. How can the bottom line do well when state authorities and the utilities themselves are discouraging water usage? The answer is that many states have implemented strategies that not only don't penalize utilities for selling less water, but provides incentives for households to conserve more.

INDUSTRY TIMELINESS: 89 (of 97)

State regulatory authorities are actively working with the industry in a way that is benefited both parties. In drought-stricken California, regulators have changed the compensation methodology for water utilities. Now they earn income on a fee basis, regardless of the amount of water sold. This has proven to be successful in cutting consumption without hurting the utilities bottom line.

As we often point out, the most important factor in a any utility's success, whether it provides electricity, gas, or water, is the regulatory climate in which it operates. Harsh regulatory conditions can make it nearly impossible for the best run utilities to earn a reasonable return on their investment.

Looking forward, the outlook for continued successful cooperation between states and utilities seems likely. Both parties realize that for decades much-needed capital improvements were deferred. Industry experts are now in agreement that large sums have to be made to bring the nation's water infrastructure up to par. Because water bills have been less than homeowners have been paying for other utility services, there appears to be less resistant in increasing them.

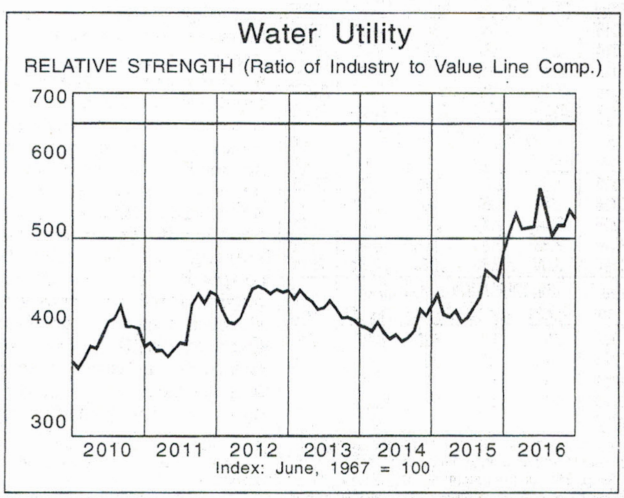
Consolidation

There are over 50,000 mostly small water authorities in the U. S. Many of these districts find themselves without the sums needed to modernize their facilities. As a result, many are merging with larger entities that have the financial wherewithal to make the required investment. *American Water Works*, *American States Water*, and *Aqua America* are three of the most active acquirers. Another benefit from these mergers is that there are a large amounts of redundancies in the industry and substantial cost savings can be achieved.

Conclusion

Our ranking system suggests that stock prices in this group are fully valued. None of the eight stocks are timely with *American Water Works*, *Connecticut Water Service*, *Middlesex Water*, *SJW Corp*, and *York Water* all ranked to underperform the market averages in the year ahead.

James A. Flood



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MOODY'S
INVESTORS SERVICE

CREDIT OPINION
23 October 2020

Update

Rate this Research

RATINGS

Louisville Gas & Electric Company

Domicile	Louisville, Kentucky, United States
Long Term Rating	A3
Type	LT Issuer Rating
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Louisville Gas & Electric Company

Update to credit analysis

Summary

Louisville Gas & Electric Company's (LG&E) credit strengths include its supportive regulatory environment in the state of Kentucky. Historically, LG&E has produced relatively consistent credit metrics due to its stable utility operations, and it represents approximately 19% of the cash flow to its ultimate parent company, PPL Corporation (PPL). Going forward, we believe LG&E's large capital investment plan may pressure its ratio of cash flow from operations before changes in working capital (CFO pre-WC) to debt to the 23% to 25% range, which is slightly weaker than its historical level. To a lesser extent, LG&E's positive credit factors are also somewhat offset by a lack of fuel and geographic diversity.

The regulatory environment of Kentucky has a transparent recovery framework. LG&E has various tracker mechanisms allowed by the Kentucky Public Service Commission (KPSC), providing timely recovery of some of the company's investment costs. LG&E's latest rate case concluded in April 2019 when a settlement was approved by the commission, resulting in an aggregate revenue increase of approximately $21 million and with a $52 million credit from the elimination of the Tax Cuts and Jobs Act (TCJA) it will be an annual increase of $73 million. The settlement was based on a return on equity of 9.725%.

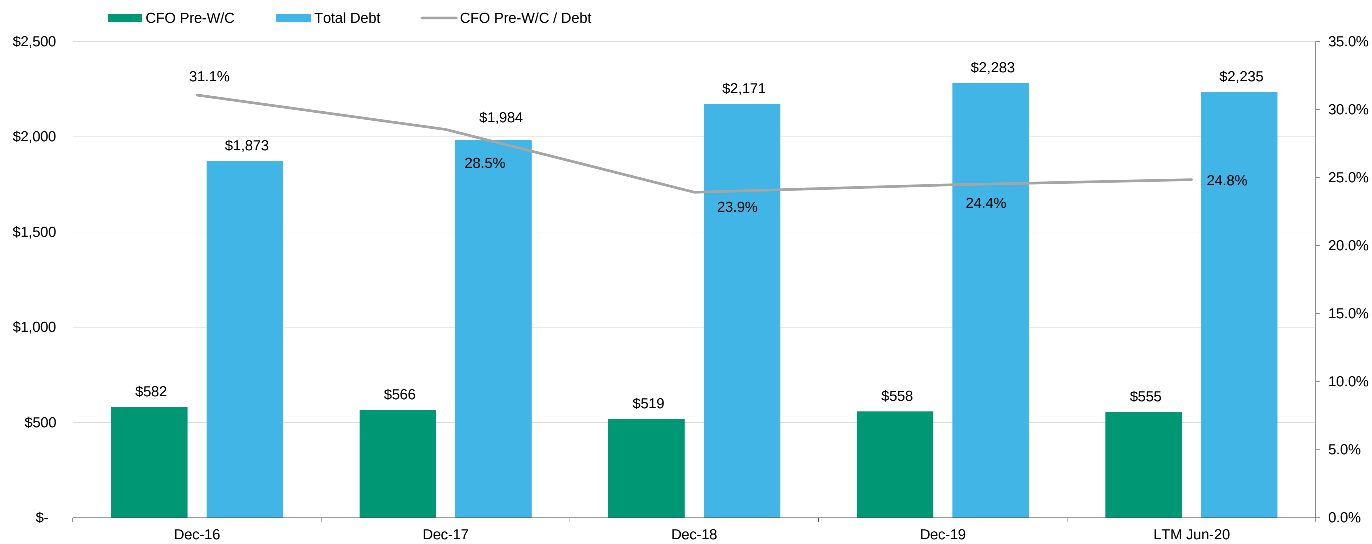
Recent developments

In August 2020, PPL announced that it had initiated a process to sell its utility assets in the United Kingdom that have a total estimated rate base of around $10 billion and approximately $8 billion of debt. If PPL is successful in divesting its UK assets, we estimate its Kentucky operations will proportionally increase to more than half of its rate base from around 37%. Due to their vertically integrated utility business models, with coal as the primary fuel source for its generation in Kentucky, we would view PPL's overall business risk to be higher.

The rapid spread of the coronavirus outbreak, severe global economic shock and asset price volatility are creating a severe and extensive credit shock across many sectors, regions and markets. The combined credit effects of these developments are unprecedented. We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety.

We expect LG&E to be relatively resilient to recessionary pressures related to the coronavirus because of its rate regulated business model and timely cost recovery mechanisms. Nevertheless, we are watching for electricity usage declines, utility bill payment delinquency, and the regulatory response to counter these effects on earnings and cash flow. As events related to the coronavirus continue, we are taking into consideration a wider range of potential outcomes, including more severe downside scenarios. The effects of the pandemic could result in financial metrics that are weaker than expected; however, we see these issues as temporary and not reflective of the long-term financial profile or credit quality of LG&E.

Exhibit 1
Historical CFO Pre-WC, Total Debt and CFO Pre-WC to Debt ($MM)



Source: Moody's Financial Metrics

Credit strengths

» Supportive regulatory framework in Kentucky

» Stable financial profile with transparent and predictable cash flow

Credit challenges

» Slightly pressured credit metrics due to large capital investment program

» High coal concentration in its generation fuel mix

» Elevated carbon transition risk

Rating outlook

LG&E's stable outlook reflects our expectation that the regulatory environment in Kentucky will remain consistent and supportive. The stable outlook also incorporates our view that LG&E will continue to generate stable cash flow and adequate financial metrics while it executes a large capital investment program.

Factors that could lead to an upgrade

LG&E's rating could be upgraded if its financial metrics increase, including CFO pre-WC to debt at or above 26% on a sustained basis. An upgrade is also possible if LG&E's regulatory environment materially improves and provides more favorable regulatory recovery mechanisms. However, it is unlikely that LG&E's rating will be upgraded while the company is in the midst of a large capital investment program and faces a slight negative impact in cash flow due to tax reform.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

Factors that could lead to a downgrade

LG&E's rating could be downgraded if there is a significant deterioration in the credit supportiveness of the regulatory environment. Additionally, the rating could be downgraded if its financial metrics deteriorate, such that CFO pre-WC to debt declines below 20% for an extended period of time.

Key indicators

Exhibit 2

Louisville Gas & Electric Company [1]

	Dec-16	Dec-17	Dec-18	Dec-19	LTM Jun-20
CFO Pre-W/C + Interest / Interest	8.9x	8.7x	7.6x	7.3x	7.3x
CFO Pre-W/C / Debt	31.1%	28.5%	23.9%	24.4%	24.8%
CFO Pre-W/C – Dividends / Debt	24.2%	18.9%	16.7%	16.5%	16.5%
Debt / Capitalization	35.3%	39.1%	39.7%	39.9%	38.7%

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
Source: Moody's Financial Metrics

Profile

Louisville Gas and Electric Company (LG&E) is a wholly owned regulated public utility subsidiary of LG&E and KU Energy LLC (LKE, Baa1 stable) that is engaged in the generation, transmission and distribution of electricity and the storage, distribution and sale of natural gas in Kentucky. LG&E provides electric service to approximately 418,000 customers in Louisville and delivers natural gas service to approximately 329,000 customers in its electric service area and eight additional counties in Kentucky. LG&E is regulated by the Kentucky Public Service Commission.

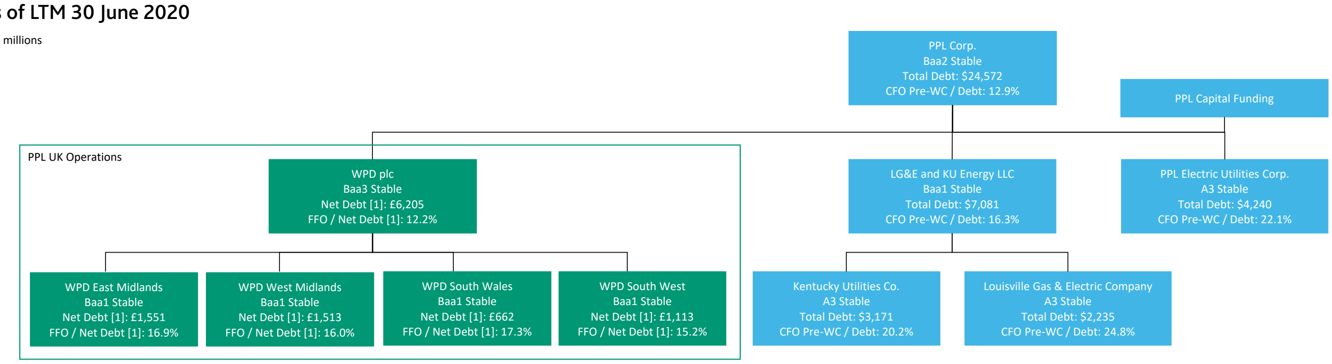
LG&E and its affiliate, Kentucky Utilities Company (KU, A3 stable), are the two main operating entities of LKE. LKE is wholly owned by PPL Corporation (PPL, Baa2 stable), a diversified utility holding company headquartered in Allentown, PA.

Exhibit 3

Organizational Structure

As of LTM 30 June 2020

$ in millions



[1] As of 3/31/2020; CFO Pre-WC to Debt is not a key metric we use for WPD and subsidiaries. WPD and subsidiaries are assessed under the Regulated Electric and Gas Networks Industry Grid.
[2] Metrics are based on 'adjusted' financial data and incorporate Moody's Global Standard Adjustments for non-financial corporations.
Source: Moody's Financial Metrics

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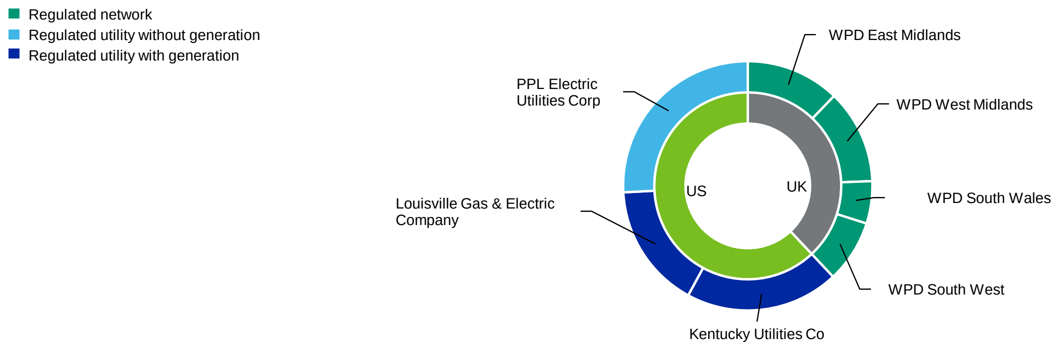
Exhibit 4
PPL's rate base breakdown between the US and UK jurisdictions



Source: Company Reports

Detailed credit considerations

Supportive regulatory environment in Kentucky

We view the regulatory framework provided by Kentucky to be supportive. The KPSC has approved various tracker mechanisms that provide timely recovery of costs outside of a general rate case. Some of these authorized tracker mechanisms include a Fuel Adjustment Clause (FAC), an Environmental Cost Recovery Surcharge (ECR), a Gas Supply Clause (GSC), a Gas Line Tracker (GLT), and a Demand-Side Management (DSM) Cost Recovery Mechanism. The Kentucky operating utilities do not have decoupling mechanisms in place, which subjects LG&E's revenue to some volatility. However, the impact of non-weather related demand fluctuations on its revenue is minimized because of the DSM mechanism.

LG&E's latest general rate case concluded in April 2019. LG&E had requested a $35 million electric rate increase and a $25 million gas rate increase based on a 10.42% return on equity (ROE) and equity layer of 52.84%. The settlement approved by the KPSC resulted in a total revenue increase of about $21 million based on a 9.725% ROE. Also, the KPSC approved the termination of the Tax Cuts and Jobs Act (TCJA) bill credit mechanism, which was used to reduce both electric and gas rates to reflect the impact of tax reform. With the new rates from the latest rate case implemented, the termination was implemented. This represented a total annual revenue increase of $73 million for LG&E, effective as of May 2019.

Large capital investment plan in the near-term

LG&E is currently in the midst of a large capital investment plan and expects to spend approximately $1.9 billion over the next five years including the investment that would be recovered under mechanism. Approximately $1.0 billion will be spent on distribution facilities, $322 million on generating facilities, $214 million on environmental, $132 million on transmission facilities, and $207 million on other expenses. The total projected capital investment represents about 33% of LG&E's net book value of property, plant and equipment, which was about $5.8 billion at the end of 2019.

Exhibit 5
Projected Capital Investment Plan

Source: Company Reports

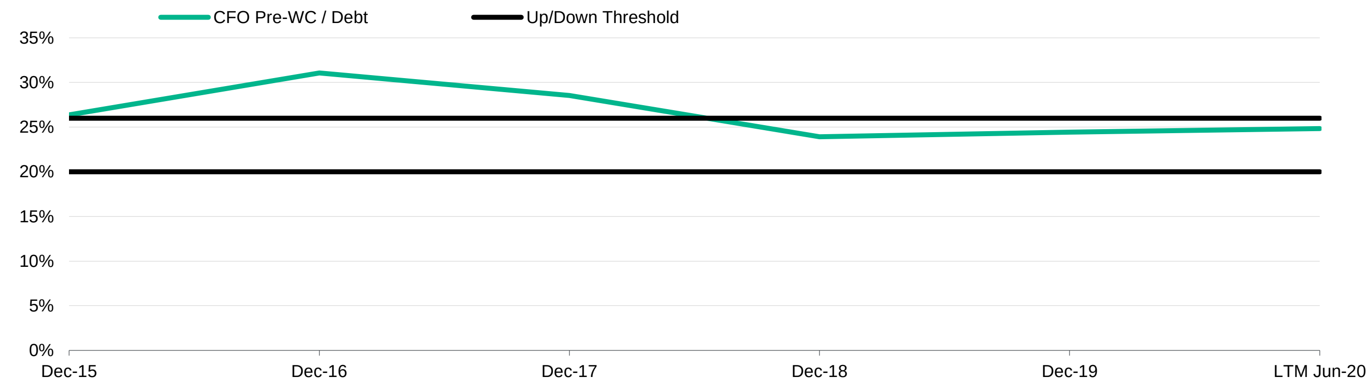
We expect regulatory lag related to this capital investment plan to be somewhat moderated by Kentucky's supportive regulatory environment, especially regarding environmental investments through the ECR. The KPSC is also authorized to grant a return on construction work in progress (CWIP) in rate case proceedings, a credit positive. Moreover, the ECR minimizes regulatory lag for investments associated with coal combustion waste. The terms of the ECR allow LG&E to receive a return on and of investments two months after the capital is deployed. We view this to be credit supportive compared to the traditional ratemaking process where there would be longer regulatory lag due both to the length of the construction period and subsequent rate case proceedings.

Stable financial profile, but slightly pressured credit metrics

Historically, LG&E has maintained a strong financial profile with its ratio of CFO pre-WC to debt staying in the mid to high-20% range. This metric was negatively impacted by the tax reform and we expect it to continue to weaken over the next 12-18 months, with the elevated capital investment the primary driver of the pressure. Furthermore, it is possible that metrics may weaken further due the negative impact of the COVID pandemic. However, we do not expect the impact to be material because the utility experienced an increase in the residential usage while commercial and industrial customer usage declined. In 2019, residential electric sales generated approximately 40% of LG&E's total revenue while commercial and industrial sales contributed the remainder.

LG&E's metrics are currently and will remain appropriately positioned for its credit profile. As of the last twelve month (LTM) period ending 30 June 2020, the utility's CFO pre-WC to debt was 24.8%, or 25.5% on average for the past three years. The decline in metrics from historical levels has been caused by elevated capital investments as well as the negative impact of tax reform. However, prudent cost recovery mechanisms that are in place should result in timely recovery of investments and help LG&E maintain its key credit metrics within an adequate range. Also, capital contributions received from LKE of approximately $53 million as of LTM 30 June 2020 has slightly helped to mitigate the pressure on its cash flow.

Exhibit 6
LG&E's Historical CFO pre-WC to Debt vs Financial Metric Upgrade/Downgrade Thresholds



The financial metric threshold indicated are one of several factors that could result in an upgrade or downgrade of the ratings if they are above or below that level for a sustained period.
Source: Moody's Financial Metrics

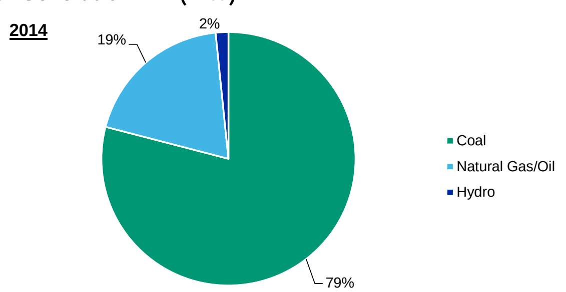
ESG considerations

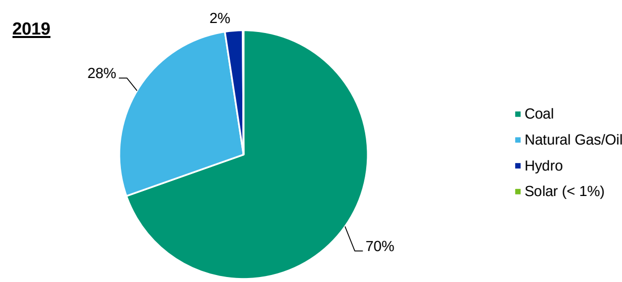
Environmental

LG&E has elevated carbon transition risk within the US regulated utility sector because it is a vertically integrated utility that has large, fossil based generation capacity. LG&E has total generation capacity of 2.8 GW, of which 1.9 GW (70%) is coal-fired, which provides the majority (86%) of LG&E's electricity generation output. The remaining 14% of the generating output is comprised mainly of gas/ oil-fired, hydro, and solar facilities. LG&E's generation fuel mix became more diversified in 2015 when the new 660 MW Cane Run gas-fired power plant started commercial operations, replacing the retired Tyrone and Green River coal-fired power plants as well as the Cane Run coal plant.

LG&E and KU received approval from the KPSC to develop a 4 MW solar facility to service a solar share program. The solar share program is a voluntary program that allows customers to subscribe for capacity in the solar share facility. In January 2020, LG&E and KU requested approval from the KSPC for the purchase of 100 MW of solar power in connection with the green tariff option established in the most recent Kentucky rate cases. KSPC has approved the solar contract subject to changes. LG&E and KU will purchase the initial 20 years of output of a proposed third-party solar generation facility and resell the majority of the power as renewable energy to two large industrial customers and use the remaining power for other customers.

Exhibit 7
LG&E Generation Mix (MW)





Source: Company reports

Fuel concentration in coal is typically considered to be a significant credit negative. However, we do not view LG&E's high reliance on coal to be as negative as some other companies because the state of Kentucky is very supportive of the coal industry. This support is evidenced by the ECR, which provides the company with credit supportive terms for its investments in coal-related environmental expenditures. However, LG&E is exposed to the risk of potentially needing to make a more rapid transition to clean energy in the future if carbon policies change.

PPL has enhanced transparency and disclosure, especially related to its environmental risks, over the last three years. PPL published a 2019 sustainability report, has set a more aggressive carbon reduction goal of at least 80% from 2010 levels by 2050 and has accelerated its previous 70% goal by 10 years to 2040. It also reiterated the assessment outcome for considering a two-degree scenario analysis based on the recommendations of the Task Force on Climate-Related Financial Disclosure (TCFD). Under these carbon regulation policy scenarios, PPL's analysis indicated that CO2 emissions from the company's Kentucky utilities' generation assets would be reduced 45-90% from 2005 levels by 2050.

Social

Social risks are primarily related to LG&E's customer and regulatory relations as well as demographic and societal trends. LG&E's regulatory environment, as well as its interaction with the KPSC, is important in considering the company's social risk. Also, the safety and reliability of its operations are extremely important social considerations. Given recent developments related to the COVID-19 pandemic, there is a possibility of increasing social risk longer term as the affordability of the utility bill and prolonged recessionary impact have a negative impact on LG&E.

Governance

As a subsidiary of PPL, corporate governance considerations include the financial policy and risk management of its parent company. We note that a stable financial position is an important characteristic for managing environmental and social risks.

Liquidity analysis

We expect LG&E to maintain an adequate liquidity profile over the next 12-18 months. Although the utility has an elevated capital investment program over the next few years, we anticipate that its liquidity will be supported by relatively stable and predictable cash flows and good access to capital markets.

LG&E's liquidity is supported by a $500 million syndicated credit facility that expires in January 2024. As of 30 June 2020, the credit facility had $500 million of available capacity. LG&E's credit facility contains one financial covenant, a limitation on the ratio of debt to capitalization of 70%, which the company was in compliance with at the end of the second quarter of 2020. The facility does not contain a material adverse change clause.

Over the LTM period ending 30 June 2020, LG&E generated cash flow from operations of approximately $553 million, spent about $483 million in capital investments and paid $187 million in dividends, resulting in a negative free cash flow of approximately $122 million. The shortfall was partially financed with equity contributions from the parent. Due to the high level of planned capital investments, we expect LG&E to remain in a negative free cash flow position over the next 12-18 months.

LG&E's next long-term debt puts are $128 million of revenue bonds with a mandatory purchase in April 2021, $70 million of first mortgage bonds due May 2021, $66 million of revenue bonds with a mandatory purchase in June 2021, and $27.5 million of first mortgage bonds due September 2021, respectively. The next stated debt maturity is not until 2025 when $300 million of senior secured notes are due.

LG&E and KU Energy (LKE), the intermediate parent company of LG&E, manages the liquidity of its two subsidiaries on a consolidated basis, although each utility has a separate credit facility. KU has a separate $400 million syndicated credit facility maturing in January 2024. As of 30 June 2020, KU had all $400 million available. The facility contains a financial covenant requiring that the companies' debt to total capitalization not exceed 70%. All entities were in compliance as of 30 June 2020.

Rating methodology and scorecard factors

Exhibit 8
Rating Factors
Louisville Gas & Electric Company

Regulated Electric and Gas Utilities Industry Scorecard [1][2]	Current LTM 6/30/2020		Moody's 12-18 Month Forward View As of Date Published [3]	
Factor 1 : Regulatory Framework (25%)	**Measure**	**Score**	**Measure**	**Score**
a) Legislative and Judicial Underpinnings of the Regulatory Framework	A	A	A	A
b) Consistency and Predictability of Regulation	A	A	A	A
Factor 2 : Ability to Recover Costs and Earn Returns (25%)				
a) Timeliness of Recovery of Operating and Capital Costs	Baa	Baa	Baa	Baa
b) Sufficiency of Rates and Returns	A	A	A	A
Factor 3 : Diversification (10%)				
a) Market Position	Baa	Baa	Baa	Baa
b) Generation and Fuel Diversity	Baa	Baa	Baa	Baa
Factor 4 : Financial Strength (40%)				
a) CFO pre-WC + Interest / Interest (3 Year Avg)	7.6x	Aa	6.5x - 7.5x	Aa
b) CFO pre-WC / Debt (3 Year Avg)	25.5%	A	23% - 25%	A
c) CFO pre-WC – Dividends / Debt (3 Year Avg)	18.0%	A	13% - 18%	Baa
d) Debt / Capitalization (3 Year Avg)	38.9%	A	38% - 40%	A
Rating:				
Scorecard-Indicated Outcome Before Notching Adjustment		A2		A3
HoldCo Structural Subordination Notching		0		0
a) Scorecard-Indicated Outcome		A2		A3
b) Actual Rating Assigned		A3		A3

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
[2] As of 6/30/2020(L)
[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.
Source: Moody's Financial Metrics™

Appendix

Exhibit 9

Cash Flow and Credit Metrics [1]

CF Metrics	Dec-16	Dec-17	Dec-18	Dec-19	LTM Jun-20
As Adjusted					
FFO	**589**	**557**	**527**	**548**	**549**
+/- Other	(7)	9	(8)	10	6
CFO Pre-WC	**582**	**566**	**519**	**558**	**555**
+/- ΔWC	11	(22)	29	(19)	(2)
CFO	**593**	**544**	**548**	**539**	**553**
- Div	128	192	156	182	187
- Capex	452	471	567	493	483
FCF	**13**	**(119)**	**(175)**	**(136)**	**(117)**
(CFO Pre-W/C) / Debt	31.1%	28.5%	23.9%	24.4%	24.8%
(CFO Pre-W/C - Dividends) / Debt	24.2%	18.9%	16.7%	16.5%	16.5%
FFO / Debt	31.4%	28.1%	24.3%	24.0%	24.6%
RCF / Debt	24.6%	18.4%	17.1%	16.0%	16.2%
Revenue	1,430	1,453	1,496	1,500	1,485
Cost of Good Sold	457	451	496	444	400
Interest Expense	74	73	79	88	89
Net Income	205	216	204	231	242
Total Assets	6,360	6,619	6,947	7,133	7,156
Total Liabilities	3,900	4,107	4,275	4,390	4,316
Total Equity	2,460	2,512	2,672	2,743	2,840

[1] All figures and ratios are calculated using Moody's estimates and standard adjustments. Periods are Financial Year-End unless indicated. LTM = Last Twelve Months
Source: Moody's Financial Metrics

Exhibit 10

Peer Comparison Table [1]

	Louisville Gas & Electric Company			Kentucky Power Company			Black Hills Power, Inc.			Empire District Electric Company (The)		
	A3 Stable			Baa3 Stable			A3 Stable			Baa1 Stable		
	FYE	FYE	LTM	FYE	FYE	LTM	FYE	FYE	LTM	FYE	FYE	LTM
(in US millions)	Dec-18	Dec-19	Jun-20	Dec-18	Dec-19	Jun-20	Dec-18	Dec-19	Jun-20	Dec-18	Dec-19	Jun-20
Revenue	1,496	1,500	1,485	642	619	579	298	291	277	698	644	602
CFO Pre-W/C	519	558	555	95	93	97	95	89	88	265	211	209
Total Debt	2,171	2,283	2,235	951	1,037	1,088	398	447	483	912	898	898
CFO Pre-W/C / Debt	23.9%	24.4%	24.8%	10.0%	8.9%	8.9%	23.9%	19.9%	18.1%	29.0%	23.5%	23.3%
CFO Pre-W/C – Dividends / Debt	16.7%	16.5%	16.5%	10.0%	8.4%	8.9%	14.9%	19.9%	14.0%	18.6%	20.2%	21.6%
Debt / Capitalization	39.7%	39.9%	38.7%	45.6%	46.4%	47.0%	43.6%	44.4%	46.2%	44.9%	42.8%	42.5%

[1] All figures & ratios calculated using Moody's estimates & standard adjustments. FYE = Financial Year-End. LTM = Last Twelve Months. RUR* = Ratings under Review, where UPG = for upgrade and DNG = for downgrade
Source: Moody's Financial Metrics

Ratings

Exhibit 11

Category	Moody's Rating
LOUISVILLE GAS & ELECTRIC COMPANY	
Outlook	Stable
Issuer Rating	A3
First Mortgage Bonds	A1
Senior Secured	A1
Sr Unsec Bank Credit Facility	A3
Bkd LT IRB/PC	A1
Commercial Paper	P-2
Bkd Other Short Term	P-2
ULT PARENT: PPL CORPORATION	
Outlook	Stable
Issuer Rating	Baa2
PARENT: LG&E AND KU ENERGY LLC	
Outlook	Stable
Issuer Rating	Baa1
Senior Unsecured	Baa1

Source: Moody's Investors Service

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CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

MOODY'S
INVESTORS SERVICE

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MOODY'S
INVESTORS SERVICE

CREDIT OPINION
23 October 2020

Update

Rate this Research

RATINGS

Kentucky Utilities Co.

Domicile	Lexington, Kentucky, United States
Long Term Rating	A3
Type	LT Issuer Rating
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Kentucky Utilities Co.

Update to credit analysis

Summary

Kentucky Utilities' (KU) credit strengths include its supportive regulatory environments in the states of Kentucky and Virginia. Historically, KU has produced relatively consistent credit metrics due to stable utility operations, and represents approximately 22% of the cash flow of its ultimate parent company, PPL Corporation (PPL). Going forward, we believe that KU's large capital investment plan will pressure the ratio of cash flow from operations before changes in working capital (CFO pre-WC) to debt to the 22% to 24% range, which is weaker than its historical level. To a lesser extent, KU's positive credit factors are also somewhat offset by a lack of fuel and geographic diversity.

The supportive regulatory environments of Kentucky and Virginia have a transparent recovery framework. The regulatory commissions have allowed KU various tracker mechanisms, providing timely cost recovery, and KU has been active in its general rate case filings over the last two years. In July 2019, KU filed for an electric rate case in Virginia, requesting a $13 million rate increase. The Virginia State Corporation Commission (SCC) authorized a $9 million rate increase in April 2020. Its last rate case in Virginia concluded in May 2018.

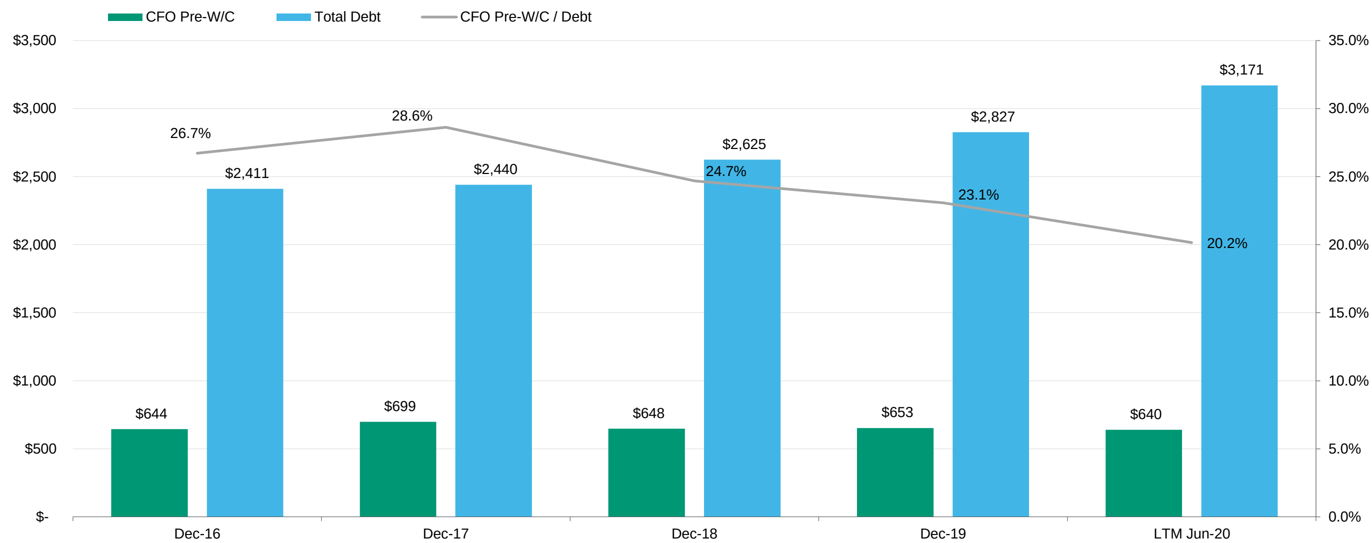
Recent developments

In August 2020, PPL, KU's parent company, announced that it had initiated a process to sell its utility assets in the United Kingdom that have a total estimated rate base of around $10 billion and approximately $8 billion of debt. If PPL is successful in divesting its UK assets, we estimate its Kentucky operations will proportionally increase to more than half of rate base from around 37%. Due to their vertically integrated utility business models with coal as the primary fuel source for its generation in Kentucky, we would view PPL's overall business risk to be higher.

The rapid spread of the coronavirus outbreak, severe global economic shock and asset price volatility are creating a severe and extensive credit shock across many sectors, regions and markets. The combined credit effects of these developments are unprecedented. We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety.

We expect KU to be relatively resilient to recessionary pressures related to the coronavirus because of its rate regulated business model and timely cost recovery mechanisms. Nevertheless, we are watching for electricity usage declines, utility bill payment delinquency, and the regulatory response to counter these effects on earnings and cash flow. As events related to the coronavirus continue, we are taking into consideration a wider range of potential outcomes, including more severe downside scenarios. The effects of the pandemic could result in financial metrics that are weaker than expected; however, we see these issues as temporary and not reflective of the long-term financial profile or credit quality of KU.

Exhibit 1
Historical CFO Pre-WC, Total Debt and CFO Pre-WC to Debt ($ MM)



Source: Moody's Financial Metrics

Credit strengths

» Supportive regulatory frameworks in Kentucky and Virginia

» Overall stable profile with transparent and predictable cash flows

Credit challenges

» Slightly pressured credit metrics due to large capital investment program

» High coal concentration in its generation fuel mix

» Elevated carbon transition risk relative to its peers

Rating outlook

KU's stable outlook reflects our expectation that the regulatory environments in Kentucky and Virginia will remain consistent and supportive. The stable outlook also incorporates our view that KU will continue to generate stable cash flow and adequate financial metrics while it executes a large capital investment program.

Factors that could lead to an upgrade

KU's rating could be upgraded if its financial metrics increase, including CFO pre-WC to debt at or above 26% on a sustained basis. An upgrade is also possible if KU's regulatory environment materially improves, providing more favorable regulatory recovery mechanisms. However, it is unlikely that KU's rating will be upgraded while the company is in the midst of a large capital investment program.

Factors that could lead to a downgrade

KU's ratings could be downgraded if there is a significant deterioration in the credit supportiveness of the regulatory environments. Additionally, KU's rating could be downgraded if its financial metrics weaken, such that CFO pre-WC to debt declines below 20% for an extended period of time.

Key indicators

Exhibit 2

Kentucky Utilities Co. [1]

	Dec-16	Dec-17	Dec-18	Dec-19	LTM Jun-20
CFO Pre-W/C + Interest / Interest	7.6x	8.2x	7.4x	6.9x	6.6x
CFO Pre-W/C / Debt	26.7%	28.6%	24.7%	23.1%	20.2%
CFO Pre-W/C – Dividends / Debt	16.4%	19.4%	15.3%	15.0%	13.0%
Debt / Capitalization	35.0%	37.7%	38.7%	39.4%	41.6%

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. Financial Metrics™
Source: Moody's Financial Metrics

Profile

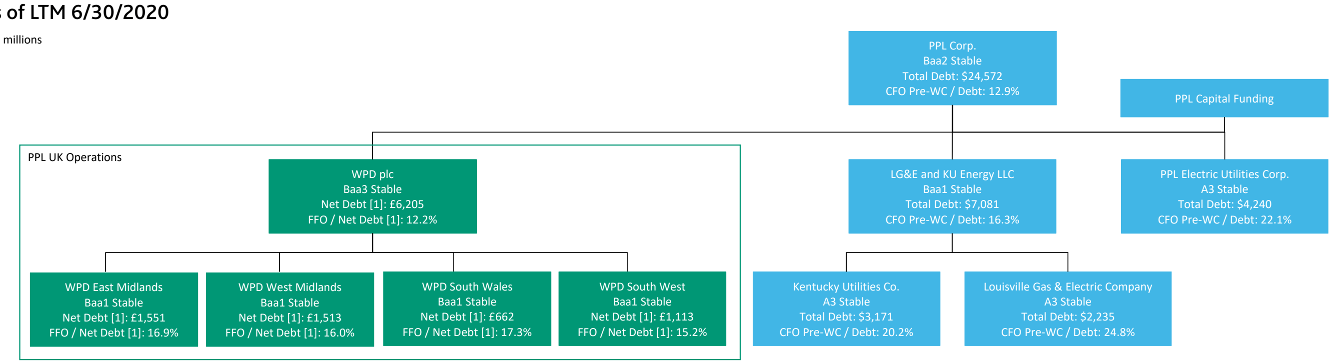
Kentucky Utilities (KU) is a wholly owned regulated public utility subsidiary of LG&E and KU Energy LLC (LKE, Baa1 stable) that is engaged in the generation, transmission and distribution of electricity. KU provides electric service to approximately 530,000 customers in 77 counties of Kentucky and 28,000 customers in five counties of Virginia. KU is regulated by the Kentucky Public Service Commission (KPSC) and the Virginia State Corporate Commission (VSCC).

KU and its affiliate, Louisville Gas and Electric Company (LG&E, A3 stable), are the two main operating entities of LKE. LKE is wholly owned by PPL Corporation (PPL, Baa2 stable), a diversified utility holding company headquartered in Allentown, PA.

Exhibit 3

Organizational structure
As of LTM 6/30/2020

$ in millions



[1] As of 3/31/2020; CFO Pre-WC to Debt is not a key metric we use for WPD and subsidiaries. WPD and subsidiaries are assessed under the Regulated Electric and Gas Networks Industry Grid.
[2] Metrics are based on 'adjusted' financial data and incorporate Moody's Global Standard Adjustments for non-financial corporations.
Source: Moody's Financial Metrics

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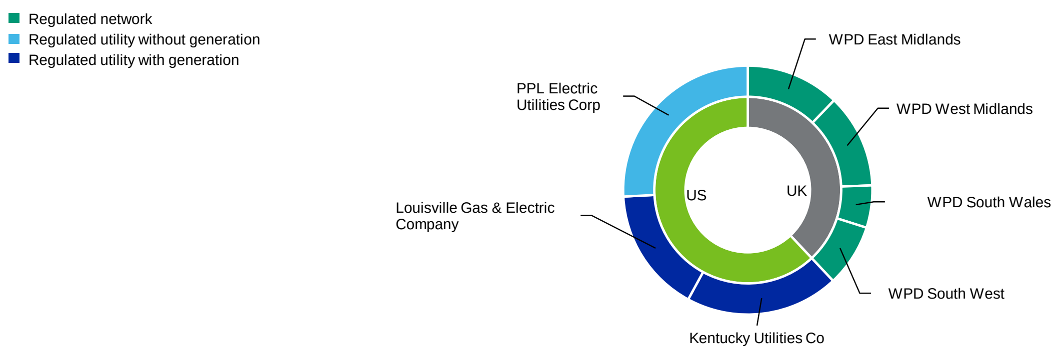
Exhibit 4

PPL's rate base breakdown between the US and UK jurisdictions



Source: Company Reports

Detailed credit considerations

Supportive regulatory environments in Kentucky and Virginia

We view the regulatory frameworks provided by Kentucky, where it has most of its operations, and Virginia to be supportive. The KPSC has approved various tracker mechanisms that provide timely recovery of costs outside of a general rate case. Some of the authorized tracker mechanisms include a Fuel Adjustment Clause (FAC), an Environmental Cost Recovery Surcharge (ECR), and a Demand-Side Management (DSM) Cost Recovery Mechanism. The Kentucky operating utilities do not have decoupling mechanisms in place, which subjects KU's revenue to some volatility. However, the impact of non-weather related demand fluctuations on its revenue is minimized because of the DSM mechanism.

KU's latest electric rate case in Kentucky concluded in April 2019 when a settlement was reached and approved. The settlement authorized a $56 million revenue increase compared to the initial $112 million increase requested in September 2018. The revenue increase was based on a 9.725% return on equity (ROE) versus the initial request of 10.42%. Also, the KPSC approved the termination of the Tax Cuts and Jobs Act (TCJA) bill credit mechanism, which was used to reduce both electric rates to reflect the impact of the tax reform. With the new rates from the latest rate case implemented, the termination was implemented. This represented a total annual revenue increase of $114 million for KU, effective as of May 2019.

In July 2019, KU filed for an electric rate case in Virginia where it has a smaller operation. The company requested a revenue increase of approximately $13 million based on an allowed ROE of 10.5% and an equity layer of 54.04%. In April 2020, the VSCC authorized a rate increase of $9 million as a result of an approved settlement. The settlement did not specify the allowed ROE and equity layer. Although the specifics of the settlement were not disclosed, the parties involved agreed that a ROE range of 9%-10% was reasonable.

Large capital investment plan in the near-term

KU is currently in the midst of a large capital investment plan and expects to spend approximately $2.3 billion, including capital expenditure under cost recovery mechanisms, over the next five years. Approximately $632 million will be spent on transmission facilities, $648 million on distribution facilities, $335 million on environmental, $441 million on generating facilities, and $203 million on other expenses. The total projected capital investment represents about 32% of KU's net book value of property, plant and equipment, which was about $7.3 billion at the end of 2019.

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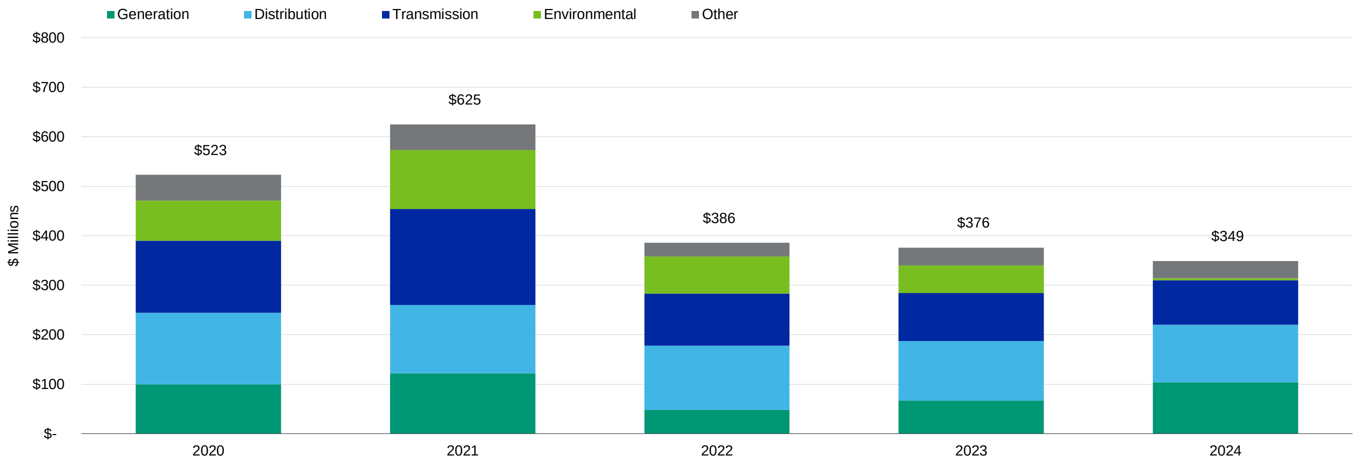
Exhibit 5
Projected Capital Investment Plan



Source: Company Reports

We expect regulatory lag related to KU's capital investments to be somewhat moderated by Kentucky's supportive regulatory environment, especially regarding environmental investments through the ECR. The KPSC is also authorized to grant a return on construction work in progress (CWIP) in rate case proceedings, a credit positive. Moreover, the ECR minimizes regulatory lag for investments associated with the coal combustion waste. The terms of the ECR allow KU to receive a return on and of investments two months after the capital is deployed. We view this to be credit supportive compared to the traditional ratemaking process where there would be longer regulatory lag due to the length of the construction period and subsequent rate case proceedings.

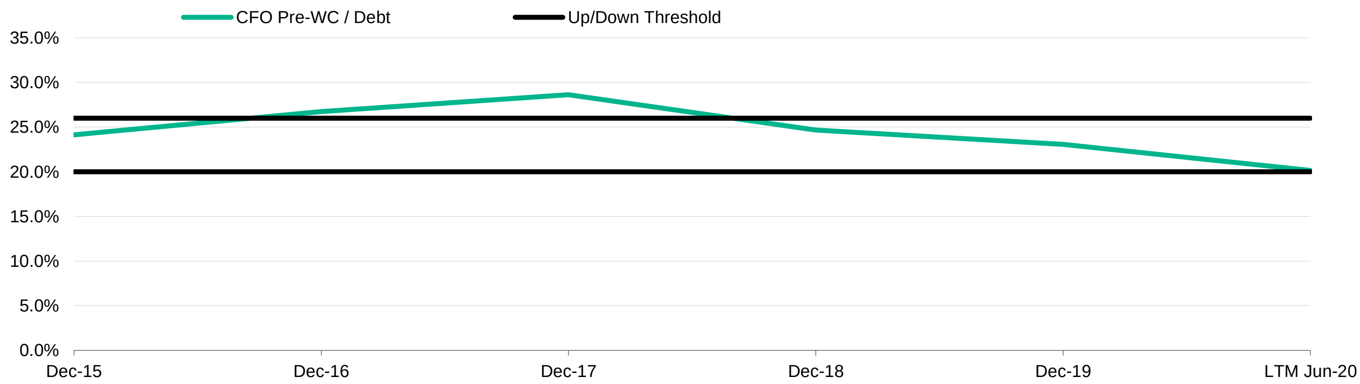
Adequate overall financial profile, but credit metrics slightly pressured

Historically, KU has maintained a strong financial profile with its ratio of CFO pre-WC to debt in the mid to high 20% range. However, we expect metrics to slightly weaken to the low to mid 20% range over the next 12-18 months. Furthermore, it is possible that metrics may weaken further due the negative impact of the COVID pandemic. However, we do not expect the impact to be material because the utility experienced an increase in residential usage while commercial and industrial customer usage declined. In 2019, residential sales generated approximately 40% of KU's total revenue while commercial and industrial sales contributed the remainder.

KU's metrics are currently and will remain appropriately positioned its credit profile. As of the last twelve month (LTM) period ending 30 June 2020, CFO pre-WC to debt was 20.2%, or 23.7% on average for the past three years. KU's debt level in the first half of 2020 was higher due to the early refinancing of a 2020 maturity. In June 2020, KU issued $500 million of first mortgage bonds in advance to fund its $500 million first mortgage bond maturing in November 2020. The series that was to mature in November was redeemed at par in August 2020.

We expect KU's metrics to be pressured due to elevated capital investments over the next 18 - 24 months. However, prudent cost recovery mechanisms that are in place should result in timely recovery of investments and should help KU maintain key credit metrics within the adequate ranges. Also, capital contributions received from LKE of approximately $37 million as of LTM 30 June 2020 has modestly helped mitigate the pressure on its cash flow.

Exhibit 6
KU's Historical CFO pre-WC to Debt vs Financial Metric Upgrade/Downgrade Thresholds



The financial metric threshold indicated are one of several factors that could result in an upgrade or downgrade of the ratings if they are above or below that level for a sustained period.
Source: Moody's Financial Metrics

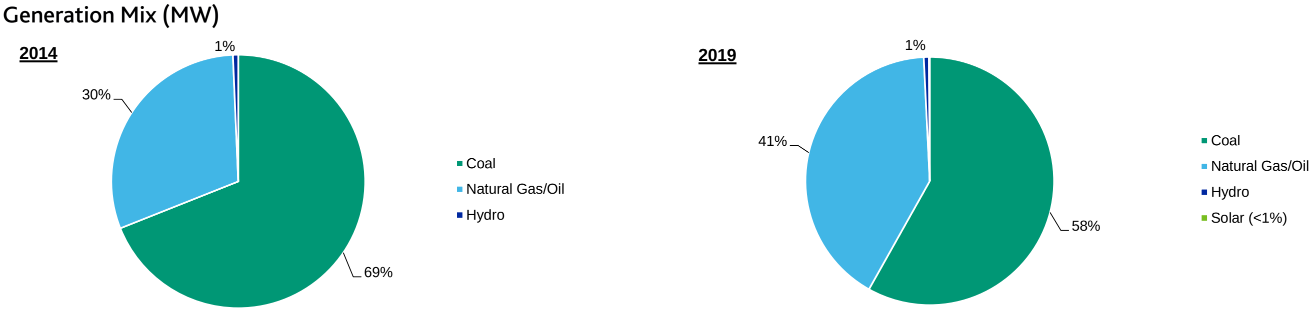
ESG considerations

Environmental

KU has elevated carbon transition risk within the US regulated utility sector because it is a vertically integrated utility that has a large, fossil based generation capacity. Kentucky's political and regulatory environment is supportive of coal mining and related industries. KU has a total generation capacity of 4.8 GW, and 2.8 GW (58%) is coal-fired, which provides the majority (73%) of the electricity generation output. The remaining 27% of the generating capacity is comprised mainly of gas/oil-fired, hydro, and solar facilities. KU's generation fuel mix became more diversified when a new gas-fired power plant, the 660 MW Cane Run 7 plant, became operational in June 2015. It replaced three older coal-fired plants which had a combined generating capacity of 797 MW. Due to environmental requirements and energy efficiency measures, KU retired two older coal units at the E.W Brown plant in the first quarter of 2019 with a combined capacity of 272 MW.

KU and LG&E received approval from the KPSC to develop a 4 MW solar facility to service a solar share program. The solar share program is a voluntary program that allows customers to subscribe capacity in the solar share facility. In January 2020, KU and LG&E requested approval from the KSPC for the purchase of 100 MW of solar power in connection with the green tariff option established in the most recent Kentucky rate cases. KSPC has approved the solar contract subject to changes. LG&E and KU will purchase the initial 20 years of output of a proposed third-party solar generation facility and resell the majority of the power as renewable energy to two large industrial customers and use the remaining power for other customers.

Exhibit 7
KU Generation Mix (MW)



Source: Company reports

Fuel concentration in coal is typically considered to be a significant credit negative. However, we do not view KU's high reliance on coal to be as negative as some other companies because the state of Kentucky is very supportive of the coal industry. This support is evidenced by the ECR, which provides the company with credit supportive terms for its investments in coal-related environmental expenditures. However, KU is exposed to the risk of potentially needing to make a more rapid transition to clean energy in the future if carbon policies change.

PPL has enhanced transparency and disclosure, especially related to its environmental risks, over the last three years. PPL has published a 2019 sustainability report and has also set a more aggressive carbon reduction goal of at least 80% from 2010 levels by 2050 and has accelerated its previous 70% goal by 10 years to 2040. It also reiterated the assessment outcome for considering a two-degree scenario analysis based on the recommendations of the Task Force on Climate-Related Financial Disclosure (TCFD). Under these carbon regulation policy scenarios, PPL's analysis indicated that the CO_2 emissions from the company's Kentucky utilities' generation assets would be reduced 45-90% from 2005 levels by 2050.

Social

Social risks are primarily related to KU's customer and regulatory relations as well as demographic and societal trends. KU's regulatory environment as well as its interaction with the KPSC and SCC are important in considering the company's social risk. Also, the safety and reliability of its operations are extremely important social considerations. Given recent developments related to the COVID-19 pandemic, there is a possibility of increasing social risk longer term as the affordability of the utility bill and prolonged recessionary impact have a negative impact on KU.

Governance

As a subsidiary of PPL, corporate governance considerations include the financial policy and risk management of its parent company. We note that a stable financial position is an important characteristic for managing environmental and social risks.

Liquidity analysis

We expect KU to maintain an adequate liquidity profile over the next 12-18 months. Although the utility has an elevated capital investment program over the next few years, we anticipate its liquidity will be supported by relatively stable and predictable cash flow and good access to capital markets.

KU's liquidity is supported by a $400 million syndicated credit facility that expires in January 2024. As of 30 June 2020, the credit facility had $400 million of available capacity. KU's credit facility contains one financial covenant, a limitation on the ratio of debt to capitalization of 70%, which the company was in compliance with at the end of the second quarter of 2020. The facility does not contain a material adverse change clause.

Over the LTM period ending 30 June 2020, KU generated cash flow from operations of approximately $640 million, spent about $581 million in capital investments and paid $227 million in dividends, resulting in a negative free cash flow of approximately $168 million. The shortfall was partially financed with equity contributions from the parent. Due to the high level of planned capital investments, we expect KU to remain in a negative free cash flow position over the next 12-18 months.

KU's next long-term debt puts are $132 million of revenue bonds with a mandatory purchase in June 2021.

LG&E and KU Energy (LKE), the intermediate parent company of KU, manages the liquidity of its two subsidiaries on a consolidated basis, although each utility has a separate credit facility. LG&E has a separate $500 million syndicated credit facility maturing in January 2024. As of 30 June 2020, LG&E had $500 million available. LG&E's facility contains a financial covenant requiring that the companies' debt to total capitalization not exceed 70%. All entities were in compliance as of 30 June 2020.

Rating methodology and scorecard factors

Exhibit 8

Rating Factors

Kentucky Utilities Co.

Regulated Electric and Gas Utilities Industry Scorecard [1][2]	Current LTM 6/30/2020		Moody's 12-18 Month Forward View As of Date Published [3]	
Factor 1 : Regulatory Framework (25%)	**Measure**	**Score**	**Measure**	**Score**
a) Legislative and Judicial Underpinnings of the Regulatory Framework	A	A	A	A
b) Consistency and Predictability of Regulation	A	A	A	A
Factor 2 : Ability to Recover Costs and Earn Returns (25%)				
a) Timeliness of Recovery of Operating and Capital Costs	Baa	Baa	Baa	Baa
b) Sufficiency of Rates and Returns	A	A	A	A
Factor 3 : Diversification (10%)				
a) Market Position	Baa	Baa	Baa	Baa
b) Generation and Fuel Diversity	Baa	Baa	Baa	Baa
Factor 4 : Financial Strength (40%)				
a) CFO pre-WC + Interest / Interest (3 Year Avg)	7.2x	Aa	6.5x - 7x	Aa
b) CFO pre-WC / Debt (3 Year Avg)	23.7%	A	22% - 24%	A
c) CFO pre-WC – Dividends / Debt (3 Year Avg)	15.6%	Baa	12% - 16%	Baa
d) Debt / Capitalization (3 Year Avg)	39.5%	A	37% - 40%	A
Rating:				
Scorecard-Indicated Outcome Before Notching Adjustment		A3		A3
HoldCo Structural Subordination Notching		0		0
a) Scorecard-Indicated Outcome		A3		A3
b) Actual Rating Assigned		A3		A3

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
[2] As of 06/30/2020 (L)
[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.
Source: Moody's Financial Metrics

Appendix

Exhibit 9

Cash Flow and Credit Metrics [1]

CF Metrics	Dec-16	Dec-17	Dec-18	Dec-19	LTM Jun-20
As Adjusted					
FFO	**652**	**687**	**622**	**665**	**652**
+/- Other	(8)	12	26	(12)	(12)
CFO Pre-WC	**644**	**699**	**648**	**653**	**640**
+/- ΔWC	(1)	(13)	47	(26)	-
CFO	**643**	**686**	**695**	**627**	**640**
- Div	248	226	246	229	227
- Capex	359	442	572	622	581
FCF	**36**	**18**	**(123)**	**(224)**	**(168)**
(CFO Pre-W/C) / Debt	26.7%	28.6%	24.7%	23.1%	20.2%
(CFO Pre-W/C - Dividends) / Debt	16.4%	19.4%	15.3%	15.0%	13.0%
FFO / Debt	27.1%	28.1%	23.7%	23.5%	20.6%
RCF / Debt	16.8%	18.9%	14.3%	15.4%	13.4%
Revenue	1,749	1,744	1,760	1,740	1,704
Cost of Good Sold	945	928	967	892	848
Interest Expense	98	97	102	110	113
Net Income	265	259	286	293	284
Total Assets	8,129	8,298	8,588	8,825	9,243
Total Liabilities	4,830	4,964	5,167	5,270	5,607
Total Equity	3,299	3,334	3,421	3,555	3,636

[1] All figures and ratios are calculated using Moody's estimates and standard adjustments. Periods are Financial Year-End unless indicated. LTM = Last Twelve Months
Source: Moody's Financial Metrics

Exhibit 10

Peer Comparison Table [1]

	Kentucky Utilities Co. A3 Stable			Kentucky Power Company Baa3 Stable			Black Hills Power, Inc. A3 Stable			Empire District Electric Company (The) Baa1 Stable		
(in US millions)	FYE Dec-18	FYE Dec-19	LTM Jun-20	FYE Dec-18	FYE Dec-19	LTM Jun-20	FYE Dec-18	FYE Dec-19	LTM Jun-20	FYE Dec-18	FYE Dec-19	LTM Jun-20
Revenue	1,760	1,740	1,704	642	619	579	298	291	277	698	644	602
CFO Pre-W/C	648	653	640	95	93	97	95	89	88	265	211	209
Total Debt	2,625	2,827	3,171	951	1,037	1,088	398	447	483	912	898	898
CFO Pre-W/C / Debt	24.7%	23.1%	20.2%	10.0%	8.9%	8.9%	23.9%	19.9%	18.1%	29.0%	23.5%	23.3%
CFO Pre-W/C – Dividends / Debt	15.3%	15.0%	13.0%	10.0%	8.4%	8.9%	14.9%	19.9%	14.0%	18.6%	20.2%	21.6%
Debt / Capitalization	38.7%	39.4%	41.6%	45.6%	46.4%	47.0%	43.6%	44.4%	46.2%	44.9%	42.8%	42.5%

[1] All figures & ratios calculated using Moody's estimates & standard adjustments. FYE = Financial Year-End. LTM = Last Twelve Months. RUR* = Ratings under Review, where UPG = for upgrade and DNG = for downgrade
Source: Moody's Financial Metrics

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Ratings

Exhibit 11

Category	Moody's Rating
KENTUCKY UTILITIES CO.	
Outlook	Stable
Issuer Rating	A3
First Mortgage Bonds	A1
Senior Secured	A1
Sr Unsec Bank Credit Facility	A3
Bkd LT IRB/PC	A1
Commercial Paper	P-2
Bkd Other Short Term	P-2
ULT PARENT: PPL CORPORATION	
Outlook	Stable
Issuer Rating	Baa2
PARENT: LG&E AND KU ENERGY LLC	
Outlook	Stable
Issuer Rating	Baa1
Senior Unsecured	Baa1

Source: Moody's Investors Service

REPORT NUMBER 1250151

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

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Louisville Gas & Electric Co.

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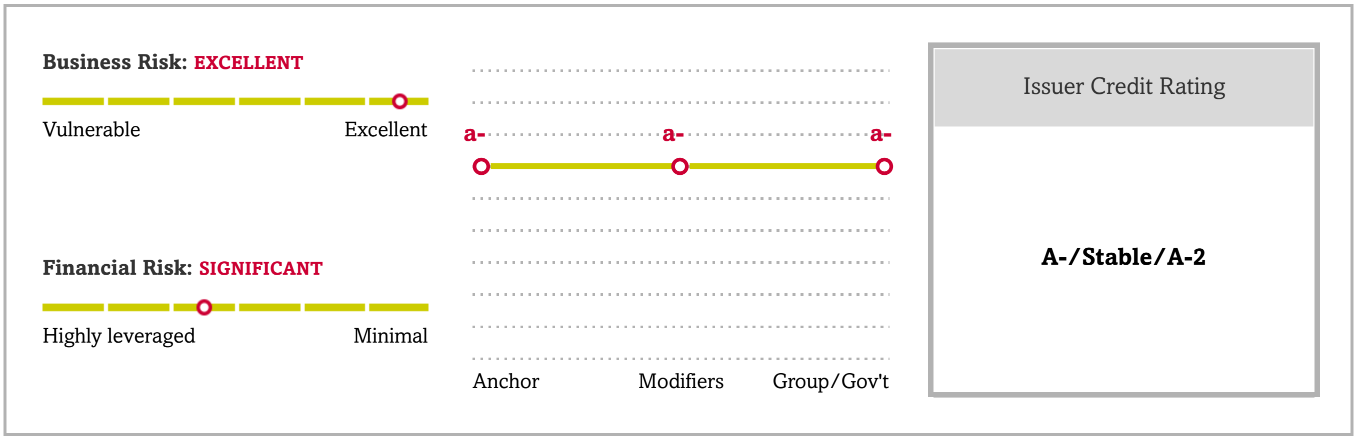
Louisville Gas & Electric Co.



Credit Highlights

Overview

Key strengths	Key risks
Vertically integrated electric and natural gas distribution utility.	Geographic concentration in Louisville, Ky. and modest customer base with limited scale.
The credit-supportive and constructive regulatory environment in Kentucky.	Negative discretionary cash flow after capital spending and dividends.
Balanced capital structure supports overall credit quality.	Generation is subject to environmental-compliance rules.

Kentucky's regulatory environment supports the company's credit quality. Louisville Gas & Electric Co. (LG&E) benefits from mechanisms, such as a gas line tracker and a pass-through fuel cost mechanism, that help stabilize its operating cash flow.

Debt leverage at regulated utilities remains modest. We expect the debt leverage, reflected in debt to EBITDA, of the company's regulated utilities to remain modest in the high-3x to low-4x range over the next few years due, in part, to their timely cost recovery through rate increases.

Capital spending has been high due to environmental compliance. The company has had to increase its capital spending to comply with the Environmental Protection Agency's (EPA) Clean Air Act rules for coal combustion waste and the byproducts created through coal-fired generation. LG&E is entitled to recover these costs through an environmental cost-recovery mechanism.

Outlook: Stable

The stable outlook on LG&E reflects our stable outlook on its parent, PPL Corp., over the next 24 months. The stable outlook on PPL reflects our excellent assessment of its business risk profile, which we consider to be at the stronger end of our range for an excellent assessment. It also incorporates our significant assessment of the company's financial risk profile, which we believe is at the weaker end of our range for a significant assessment. Under our base-case scenario, PPL's adjusted funds from operations (FFO)-to-debt ratio will average about 14% while its adjusted debt to EBITDA remains elevated at about 5x.

Downside scenario

We could lower our ratings on PPL and its subsidiaries over the next 24 months if the company's core credit ratios weaken such that its adjusted FFO to debt remains consistently below 13% without any changes to its business risk.

Upside scenario

Given our assessment of the company's business risk and our base-case assumptions, we do not anticipate raising our ratings on PPL or its subsidiaries over our outlook period. However, we could raise our ratings if PPL improves its adjusted FFO-to-debt ratio to more than 18% on a consistent basis while maintaining its current level of business risk.

Our Base-Case Scenario

Assumptions

- Gross margin improves in 2020 on base-rate increases and cost recovery;
- Gross margin increases in 2021 due to the timely recovery of costs and successful rate cases;
- Higher capital expenditure in 2020 of about $420 million for upgrades to distribution equipment and improvements to generation assets to comply with environmental regulations;
- Annual dividends of about $230 million; and
- All debt maturities are refinanced.

Key Metrics

	2020e	2021f	2022f
FFO to debt (%)	20-22	19-21	19-21
FFO cash interest coverage (x)	6.5-7.1	6.0-6.4	5.7-6.1
Debt to EBITDA (x)	3.6-4.0	3.6-4.0	3.6-4.0

e--Estimate. f--Forecast. FFO--Funds from operations. Note: All figures are S&P-adjusted.

Company Description

LG&E, which operates in and around Louisville, Ky., is a vertically integrated electric utility that serves 400,000 customers and a natural gas distribution utility serving around 320,000 customers.

Business Risk: Excellent

Our assessment of LG&E's business risk profile primarily reflects its regulated utilities, which comprise vertically integrated electric and natural gas distribution operations, and Kentucky's generally constructive regulatory framework.

With a customer base of about 400,000 electric and about 320,000 natural gas customers, LG&E has some scale. In addition, its largely residential and commercial customer base insulates it against fluctuations in demand and stabilizes its cash flows. Our assessment also incorporates the company's moderate operating diversity due to its electric and natural gas operations.

The company has about 3,000 megawatts of generation capacity, which entails greater operating risk than its transmission and distribution operations. The company has been upgrading its coal-fired generation plants to comply with environmental regulations. While the capital costs for these upgrades are significant, LG&E can recover these costs through an environmental cost recovery mechanism, which limits its regulatory lag and supports its credit profile. The company is regulated by the Kentucky Public Service Commission and benefits from other mechanisms, such as a gas line tracker and a pass-through fuel cost mechanism, that help stabilize its returns. Moreover, LG&E's low-cost, coal-fired generation and efficient operations contribute to the overall competitive rates it offers its customers.

Table 1

Peer Comparison

Industry sector: combo

	Louisville Gas & Electric Co.	Southern Indiana Gas & Electric Co.	Wisconsin Public Service Corp.
Ratings as of Jan. 15, 2019	A-/Stable/A-2	A-/Watch Neg/--	A-/Stable/A-2
	--Fiscal year ended Dec. 31, 2017--		
(Mil. $)			
Revenue	1,453.0	662.0	1,485.4
EBITDA	650.4	252.3	444.0
FFO	551.9	181.6	349.8
Net income from continuing operations	213.0	79.9	154.9
Cash flow from operations	537.2	151.8	529.5
Capital expenditure	459.2	150.0	356.0
Free operating cash flow	78.0	1.8	173.5
Discretionary cash flow	(114.0)	(53.1)	(21.5)

Table 1

Peer Comparison (cont.)			
Industry sector: combo			
	Louisville Gas & Electric Co.	**Southern Indiana Gas & Electric Co.**	**Wisconsin Public Service Corp.**
Cash and short-term investments	15.0	2.3	7.9
Debt	2,154.8	740.6	1,569.0
Equity	2,527.0	873.0	1,617.3
Adjusted ratios			
EBITDA margin (%)	44.8	38.1	29.9
Return on capital (%)	7.6	8.4	7.5
EBITDA interest coverage (x)	7.2	6.8	6.9
FFO cash interest coverage (X)	9.9	6.2	7.3
Debt/EBITDA (x)	3.3	2.9	3.5
FFO/debt (%)	25.6	24.5	22.3
Cash flow from operations/debt (%)	24.9	20.5	33.7
Free operating cash flow/debt (%)	3.6	0.2	11.1
Discretionary cash flow/debt (%)	(5.3)	(7.2)	(1.4)

FFO--Funds from operations.

Financial Risk: Significant

Under our base-case scenario, we expect that LG&E's adjusted FFO to debt will be in the 19%-21% range in 2020 as it no longer experiences the negative effects of U.S. tax reform. Additionally, we foresee some uplift because the company will increase its regular base rate and recovery. This uplift is offset by LG&E's ongoing discretionary cash flow deficits due to its heightened capital expenditure, which we expect it will fund, at least partly, with external debt. We anticipate that the company's debt leverage will remain about 3.8x.

In 2021 and 2022, we anticipate that LG&E's cost recovery and potential rate cases will be offset by its increased capital spending and elevated dividend program, which will slightly weaken its credit measures. We base our risk assessment on our medial volatility table benchmarks, which are more relaxed than the benchmarks we use for a typical corporate issuer. This reflects the company's steady cash flow, rate-regulated utility operations, and effective regulatory risk management.

Table 2

Financial Summary					
Industry sector: combo					
	--Fiscal year ended Dec. 31--				
	2018	**2017**	**2016**	**2015**	**2014**
(Mil. $)					
Revenue	1,496.0	1,453.0	1,430.0	1,444.0	1,533.0
EBITDA	618.9	650.4	621.8	564.1	495.0

Table 2

Financial Summary (cont.)

Industry sector: combo

	--Fiscal year ended Dec. 31--				
	2018	**2017**	**2016**	**2015**	**2014**
Funds from operations (FFO)	533.7	555.6	591.4	589.3	382.4
Interest expense	93.8	90.0	90.6	73.9	54.6
Cash interest paid	78.2	72.7	73.4	55.8	47.6
Cash flow from operations	454.7	525.6	494.4	562.3	375.4
Capital expenditure	555.2	459.2	440.2	689.9	656.0
Free operating cash flow (FOCF)	(100.5)	66.4	54.2	(127.6)	(280.6)
Discretionary cash flow (DCF)	(256.5)	(125.6)	(73.8)	(246.6)	(392.6)
Cash and short-term investments	10.0	15.0	5.0	19.0	10.0
Gross available cash	10.0	15.0	5.0	19.0	10.0
Debt	2,297.0	2,132.8	2,082.7	2,109.5	1,779.1
Equity	2,687.0	2,527.0	2,476.0	2,330.0	2,174.0
Adjusted ratios					
EBITDA margin (%)	41.4	44.8	43.5	39.1	32.3
Return on capital (%)	8.0	9.4	9.3	9.0	8.8
EBITDA interest coverage (x)	6.6	7.2	6.9	7.6	9.1
FFO cash interest coverage (x)	7.8	8.6	9.1	11.6	9.0
Debt/EBITDA (x)	3.7	3.3	3.3	3.7	3.6
FFO/debt (%)	23.2	26.1	28.4	27.9	21.5
Cash flow from operations/debt (%)	19.8	24.6	23.7	26.7	21.1
FOCF/debt (%)	(4.4)	3.1	2.6	(6.0)	(15.8)
DCF/debt (%)	(11.2)	(5.9)	(3.5)	(11.7)	(22.1)

Liquidity: Adequate

We assess LG&E's stand-alone liquidity as adequate because we expect its liquidity sources will likely be more than 1.1x its uses over the next 12 months and anticipate that its net sources will remain positive even if its EBITDA declines by 10%. We believe LG&E has sound banking relationships, the ability to absorb high-impact, low-probability events without refinancing, and a satisfactory standing in the credit markets.

Principal Liquidity Sources	Principal Liquidity Uses
• Estimated cash FFO of about $500 million; and • Revolving credit facility availability of $500 million.	• Debt maturities of about $230 million; • Capital spending of about $450 million as of the end of the third quarter; and • Dividends of about $210 million.

Environmental, Social, And Governance

Environmental factors are material to our rating analysis, though social and governance factors are not.

Most of the LG&E's total generation capacity--about 3,000 megawatts--comes from coal, which represents an environmental risk factor. By 2050, PPL intends to reduce its carbon footprint by 70%. In Kentucky, the company is seeking a green energy tariff that would help it expand its renewable energy generation. The company expects to replace much of its coal-based generation with a combination of natural gas and renewables.

Social factors are neutral to our ESG assessment and are consistent with what we see across the industry for other publicly traded utilities. By pursuing greater renewable generation, the company is meeting customer demand for greener energy. Governance factors are also neutral to our ESG assessment and the company's governance practices are consistent with what we see across the industry for other publicly traded utilities.

Group Influence

Under our group rating methodology, we consider LG&E to be a core subsidiary of its parent PPL Corp., which reflects our view that the company is highly unlikely to be sold, is integral to the group's overall strategy, possesses a strong long-term commitment from senior management, and is closely linked to the parent's name and reputation. Therefore, we rate LG&E 'A-', which is in line with our 'a-' group credit profile.

Issue Ratings - Subordination Analysis

Our short-term 'A-2' rating on LG&E is based on our long-term issuer credit rating on the company.

Issue Ratings - Recovery Analysis

Key analytical factors

- LG&E's first-mortgage bonds benefit from a first-priority lien on substantially all of the utility's real property owned or subsequently acquired. Collateral coverage of more than 1.5x supports a recovery rating of '1+' and an issue-level rating one notch above the long-term issuer credit rating.

Reconciliation

Table 3

Reconciliation Of Louisville Gas & Electric Co. Reported Amounts With S&P Global Ratings' Adjusted Amounts (Mil. $)

	--Fiscal year ended Dec. 31, 2018--						
Louisville Gas & Electric Co. reported amounts							
	Debt	**EBITDA**	**Operating income**	**Interest expense**	**S&P Global Ratings' adjusted EBITDA**	**Cash flow from operations**	**Capital expenditure**
	2,088.0	580.0	385.0	76.0	618.9	443.0	554.0
S&P Global Ratings' adjustments							
Cash taxes paid	--	--	--	--	(7.0)	--	--
Cash taxes paid: Other	--	--	--	--	--	--	--
Cash interest paid	--	--	--	--	(71.0)	--	--
Operating leases	24.3	12.5	2.0	2.0	(2.0)	10.5	--
Postretirement benefit obligations/deferred compensation	3.2	--	--	--	--	--	--
Accessible cash and liquid investments	(10.0)	--	--	--	--	--	--
Power purchase agreements	73.8	6.4	5.2	5.2	(5.2)	1.2	1.2
Asset retirement obligations	81.4	6.0	6.0	6.0	--	--	--
Nonoperating income (expense)	--	--	(10.0)	--	--	--	--
Debt: Other	36.4	--	--	--	--	--	--
EBITDA: other income/(expense)	--	14.0	14.0	--	--	--	--
Depreciation and amortization: other	--	--	(14.0)	--	--	--	--
Interest expense: Other	--	--	--	4.7	--	--	--
Total adjustments	209.0	38.9	3.2	17.8	(85.2)	11.7	1.2
S&P Global Ratings' adjusted amounts							
	Debt	**EBITDA**	**EBIT**	**Interest expense**	**Funds from operations**	**Cash flow from operations**	**Capital expenditure**
	2,297.0	618.9	388.2	93.8	533.7	454.7	555.2

Ratings Score Snapshot

Issuer Credit Rating

A-/Stable/A-2

Business risk: Excellent

- **Country risk:** Very low
- **Industry risk:** Very low
- **Competitive position:** Excellent

Financial risk: Significant

- **Cash flow/leverage:** Significant

Anchor: a-

Modifiers

- **Diversification/portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Satisfactory (no impact)
- **Comparable rating analysis:** Neutral (no impact)

Stand-alone credit profile : a-

- **Group credit profile:** a-
- **Entity status within group:** Core (no impact)

Related Criteria

- Criteria - Corporates - General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria - Corporates - General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- ARCHIVE | Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- ARCHIVE | General Criteria: Group Rating Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Criteria - Corporates - Utilities: Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009
- ARCHIVE | Criteria | Insurance | General: Hybrid Capital Handbook: September 2008 Edition, Sept. 15, 2008

Business And Financial Risk Matrix

Business Risk Profile	Financial Risk Profile					
	Minimal	Modest	Intermediate	**Significant**	Aggressive	Highly leveraged
Excellent	aaa/aa+	aa	a+/a	**a-**	bbb	bbb-/bb+
Strong	aa/aa-	a+/a	a-/bbb+	bbb	bb+	bb
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-

Ratings Detail (As Of March 16, 2020)*

Louisville Gas & Electric Co.		
Issuer Credit Rating		A-/Stable/A-2
Commercial Paper		
Local Currency		A-2
Senior Secured		A
Issuer Credit Ratings History		
01-Jun-2015	*Foreign Currency*	A-/Stable/A-2
10-Jun-2014		BBB/Watch Pos/A-2
15-Apr-2011		BBB/Stable/A-2
01-Jun-2015	*Local Currency*	A-/Stable/A-2
10-Jun-2014		BBB/Watch Pos/A-2
15-Apr-2011		BBB/Stable/A-2

*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

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Kentucky Utilities Co.

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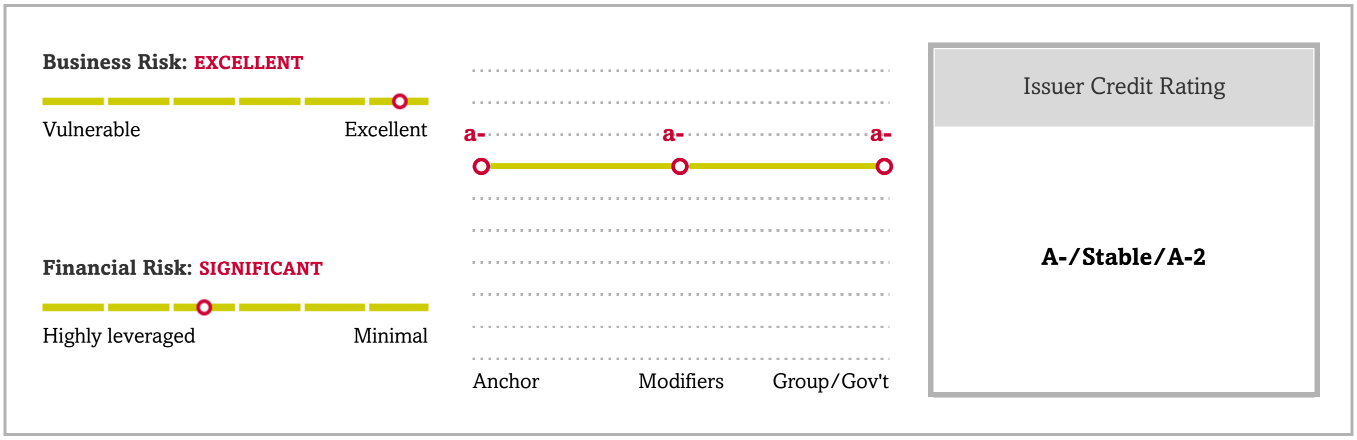
Kentucky Utilities Co.



Credit Highlights

Overview

Key strengths	Key risks
Fully regulated vertically integrated electric utility.	Limited geographic diversity and relatively small customer base.
Constructive and credit supportive regulatory framework.	Moderate operational and environmental risk relating to coal-fired generation.
Financial measures in 2020 benefiting from timely cost recovery mechanisms.	Negative discretionary cash flow, in part reflecting greater capital spending.

Kentucky Utilities Co. (KU) operates under a credit-supportive framework. Kentucky Utilities Co. has a constructive regulatory framework that provides for the timely recovery of approved capital expenditures, as well as pass-through fuel cost mechanisms and various operating expenses recoveries.

Debt leverage remains modest for regulated utilities overall. Over the next few years, we expect debt leverage, as indicated by debt to EBITDA, to remain in the mid- to high-3x range, modest for regulated utilities, in part from timely cost recovery.

Capital spending has remained elevated as a result of environmental compliance. In order to comply with the Environmental Protection Agency's (EPA's) Clean Air Act rules for coal combustion waste and byproducts, we foresee the company continuing into 2020 with slightly lower capital spending than previous years. KU is entitled to cost recovery through an environmental cost recovery mechanism.

Outlook: Stable

The stable rating outlook on KU reflects that of its parent PPL Corp. (PPL) over the next 24 months. We base the outlook on on our assessment of PPL's excellent business risk profile, which is at the upper end of the range, and significant financial risk profile, which is at the lower end of the range. Under S&P Global Ratings' base case scenario, PPL's adjusted funds from operations (FFO) to debt will average about 14%, and adjusted debt to EBITDA will remain elevated at about 5x.

Downside scenario

We could lower the ratings over the next 24 months on PPL and its subsidiaries if core credit ratios weakened such that adjusted FFO to debt consistently stays below 13% and business risk remains unchanged.

Upside scenario

Given our assessment of business risk and our base case scenario for financial performance, we do not anticipate higher ratings during the outlook period. However, we could raise our ratings if PPL achieves adjusted FFO to debt of more than 18% on a consistent basis while maintaining the current level of business risk.

Our Base-Case Scenario

Assumptions

- Gross margin growth in 2020 driven by modest volume growth and ongoing rate recovery for capital spending including on environmental-compliance equipment;
- High average capital spending of $560 million per year for upgrading generation infrastructure to meet environmental standards and for improvements to transmission and distribution assets; and
- All debt maturities refinanced.

Key Metrics

	2020e	2021f	2022f
Adjusted FFO to debt (%)	22-24	19-21	19-21
Adjusted FFO cash interest coverage (X)	6.8-7.2	6.2-6.6	6.0-6.4
Adjusted debt to EBITDA	3.5-3.9	3.5-3.9	3.7-4.1

e--Estimate. f—Forecast. FFO--Funds from operations.

Company Description

KU is a vertically integrated electric utility providing service to about 550,000 customers that are mostly in Kentucky.

Business Risk: Excellent

We assess KU's business risk profile based on the company's regulated integrated utility operations under Kentucky's generally constructive regulatory framework, which provides for the timely recovery of approved capital expenditures.

KU has moderate scale with 550,000 customers and limited geographic diversity because it operates almost entirely in Kentucky. The customer mix is mostly residential and commercial, which can insulate the company from fluctuations in electricity demand and also supports relatively stable operating cash flow.

The company has generation capacity of about 5,000 MW, including sizeable coal-fired capacity. However, KU has been upgrading its coal units to comply with environmental regulations. KU can recover the costs for these upgrades through an environmental cost recovery mechanism, which limits regulatory lag and supports the credit profile. Under Kentucky Public Service Commission regulation, the company benefits from other recovery mechanisms such as a pass-through fuel cost and a purchased-power cost-recovery rider. These mechanisms help stabilize the company's operating cash flow. Moreover, the company's low-cost, coal-fired generation and efficient operations contribute to competitive rates for customers.

Table 1

Kentucky Utilities Co.--Peer Comparison

Industry sector: electric				
	Kentucky Utilities Co.	**Kentucky Power Co.**	**Appalachian Power Co.**	**Louisville Gas & Electric Co.**
Ratings as of March 4, 2020	**A-/Stable/A-2**	**A-/Stable/--**	**A-/Stable/A-2**	**A-/Stable/A-2**
	--Fiscal year ended Dec. 31, 2018--	**--Fiscal year ended Dec. 31, 2018--**	**--Fiscal year ended Dec. 31, 2018--**	**--Fiscal year ended Dec. 31, 2018--**
(Mil. $)				
Revenue	1,760.0	642.1	2,934.8	1,496.0
EBITDA	774.8	203.0	903.2	618.9
Funds from operations (FFO)	650.2	165.8	729.6	533.7
Interest expense	118.6	41.9	206.1	93.8
Cash interest paid	99.5	40.4	186.7	78.2
Cash flow from operations	589.2	118.2	826.7	454.7
Capital expenditure	562.5	134.8	772.3	555.2
Free operating cash flow (FOCF)	26.7	(16.6)	54.4	(100.5)
Discretionary cash flow (DCF)	(219.3)	(16.6)	(105.6)	(256.5)
Cash and short-term investments	14.0	1.2	4.2	10.0
Debt	2,817.7	938.0	4,192.6	2,297.0
Equity	3,442.0	732.9	4,006.1	2,687.0
Adjusted ratios				
EBITDA margin (%)	44.0	31.6	30.8	41.4

Table 1

Kentucky Utilities Co.--Peer Comparison (cont.)

Industry sector: electric

	Kentucky Utilities Co.	Kentucky Power Co.	Appalachian Power Co.	Louisville Gas & Electric Co.
Ratings as of March 4, 2020	**A-/Stable/A-2**	**A-/Stable/--**	**A-/Stable/A-2**	**A-/Stable/A-2**
	--Fiscal year ended Dec. 31, 2018--	**--Fiscal year ended Dec. 31, 2018--**	**--Fiscal year ended Dec. 31, 2018--**	**--Fiscal year ended Dec. 31, 2018--**
Return on capital (%)	7.8	6.5	6.3	8.0
EBITDA interest coverage (x)	6.5	4.8	4.4	6.6
FFO cash interest coverage (x)	7.5	5.1	4.9	7.8
Debt/EBITDA (x)	3.6	4.6	4.6	3.7
FFO/debt (%)	23.1	17.7	17.4	23.2
Cash flow from operations/debt (%)	20.9	12.6	19.7	19.8
FOCF/debt (%)	0.9	(1.8)	1.3	(4.4)
DCF/debt (%)	(7.8)	(1.8)	(2.5)	(11.2)

Source: S&P Global Ratings, company data.

Financial Risk: Significant

Under our base case scenario, we project that KU's adjusted FFO to debt will be in the 22%-24% range, near the upper end the benchmark range. Bolstering the financial risk profile determination is the supplemental ratio of adjusted FFO cash interest coverage in the 6.2x-6.6x range. Over the next few years, we expect credit measures to benefit from the use of regulatory mechanisms to recover its invested capital cost. We expect continued capital spending averaging $560 million per year, when combined with the utility's dividend, will result in discretionary cash flow that is negative. We do expect debt leverage to be relatively modest for a regulated utility as indicated by debt to EBITDA averaging about 3.6x over the next few years.

We assess KU's financial risk profile using our medial volatility table financial benchmarks, which are more relaxed than those used for a the typical corporate issuer. This reflects KU's low-risk regulated electric utility operations, steady cash flow, and effective regulatory risk management.

Table 3

Kentucky Utilities Co.--Financial Summary

Industry sector: electric

	--Fiscal year ended Dec. 31--				
	2018	**2017**	**2016**	**2015**	**2014**
(Mil. $)					
Revenue	1,760.0	1,744.0	1,749.0	1,728.0	1,737.0
EBITDA	774.8	808.8	807.3	719.4	662.2

Table 3

Kentucky Utilities Co.--Financial Summary (cont.)

Industry sector: electric

	--Fiscal year ended Dec. 31--				
	2018	**2017**	**2016**	**2015**	**2014**
Funds from operations (FFO)	650.2	678.2	700.5	723.7	586.9
Interest expense	118.6	115.5	117.6	101.5	91.1
Cash interest paid	99.5	96.6	93.8	79.7	75.3
Cash flow from operations	589.2	641.6	613.5	615.5	573.2
Capital expenditure	562.5	432.5	350.5	519.4	604.0
Free operating cash flow (FOCF)	26.7	209.1	263.0	96.1	(30.8)
Discretionary cash flow (DCF)	(219.3)	(16.9)	15.0	(56.9)	(178.8)
Cash and short-term investments	14.0	15.0	7.0	11.0	11.0
Gross available cash	14.0	15.0	7.0	11.0	11.0
Debt	2,817.7	2,698.4	2,694.1	2,761.7	2,593.3
Equity	3,442.0	3,357.0	3,323.0	3,287.0	3,206.0
Adjusted ratios					
EBITDA margin (%)	44.0	46.4	46.2	41.6	38.1
Return on capital (%)	7.8	8.8	9.1	8.1	8.1
EBITDA interest coverage (x)	6.5	7.0	6.9	7.1	7.3
FFO cash interest coverage (x)	7.5	8.0	8.5	10.1	8.8
Debt/EBITDA (x)	3.6	3.3	3.3	3.8	3.9
FFO/debt (%)	23.1	25.1	26.0	26.2	22.6
Cash flow from operations/debt (%)	20.9	23.8	22.8	22.3	22.1
FOCF/debt (%)	0.9	7.8	9.8	3.5	(1.2)
DCF/debt (%)	(7.8)	(0.6)	0.6	(2.1)	(6.9)

Sources: S&P Global Ratings, company data

Liquidity: Adequate

We assess KU's stand-alone liquidity as adequate because we believe its liquidity sources will likely cover uses by more than 1.1x over the next 12 months and meet cash outflows even if EBITDA declines 10%. We view KU as having sound bank relationships, the ability to absorb high-impact, low probability events without the need for refinancing, and a satisfactory standing in credit markets.

Principal Liquidity Sources	Principal Liquidity Uses
• Revolving credit facility availability of $400 million • Estimated cash FFO of $600 million	• Debt maturities of about $500 million • Capital spending of about $560 million • Dividends of about $280 million

Environmental, Social, And Governance

Environmental factors are material in our rating analysis, while social and governance factors are not.

Most of the total generation capacity--about 5,000 megawatts--is coal-fired, representing an environmental risk factor. By 2050, PPL intends to reduce its carbon footprint by 70%. In Kentucky, the company is seeking a green energy tariff that would help grow renewable energy. The company expects to replace much of its coal-based generation with a combination of natural gas and renewables. Social factors are neutral to our ESG assessment and are consistent with what we see across the industry for other publicly traded utilities. Governance factors are also neutral to our ESG assessment and its governance practices are consistent with what we see across the industry for other publicly traded utilities.

Group Influence

Under our group rating methodology we consider KU a core subsidiary of parent PPL, reflecting our view that KU is unlikely to be sold, is integral to the group's overall strategy, possesses a strong long-term commitment from senior management, and is closely linked to the parent's name and reputation. As a result, the issuer credit rating on KU is 'A-', in line with the group credit profile of 'a-'.

Issue Ratings - Subordination Risk Analysis

The short-term rating on KU is 'A-2', based on the issuer credit rating.

Issue Ratings - Recovery Analysis

Key analytical factors

KU's first-mortgage bonds benefit from a first-priority lien on substantially all of the utility's real property, owned or subsequently acquired. Collateral coverage of over 1.5x supports a recovery rating of '1+' and an issue rating one notch above the issuer credit rating.

Reconciliation

Table 3

Reconciliation Of Kentucky Utilities Co. Reported Amounts With S&P Global Ratings' Adjusted Amounts (Mil. $)

Reconciliation Of Kentucky Utilities Co. Reported Amounts With S&P Global Ratings' Adjusted Amounts (Mil. $)							
	--Fiscal year ended Dec. 31, 2018--						
Kentucky Utilities Co. reported amounts							
	Debt	**EBITDA**	**Operating income**	**Interest expense**	**S&P Global Ratings' adjusted EBITDA**	**Cash flow from operations**	**Capital expenditure**
	2,556.0	747.0	468.0	100.0	774.8	581.0	562.0
S&P Global Ratings' adjustments							
Cash taxes paid	--	--	--	--	(25.0)	--	--
Cash taxes paid: Other	--	--	--	--	--	--	--
Cash interest paid	--	--	--	--	(95.0)	--	--
Operating leases	32.0	10.0	2.3	2.3	(2.3)	7.7	--
Postretirement benefit obligations/deferred compensation	24.5	--	--	--	--	--	--
Accessible cash and liquid investments	(14.0)	--	--	--	--	--	--
Power purchase agreements	32.4	2.8	2.3	2.3	(2.3)	0.5	0.5
Asset retirement obligations	152.5	12.0	12.0	12.0	--	--	--
Nonoperating income (expense)	--	--	(5.6)	--	--	--	--
Debt: Other	34.4	--	--	--	--	--	--
EBITDA: Other income/(expense)	--	3.0	3.0	--	--	--	--
Depreciation and amortization: Other	--	--	(3.0)	--	--	--	--
Interest expense: Other	--	--	--	2.1	--	--	--
Total adjustments	261.7	27.8	11.0	18.6	(124.5)	8.2	0.5
S&P Global Ratings' adjusted amounts							
	Debt	**EBITDA**	**EBIT**	**Interest expense**	**Funds from operations**	**Cash flow from operations**	**Capital expenditure**
	2,817.7	774.8	479.0	118.6	650.2	589.2	562.5

Sources: S&P Global Ratings, company data.

Ratings Score Snapshot

Issuer Credit Rating

A-/Stable/A-2

Business risk: Excellent

- **Country risk:** Very low

Kentucky Utilities Co.

- **Industry risk:** Very low
- **Competitive position:** Strong

Financial risk: Significant

- **Cash flow/leverage:** Significant

Anchor: a-

Modifiers

- **Diversification/portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Satisfactory (no impact)
- **Comparable rating analysis:** Neutral (no impact)

Stand-alone credit profile : a-

- **Group credit profile:** a-
- **Entity status within group:** Core (no impact)

Related Criteria

- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria - Corporates - General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria - Corporates - General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Criteria - Corporates - Utilities: Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

Business And Financial Risk Matrix

Business Risk Profile	Financial Risk Profile					
	Minimal	Modest	Intermediate	**Significant**	Aggressive	Highly leveraged
Excellent	aaa/aa+	aa	a+/a	**a-**	bbb	bbb-/bb+
Strong	aa/aa-	a+/a	a-/bbb+	bbb	bb+	bb
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-

Ratings Detail (As Of March 20, 2020)*

Kentucky Utilities Co.	
Issuer Credit Rating	A-/Stable/A-2
Commercial Paper	
Local Currency	A-2
Senior Secured	A
Issuer Credit Ratings History	
01-Jun-2015	A-/Stable/A-2
10-Jun-2014	BBB/Watch Pos/A-2
15-Apr-2011	BBB/Stable/A-2

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COVID-19: The Outlook For North American Regulated Utilities Turns Negative

April 2, 2020

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Key Takeaways

- We are revising our assessment of the North America regulated utility industry to negative from stable.
- We expect that the utility industry will remain a high-credit-quality investment-grade industry.
- We expect that the industry's median rating, which is 'A-', could weaken to the 'BBB+' level.
- Prior to the coronavirus outbreak in North America about 25% of the utilities had a negative outlook or ratings that were on CreditWatch with negative implications.
- Additionally, many utilities with a stable outlook have minimal financial cushion at the current rating level.
- We expect COVID-19 will weaken the industry's 2020 funds from operations (FFO) to debt by about 100 basis points.

S&P Global Ratings acknowledges a high degree of uncertainty about the rate of spread and peak of the coronavirus outbreak. Some government authorities estimate the pandemic will peak about midyear, and we are using this assumption in assessing the economic and credit implications. We believe the measures adopted to contain COVID-19 have pushed the global economy into recession (see our macroeconomic and credit updates here: www.spglobal.com/ratings). As the situation evolves, we will update our assumptions and estimates accordingly.

S&P Global Ratings is revising downward its assessment of the North America utility industry to negative from stable. The North America utility industry consists of about 250 water, gas, and electric utilities. While we expect the sector to remain an investment-grade industry, we nevertheless project a modest weakening of credit quality within the industry. Credit quality had been gradually weakening prior to the COVID-19 outbreak with about 25% of companies on negative outlook or with ratings on CreditWatch with negative implications. We view COVID-19 as a source of incremental pressure and expect that the recession will lead to an increasing number of downgrades and negative outlooks. Currently, the median rating within the industry is 'A-' and over the next 12 months, we expect that the industry median could move to 'BBB+'.

Credit Quality Was Weakening Even Before COVID-19

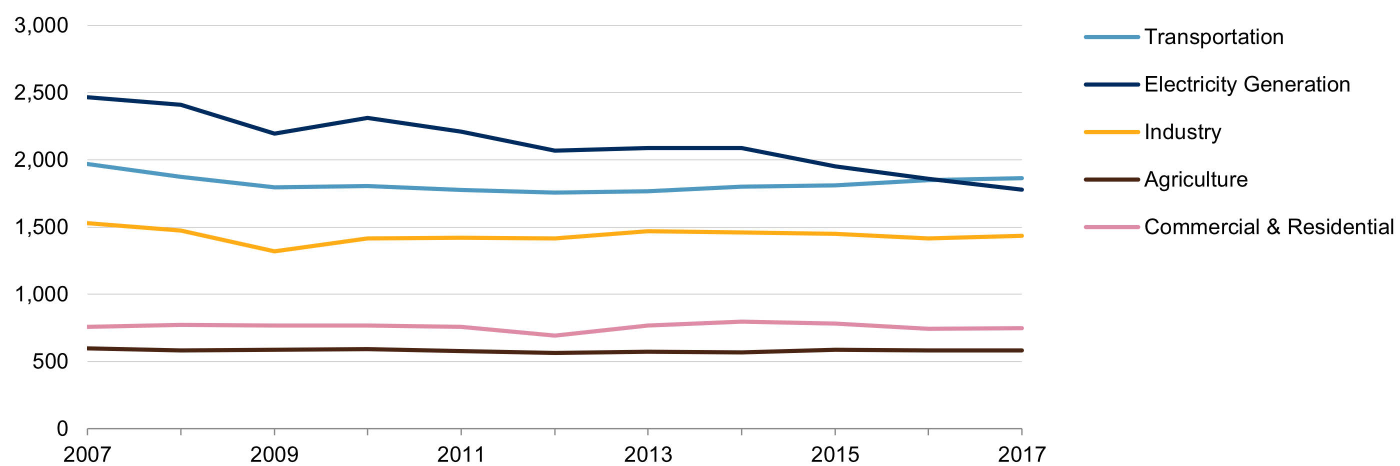
The North America regulated utility industry's credit quality was already weakening prior to COVID-19. This reflected companies' more consistent ability to manage credit measures closer to the downgrade threshold, leaving very minimal financial cushion at the current rating level. We generally view the industry's cash flows as more predictable and steady than most other corporate industries. Even so, unless a management team can proactively implement corrective actions, a utility with minimal financial cushion at the current rating coupled with an unexpected material event, typically results in a negative outlook or a downgrade.

The industry has faced many unexpected events and credit obstacles over the past two years. Some of these include safety (NiSource Inc.), wildfires (PG&E Corp., Edison International, and Sempra Energy), large capital projects (Southern Co., SCANA Corp., Eversource Energy, Duke Energy Corp., and Dominion Energy Inc.), utility acquisition (Fortis Inc., Emera Inc., ENMAX Corp., and NextEra Energy Inc.), and nonutility acquisitions (DTE Energy Co.). Each of these instances have either significantly reduced the prior cushion at the current rating level, triggered negative outlooks, or downgrades.

Also pressuring the industry's credit quality is the critical focus on environmental, social, and governance (ESG) factors. Over the past decade, the industry has done an outstanding job to significantly reduce its greenhouse gas emissions and reduce its reliance on coal-fired generation.

Chart 1

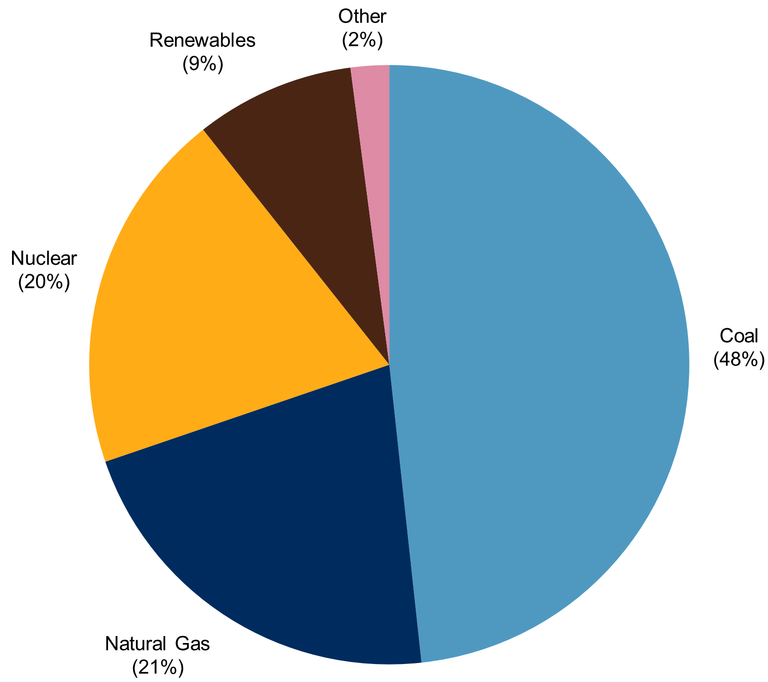
Total U.S. Greenhouse Gas Emissions By Economic Sector From 2007 -2017
Million metric tons of CO2 equivalents



Source: U.S. Energy Information Administration.

Chart 2

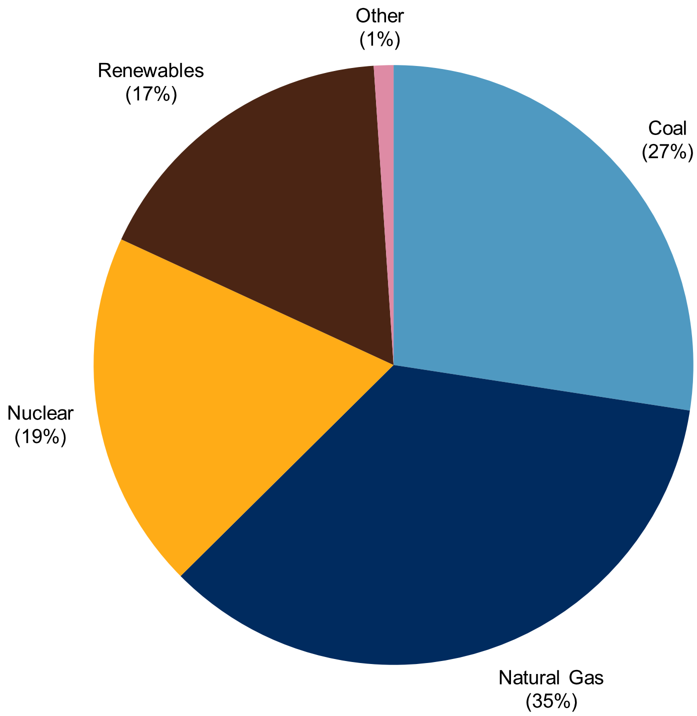
U.S. 2008 Generation Mix



Source: U.S. Energy Information Administration.

Chart 3

U.S. 2018 Generation Mix



Source: U.S. Energy Information Administration.

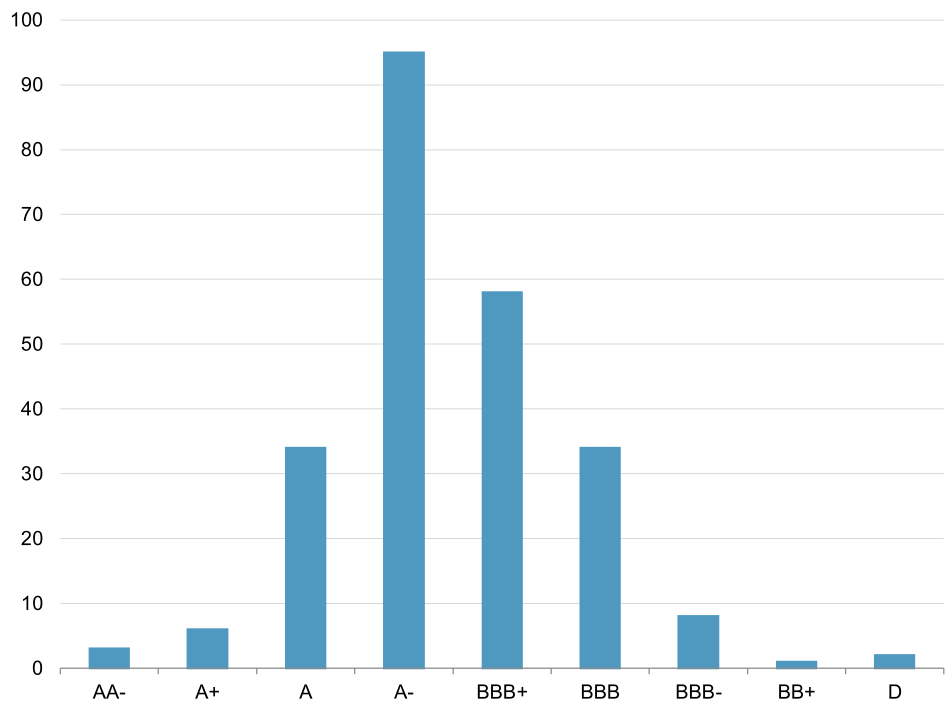
However, there are individual companies such as American Electric Power Co. Inc., Ameren Corp., and Evergy Inc. that despite having long-term plans to reduce their reliance on coal-fired generation, will continue to rely heavily on that fuel source for the next decade, possibly pressuring credit quality.

Rating Upgrades And Downgrades

Over the past decade, there have been generally more upgrades than downgrades in the sector. This has strengthened the utilities' credit quality since the financial recession and currently, the median rating within the industry is 'A-'.

Chart 4

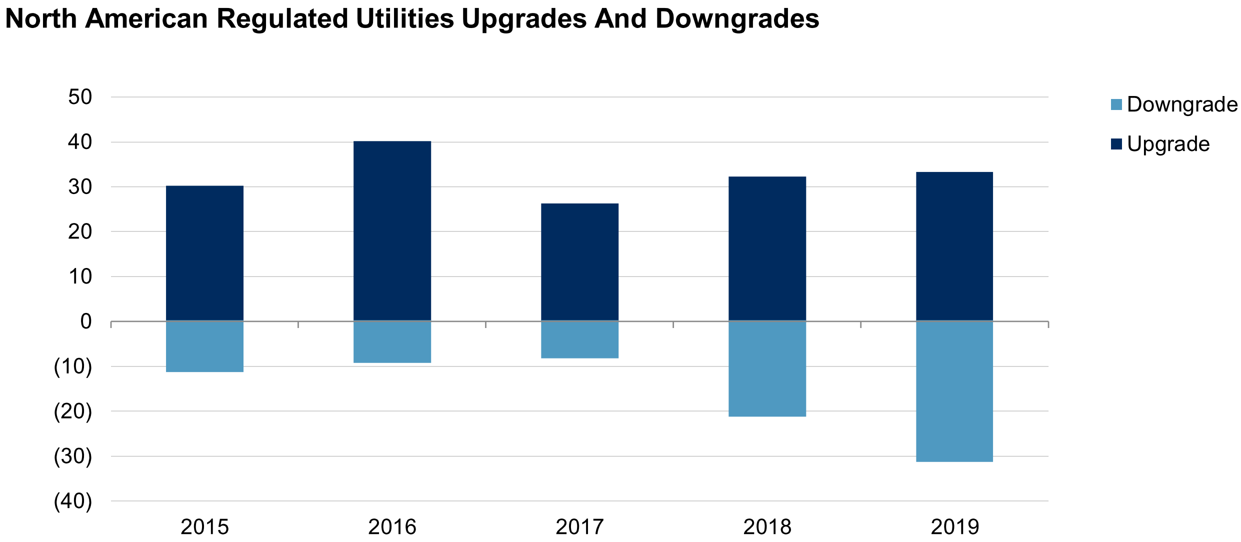
North American Regulated Utilities Ratings Distribution 2019



Source: S&P Global Ratings.

When analyzing our rating upgrades and downgrades in the sector for 2019, even prior to COVID-19, we note a weakening of credit quality.

Chart 5



Source: S&P Global Ratings.

While 2019 may initially appear to be similar to prior years with upgrades outpacing downgrades at 33 to 31, the underlying analysis tells a different story. In 2019, about 60% of the upgrades were attributed to S&P Global Ratings' revised group rating methodology criteria. Under the revised criteria, we placed more emphasis on the regulation of a utility allowing for a subsidiary with effective regulation and with a stand-alone credit profile that is higher than its group to potentially be rated higher. Absent the revised criteria, downgrades would have outpaced upgrades by 30 to 13 in 2019. This is a clear indication that even before COVID-19, the credit quality of the North America regulated utility sector had weakened.

Operating With Minimal Financial Cushion

While many companies with a negative outlook such as Puget Energy Inc. have minimal financial cushion at their current rating level, many others with a stable outlook also have minimal financial cushion at their current rating level. Companies with a stable outlook and minimal financial cushion include Exelon Corp., ALLETE Inc., American Water Works Co. Inc., Edison International, AVANGRID Inc., DPL Inc., CenterPoint Energy Inc., and Madison Gas & Electric Co. As the financial effects of COVID-19 continue to take hold, we expect that even companies with stable outlooks may experience ratings downward pressure. This is another reason that underscores our assessment that the industry outlook has turned negative.

How COVID-19 May Affect The Sector

In general, we assume that the U.S. will experience more than a 12% contraction in GDP during the second quarter and estimate the pandemic will peak between June and August (Global Macroeconomic Update, March 24: A Massive Hit To World Economic Growth, March 24, 2020).

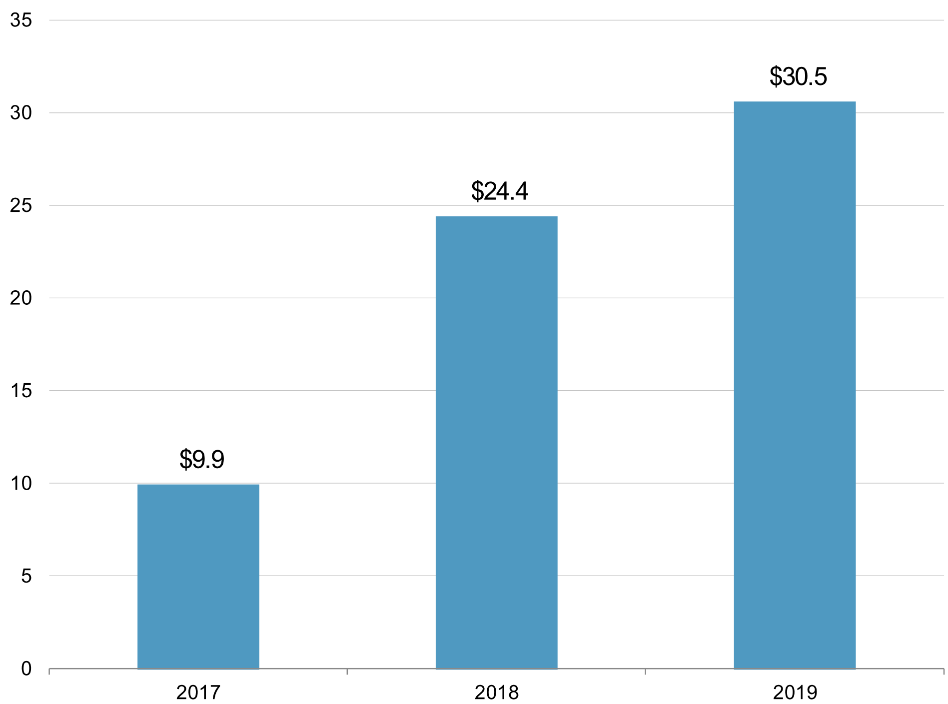
For the North America utility industry, we expect that COVID-19 will reduce the commercial and industrial (C&I) usage (North American Regulated Utilities Face Additional Risks Amid Coronavirus Outbreak, March 19, 2020). While some utilities will be able to offset some of the lower C&I usage through various regulatory mechanisms that include decoupling of revenues mechanisms and formula rates, many others will see a weakening of sales. Furthermore, as the recession continues to take hold, we expect bad debt expense will increase as it becomes increasingly more difficult for customers to pay their bills. While many utilities can defer these costs for future recovery, as these balances grow, historically we have seen incidents where utilities negotiate with their commission's to write off some of these costs as part of a larger agreement. Overall, we expect that these effects will result in a weakening of credit measures.

On a positive note, the industry continues to exhibit adequate liquidity and access to the debt markets, despite uneven performance of the commercial paper market for tier 2 issuers. The industry is benefiting from proactive risk management of establishing large credit facilities, having good access to additional liquidity through new term loans from banks, and public issuance of utility debt. These positive developments contrast to the last financial recession, when many utilities fully drew on their available credit lines and access to the banks or to the public debt market was effectively shut for many weeks.

Yet availability to the equity markets remains extraordinarily challenging. In 2019, the industry issued more than $30 billion in equity to preserve credit quality and heading into 2020 many companies within the industry assumed equity issuances as part of their financing plans. Given the industry's negative discretionary cash flow because of its high capital spending and lack of access to the equity markets, we expect that this will also lead to a weakening of credit measures.

Chart 6

North American Regulated Utilities Equity Issuance In Billions



Source: S&P Global Ratings.

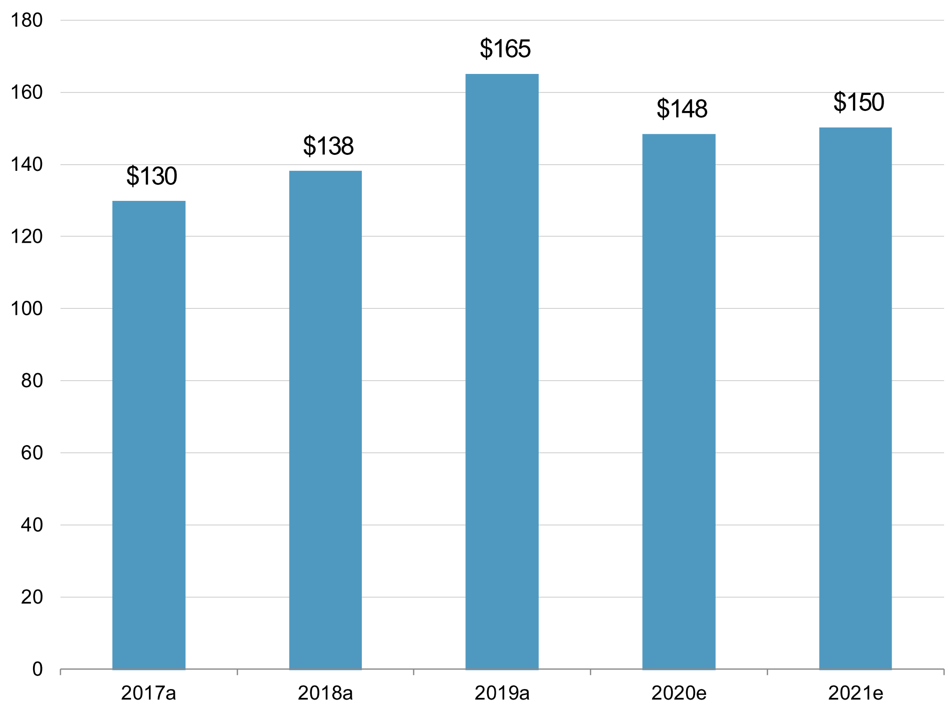
Another area of concern are utilities that rely to various degrees on nonutility businesses that have commodity exposure (S&P Global Ratings Cuts WTI And Brent Crude Oil Price Assumptions Amid Continued Near-Term Pressure, March 19, 2020). These include OGE Energy Corp., CenterPoint Energy Inc., DTE Energy Co., Dominion Energy Inc., Public Service Enterprise Group Inc., NextEra Energy Inc., and Exelon Corp. While many of them are well hedged in the near term, volumetric risk and a longer-term weakening of commodity prices could have a material effect on their credit measures. Overall, assuming that the effects of COVID-19 is only temporary, we would expect that the industry's 2020 FFO to debt will weaken by about 100 basis points, consistent with our revised negative outlook for the industry.

The Industry Has Levers

Depending on the severity of the recession, the industry has important levers that could mitigate some of the risks. This includes reducing capital spending and dividends. Currently, we estimate that 2020 capital spending will approximate $150 billion.

Chart 7

North American Regulated Utilities Capital Expenditures In Billions



a--actual. e--estimate. Source: S&P Global Ratings.

Based on our conversations with the companies within the industry there is a wide range as to how deeply a utility can reduce its capital spending and still maintain safe and reliable services. Some utilities can only reduce capital spending by as little as 15%, others by as much as 60%. Our analysis indicates that the majority of utilities could reduce their capital spending on a temporary basis by about 40% and maintain safe operations. Should the recession prolong, we would expect that the industry would generally first reduce capital spending and only afterward cut dividends. There is precedent that during times of high financial stress, utilities have reduced their dividends and we would expect that the industry, if necessary, would use this lever, acting prudently to preserve credit quality.

Credit quality of the North America regulated utility industry was already weakening prior to COVID-19. We believe that incremental challenges that the industry will face from this recession exacerbates financial pressure and underpins our revised negative outlook for the industry. However, we also expect that this industry's credit quality will continue to outperform most other corporate industries despite these challenges. Furthermore, we expect that the utilities will use the levers available to them to reduce credit risks and limit the financial impact from COVID-19. Overall, while we expect a weakening to the industry's credit quality, we continue to firmly believe that this industry will remain a high-quality, investment-grade industry.

This report does not constitute a rating action.

S&P Global
Ratings

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North American Regulated Utilities Face Tough Financial Policy Tradeoffs To Avoid Ratings Pressure Amid The COVID-19 Pandemic

May 11, 2020

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Key Takeaways

- Some North American regulated utilities are negatively affected by weaker economic conditions related to COVID-19 and are facing unexpected incremental pressure on ratings.
- Even before the current downturn and COVID-19, a confluence of factors, including the adverse impacts of tax reform, historically high capital spending, and associated increased debt, resulted in little cushion in ratings for unexpected operating challenges.
- We expect most utilities will be allowed to account for and defer the costs associated with COVID-19 through existing regulatory mechanisms or future rate cases, although the timing and extent of these protections adds uncertainty to already stretched financial profiles.
- With this as a backdrop, individual companies' financial policies may be tested, as some risk jeopardizing ratings that provide efficient access to capital that feeds this sector.
- We believe that most management teams remain mindful of the benefits of maintaining credit quality and limiting risk, and that they will take countermeasures to offset financial profile weakness.
- Tough tradeoffs may have to be considered to forestall potential downgrades and we think most companies will have some ability to influence better outcomes, even in a pandemic.

As many sectors face unprecedented disruption related to demand contraction and turbulent credit markets, our utility analysts are actively engaging with the companies we rate to discuss potential challenges utility management teams face. While utilities are not immune from the effects of the sudden deterioration of economic activity, they generally are well-positioned to ride out short-term demand shocks, including those associated with COVID-19. Utility companies operating in the U.S. and Canada benefit from some of the most credit-supportive business models of any issuers rated by S&P Global Ratings. A well-run utility will typically earn a fair return on invested capital, and recover all of its costs, including debt service, thanks to the prevalence of cost-of-service rate-making and durable regulatory frameworks. These companies benefit from strong barriers to entry in the form of regulation over a service territory that effectively grants the utility monopoly status. Threats from competitors and substitute products are limited and utilities have demonstrated an ability to manage recent hurdles such as distributed generation and climate change. Still, weaker economic conditions related to COVID-19 have affected some utilities and as the realities of lost revenue comes into focus, we find they are facing unexpected incremental pressure on ratings.

S&P Global Ratings acknowledges a high degree of uncertainty about the rate of spread and peak of the coronavirus outbreak. Some government authorities estimate the pandemic will peak about midyear, and we are using this assumption in assessing the economic and credit implications. We believe the measures adopted to contain COVID-19 have pushed the global economy into recession (see our macroeconomic and credit updates here: www.spglobal.com/ratings). As the situation evolves, we will update our assumptions and estimates accordingly.

Despite Favorable Regulation, Management's Aggressiveness Leaves Little Room For Unexpected Setbacks

Most utility companies will be able to manage the impacts of COVID-19, as existing recovery mechanisms and rate proceedings will allow management teams to recapture lost cash flow with little disruption to financial risk profiles. Bad debts from mandated and voluntary policies not to cut power to vulnerable ratepayers will add to utility pressures, but we expect that utilities will collect most of this through rate cases and the creation of deferred regulatory assets. Given this type of stability in the face of economic downturns, our ratings on regulated utility companies are among the highest in our Corporate and Infrastructure Ratings practices, and we take fewer adverse rating actions in the sector in times of economic turmoil. Of course, utility companies face credit risks, but they are usually not in the form of demand shocks that so often plague typical industrial companies. More often, downgrades result from poorly executed strategic plans, stretched financial profiles from expansion, adverse regulatory rulings, or pressure from operational stumbles.

We certainly do not contend that demand does not matter to utility credit risk: it can at the margin. However, we do not see the pronounced swings in demand typical of more cyclical companies. The extent to which reduced demand prompts ratings actions, which does not occur often, depends on the individual utility and its management of regulatory risk. The relative stability of demand during a recession reflects the essential nature of the commodities provided and the fact that residential customers typically account for the majority of sales. Industrial and commercial demand can vary more, but the picture remains relatively predictable overall. What really differentiates utilities during severe downturns is the consistency and transparency of regulation, which can protect utility top lines. Regulation around the U.S. and Canada varies widely but many regulators have provided support to utilities from demand shortfalls related to conservation or weather, in the form of mechanisms that decouple revenue from sales, formula rate-making, or through other regulatory processes that enable utilities to defer costs for future recovery. In fact, it is because of conservation and the need to manage their businesses without volumetric growth for the last decade that the industry benefits from many favorable regulatory mechanisms. With respect to the current situation, we expect most utilities will be allowed to defer and collect the costs associated with COVID-19 through existing regulatory protections or future rate cases, although the timing and extent of these protections adds uncertainty to already stretched financial profiles.

Table 1

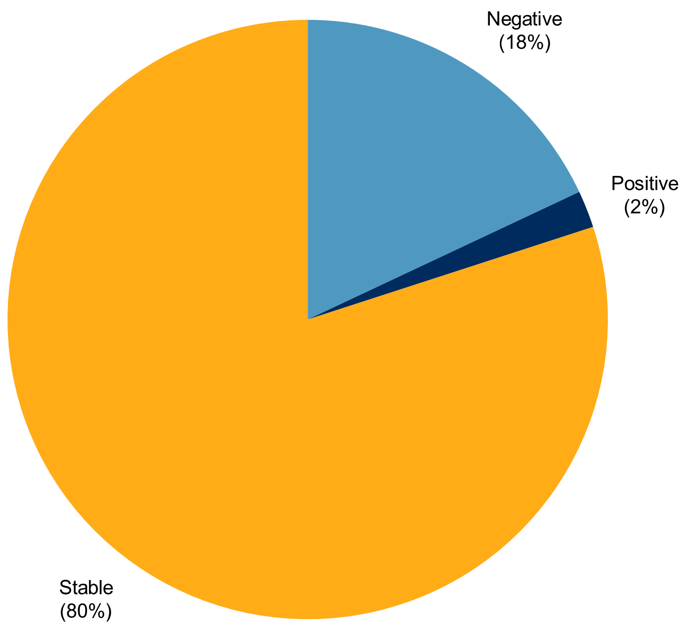
COVID-19 Cost Recovery Provisions

Deferral	Customer payment plan	Pending	Other
Alaska	Colorado	Arizona	Georgia
Arkansas	New Hampshire	Illinois	Texas-PUC
California	North Carolina	Kentucky	
Connecticut	Ohio	Pennsylvania	
Dist. Of Columbia	Rhode Island	Virginia	
Georgia		Wisconsin	
Idaho			
Maryland			
Texas-PUC			
Wyoming			

As of April 20, 2020. Deferral = Costs and/or lost revenues may be deferred for future recovery. Customer payment plan = Lost revenue associated with suspension moratorium to be recovered from individual customer over time. Pending = Proceeding underway/legislation pending to determine cost recovery. Georgia--Lost revenue associated with suspension moratorium proposed to be recovered through existing rate plan for one utility. Texas--PUC-costs or lost revenues may be deferred for future recovery for utilities; interim funding mechanism in place for retail electric providers. Source: Regulatory Research Associates, a group within S&P Global Market Intelligence.

This added uncertainty is really the focal point for our analyses as we update our models for 2020-2022 to reflect the severe U.S. recession in the second quarter of 2020 and a recovery in the second half of the year. As we've noted, many utilities already face rating pressure due to a confluence of factors, including the adverse impacts of tax reform of 2019, historically high capital spending of about $150 billion per year, and associated increased debt levels. These factors have resulted in an unusually high percentage of negative outlooks for the sector. As of March 31, 2020, the percentage of issuers with negative outlooks was near 20% (reduced from 25% in late 2019).

North American Regulated Utilities--Outlook Distribution



As of March 31, 2020. Source: S&P Global Ratings.

Complicating matters is that capital markets will likely remain choppy. The sector's heightened reliance on high equity offerings last year could be constrained due to COVID-19 and new debt issuance has surged in recent weeks as utilities placed historically high levels of additional debt for refinancing and liquidity purposes. The good news is that the debt markets have absorbed new investment-grade issuances, which alleviates immediate concerns about liquidity. The not-so-good news is that this may weigh on some balance sheets and stretched financial profiles. In the end, these issues may test individual companies' financial policies and reveal the amount of risk they are willing to carry without compromising the sector's efficient access to capital.

Stability May Have Set A Financial Policy Trap For Some Companies

The essential nature of utility services, including electric, natural gas, and water, and the strength of the regulatory frameworks across North America breeds a level of confidence that enables utility management teams to dial-in risk management in most business environments. They are accustomed to running with negative free cash, and many have adopted policies that target a level of financial leverage that is just above the downgrade thresholds we communicate in our research reports. Under normal conditions, this is manageable, and the stability of these businesses enables companies to do that with a high degree of success. However, the incremental challenges brought to bear during this pandemic have already tested the prudence of stretching the financial profile as a consistent business policy. Leverage enables companies to grow and realize attractive returns as long as it is managed to optimal levels. The uncertainties related to COVID-19 have come on quickly, primarily from the commercial and industrial customers facing unprecedented business shocks, high unemployment, and from the downturn in nonregulated activities such as midstream energy and other services. Other pressure in the form of regulatory risk on the timing and extent of recovery related to COVID-19 costs such as bad debts, and swelling pension exposures add to the mix. For a few stretched issuers, the incremental challenges have already resulted in rating actions. For others, financial policy priorities may need reevaluation to solidify financial profiles and avoid credit deterioration, while many others will ride out the current downturn.

Some Utilities Have Limited Financial Cushion To Downside Triggers

Given the above, we believe that ratings pressure will remain to the downside through the 2020-2021 timeframe. The current high proportion of negative outlooks highlights that downside risks outweigh upside potential and a review of our existing projections for these companies only heightens concerns. A review of our projections for rated utility holding companies across the sector reflects the reality that tight cushions to downside triggers will likely persist. This sets the stage for downgrades to outpace upgrades for the near future, possibly lowering the median rating into the 'BBB' category for the first time in years. For many companies we rate, the forecast funds from operations (FFO) to debt ratio for the 2020-21 period is expected to reflect limited cushion above the downside trigger set in our published research. While that certainly does not mean that all of these companies will face downgrades, because some will begin to recover post-recession and others will take steps to address temporary weakness, it does highlight a tightening level of financial performance in an uncertain economic environment. With that said, we believe that management teams generally remain mindful of the benefits of maintaining stable credit quality and managing risk, and will take countermeasures to offset financial profile weakness.

Options Abound For Utilities, But Many Involve Unattractive Tradeoffs

Fortunately, most utility management teams have the ability to pull levers to target financial outcomes. While this is true in any sector, utilities' operating stability supports a greater degree of precision when managing financial risk against other stakeholder objectives. The capacity and willingness to take actions to offset the negative impacts of the current business environment will vary from company to company. So what options are available and at what costs? They include a range of choices including debt issuance (which may pressure credit measures) to reducing dividends and share repurchases (which may hurt share prices). We've highlighted some of the actions available to utility management teams and the costs associated with each (see table 2).

Table 2

Select Actions Regulated Utilities Could Take To Mitigate Operating Challenges

Action	Credit impact	Tradeoff/Costs
Proactive debt issuance	Alleviates immediate liquidity and refinancing concerns, no impact to FFO.	May pressure financial metrics.
Reduce operating and maintenance costs	Can help maintain financial performance including FFO/debt, offsetting lost revenue and bad debt.	If prolonged, may erode operational capabilities.
Reduce capital spending	Reduces free cash flow deficit and preserves cash but no impact on FFO/debt.	May delay key projects or growth plans.
Equity or hybrid capital issuance	Can immediately improve credit metrics to offset FFO shortfall.	Capital markets may limit access, dilution risk.

Table 2

Select Actions Regulated Utilities Could Take To Mitigate Operating Challenges (cont.)

Action	Credit impact	Tradeoff/Costs
Effective regulatory management	Can result in recovery of lost revenue and higher bad debt expense related to COVID-19.	Deferred recovery takes time to mitigate impact to metrics.
Reduce dividends and share repurchases	Reduced discretionary cash flow deficit, preserves cash, no impact to FFO.	Negatively affects share price.

FFO--Funds from operations. Source: S&P Global Ratings.

These steps are part of any utility's toolkit in seeking to secure an optimal capital structure for its business, but the COVID-19 recession is likely to add some urgency to reconsider alternatives. Others may even learn from the crisis, reassess their financial policy targets, and decide to sacrifice some growth or profit potential for the long-range benefit of preserving financial cushions necessary to support credit quality.

Utilities Seek Best Outcomes In A Down Economy--And Look Forward To Better Times

As COVID-19 sets the stage for a challenging year for utility sector credit quality, we remain reasonably optimistic that management teams will commit to credit quality to limit negative rating actions. Fortunately, for utilities, options remain available and most regulators are likely to support recovery of bad debts and lost revenues in one form or another. The painful reality is that COVID-19 came at a bad time for everyone, including utilities that already faced more potential ratings actions then is typical. For the most strained issuers, or those that may not fare as well in front of regulators vis-à-vis COVID-19 costs, this is where the rubber will hit the road in terms of evaluating financial policy priorities. Companies will have to consider tough tradeoffs, and some may even need to take proactive steps to forestall rating downgrades. The good news is that most utilities have some ability to influence that outcome because the demand for utility services is relatively stable, even in a pandemic.

This report does not constitute a rating action.

S&P Global
Market Intelligence

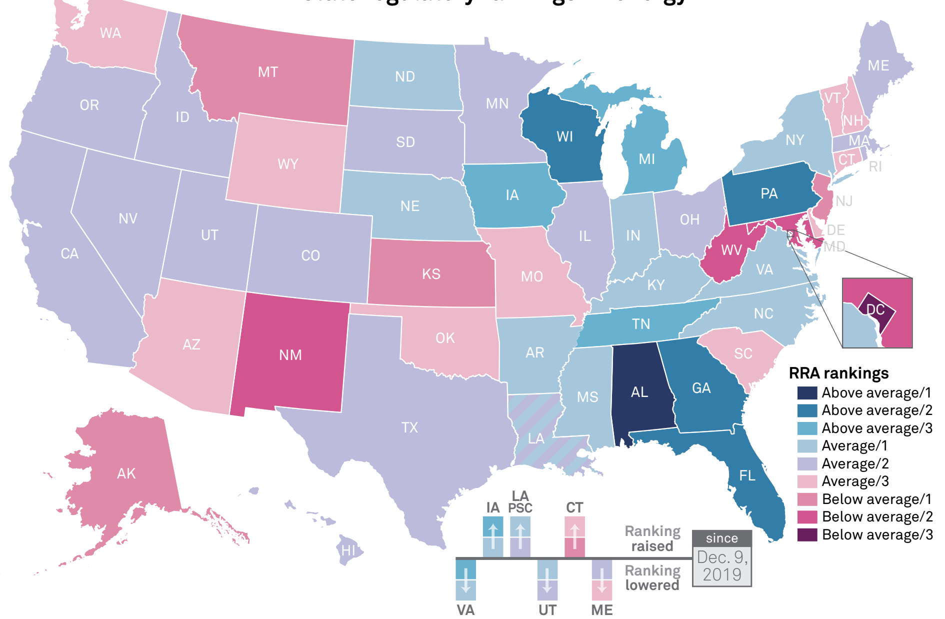
March 25, 2020
spglobal.com/marketintelligence

RRA Regulatory Focus
State Regulatory Evaluations

Assessments of regulatory climates for energy utilities

Regulatory Research Associates, a group within S&P Global Market Intelligence, evaluates the regulatory climate for energy utilities in each of the jurisdictions within the 50 states and the District of Columbia, a total of 53 jurisdictions, on an ongoing basis. The evaluations are assigned from an investor perspective and indicate the relative regulatory risk associated with the ownership of securities issued by each jurisdiction's energy utilities.

RRA state regulatory rankings — energy



As of March 25, 2020.
Map credit: Ciaralou Agpalo Palicpic
Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

S&P Global
Market Intelligence

Each evaluation is based upon consideration of the numerous factors affecting the regulatory process in the state and may be adjusted as events occur that cause RRA to modify its view of the regulatory risk accruing to the ownership of utility securities in that individual jurisdiction.

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RRA State Regulatory Evaluations *
Energy

Above Average 1	Average 1	Below Average 1
Alabama	Arkansas	Alaska
	Indiana	Kansas
	Kentucky	Montana
	Louisiana — PSC	New Jersey
	Mississippi	
	Nebraska	
	New York	
	North Carolina	
	North Dakota	
	Virginia	
Above Average 2	**Average 2**	**Below Average 2**
Georgia	California	Maryland
Florida	Colorado	New Mexico
Pennsylvania	Hawaii	West Virginia
Wisconsin	Idaho	
	Illinois	
	Louisiana—NOCC	
	Massachusetts	
	Minnesota	
	Nevada	
	Ohio	
	Oregon	
	Rhode Island	
	South Dakota	
	Texas—PUC	
	Texas—RRC	
	Utah	
Above Average 3	**Average 3**	**Below Average 3**
Iowa	Arizona	Dist. of Columbia
Michigan	Connecticut	
Tennessee	Delaware	
	Maine	
	Missouri	
	New Hampshire	
	Oklahoma	
	South Carolina	
	Vermont	
	Washington	
	Wyoming	

As of March 25, 2020.
NOCC = New Orleans City Counsil; PSC = Public Service Commission; PUC = Public Utility Commission; RRC = Railroad Commission
*Within a given subcategory, states are listed in alphabetical order, not by relative ranking.
Source: Regulatory Research Associates, a group within S&P Global Market Intelligence.

RRA also reviews evaluations when updating Commission Profiles and when publishing this quarterly comparative report. The issues considered are discussed in RRA Research Notes, Commission Profiles, Rate Case Final Reports and Topical Special Reports. RRA also considers information obtained from contacts with commission, company and government personnel in the course of its research. The final evaluation is an assessment of the probable level and quality of the earnings to be realized by the state's utilities as a result of regulatory, legislative and court actions.

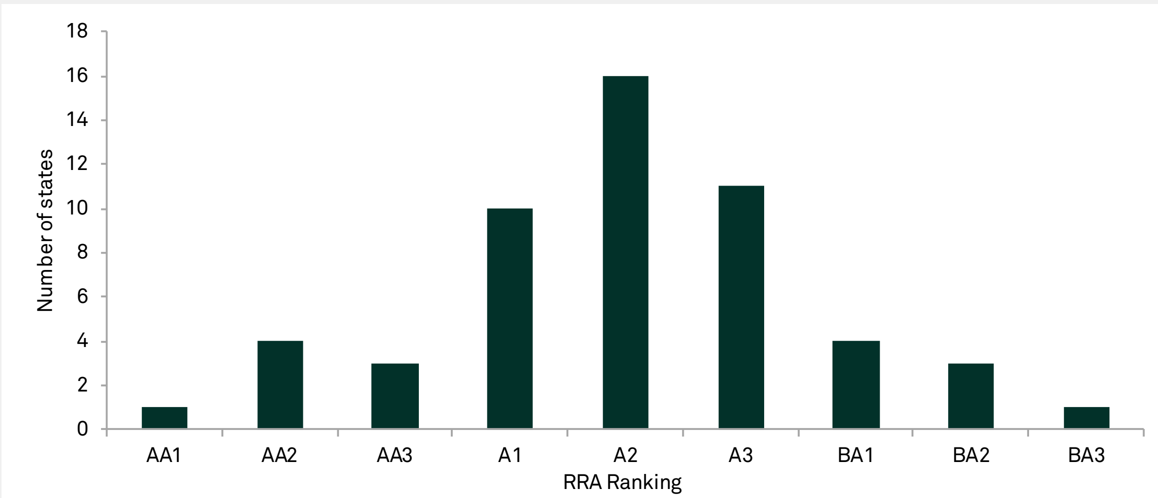
An Above Average designation indicates that, in RRA's view, the regulatory climate in the jurisdiction is relatively more constructive than average, representing lower risk for investors that hold or are considering acquiring the securities issued by the utilities operating in that jurisdiction.

At the opposite end of the spectrum, a Below Average ranking would indicate a less constructive, higher-risk regulatory climate from an investor viewpoint.

A rating in the Average category would imply a relatively balanced approach on the part of the governor, the legislature, the courts and the commission when it comes to adopting policies that impact investor and consumer interests.

Within the three principal rating categories, the designations 1, 2 and 3 indicate relative position, with a 1 implying a more constructive relative ranking within the category, a 2 indicating a midrange ranking within the category and a 3 indicating a less constructive ranking within the category.

State regulatory rankings distribution*



As of March 25. 2020.
* Graph is based on rankings of regulatory climate for energy utilities only.
AA = Above Average; A = Average; BA = Below Average
Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

RRA attempts to maintain a "normal distribution" of the rankings, with the majority of the states classified in one of the three Average categories. The remaining states are then split relatively evenly between the Above Average and Below Average classifications, as seen in the accompanying chart that depicts the current ranking distribution. ***For a more in-depth discussion of the factors RRA reviews as part of its ratings process, see the Overview of RRA rankings process section that begins on page 8.***

Rankings changes

Since the publication of the previous "State Regulatory Evaluations" report , which was published on Dec.9, 2019, RRA has made no rankings changes.

However, in conjunction with this quarterly review RRA is making six rankings changes. RRA is raising the rankings of **Connecticut, Iowa and Louisiana** and is lowering the rankings of **Maine, Utah and Virginia**.

At this time, RRA is raising the ranking of Connecticut regulation to Average/3 from Below Average/1. The ranking shift accounts for modestly constructive ratemaking actions the Connecticut Public Utilities Regulatory Authority, or PURA, has taken in recent years, including a focus on grid modernization. Although the authorized ROEs in recent years for both the electric and gas utilities have been considerably below national averages, the PURA has adopted these returns as part of multi-year rate plans that streamline the regulatory process and provide an enhanced degree of certainty with respect to the rate recognition of planned investments.

RRA is also raising the ranking of Iowa regulation to Above Average/3 from Average/1 as constructive measures stemming from the state's omnibus energy legislation enacted in 2018 materialized in 2019. Key to moving the needle in the ranking was the use of forward-looking test years in rate cases, as allowed by that 2018 legislation, in two separate 2019 rate case proceedings.

In addition, RRA is raising the ranking of Louisiana regulation to Average/1 from Average/2, recognizing the impact of the state's use of alternative regulation plans. For many years Louisiana's utilities have operated under these mechanisms that provide for periodic rate adjustments outside of base rate cases. Many of the plans contain earnings-sharing provisions, and include other constructive provisions that address various utility costs and investments in a timely manner, including new generation capacity additions. The plans also have generally incorporated benchmark equity returns that were in line with or above prevailing industry averages at the time they were established.

At this time, RRA is lowering the ranking of Maine regulation to Average/3 from Average/2 due to recent restrictive developments related to mergers and rate case activity. Legislation was enacted in 2019 that amends the Maine Public Utilities Commission's standard of approval for public utility corporate reorganizations to a "net benefits" standard from a "no net harm" standard. While the PUC ultimately approved the proposed sale of Emera Inc. subsidiary Emera Maine to ENMAX Corp. under the new stricter test, it did so only after a revised settlement was reached outlining more stringent conditions, including extending a rate freeze for Emera Maine by an additional six months and restricting the level of dividend payments.

In a recent rate case for Central Maine Power, or CMP, the PUC imposed a penalty to reflect "imprudent" management decisions with respect to a new billing system. The penalty reduced the utility's authorized ROE by 100 basis points to 8.25%. This ROE is significantly below the average of ROEs authorized by state commission in cases decided in 2019, and is the lowest equity return authorization for an electric utility nationwide since RRA began tracking equity returns in the 1980s. CMP is a subsidiary of Avangrid Inc,. which is owned by Iberdrola SA.

RRA is reducing the rating of Utah regulation to Average/2 from Average/1. This is driven primarily by a recent restrictive Public Service Commission of Utah decision for Questar Gas, in which the commission adopted a below industry average equity return and directed the company to phase-in a relatively modest rate increase. This in conjunction with constructive developments in certain other jurisdictions caused a shift in Utah's relative position within the RRA rankings framework. Questar is a subsidiary of Domionion Energy Inc.

RRA is lowering the ranking of Virginia regulation to Average/1 from Above Average/3. This is the second ranking reduction RRA has made for Virginia in the last 12 months — the ranking was lowered to Above Average/3 from Above Average/2 in August 2019. These rankings actions indicate that while RRA perceives an increase in the level of regulatory risk for the utilities operating in the state, the Virginia regulatory climate remains somewhat more constructive than average from an investor viewpoint.

These changes were precipitated by several factors including a declining trend in authorized ROEs, backlash concerning the use of rider mechanisms for new investment, as evidenced by commercial customer initiatives to aggregate load to qualify to procure power from a source other than the utility, legislative initiatives to implement broad-based retail competition for electric generation and the failure of the General Assembly to either re-elect a sitting commissioner or elect a replacement in a timely manner.

RRA state regulatory evaluations

State-by-state listing — energy

State	Ranking	State	Ranking	State	Ranking
Alabama	Above Average/1	Louisiana—NOCC	Average/2	Ohio	Average/2
Alaska	Below Average/1	Louisiana—PSC*	Average/1	Oklahoma	Average/3
Arizona	Average/3	Maine**	Average/3	Oregon	Average/2
Arkansas	Average/1	Maryland	Below Average/2	Pennsylvania	Above Average/2
California	Average/2	Massachusetts	Average/2	Rhode Island	Average/2
Colorado	Average/2	Michigan	Above Average/3	South Carolina	Average/3
Connecticut*	Average/3	Minnesota	Average/2	South Dakota	Average/2
Delaware	Average/3	Mississippi	Average/1	Tennessee	Above Average/3
District of Columbia	Below Average/2	Missouri	Average/3	Texas—PUC	Average/2
Florida	Above Average/2	Montana	Below Average/1	Texas—RRC	Average/2
Georgia	Above Average/2	Nebraska	Average/1	Utah**	Average/2
Hawaii	Average/2	Nevada	Average/2	Vermont	Average/3
Idaho	Average/2	New Hampshire	Average/3	Virginia**	Average/1
Illinois	Average/2	New Jersey	Below Average/1	Washington	Average/3
Indiana	Average/1	New Mexico	Below Average/2	West Virginia	Below Average/2
Iowa*	Abive Average/3	New York	Average/1	Wisconsin	Above Average/2
Kansas	Below Average/1	North Carolina	Average/1	Wyoming	Average/3
Kentucky	Average/1	North Dakota	Average/1		

As of March 25, 2020.
NOCC = New Orleans City Council; PSC = Public Service Commission; PUC = Public Utility Commission; RRC = Railroad Commission
* Ranking raised since Dec. 9, 2019.
**Ranking lowered since Dec. 9, 2019.
Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

Issues to watch

Coronavirus/COVID 19

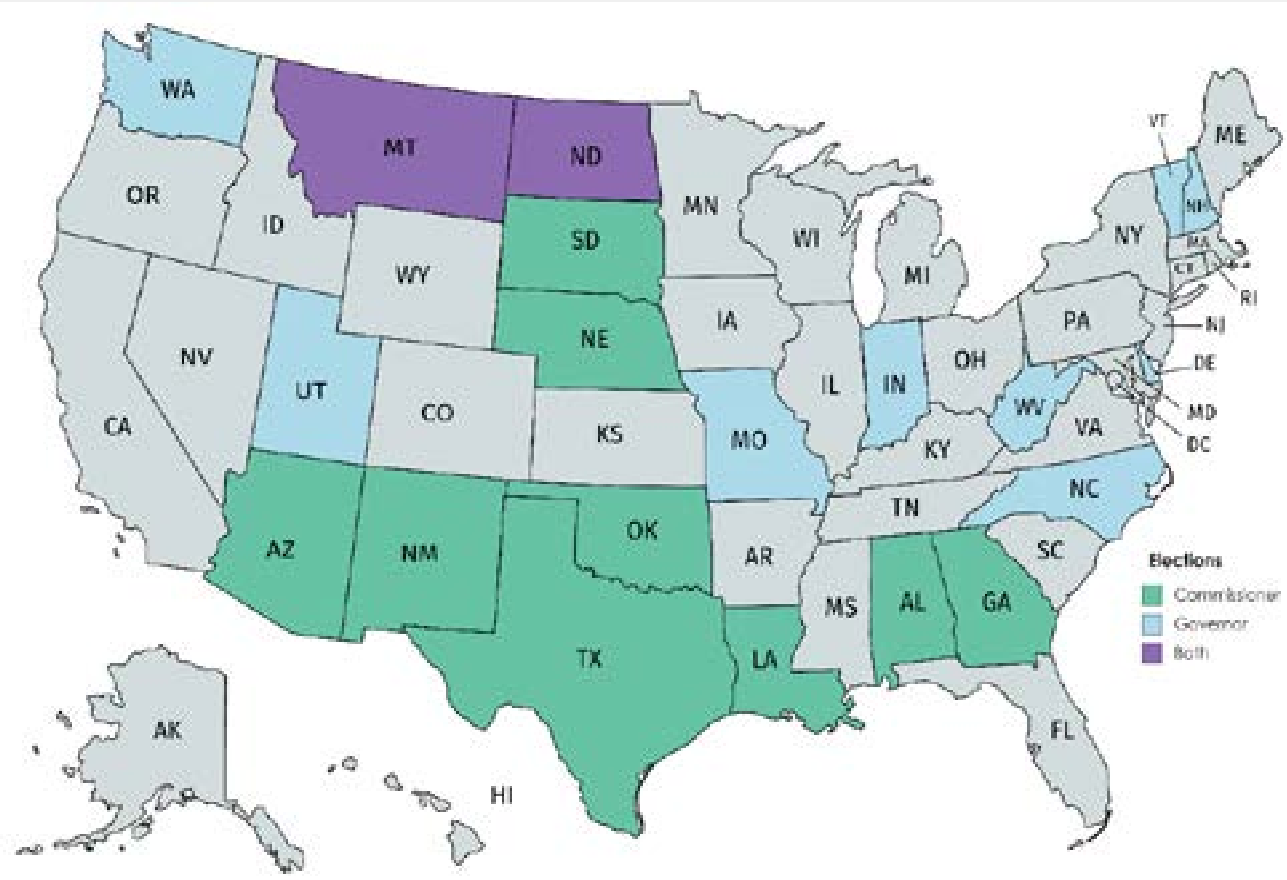
The coronavirus outbreak presents challenges for U.S. utilities on several fronts, including but not limited to, expected reductions in usage as businesses, schools and government buildings remain shuttered, lower revenues due to a higher anticipated occurrence of bad-debt/uncollectibles and increased operating costs associated with enhanced biohazard safety measures and maintaining sufficient staffing to ensure safety and reliability of utility service.

These challenges have the potential to significantly impact the financial performance of the investor-owned utilities, increasing the overall level of investor risk, and will have to be addressed by state regulators. Mechanisms are in place in several states that, all else being equal, could blunt the impact or allow the impacts to be addressed on a more expedited basis, and these mechanisms are already baked into RRA's rankings of those states.

However, RRA will be on the lookout for instances where the operation of these mechanisms is interrupted because of the unique circumstances surrounding the public health crisis and/or where the state adopts a new or unique approach to addressing the impacts that recognizes the interests of the companies and their investors, as well as customers.

It may be some time before it is apparent how these issues are addressed, as the public health crisis has already begun to bog down an already busy regulatory agenda. Similarly, concerns regarding the spread of the virus and the need to

2020 general election snapshot



Commissioner elections

State		Commissioner	Running?
Alabama	●	Twinkle Andress Cavanaugh*	Yes
Arizona	●	Robert Burns*	No[1]
	●	Boyd Dunn	Yes
	●	Lea Maquez Peterson	Yes
Georgia	●	Lauren "Bubba" McDonald, Jr.*	NA
	●	James Shaw, Jr.	NA
Louisiana	●	Foster L. Campbell, Jr**	NA
	●	Eric Skrmetta	NA
Montana	●	Bob Lake**	No[1]
	●	Roger Koopman	No[1]
	●	Tony O'Donnell	Yes
Nebraska	●	Crystal Rhoades	Yes
New Mexico	●	Valerie Espinoza**	No[1]
	●	Cynthia Hall	Yes
North Dakota	●	Brian Kroshus*	Yes
Oklahoma	●	Todd Hiett*	NA
South Dakota	●	Gary Hanson*	NA
Texas	●	Ryan Sitton	Yes

Gubernatorial election

State		Commissioner	Running?
Delaware	●	John Carney, Jr.	NA
Indiana	●	Eric Holcomb	Yes
Missouri	●	Mike Parson	Yes
Montana	●	Steve Bullock	No[1]
New Hampshire	●	Chris Sununu	Yes
North Carolina	●	Roy Cooper	Yes
North Dakota	●	Doug Burgum	Yes
Utah	●	Gary Herbert	No
Vermont	●	Phil Scott	NA
Washington	●	Jay Inslee	Yes
West Virginia	●	Jim Justice	Yes

● Democrat ● Republican

Data as of Jan. 10, 2020.
* Chairman/President, ** Vice Chairman
NA = not available
[1] The incumbent is ineligible for re-election due to term limits.
Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

address the broader economic impacts are disrupting legislative sessions that are underway across the U.S., slowing the process and creating additional uncertainty for the sector as a whole.

Elections

In addition to the U.S. Presidential election, the 2020 general elections will feature 19 utility commissioner and 11 gubernatorial elections. Changes in regulatory personnel that result from these elections could lead to policy shifts in the affected jurisdictions.

A total of four commissioners in three states where regulators are elected, are ineligible to run for reelection in November due to term limits — Arizona, Montana, where there are two, and New Mexico.

The chief executive of the jurisdiction appoints the utility commission members in nine of the 11 states where gubernatorial elections will be held. Nineteen commissioner terms in eight of those states will expire during the governor-elects' new terms and eight terms will expire within the first 12 months following the election.

States to watch

In addition to the changes discussed above, there are several states where ongoing issues bear close scrutiny.

In Arizona, a proceeding is ongoing in which the commission is considering an overhaul of the regulatory framework including the implementation of retail competition for generation and adoption of a 100% renewable portfolio standard, or RPS. While RRA does not take a view on whether the introduction of retail competition or the RPS is in and of itself positive or negative, experience shows that the transition process can be fraught with risk, and so developments in this proceeding bear watching.

In addition, a commission-mandated rate case is underway for Pinnacle West Capital Corp. subsidiary Arizona Public Service Co., while proceedings are also pending for Southwest Gas Corp. and Fortis Inc. subsidiary Tucson Electric Power Co.

In California, the team is continuing to monitor developments with respect to the bankruptcy proceedings involving Pacific Gas & Electric and its parent PG&E Corp., including the prospects for a state takeover or break up of the company. Meanwhile, issues with respect to the treatment of wildfire costs continue to await a final resolution.

Other jurisdictions that bear watching include the District of Columbia, where Exelon Corp. subsidiary Potomac Electric Power, or Pepco, filed its first ever multiyear rate plan. In a prior case, the commission had stated that it is "not averse" to certain alternative forms of regulation. The commission later issued a policy order on alternative forms of regulation, setting guidelines for future alternative regulation filings as well as for Pepco's current proposal. Recently, intervenors participating in Pepco's rate case called for the commission to reject the utility's multiyear rate proposal and instead recommended that District of Columbia Public Service Commission issue a decision based on a traditional test year filing. I final order is expected in late-2020.

Similarly, RRA continues to monitor Maryland, as the commission implements its new policy allowing the use of multiyear rate plans to mitigate regulatory lag. The Maryland Public Service Commission has adopted rules for such proceedings and Exelon subsidiary Baltimore Gas & Electric has expressed a desire to be the test or "pilot " case.

Montana also bears watching, as recent rate case decisions have produced authorized returns on equity that have trended toward nationwide averages; however, it is too soon to say whether this heralds the beginning of a sustained improvement in the regulatory climate. It is also noteworthy that three of the five commissioner seats will be up for election during the 2020 general election.

RRA continues to closely follow a proceeding in New Mexico where the New Mexico Public Regulation Commission, or PRC, is reviewing a proposal by PNM Resources Inc. subsidiary Public Service Company of New Mexico to "abandon" its investment in the San Juan Generating Station and securitize the as-yet-unrecovered investment associated with the plant and abandonment-related costs. In addition, a measure is expected to be included on the 2020 ballot in the form of a proposed constitutional amendment to change the PRC from a five-person elected body to a three-person agency, with members chosen by the governor from a list of candidates compiled by a nominating committee, beginning in 2023. If successful, the implications of this change for utilities and investors will depend on the degree of influence the governor chooses to exert on the regulatory process.

Two recently completed rates cases before the Public Utility Commission of Texas were particularly contentious due to the commission's request for testimony on enhanced ring-fencing requirements. While settlements were ultimately reached, the facts remain that 1) the companies in question already had some form of ring-fencing in place, 2) there were no allegations of improper behavior that would warrant such an examination and 3) these type of issues are generally the purview of merger proceedings rather than rate cases.

RRA continues to monitor the situation in New York with respect to the heightened politicization of certain energy regulatory matters in the state. During the summer of 2019, a political backlash ensued surrounding power outages in Consolidated Edison Inc. subsidiary Consolidated Edison Co. of New York's, or CECONY's, service area. Both Gov. Andrew Cuomo, a Democrat, and local politicians ratcheted up the criticism of CECONY's reliability. The utility reached a deal, which New York Public Service Commission adopted in January 2020, specifying a well-below-industry-average ROE as part of a three-year electric and gas rate plan.

Similarly, while settlement discussions have been held in pending rate cases for National Grid USA subsidiaries Brooklyn Union Gas Co. and KeySpan Gas East Corp., reaching a favorable agreement in these proceedings may be challenging in light of the political fallout surrounding the utilities' self-imposed moratorium on new natural gas service. Amid pressure from Cuomo, a PSC investigation into the moratorium was initiated in October 2019. A settlement was quickly reached and adopted by the PSC in November 2019, which, among other things, lifted the moratorium and called for the National Grid utilities to pay $36 million to compensate customers hurt by the moratorium and to support new energy conservation measures and projects. Rate cases are also pending for Iberdrola's four New York utility operating companies. A joint proposal in those cases are expected to be filed in the near future.

RRA state regulatory evaluations — energy

Above average/1	Above average/2	Above average/3	Average/1	Average/2	Average/3	Below average/1	Below average/2	Below average/3
Alabama	Florida	Iowa	Arkansas	California	Arizona	Alaska	Maryland	Dist. of Columbia
	Georgia	Michigan	Indiana	Colorado	Connecticut	Kansas	New Mexico	
	Pennsylvania	Tennessee	Kentucky	Hawaii	Delaware	Montana	West Virginia	
	Wisconsin		Louisiana — PSC	Idaho	Maine	New Jersey		
			Mississippi	Illinois	Missouri			
			Nebraska	Louisiana — NOCC	New Hampshire			
			New York	Massachusetts	Oklahoma			
			North Carolina	Minnesota	South Carolina			
			North Dakota	Nevada	Vermont			
			Virginia	Ohio	Washington			
				Oregon	Wyoming			
				Rhode Island				
				South Dakota				
				Texas—PUC				
				Texas—RRC				
				Utah				

As of March 25, 2020.
NOCC = New Orleans City Council; PUC = Public Utility Commission; RRC = Railroad Commission
*Within a given subcategory, states are listed in alphabetical order, not by relative ranking.
Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

State Regulatory Reviews issued since prior report

Since the prior quarterly evaluations report was published on Dec. 9, 2019, RRA has issued State Regulatory Reviews affirming the rankings of the North Carolina and South Carolina jurisdictions.

In a review published on Jan. 6, 2020, RRA affirmed its Average/3 ranking of South Carolina regulation indicating that while generally balanced, the environment in the state is somewhat more restrictive than average from an investor viewpoint.

In a review published on March 10, 2020, RRA affirmed the Average/1 ranking of the North Carolina regulatory climate. In RRA's view, North Carolina is also generally balanced from an investor viewpoint, but is a bit more constructive than average.

For a complete listing of RRA's in-depth reports, see the Energy Research Library.

Overview of RRA rankings process

RRA maintains three principal rating categories, Above Average, Average and Below Average, with Above Average indicating a relatively more constructive, lower-risk regulatory environment from an investor viewpoint and Below Average indicating a less constructive, higher-risk regulatory climate. Within the three principal rating categories, the numbers 1, 2 and 3 indicate relative position. The designation 1 indicates a stronger or more constructive rating from an investor viewpoint; 2, a midrange rating; and 3, a less constructive rating within each higher-level category. Hence, if you were to assign numeric values to each of the nine resulting categories, with a "1" being the most constructive from an investor viewpoint and a "9" being the least constructive from an investor viewpoint, then Above Average/1 would be a "1" and Below Average/3 would be a "9."

The rankings are subjective and are intended to be comparative in nature. RRA endeavors to maintain an approximate normal distribution with an approximately equal number of rankings above and below the average. The variables that RRA considers in determining each state's ranking are largely the broad issues addressed in our State Regulatory Reviews/Commission Profiles and those that arise in the context of rate cases and are discussed in RRA Rate Case Final Reports.

The rankings not only reflect the decisions rendered by the state regulatory commission, but also take into account the impact of the actions taken by the governor, the legislature, the courts and the consumer advocacy groups. The policies examined pertain largely to rate cases and the ratemaking process, but issues such as industry restructuring, corporate governance and approach to proposed mergers are also considered.

The rankings are designed to reflect the interest of both equity and fixed-income investors across more than 30 individual metrics. The individual scores are assigned based on the covering analysts' subjective judgement. The scores are then aggregated to create a single score for each state, with certain categories weighted more heavily than others.

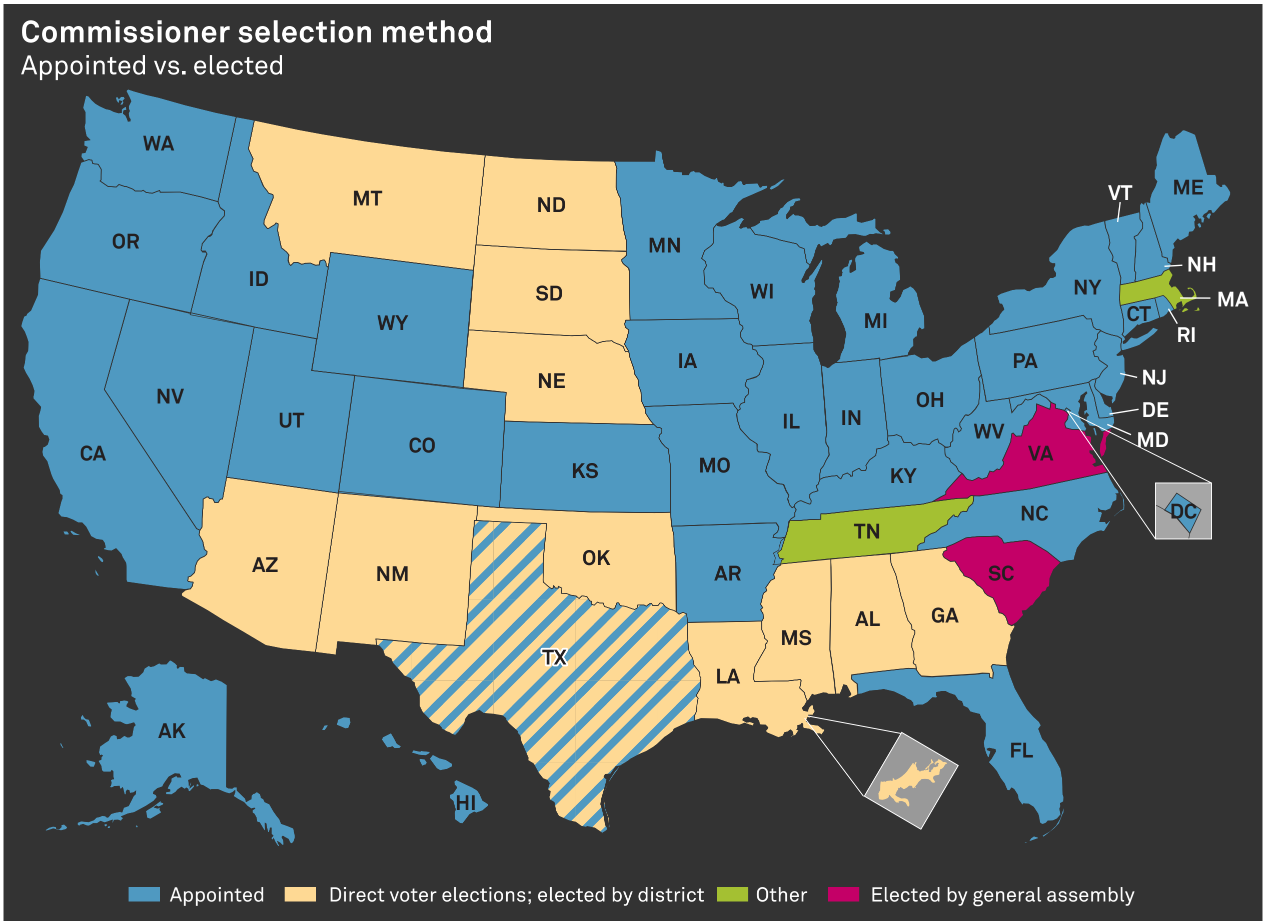
The states are then ranked from lowest to highest and distributed among the nine categories to create an approximate normal distribution. This distribution is then reviewed by the team as a whole, and individual state rankings may be adjusted based on the covering analysts' recommendations, subject to review by a designated panel of senior analysts.

Please note: In the charts within this report that show the rankings by category, the jurisdictions in each category are listed in alphabetical order rather than by relative position within the category.

The summaries below provide an overview of the variables RRA looks at, including a brief discussion of how each can impact the ranking of a given regulatory environment.

Governor/Mayor

The impact the governor, or in the District of Columbia the mayor, may have depends largely on the individual; the issue of elected versus appointed commissioners is evaluated separately.



Data as of Dec. 6, 2019.
1 The Public Utility Commission of Texas members are appointed by the governor, while members of the Railroad Commission of Texas are elected in statewide elections.
Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

RRA takes no view on whether Republican governors or Democratic governors are more or less constructive. However, attributes of the governor or the gubernatorial election process that can move the needle here are: whether energy issues were a topic of debate in recent elections and what the tone/topic of the debate was, whether the governor seeks to involve himself or herself in the regulatory process, and what type of influence the governor is seeking to exert.

Commissioner selection process/membership

RRA looks at how commissioners are selected in each state. All else being equal, RRA attributes a greater level of investor risk to states in which commissioners are elected rather than appointed. Generally, energy regulatory issues are less politicized when they are not subject to debate in the context of an election.

Realistically, a commissioner candidate who indicates support for the utilities and their shareholders, or appears to be amenable to rate increases is not likely to be popular with the voting public. In addition, there might not be specific experience requirements to run for commissioner; so, a newly elected candidate may have a steeper learning curve with respect to utility regulatory and financial issues, which could make discerning what decisions that individual might make more difficult and could increase uncertainty.

However, there have been some notable instances in which energy issues played a key role in gubernatorial/senatorial elections in states where commissioners are appointed, with detrimental consequences for the utilities, e.g., Illinois, Florida and Maryland, all of which were downgraded by RRA at the time in order to reflect the increase risk associated with increased political scrutiny of the regulatory process and policies within the jurisdiction.

In addition, RRA looks at the commissioners themselves and their backgrounds. Experience in economics and finance and/or energy issues is generally seen as a positive sign. Previous employment by the commission or a consumer advocacy group is sometimes viewed as a negative indicator. In some instances, new commissioners have very little experience or exposure to utility issues, and in some respects, these individuals represent the highest level of risk, simply because there is no way to foresee what they will do or how long it will take them to "get up to speed." Controversy or "scandal" surrounding an individual and/or conflict of interest potential are also red flags.

Similarly, a high rate of turn-over or the tendency to allow vacancies to stand unfilled for a long period of time add to the level of regulatory risk in RRA's view.

For additional information concerning the selection process in each state and the make-up of the commissions, refer to the RRA Regulatory Focus Topical Special Report entitled The Commissioners.

Commission staff/consumer interest

Most commissions have a staff that participates in rate proceedings. In some jurisdictions the staff has a responsibility to represent the consumer interest, and in others the staff's statutory role is less defined. In addition, there may or may not be: additional state-level organizations that are charged with representing the interests of a certain class or classes of customers, such as the Attorney General or the Consumer Advocate; private consortia or lobbying groups that represent certain customer groups; and/or large-volume commercial and industrial customers that intervene directly in rate cases.

Generally speaking, the greater the number of consumer intervenors, the greater the level of uncertainty for investors. The level of risk for investors also depends on the caliber and influence of the intervening parties and the level of contentiousness in the rate case process. Even though a commission may not adopt an extreme position taken by an intervenor, the inclusion of an extreme position in the record for the case widens the range of possible outcomes, reducing certainty and increasing the risk of a negative outcome for investors. RRA's opinion on these issues is largely based on past experience and observations.

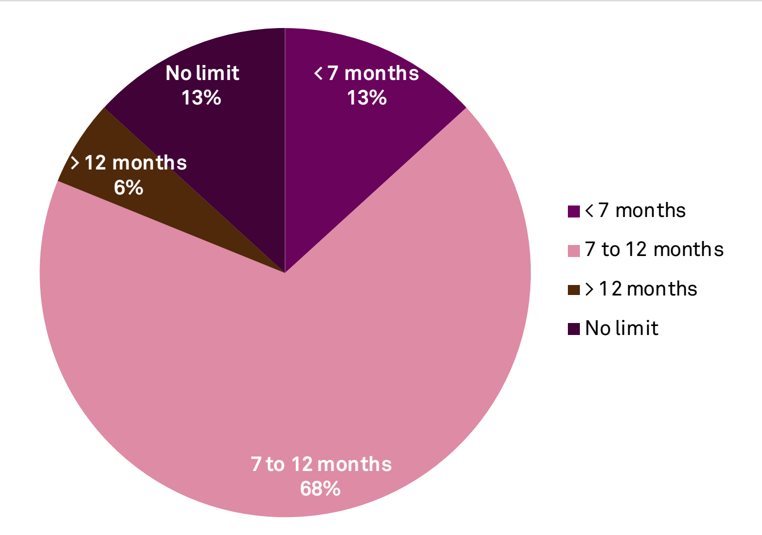
Settlements

In most instances, the ability of the parties to reach agreement without having to go through a fully litigated proceeding is considered constructive, particularly since it reduces the likelihood of court review. However, RRA also endeavors to ascertain whether the settlements arise because of a truly collaborative approach among the parties, or if they result from concern by the companies that the commissioners' views may be more extreme than the intervenors', or that the intervenors will take a much more extreme position in a litigated framework than in a closed-door settlement negotiation.

Rate case timing

For each state commission, RRA considers whether there is a set time frame within which a rate case must be decided, the length of any such statutory time frame and the degree to which the commission adheres to that time frame.

Rate case time frame



Data gathered as of March 25, 2020.
Source: Regulatory Research Associates, an offering of S&P Global Market Intelligence

Generally speaking, RRA views a set time frame as preferable, as it provides a degree of certainty as to when any new revenue may begin to be collected.

About two-thirds of state commissions nationwide have a rule or statute that requires a rate case to be decided within seven to 12 months of filing.

Shorter time frames may apply for limited-issue proceedings, but there are very few states where a rate case will take less than seven months to be decided.

In addition, a shorter time frame for a decision generally reduces the likelihood that the actual conditions during the first year the new rates will be in effect will vary markedly from the test period utilized to set new rates, thus keeping regulatory lag to a minimum.

Interim procedures

The ability to implement all or a portion of a proposed rate increase on an interim basis prior to a final decision in a rate case is viewed as constructive. However, should the commission approve a rate change that is markedly below the rates implemented on an interim basis, the utility would be required to refund any related over-collections, generally with interest.

In some instances, commission approval is required prior to the implementation of an interim increase and may or may not be easy to obtain, while in others, state law or commission rules permit the companies to implement interim rate increases as a matter of course. In some instances, the commission may establish a date prior to the final decision in the case that will be the effective date of the new rates. In these instances, the company may be permitted to recoup any revenue that was not collected between the effective date and the decision date.

Rate base

A commission's policies regarding rate base can also impact the ability of a utility to earn its authorized ROE. These policies are often outlined in state statutes, and the commission usually does not have much latitude with respect to these overall policies.

With regard to rate base, commissions are about evenly split between those that employ a year-end, or terminal valuation and those that utilize an average valuation, with one using a "date certain." In some instances, the commission may employ a different rate base valuation method depending on the utility type or the type of case — general rate case or limited-issue proceeding — or based on the test year selected by the company.

In general, assuming rate bases are rising, i.e., new investment is outpacing depreciation, a year-end valuation is preferable from an investor viewpoint.

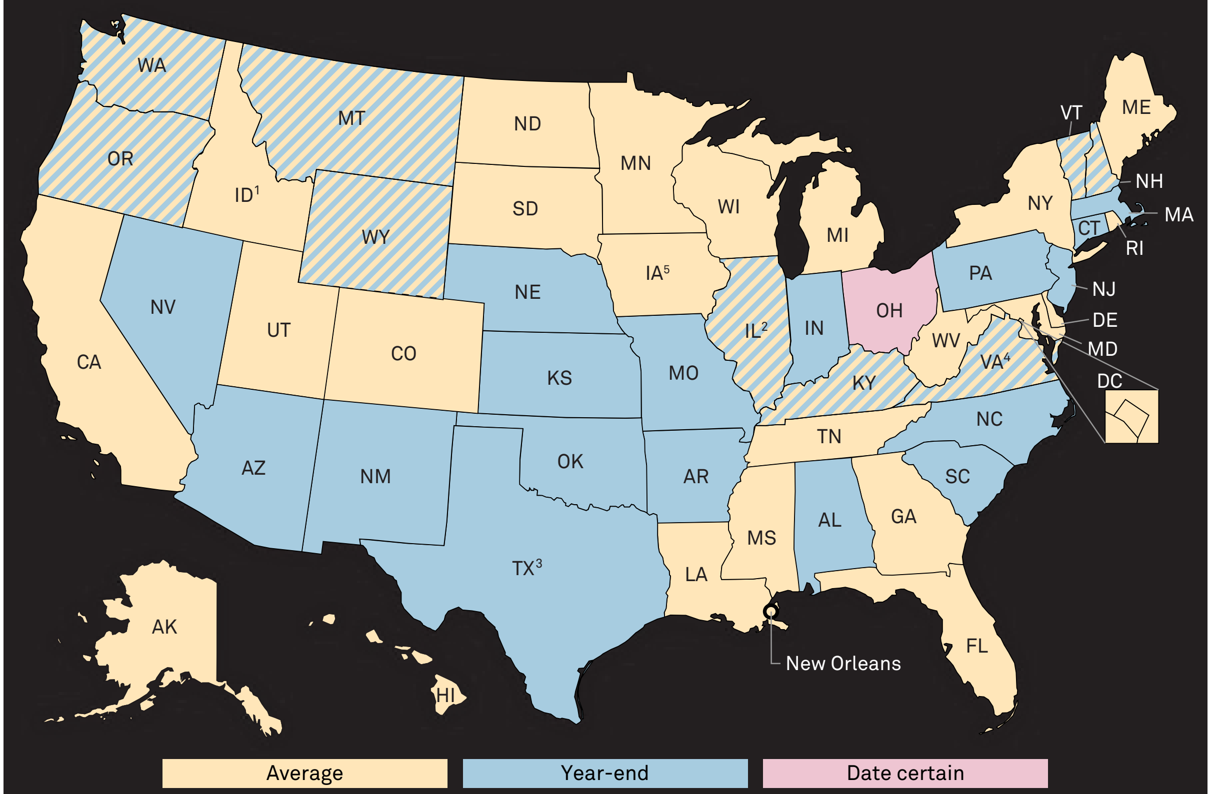
Again, this relates to how well the parameters used to set rates reflect actual conditions that will exist during the rate-effective period; hence, the more recent the valuation, the more likely it is to approximate the actual level of rate base being employed to serve customers once the new rates are placed into effect.

Some commissions permit post-test year adjustments to rate base for "known and measurable" items, and, in general, this practice is beneficial to the utilities.

However, the rules with respect to what constitutes a known and measurable adjustment are not always specific, and there can be a good deal of controversy about what does and does not pass muster.

Another key consideration is whether state law and/or the commission generally permit the inclusion in rate base of construction work in progress, or CWIP, for a cash return. CWIP represents assets that are not yet, but ultimately will be, operational in serving customers.

Rate base valuation method



Data as of Dec. 6, 2019.

[1] Major plant additions have been accorded year-end rate base treatment.

[2] For utilities that are not under formula rate plans, an average rate base must be used if a projected test year is selected. For utilities under the plans, filings must reflect estimated net plant additions through the end of the year in which the case is filed.

[3] Both the Public Utility Commission of Texas and the Railroad Commission of Texas utilize a year-end rate base valuation.

[4] Certain utilities have characterized their rate cases as utilizing a forecast test year and an average rate base, while others have referred to it as a historical test year and a year-end rate base, with known and measurable adjustments.

[5] Pursuant to legislation enacted in 2018, the Iowa Utilities Board is drafting rules to allow the utilites to select the rate base valuation method and test-year type.

Source: Regulatory Research Associates, a group within S&P Global Market Intelligence.

Generally, investors view inclusion of CWIP in rate base for a cash return as constructive, since it helps to maintain cash flow metrics during a large construction cycle. Alternatively, the utilities accrue allowance for funds used during construction, which is essentially booking a return on the construction investment as a regulatory asset that is recoverable from ratepayers once the project in question becomes operational.

While this method bolsters earnings, it does not augment cash flow and does not support credit metrics. For a more in-depth look at rate base issues, refer to the RRA report entitled *Rate base: How would you rate your knowledge of this utility industry fundamental?*

Test period

With regard to test periods, there are a number of different practices employed, with the extremes being fully forecast at the time of filing, which is considered to be most constructive, on the one hand, and fully historical at the time of filing, considered to be least constructive, on the other.

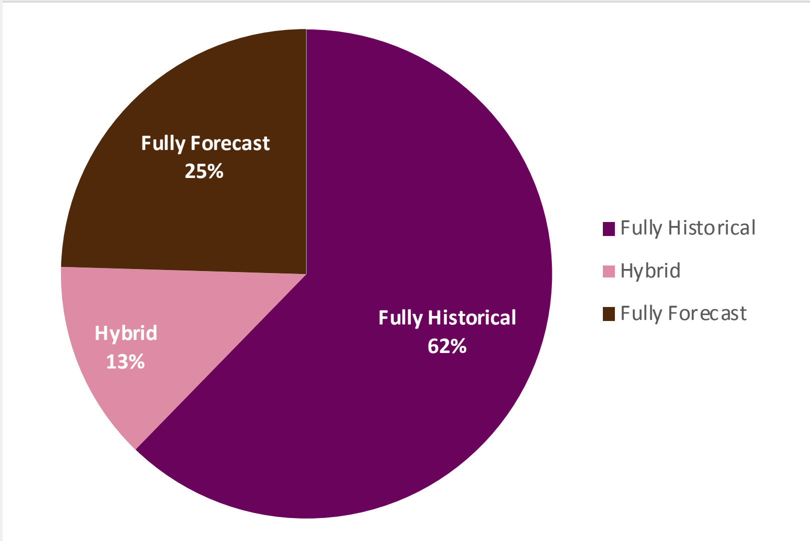
Some states utilize a combination of the two, in which a utility is permitted to file a rate case that is based on data that is fully or partially forecast at the time of filing and is later updated to reflect actual data that becomes known during the course of the proceeding.

In these cases, the test year is historical by the time a decision is ultimately rendered, and so regulatory lag remains something of a problem.

Almost two-thirds of the 53 jurisdictions covered by RRA utilize a test year that is historical at the time of filing. As with rate base valuation, in some states, commissions use different test period types for different types of proceedings or for different utility types. The accompanying map shows the predominant treatment in each state.

Many of the jurisdictions allow for known and measurable adjustments to the test year, but the statutes governing the definition of known and measurable can be ambiguous, and there can be wide disagreement among the rate case parties as to which adjustments qualify.

Rate case test year

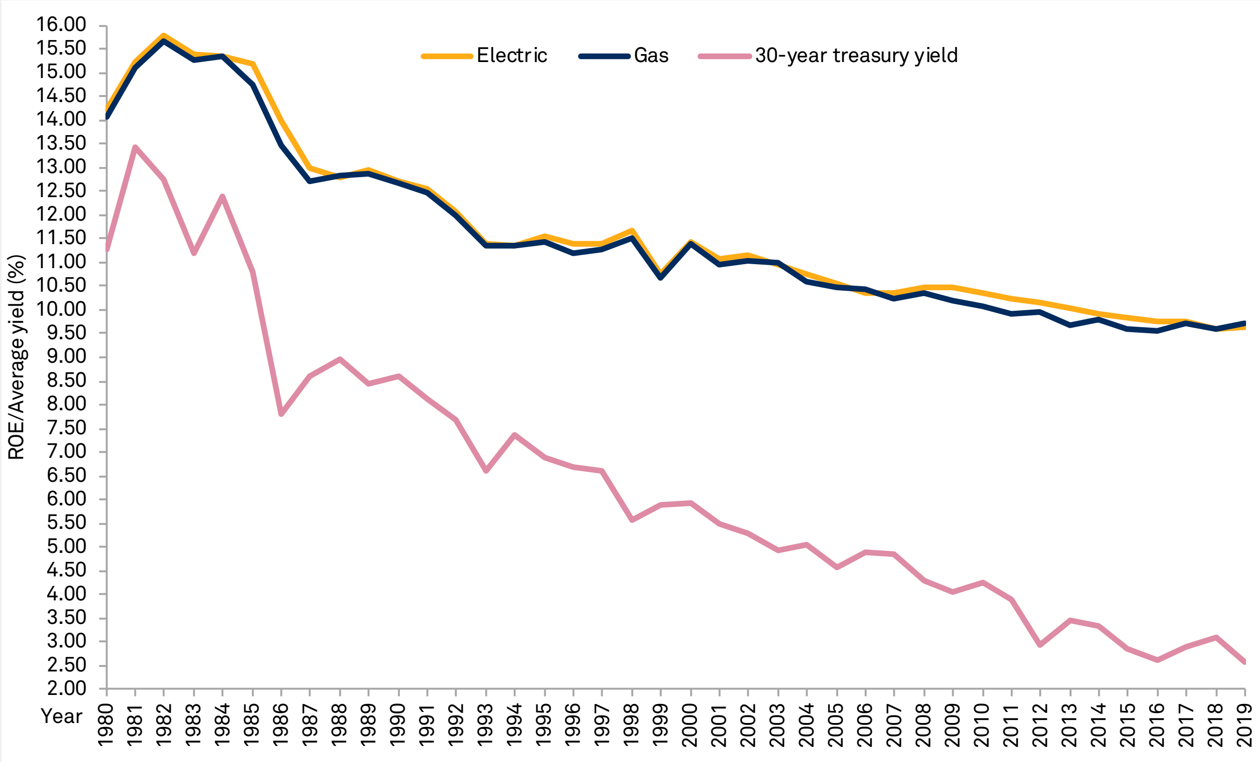


Data gathered as of March 25, 2020.
Source: Regulatory Research Associates, an offering of S&P Global Market Intelligence

Return on equity

ROE is perhaps the single most litigated issue in any rate case. There are two aspects RRA considers when evaluating an individual rate case and the overall regulatory environment: (1) how the authorized ROE compares to the average of

Average authorized ROE in the US/30-year treasury bond yields
Calendar years 1980-2019



Data compiled as of March 25, 2020.
Source: Regulatory Research Associates, an offering of S&P Global Market Intelligence

returns authorized for energy utilities nationwide over the 12 months or so immediately preceding the decision; and (2) whether the company has been accorded a reasonable opportunity to earn the authorized return in the first year of the new rates.

With regard to the first criterion, RRA looks at the ROEs historically authorized utilities in a given state and compares them to utility industry averages, as calculated in RRA's *Major Rate Case Decisions Quarterly Updates*. When referring to these "averages," RRA means the average ROE approved in cases decided in a particular year; returns carried over from prior years are not included in the averages.

Intuitively, authorized ROEs that meet or exceed the prevailing averages at the time established are viewed as more constructive than those that fall short of these averages. However, ROEs overall have been declining steadily since 1980, falling below 10% in for the first time in 2011 for gas utilities and 2014 for electric utilities, and remaining below that benchmark since.

Interest rates have been a key factor driving authorized ROEs downward, but commission determinations that various alternative or innovative ratemaking mechanisms have reduced risk for the companies and their investors across the board have played a role as well.

Consumer advocacy organizations continue to argue that lower returns on equity are warranted because of risk-reducing factors, such as limited-issue riders, decoupling mechanisms, alternative regulation constructs and changes to basic rate design.

This presents a stark contrast to views held by both fixed-income and equity investors that utilities are becoming more risky because of large capital spending plans, limited sales growth potential, changes in the structure of the industry and the regulatory framework occasioned by new technologies and the public policy shift favoring renewable resources, federal tax reform impacts, interest rate volatility and now the challenges being posed by overall market volatility as the coronavirus pandemic drags on.

With regard to the second consideration, in the context of a rate case, a utility may be authorized a relatively high ROE, but factors such as capital structure changes, the age or "staleness" of the test period, rate base and expense disallowances, the manner in which the commission chooses to calculate test year revenue, and other adjustments may render it unlikely that the company will earn the authorized return on a financial basis.

Even if a utility is accorded a "reasonable opportunity" to earn its authorized ROE, there is no guarantee that the utility will do so. The revenue requirement and ROE established in a rate case are targets that the commission believes the established rates will allow the utility to attain.

Various factors such as weather, management efficiency, unexpected events, demographic shifts, fluctuations in economic activity and customer participation in energy conservation programs may cause revenue and earnings to vary from the targets set.

Hence, the overall decision may be restrictive from an investor viewpoint even though the authorized ROE is equal to or above the average. For a more detailed discussion of the rate case process, refer to the RRA report entitled *The Rate Case Process: A Conduit to Enlightenment*.

Accounting

RRA looks at whether a state commission has permitted unique or innovative accounting practices designed to bolster earnings. Such treatment may be approved in response to extraordinary events such as storms or for volatile expenses such as pension costs. Generally, such treatment involves deferral of expenditures that exceed the level of such costs reflected in base rates. In some instances the commission may approve an accounting adjustment to temporarily bolster certain financial metrics during the construction of new generation capacity.

From time to time, commissions have approved frameworks under which companies were permitted to, at their own discretion, adjust depreciation in order to mitigate underearnings or eliminate an overearnings situation without reducing rates. These types of practices are generally considered to be constructive from an investor viewpoint.

Federal tax law changes enacted in 2017 and effective in 2018, particularly the reduction in the corporate federal income tax rate to 21% from 35%, had sweeping impacts on utilities, with a flurry of ratemaking activity during 2018 and 2019. While the issues have been addressed for most of the RRA-covered companies, there are still some that have not.

For most of the companies that have already addressed the implications with regulators, rates have been reduced to reflect the ongoing impact of the lower tax rate, refunds to return to ratepayers related deferred over-collections are occurring over a relatively short time period and amortization of the related excess accumulated deferred income tax liabilities is occurring over varying time periods — generally over the lives of the companies' assets for protected amounts and most often five to 10 years for unprotected amounts. RRA has been monitoring these developments and their impact on credit ratings and investor risk.

Alternative regulation

Generally, RRA views as constructive the adoption of alternative regulation plans that are designed to streamline the regulatory process and cost recovery or allow utilities to augment earnings in some way. These plans can be broadly or narrowly focused. Narrowly focused plans may: allow a company or companies to retain a portion of cost savings

Alternative regulation plans in the US*

Formula-based ratemaking	Multi-year rate plans	Earnings sharing	Incentive ROEs	Electric fuel/ Gas costs	Capacity release/Off-system sales	Full Decoupling
Alabama	California	Alabama	Colorado	Indiana	Colorado	Arizona
Arkansas	Connecticut	Arkansas	Iowa	Idaho	Delaware	California
Georgia	Dist. of Columbia[1]	Connecticut	Kansas[1]	Iowa	Florida	Connecticut
Hawaii	Florida	Florida	Mississippi	Illinois	Indiana	Georgia
Illinois	Georgia	Georgia	Montana[1]	Kansas	Iowa	Hawaii
Louisiana	Hawaii	Hawaii	Nevada	Kentucky	Kentucky	Idaho
Maine	Louisiana	Idaho	Ohio	Maryland	Louisiana	Indiana
Massachusetts	Maine	Iowa	Virginia	Missouri	Massachusetts	Louisiana
Minnesota	Maryland[1]	Kansas	Washington[1]	Montana	Missouri	Maine
Mississippi	Massachusetts	Louisiana	Wisconsin	New Jersey	North Dakota	Maryland
Pennsylvania[1]	Minnesota	Maine		Oregon	New Jersey	Massachusetts
Tennessee	New Hampshire	Massachusetts		Tennessee	Oklahoma	Nevada
Texas[2]	New York	Mississippi		Rhode Island	Pennsylvania	New Hampshire
Vermont	Ohio	Nevada		Utah	South Dakota	New Jersey
	Pennsylvania[2]	New Mexico		Vermont	Tennessee	New York
	Rhode Island	New York		Virginia	Texas[2]	North Carolina
	South Carolina	Oklahoma		Wyoming	Utah	Oregon
	Vermont	Oregon				Pennsylvania[1]
	Wisconsin	Rhode Island				Rhode Island
		Virginia				Utah
		Wisconsin				Vermont
						Washington

As of March 25, 2020. Data is preliminary.
ROE = return on equity
* Type of plan in place for at least on utility in the state, unless otherwise noted.
[1] Specifically permitted by rule, law or commission order; no mechanism currently in place.
[2] Used by the Railroad Commission of Texas and cities for gas utilities; no such provisions in place for electric utilities, which are regulated by the Public Utility Commission of Texas.
Source: Regulatory Research Associates, a group withinn S&P Global Market Intelligence.

relative to a base level of some expense type, e.g., fuel, purchased power, pension cost, etc.; permit a company to retain for shareholders a portion of off-system sales revenues; or provide a company an enhanced ROE for achieving operational performance and/or customer service metrics or for investing in certain types of projects, e.g., demand-side management programs, renewable resources, new traditional plant investment.

The use of plans with somewhat broader scopes, such as ROE-based earnings sharing plans, is, for the most part, considered to be constructive, but it depends upon the level of the ROE benchmarks specified in the plan and whether there is symmetrical sharing of earnings outside the specified range.

Some states employ even more broad-based plans, such as formula-based ratemaking, where authorized return parameters are set at the inception of the plans and rates are permitted to adjust automatically on an annual basis within a certain range to reflect changes in expenses and new capital investment, similar to the paradigm in place for electric transmission at the Federal Energy Regulatory Commission.

Court actions

This aspect of state regulation is particularly difficult to evaluate. Common sense would dictate that a court action that overturns restrictive commission rulings is a positive. However, the tendency for commission rulings to come before the courts and for extensive litigation as appeals go through several layers of court review may add an untenable degree of uncertainty to the regulatory process. Also, similar to commissioners, RRA looks at whether judges are appointed or elected, as political considerations are more likely to influence elected jurists.

Legislation

While RRA's Commission Profiles provide statistics regarding the make-up of each state legislature, RRA has not found a specific correlation between the quality of energy legislation enacted and which political party controls the legislature. Of course, in a situation where the governor and legislature are of the same political party, generally speaking, it is easier for the governor to implement key policy initiatives, which may or may not be focused on energy issues.

Key considerations with respect to legislation include: how proscriptive newly enacted laws are; whether the bill is clear or ambiguous and open to varied interpretations; whether it balances ratepayer and shareholder interests rather than merely "protecting" the consumer; and whether the legislation takes a long-term view or is a "knee-jerk" reaction to a specific set of circumstances.

Legislative activity impacting utility regulatory issues has been robust in recent years, as state policymakers, utilities and industry stakeholders seek to address "disruptors" that challenge the traditional regulatory framework. RRA follows these developments closely with an eye toward assessing whether the states are taking a balanced, sustainable approach and how legacy utility providers will be affected by the policies being adopted.

Corporate governance

The term corporate governance generally refers to a commission's ability to intervene in a utility's financial decision-making process through required preapproval of all securities issuances, limitations on leverage in utility capital structures, dividend payout limitations, ring fencing and authority over mergers. Corporate governance may also include oversight of affiliate transactions.

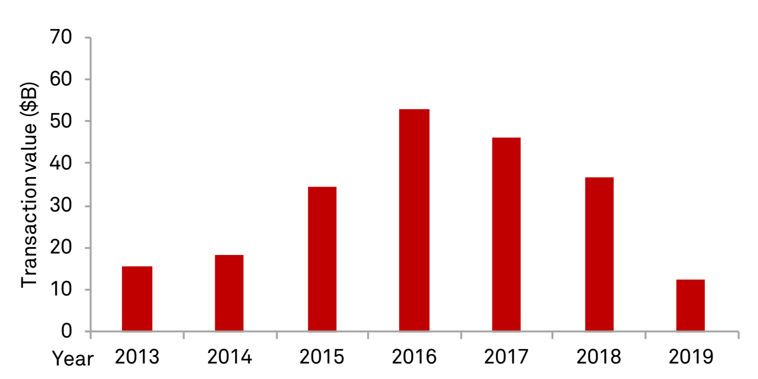
In general, RRA views a modest level of corporate governance provisions to be the norm, and in some circumstances, these provisions, such as ring fencing, have protected utility investors as well as ratepayers. However, a degree of oversight that would allow the commission to "micromanage" the utility's operations and limit the company's financial flexibility would be viewed as restrictive.

Merger and acquisition activity

Though merger and acquisition activity has slowed somewhat in 2019, it was fairly robust in prior years, with more than 30 transactions aggregating to $183 billion in transaction value announced since 2015.

Aside from the involved entities' boards of directors and shareholders, deals involving regulated utilities must pass muster with some or all of a variety of federal and state regulatory bodies. The states generally look at the day-to-day issues such as the impact on rates, safety and reliability.

Utility mergers announced 2013—2019



Data gathered as of Dec. 31, 2019.
Source: Regulatory Research Associates, an offering of S&P Global Market Intelligence

Looking more closely at the role of state regulators, 50 of the 53 non-federal jurisdictions RRA follows have some type of review authority over proposed mergers. In Indiana and Florida, preapproval by state regulators is not required before a transaction can proceed. In Texas, prior approval by the Public Utility Commission of Texas is required before a transaction involving an electric utility can take place, but Railroad Commission of Texas approval is not required for a transaction involving a local gas distribution company.

In evaluating a commission's stance on mergers, RRA looks at several broad issues such as whether there is a statutory time frame for consideration of a transaction and how long the process actually took.

For the 50 jurisdictions where commission preapproval is required, the review process and standards vary widely. In 20 of the jurisdictions, the commission must complete a merger review within a prescribed period of time, but in the remaining jurisdictions there is no timeline for their merger reviews, which means a commission could effectively "pocket veto" a transaction by delaying a decision until the merger agreement between the applicants expires or until pursuing the transaction is no longer feasible.

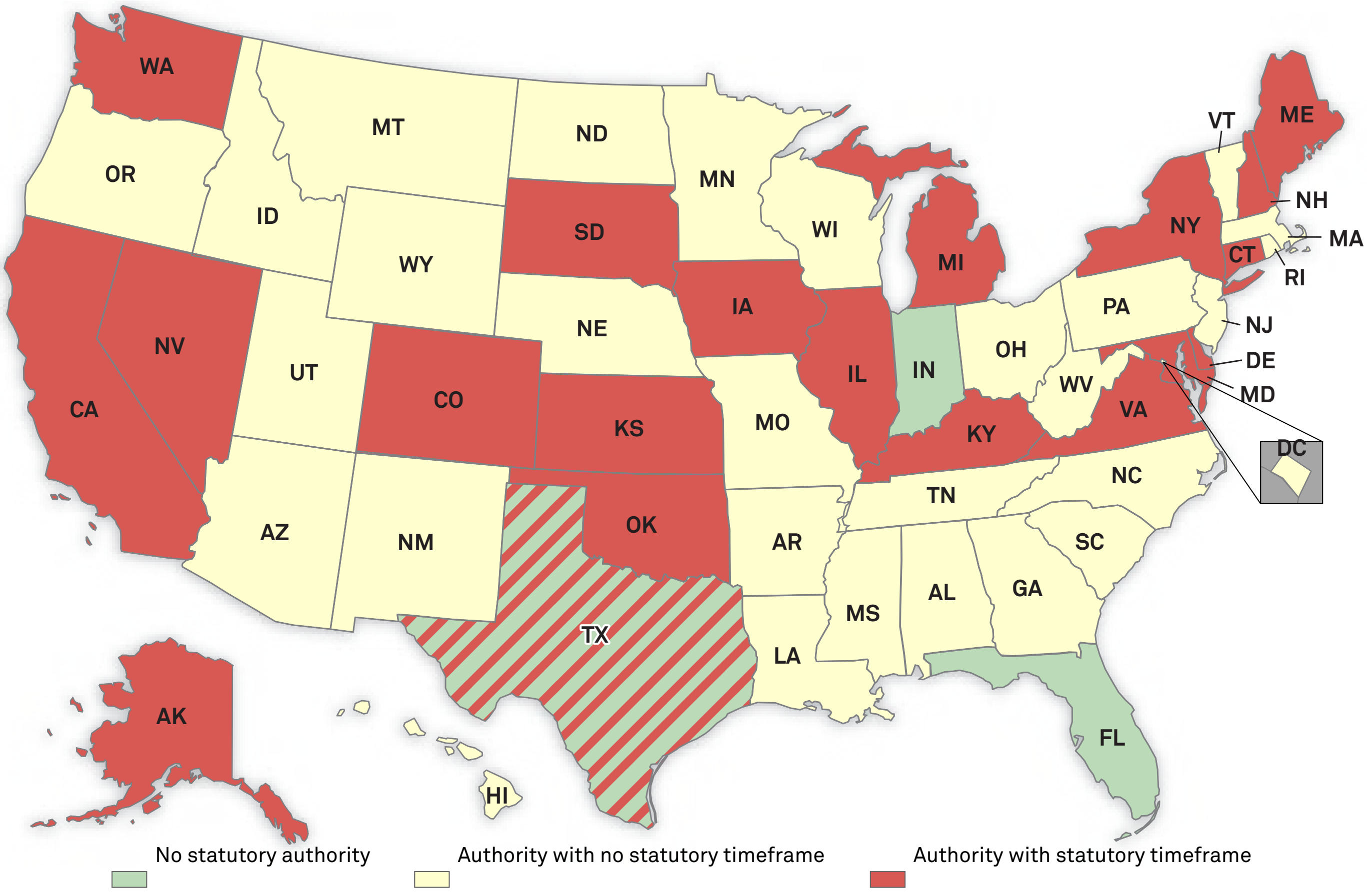
In addition, RRA considers whether a settlement was reached among the parties and, if so, whether the commission honored that settlement or required additional commitments. RRA also examines how politicized the process was: Did the governor, or in the District of Columbia the mayor, play a role? Did the transaction garner a lot of local media attention in the affected jurisdiction?

The definition of what constitutes a transaction that is subject to review can vary widely and may include sales of individual assets or a marginal minority interest as well as larger transactions where a controlling interest or the whole company is changing hands. State law often lacks specificity with respect to what constitutes a transaction that is subject to regulatory review.

In cases where the state commission has authority over mergers, RRA reviews the type of approval standard that is contained in state law and/or has been applied by the commission in specific situations.

For discussion purposes, RRA groups the statutory standards into three general buckets: public interest, which is generally thought to be the least restrictive, no net ratepayer harm, which is somewhat more restrictive, and net ratepayer benefit, which is the most restrictive.

Utility mergers — statutory authority



S&P Global
Market Intelligence

As of Dec. 6, 2019.
In Texas, mergers involving electric utilities are subject to commission review; mergers involving local gas distribution companies are not.
Source: Regulatory Research Associates, a group within S&P Global Market Intelligence.
Map credit: Arleigh Andes

In many instances, regulators have broad discretion to interpret what the statutes may mean by these terms. So, the standard of review is often more readily apparent by looking at how prior transactions were addressed than by reading the statutory language — one commission's public interest might be another's net ratepayer benefit.

More narrowly, RRA reviews the conditions placed on the commission's approval of these transactions, including: whether the company will be permitted to retain a portion of any merger-related cost savings; if guaranteed rate reductions or credits are required that are or are not directly related to merger savings; whether certain assets were required to be divested; what type of local control and work force commitments are required; whether there are requirements for certain types of investment to further the state's public policy goals that may or may not be consistent with the companies' business models and whether the related costs will be recoverable from ratepayers; and whether the commission placed stringent limitations on capital structure and/or dividend policy or composition of the board of directors.

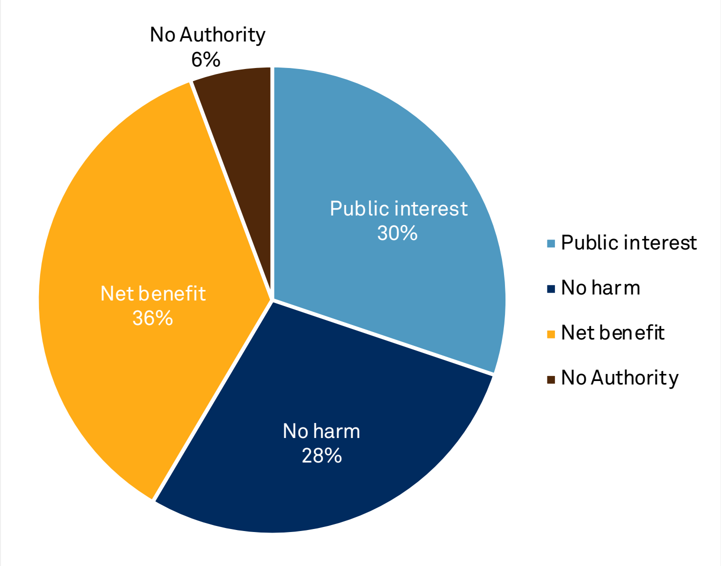
See the Merger Activity section of each Commission Profile for additional detail on statutory guidelines for merger reviews and detail concerning approved/rejected mergers and the associated conditions imposed.

Electric regulatory reform/industry restructuring

By electric industry restructuring, RRA means implementing a framework under which some or all retail customers have the opportunity to obtain their **generation** service from a competitive supplier. In a movement that began in the mid-1990s, about 20 jurisdictions have implemented retail competition for all or a portion of the customers in the utilities' service territories. The last of the transition periods ended as recently as 2011, when restructuring-related rate freezes concluded for certain Pennsylvania utilities.

RRA classifies each of the regulatory jurisdictions into one of three tiers based on their relative electric industry restructuring status.

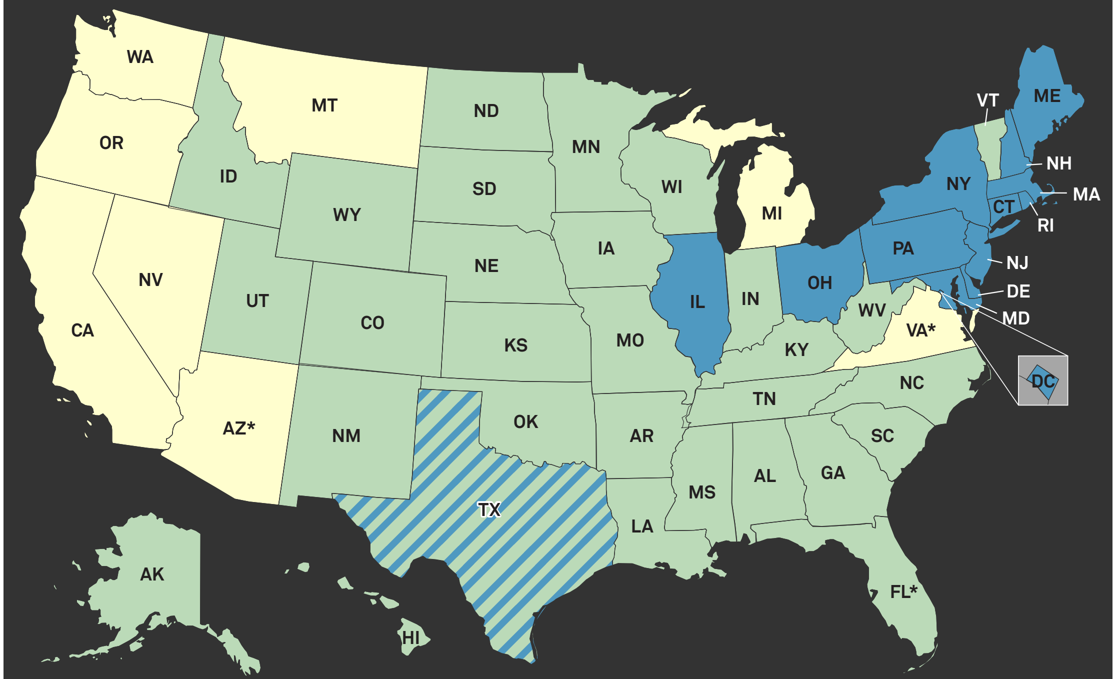
Merger review standards



As of March 25, 2020.
Source: Regulatory Research Associates, an offering of S&P Global Market Intelligence

Electric industry restructuring in US

Tier classifications



As of Dec. 6, 2019.
Tier 1: Power prices competitively determined for all retail customers.
Tier 2: Competitively priced power limited to retail access customers.
Tier 3: Power prices fully regulated for all retail customers.
* Certain factions seeking to implement/expand retail competition in the jurisdiction.
In Texas, retail competition was implemented only within the Electric Reliability Council of Texas footprint.
Source: Regulatory Research Associates, a group within S&P Global Market Intelligence. Map credit: Arleigh Andes

The three Tiers are defined as follows.

Tier 1 — Power prices are competitively determined for all retail customers, both standard-offer-service and retail-access customers. Retail access is permitted for all customers. For the most part, the utilities in these states do not own generation. Please note that RRA has classified Texas as a Tier1 state even though retail competition is only available for customers served by utilities that are within the Electric Reliability Council of Texas footprint.

Tier 2 — Competitively priced power is limited to retail-access customers. Retail access is permitted on at least a limited basis. Power prices for standard-offer-service customers remain regulated. For the most part, utilities remain vertically integrated.

Tier 3 — Power prices are fully regulated for all retail customers. All retail customers must purchase their power from the franchised utility.

RRA generally does not view a state's decision to implement retail competition for generation as either positive or negative from an investor viewpoint. However, how the transition occurred has been a key part of RRA's evaluation of each affected jurisdiction. Issues considered by RRA include whether up-front rate reductions were required, the length of the transition periods and how stranded costs were addressed.

Now that transition periods are completed, RRA has focused more on how standard-offer or default service is procured for customers who do not select an alternative provider and how much, if any, market-price risk the utility must absorb.

However, initiatives are underway in Arizona and Virginia that could lead to an expansion of retail competition in those jurisdictions.

RRA is also monitoring states where initiatives are underway to revamp the way the transmission and distribution system is configured. These efforts have arisen from expansion of renewables and a focus on grid reliability/resiliency. RRA refers to this trend as electric industry restructuring phase two.

Similar to phase one, the recovery of stranded costs and ways to ensure universal service are real concerns. In phase two, the conversation is further complicated by the need to ensure not just the physical, but also the cybersecurity of the grid. Several states got out in front of these issues and are addressing them in a broad-based way, while others are taking a more piecemeal approach dealing with deployment of advanced metering, distributed generation and net metering, time-of-use rates, cybersecurity and other issues on an individual basis.

The pressure to resolve these issues is increasing, as customers and policymakers want the changes in place yesterday. As these issues unfold, the same issues that were of concern in the first phase of restructuring will warrant close attention.

Gas regulatory reform/industry restructuring

Retail competition for gas supply is more widespread than is electric retail competition, and the transition was far less contentious as the magnitude of potential stranded asset costs was much smaller. Similar to electric retail competition, RRA generally does not view a state's decision to implement retail competition for gas service as either positive or negative from an investor viewpoint. RRA primarily considers the manner in which stranded costs were addressed and how default-service obligation-related costs are recovered.

Securitization

Securitization refers to the issuance of bonds backed by a specific existing revenue stream that has been "guaranteed" by regulators. State commissions have used securitization to allow utilities to recover demand-side management costs, electric industry restructuring-related stranded costs, environmental compliance costs and storm costs. RRA views the use of this mechanism as generally constructive from an investor viewpoint, as it virtually eliminates the recovery risk for the utility and frees up cash to be deployed for other purposes.

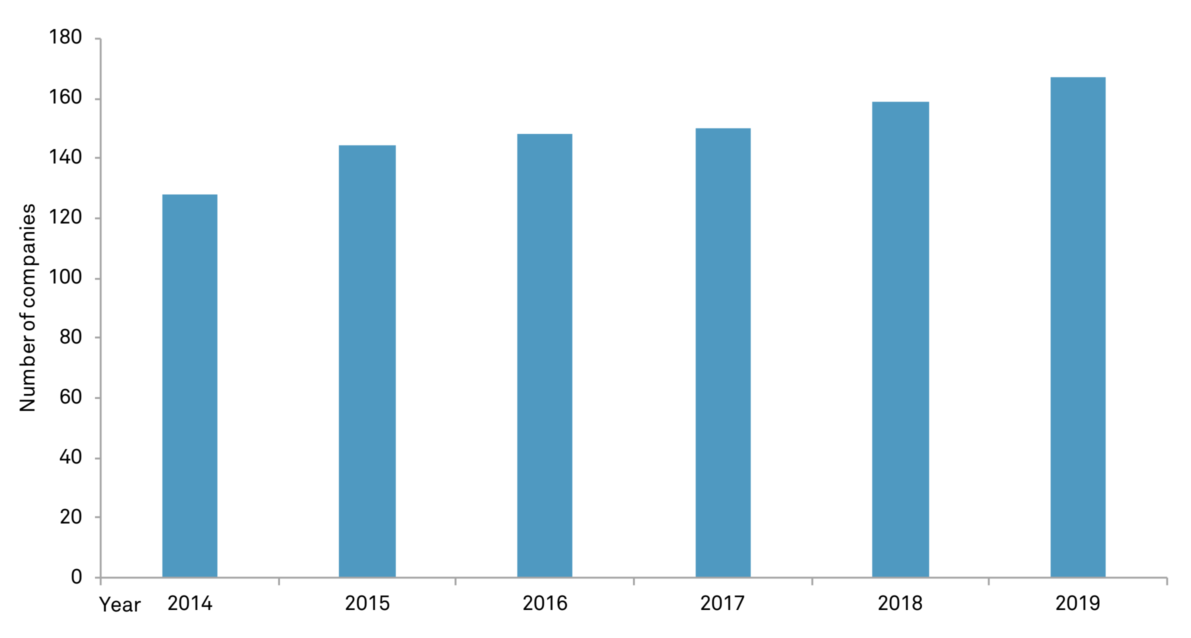
Adjustment clauses

Since the 1970s, adjustment clauses have been widely utilized to allow utilities to recover fuel and purchased power costs outside a general rate case, as these costs are generally subject to a high degree of variability. In some instances, a base amount is reflected in base rates, with the clause used to reflect variations from the base level, and in others, the entire annual fuel/purchased power cost amount is reflected in the clause.

Over time, the types of costs recovered through these mechanisms were expanded in some jurisdictions to include such items as pension and healthcare costs, demand-side management program costs, Federal Energy Regulatory Commission-approved regional transmission organization costs, new generation plant investment, and transmission and distribution infrastructure spending.

RRA generally views the use of these types of mechanisms as constructive but also looks at the frequency at which the adjustments occur, whether there is a true-up mechanism, whether adjustments are forward-looking in nature where applicable, whether a cash return on construction work in progress is permitted and whether there may be some ROE incentive for certain types of investment.

Utility operating companies with full or partial decoupling mechanisms
RRA covered companies



As of March 16, 2020.
RRA = Regulatory Research Associates, a group within S&P Global Market Intelligence.
Source: Regulatory Research Associates, a group within S&P Global Market Intelligence.

Other mechanisms that RRA views as constructive are weather-normalization clauses that are designed to remove the impact of weather on a utility's revenue, referred to as partial decoupling mechanisms, and full decoupling mechanisms that may remove not only the impact of weather but also the earnings impacts of customer participation in energy efficiency programs and sales volatility stemming from fluctuations in the overall economic health of the service territory.

Generally, an adjustment mechanism would be viewed as less constructive if there are provisions that limit the utility's ability to fully implement revenue requirement changes under certain circumstances, e.g., if the utility is earning in excess of its authorized return.

See the RRA Regulatory Focus Topical Special Report entitled Adjustment Clauses — A State-by-State Overview and related data tables for additional detail.

Integrated resource planning

RRA generally considers the existence of a resource-planning process to be constructive from an investor viewpoint as it may provide the utility at least some measure of protection from hindsight prudence reviews of its resource acquisition decisions. In some cases, the process may also provide for preapproval of the ratemaking parameters and/or a specific cost for the new facility. RRA views these types of provisions as constructive, as the utility can make more informed decisions as to whether it will proceed with a proposed project.

Renewable energy/emissions requirements

As with retail competition, RRA does not take a stand as to whether the implementation of renewable portfolio standards, or RPS, or an emissions reduction mandate is positive or negative from an investor viewpoint. However, RRA considers whether there is a defined preapproval and/or cost-recovery mechanism for investments in projects designed to comply with these standards.

RRA also reviews whether there is a mechanism such as a rate increase cap that ensures that meeting the standards does not impede the utility's ability to pursue other investments and/or recover increased costs related to other facets of its business. RRA also looks at whether incentives, such as an enhanced ROE, are available for these types of projects.

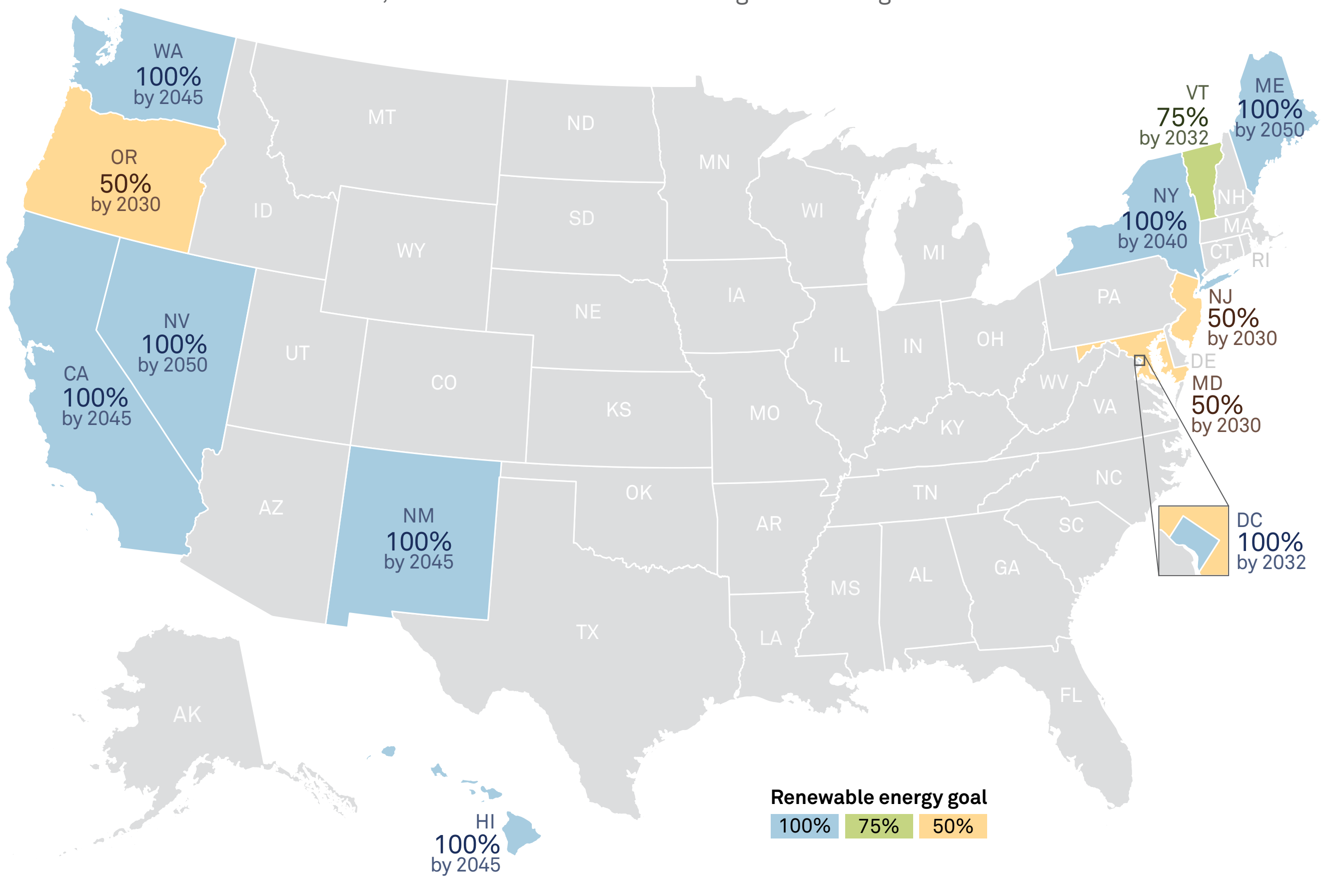
In recent years, the focus on renewables has surged across the United States, with all but 12 jurisdictions developing some type of RPS. The proliferation of renewables, particularly those that are customer-sited or distributed resources, and the related rise of battery storage and electric vehicles have raised questions regarding the traditional centralized industry framework and whether that framework needs to change, perhaps ushering in a second phase of electric industry restructuring. How these changes are implemented is something RRA will be watching closely.

With respect to emissions, the threat of a federal carbon emissions standard for utilities and the spread of state-level initiatives have caused many companies to rethink legacy coal-fired generation, causing plants to be shut down earlier than anticipated. How the commissions address these "stranded costs" also poses a risk for investors and bears monitoring.

The zero-carbon movement has also caused utilities/states to re-examine investments in nuclear facilities and, in some cases, to develop programs designed to support the continued operation of those facilities even though they may not be economic from a competitive-markets standpoint. How these issues are addressed is something that RRA is also monitoring.

Most ambitious renewable energy standard

The District of Columbia and 11 states have implemented ambitious renewable energy goals and mandates. Of these 12, seven enacted measures during the 2019 legislative session.



Data as of Dec. 16, 2019.
Map credit: Jose Miguel Fidel C. Javier
Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

S&P Global Market Intelligence

Rate structure

RRA looks at whether there are economic development or load-retention rate structures in place and, if so, how any associated revenue shortfall is recovered.

RRA also looks at whether there have been steps taken over recent years to reduce/eliminate interclass rate subsidies, i.e., to equalize rates of return across customer classes.

In addition, RRA considers whether the commission has adopted or moved toward a straight-fixed-variable rate design, under which a greater portion of a company's fixed costs are recovered through the fixed monthly customer charge, thus according the utility greater certainty of recovering its fixed costs.

This is increasingly important in an environment where weather patterns are more volatile, organic growth is limited due to the economy and the proliferation of energy efficiency/conservation programs, and large amounts of non-revenue-producing capital spending is required to upgrade and strengthen the grid.

Fixed vs. variable costs

Fixed	Variable
Depreciation	Gas commodity
Delivery O&M	Electric commodity
Property taxes	Generation O&M
Return on investment	
Customer service	

As of March 25, 2020.
Source: Regulatory Research Associates, an offering of S&P Global Market Intelligence.

In conjunction with the influx of renewables and distributed generation, the issue of how to compensate customer-owners for excess power they put back into the grid has become increasingly important and in some instances controversial. How these pricing arrangements, known as net metering, are structured can impact the ability of the utilities to recover their fixed distribution system costs and by extension their ability to earn their authorized returns.

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Regulated Electric and Gas Utilities – US

FAQ on credit implications of the coronavirus outbreak

What is the primary near-term credit issue for regulated investor-owned utilities arising from the coronavirus outbreak?

The maintenance of sufficient liquidity to weather a prolonged period of financial volatility and turbulent capital markets are the most important credit issue facing US regulated utilities. Liquidity encompasses a company's ability to generate cash from internal sources, as well as the availability of external sources to supplement these internal sources. Utilities are among the largest debt issuers in the corporate universe and typically require consistent access to the capital markets to assure adequate sources of funding and to maintain financial flexibility. During times of distress and when capital markets are exceedingly volatile and tight, liquidity becomes critically important because access to the capital markets may be difficult.

The severity of the coming economic recession will be determined in large part by the scope and duration of the coronavirus pandemic. As a result, utilities may encounter declines in volumes and revenue, as well as increases in bad debt expense if cash-strapped customers are unable to pay their bills. These factors will limit a utility's internal cash flow, which will require greater reliance on external sources of liquidity.

Do utilities currently have access to the capital markets?

Yes, thus far utilities have had relatively strong access. So far in March, utilities have had good access to the capital markets, raising over $20 billion in US investment-grade debt. Tier 1 issuers commercial paper issuers, such as Florida Power & Light Company (A1 stable), NSTAR Electric Company (A1 stable) and Northern Illinois Gas Company (A2 stable), continue to have generally good access to the CP market, albeit at shorter tenors and sometimes on an overnight basis. The commercial paper (CP) market has tightened considerably for Tier 2 issuing companies, such as Spire Inc. (Baa2 stable), The Southern Company (Baa2 stable) and Avangrid, Inc. (Baa1 negative). In an effort to reduce their reliance on the volatile CP market, many companies have taken a variety of measures to bolster their liquidity. Some have entered the bond markets opportunistically to issue long-dated bonds in an effort to capitalize on low rates, while others have used uncommitted lines of credit and entered into short-term bank term loans (e.g., 364-day facilities) to shore up their liquidity position.

We do not view higher leverage related to pre-financing as credit negative because the higher debt load should be temporary. Instead, we view the removal of near-term maturity uncertainty amid capital markets volatility as positive for liquidity, much as we did during the 2007-09 recession.

Exhibit 1

P-1 issuers continue to have better access to the CP market compared to P-2 peers

Short-term ratings for US regulated utilities for the most recent 12 month period (mostly as of the end of 2019) versus their short-term ratings as of the end of 2007

Issuer	Current ST Rating	ST Debt Outstanding as of LTM	2007 ST Rating	ST Debt Outstanding as of FY 2007
Alabama Power Company	P-1	$0	P-1	$0
American Transmission Company LLC	P-1	$263	P-1	$105
Consumers Energy Company	P-1	$90	WR	$0
DTE Electric Company	P-1	$451	P-2	$683
Florida Power & Light Company	P-1	$1,482	P-1	$842
Gulf Power Company	P-1	$155	WR	$45
Madison Gas and Electric Company	P-1	$55	P-1	$61
MidAmerican Energy Company	P-1	$0	P-1	$86
Northern Illinois Gas Company	P-1	$120	P-1	$369
Northern States Power Company (Minnesota)	P-1	$30	P-2	$437
Northern States Power Company (Wisconsin)	P-1	$65	NR	$59
NSTAR Electric Company	P-1	$77	P-1	$257
ONE Gas, Inc	P-1	$517	NR	-
PECO Energy Company	P-1	$0	P-1	$246
Peoples Gas Light and Coke Company	P-1	$28	P-1	$188
Public Service Electric and Gas Company	P-1	$10	P-2	$65
Southern California Gas Company	P-1	$630	P-1	$0
Virginia Electric and Power Company	P-1	$350	P-2	$371
Wisconsin Electric Power Company	P-1	$37	P-1	$354
Wisconsin Public Service Corporation	P-1	$19	P-1	$61
Alliant Energy Corporation	P-2	$364	P-2	$211
Ameren Corporation	P-2	$440	P-2	$1,472
Ameren Illinois Company	P-2	$53	WR	-
American Electric Power Company, Inc.	P-2	$2,838	P-2	$1,167
Atlantic City Electric Company	P-2	$70	P-2	$52
Avangrid, Inc.	P-2	$614	P-2	$138
Baltimore Gas and Electric Company	P-2	$76	P-2	$0
Berkshire Hathaway Energy Company	P-2	$3,214	NR	$130
Black Hills Corporation	P-2	$350	NR	$37
CenterPoint Energy Resources Corp.	P-2	$0	P-3	$299
CenterPoint Energy, Inc.	P-2	$868	NP	$232
Commonwealth Edison Company	P-2	$130	NP	$370
Consolidated Edison Company of New York, Inc.	P-2	$1,137	P-1	$555
Consolidated Edison, Inc.	P-2	$1,692	P-1	$840
Delmarva Power & Light Company	P-2	$56	P-2	$286
Dominion Energy Gas Holdings, LLC	P-2	$322	NR	-
Dominion Energy South Carolina, Inc.	P-2	$565	P-2	$464
Dominion Energy, Inc.	P-2	$911	P-2	$1,757
DTE Energy Company	P-2	$828	P-2	$1,084
DTE Gas Company	P-2	$232	P-2	$454
Duke Energy Corporation	P-2	$3,135	P-2	$1,080
Empire District Electric Company (The)	P-2	$0	P-2	$33
Entergy Corporation	P-2	$1,947	NR	$25
Evergy Kansas Central, Inc.	P-2	$382	WR	$180
Evergy Metro, Inc.	P-2	$205	P-2	$436

Issuer	Current ST Rating	ST Debt Outstanding as of LTM	2007 ST Rating	ST Debt Outstanding as of FY 2007
Evergy Missouri West, Inc.	P-2	$168	NR	$25
Eversource Energy	P-2	$1,260	WR	$79
Exelon Corporation	P-2	$1,370	P-2	$616
Exelon Generation Company, LLC	P-2	$320	P-2	$0
Hydro One Inc.	P-2	$881	P-1	$12
IDACORP, Inc.	P-2	$0	P-2	$186
Idaho Power Company	P-2	$0	P-2	$137
Interstate Power and Light Company	P-2	$108	P-2	$130
ITC Holdings Corp.	P-2	$0	NR	$0
Kentucky Utilities Co.	P-2	$150	WR	$23
Louisville Gas & Electric Company	P-2	$238	NR	$78
New Jersey Natural Gas Company	P-2	$50	P-1	$186
NextEra Energy Capital Holdings, Inc.	P-2	-	NR	-
NiSource Inc.	P-2	$1,773	NR	$1,463
Northwest Natural Gas Company	P-2	$46	P-1	$143
NorthWestern Corporation	P-2	$0	WR	$0
OGE Energy Corp.	P-2	$112	P-2	$296
Oklahoma Gas & Electric Company	P-2	$0	P-1	$349
Oncor Electric Delivery Company LLC	P-2	$46	SGL-2	$1,280
Ontario Power Generation Inc.	P-2	$91	NR	$304
Orange and Rockland Utilities, Inc.	P-2	$30	P-1	$45
PacifiCorp	P-2	$130	P-2	$0
Pepco Holdings, LLC	P-2	$220	P-3	$289
Portland General Electric Company	P-2	$0	P-2	$0
Potomac Electric Power Company	P-2	$82	P-2	$180
PPL Electric Utilities Corporation	P-2	$0	P-2	$41
Public Service Company of Colorado	P-2	$39	P-2	$271
Public Service Enterprise Group Incorporated	P-2	$2,480	P-2	$65
Puget Sound Energy, Inc.	P-2	$176	NR	$260
Questar Gas Company	P-2	$45	WR	$73
San Diego Gas & Electric Company	P-2	$80	P-1	$0
South Jersey Gas Company	P-2	$175	WR	$78
Southern California Edison Company	P-2	$0	P-2	$704
Southern Company (The)	P-2	$2,055	P-1	$1,272
Southern Power Company	P-2	$1,373	P-2	$50
Southwestern Public Service Company	P-2	$0	P-2	$129
Spire Inc.	P-2	$519	NR	$211
Union Electric Company	P-2	$234	P-2	$82
WGL Holdings, Inc.	P-2	$331	NP	$184
Wisconsin Gas LLC	P-2	$266	P-1	$90
Wisconsin Power and Light Company	P-2	$168	P-1	$82
Xcel Energy Inc.	P-2	595	P-2	$1,089

Note: LTM financial data is based on latest 12-month data available.
Source: Moody's Investors Service, SEC Filings

Which companies are most vulnerable to credit pressure as a result of the coronavirus?

The impact of the coronavirus outbreak on utility credit quality will largely depend on the length of the crisis and the severity of the economic recession that we expect will take hold during the first half of this year (see "Global Macro Outlook 2020-21 [March 25, 2020 Update]: The coronavirus will cause unprecedented shock to the global economy"). The economic downturn will pose a challenge for companies with already-weak financial profiles that are trending at or below their respective downgrade thresholds.

The financial cushion that a utility company maintains – often expressed as where the latest 12 month financial credit ratio compares to the published upgrade or downgrade trigger – is always of interest to investors. But our assessment of a utility's credit quality goes beyond a specific ratio as we consider a host of other factors, particularly the regulatory environment in which it operates. Some utilities have financial ratios that reflect the impact of extraordinary developments. For example, Edison International's (Baa3 stable) historical ratios of cash flow from operations before changes in working capital (CFO pre-WC) to debt reflect its extraordinary costs associated with past California's wildfires.

Exhibit 2

Utility companies with weak financial profiles are most vulnerable to the impact of the coronavirus outbreak

Select list of US regulated utility holding companies at or below their downgrade threshold for ratios of CFO pre-WC to debt as of 31 December 2019

Issuer	Rating	Outlook	FY 2019 (CFO Pre-W/C) / Debt	3-Year Average (CFO Pre-W/C) / Debt	Downgrade Threshold	Cushion Between Downgrade Threshold and FY 2019
Edison International	Baa3	Stable	-2%	13%	13%	-15%
Eversource Energy	Baa1	Stable	13%	13%	15%	-2%
Sempra Energy [1]	Baa1	Negative	14%	15%	16%	-2%
CenterPoint Energy, Inc. [2]	Baa2	Stable	13%	16%	15%	-2%
Emera Inc.	Baa3	Stable	10%	10%	12%	-2%
Entergy Corporation	Baa2	Stable	14%	13%	15%	-1%
CMS Energy Corporation	Baa1	Stable	16%	17%	17%	-1%
American Electric Power Company, Inc.	Baa1	Negative	14%	17%	15%	-1%
Pinnacle West Capital Corporation	A3	Negative	20%	22%	21%	-1%
Duke Energy Corporation	Baa1	Stable	15%	14%	15%	0%
FirstEnergy Corp.	Baa3	Stable	11%	13%	11%	0%
NextEra Energy, Inc.	(P)Baa1	Stable	18%	20%	18%	0%
Consolidated Edison, Inc.	Baa2	Stable	13%	15%	13%	0%
Berkshire Hathaway Energy Company	A3	Stable	15%	16%	15%	0%
Public Service Enterprise Group Incorporated	Baa1	Stable	18%	20%	17%	1%
Fortis Inc.	Baa3	Stable	12%	11%	11%	1%
PPL Corporation	Baa2	Stable	13%	13%	12%	1%
Southern Company (The)	Baa2	Stable	15%	15%	14%	1%
DTE Energy Company	Baa2	Stable	16%	17%	15%	1%
Dominion Energy, Inc.	Baa2	Stable	15%	14%	14%	1%

[1] As noted in the 31 Dec 2019 credit opinion, assuming no changes to Sempra's business risk profile, a downgrade of Sempra could occur if the company fails to achieve a ratio of CFO pre-W/C to debt well above 16% in 2020.
[2] As noted in the 27 Feb 2020 credit opinion, CNP's ratio of CFO pre-W/C to debt downgrade threshold may be lowered to below 14% upon completion of the announced sale of its non-regulated business.
Source: Moody's Investors Service, Moody's Financial Metrics

Utilities that have a higher proportion of commercial and industrial (C&I) customers will be hard hit by declining volumes during a pandemic-triggered economic downturn. C&I demand accounts for about 50% of total regulated electric revenue and is far more vulnerable to economic disruptions than residential demand. Utilities with substantial sales to businesses in the tourism, travel and oil & gas sectors are also vulnerable (see "Corporates - Global Heat map: Coronavirus hurts travel-driven sectors, disrupts supply chains, effects compounded with global spread"). While we expect many of the most affected businesses to recover, we are also monitoring the small commercial business customer classes, where volume declines could be slower to recover.

Exhibit 3
ALLETE and Superior are most exposed to industrial customers
Top US regulated utility companies with the highest proportion of industrial customers

Issuer	Rating, Outlook	State	% Industrial customers (by MWh volumes)
ALLETE, Inc.	Baa1, Stable	Minnesota, Wisconsin	74%
Superior Water, Light and Power Company	A3, Stable	Wisconsin	73%
Toledo Edison Company	Baa1, Stable	Ohio	57%
Southwestern Public Service Company	Baa2, Stable	New Mexico, Texas	55%
Northern Indiana Public Service Company	Baa1, Stable	Indiana	54%
Entergy Louisiana, LLC	Baa1, Stable	Louisiana	52%
Mississippi Power Company	Baa2, Positive	Mississippi	50%
Indianapolis Power & Light Company	Baa1, Stable	Indiana	47%

Note: Electricity volumes as of year-end 2018.
Sources: S&P Global Market Intelligence, Moody's Investors Service

How do utilities absorb abrupt declines in volumes or revenues?

Regulatory support is important to recover costs associated with lost volumes, revenue or customers. Some utilities are already somewhat insulated from volume declines thanks to decoupling mechanisms. Revenue decoupling, which is widely used by local gas distribution companies (LDCs), is a ratemaking mechanism that is generally designed to eliminate or reduce the volatility of a utility's revenue on system throughput (i.e., electricity load or natural gas volumes). Decoupling helps insulate utility credit quality by safeguarding against the financial impact of a decline in electricity and natural gas consumption due to factors beyond the utility's control, such as energy efficiency, fluctuations in commodity fuel prices and weather. Because of the regulatory lag in recovering costs under these mechanisms, utilities also need to maintain sufficient liquidity until this recovery materializes.

Bad debt expense or the inability of customers to pay their bills will likely be addressed in several different ways. Many utilities already have a baseline level of bad debt expense, based on historical run-rates, which they already recover through customer rates. Some utilities, such as Oncor Electric Delivery Company LLC (A2 stable), have a bad debt expense rider/tracker that allows the utility to recover these costs in rates in a timely manner. Others may be able to defer the cost on their balance sheet as a regulatory asset and will need to address recovery in their next general rate case.

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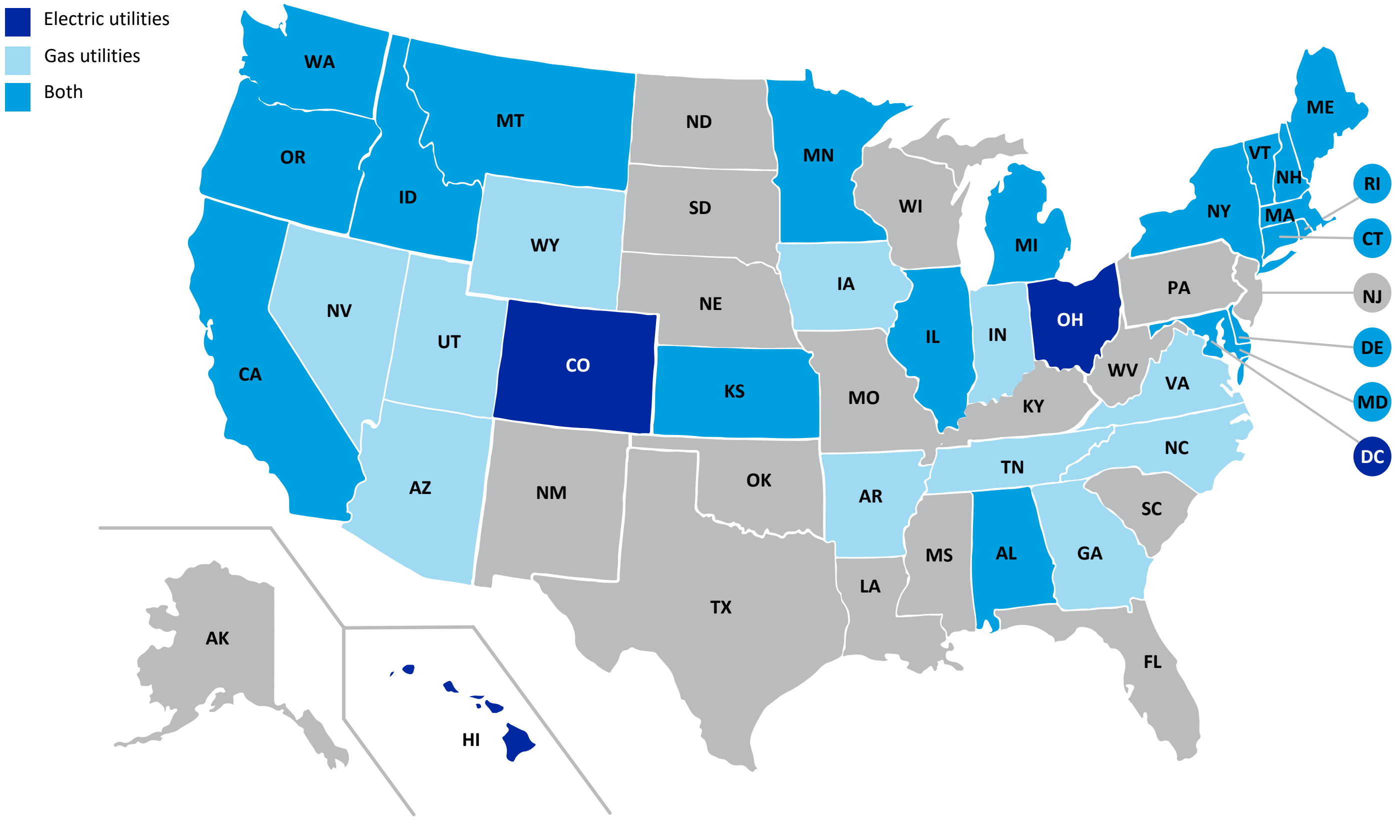
Exhibit 4

Decoupling, widely used by LDCs, is becoming more prevalent among electric utilities

US states with partial or full decoupling revenue recovery mechanisms for electric and gas utilities



Note: See list of utilities with full or partial decoupling mechanisms in the appendix.
Source: Moody's Investors Service, S&P Global Market Intelligence

Appendix

Exhibit 5

Revenue decoupling insulates utilities' revenues due to volume volatility

US regulated utility companies with full or partial revenue decoupling

Issuer	Decoupling (Full/Partial)	Issuer	Decoupling (Full/Partial)
Ameren Illinois Company	Partial	North Shore Gas Company	Partial
Arizona Public Service Company	Partial	Northern Illinois Gas Company	Partial
Avista Corp.	Full/Partial	Northern Indiana Public Service Company	Partial
Baltimore Gas and Electric Company	Full	Northern States Power Company (Minnesota)	Partial
Berkshire Gas Company	Full	Northern Utilities, Inc.	Partial
Black Hills Corporation	Full	Northwest Natural Gas Company	Partial
Black Hills Power, Inc.	Partial	NSTAR Electric Company	Full
CenterPoint Energy Resources Corp.	Full/Partial	Ohio Power Company	Partial
Central Hudson Gas & Electric Corporation	Full	Oklahoma Gas & Electric Company	Partial
Central Maine Power Company	Full	Orange and Rockland Utilities, Inc.	Full
Cleco Power LLC	Partial	PacifiCorp	Partial
Connecticut Light and Power Company (The)	Full	Peoples Gas Light and Coke Company	Partial
Connecticut Natural Gas Corporation	Full	Piedmont Natural Gas Company, Inc.	Full/Partial
Consolidated Edison Company of New York, Inc.	Full	Portland General Electric Company	Partial
Consumers Energy Company	Partial	Potomac Electric Power Company	Full/Partial
Dayton Power & Light Company	Partial	Public Service Co. of North Carolina, Inc.	Full
Delmarva Power & Light Company	Full	Public Service Company of Colorado	Partial
Dominion Energy South Carolina, Inc.	Partial	Public Service Company of New Hampshire	Partial
DTE Gas Company	Partial	Public Service Company of Oklahoma	Partial
Duke Energy Indiana, LLC.	Partial	Public Service Electric and Gas Company	Partial
Duke Energy Kentucky, Inc.	Partial	Puget Sound Energy, Inc.	Partial
Duke Energy Ohio, Inc.	Partial	Questar Gas Company	Full/Partial
Elizabethtown Gas Company	Partial	Rochester Gas & Electric Corporation	Full
Entergy Arkansas, LLC	Partial	San Diego Gas & Electric Company	Full
Entergy Louisiana, LLC	Partial	Sierra Pacific Power Company	Partial
Entergy Mississippi, LLC	Partial	South Jersey Gas Company	Full
Entergy New Orleans, LLC.	Partial	Southern California Edison Company	Full
Evergy Kansas Central, Inc.	Partial	Southern California Gas Company	Full
Evergy Metro, Inc.	Partial	Southern Connecticut Gas Company	Full
Evergy Missouri West, Inc.	Partial	Southern Indiana Gas & Electric Company	Full/Partial
Fitchburg Gas & Electric Light Company	Full	Southwest Gas Corporation	Full
Hawaiian Electric Company, Inc.	Full	Southwestern Electric Power Company	Partial
Indiana Gas Company, Inc.	Full	Spire Alabama Inc.	Partial
Indiana Michigan Power Company	Partial	Spire Missouri Inc.	Partial
Indianapolis Power & Light Company	Partial	Tucson Electric Power Company	Partial
Kentucky Power Company	Partial	Union Electric Company	Partial
Kentucky Utilities Co.	Partial	United Illuminating Company	Full
Louisville Gas & Electric Company	Partial	Unitil Energy Systems, Inc.	Partial
Mississippi Power Company	Partial	UNS Electric, Inc.	Partial
Nevada Power Company	Partial	UNS Gas, Inc.	Partial
New Jersey Natural Gas Company	Full	Washington Gas Light Company	Partial
New York State Electric and Gas Corporation	Full	Yankee Gas Services Company	Full

Source: Moody's Investors Service, S&P Global Market Intelligence

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Moody's related publications

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- Global Macro Outlook 2020-21 (March 2020 Update): Coronavirus will hurt economic growth in many countries through first half of 2020, March 2020
- Regulated electric and gas utilities – US: 2020 outlook moves to stable on supportive regulation, weaker but steady credit metrics, November 2019

Sector Comments

- Regulated Electric, Gas and Water Utilities - US: Utilities demonstrate credit resilience in the face of coronavirus disruptions, March 2020
- Regulated electric utilities – North America: Bill proposing fines for power shutoffs is credit negative for California utilities, January 2020
- Regulated electric and gas utilities – US: California's wildfire fund is sufficiently capitalized to pay out claims, November 2019
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- Regulated electric and gas utilities – US: Grid hardening, regulatory support key to credit quality as climate hazards worsen, March 2020
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- Regulated Utilities and Power - US: PG&E bankruptcy highlights environmental, social and governance risks in California, February 2019

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

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Rating Action: Moody's assigns Baa3 rating to Pacific Gas & Electric's first mortgage bonds and B1 rating to PG&E Corp's senior secured debt; outlooks stable

15 Jun 2020

Over $32 billion of debt securities rated

New York, June 15, 2020 -- Moody's Investors Service (Moody's) assigned a Ba2 Corporate Family Rating (CFR), Ba3-PD Probability of Default Rating (PDR) and SGL-2 Speculative Grade Liquidity Rating to PG&E Corporation (PCG or parent). Moody's also assigned a B1 rating to PCG's approximately $4.75 billion senior secured (stock pledge only) debt.

At the same time, Moody's assigned a Baa3 rating to Pacific Gas & Electric Company's (PG&E or utility) senior secured debt. PG&E's secured debt includes approximately $9.6 billion of reinstated senior secured first mortgage bonds, approximately $11.9 billion of exchanged senior secured first mortgage bonds, and approximately $5.9 billion of new, incremental first mortgage bonds. Moody's also assigned a B1 rating to PG&E's $252 million of preferred stock. The rating outlooks for PCG and PG&E are stable.

As part of the plan of reorganization, PG&E's capital structure includes about $9.6 billion of reinstated pre-petition debt, approximately $11.9 billion of exchanged debt as amended in the restructuring support agreement, incremental new first mortgage bond debt of about $5.9 billion and a $6 billion of temporary secured term loan debt that is pari passu to the utility's first mortgage bonds. The reinstated and exchanged bonds were previously senior unsecured but are now senior secured first mortgage bonds upon emerging from bankruptcy. To the extent the temporary debt is in the form of short-dated bonds rather than a term loan, these bonds would also be pari passu to the first mortgage bonds, and therefore rated Baa3. PG&E expects to refinance this temporary debt with wildfire claim securitization bonds in the first half of 2021 if such bonds are approved by the California Public Utilities Commission (CPUC).

All of the debt in PG&E's capital structure is secured on a first lien basis by substantially all of the utility's real assets and certain tangible assets. The parent's $4.75 billion senior secured debt issuance could be in the form of either term loans or notes, secured in this case by a pledge of the stock of PG&E. All of the proceeds received as part of the debt issuances will be held in escrow until PCG and PG&E emerge from bankruptcy. The parent's term loan will be held at PG&E Corp Term Loan B Escrow temporarily until emergence. We note that PCG will be required to issue $9 billion of new equity as part of its emergence plan and, while an equity backstop commitment exists, challenges in executing this transaction remain. The successful execution of the equity issuance is assumed and incorporated in the organization's ratings. The ratings also incorporate our expectation that the company will receive plan confirmation from the bankruptcy court by June 30, 2020 and PG&E exits bankruptcy soon thereafter with full participation in the wildfire insurance fund established by AB 1054. Failure to receive plan confirmation will result in a redemption of the new debt.

Assignments:

..Issuer: PG&E Corporation

.Corporate Family Rating, Assigned Ba2

.Probability of Default Rating, Assigned Ba3-PD

.... Speculative Grade Liquidity Rating, Assigned SGL-2

.Senior Secured Debt, Assigned B1 (LGD5)

..Issuer: Pacific Gas & Electric Company

.Senior Secured Debt, Assigned Baa3 (LGD2)

.Preferred stock, Assigned B1 (LGD5)

Outlook Actions:

..Issuer: PG&E Corporation

....Outlook, Assigned Stable

..Issuer: Pacific Gas & Electric Company

....Outlook, Assigned Stable

RATINGS RATIONALE

"PG&E's ratings reflects several challenges that lie ahead for the company as it exits its second bankruptcy in the last two decades," said Jeff Cassella, VP-Senior Credit Officer. "These challenges include the substantial task of limiting wildfires in the face of rising wildfire risks largely due to climate change as well as building trust with key stakeholders including state regulators, policymakers and customers," added Cassella.

The Ba2 CFR assigned to PCG considers PG&E's position as a large, fully regulated utility operating solely within the state of California. We view the California political and regulatory environment to be unique and more complicated compared to other state regulatory jurisdictions, in large part due to the California utilities' continuing exposure to wildfire risk, an important ESG consideration and a key driver of the organization's credit quality. While the regulatory framework offers several supportive cost recovery mechanisms, like decoupling, a forward test year and above average rates of return, inverse condemnation risk is unique to California utilities.

The Baa3 rating on PG&E's first mortgage bonds and other secured debt reflects the strong security provided by the first lien on substantially all of the utility's real assets. Upon exit from bankruptcy, PG&E's secured debt will total approximately $33 billion, representing about 50% of the book value of the company's assets and about 75% of rate base. The investment grade rating on the utility's secured debt reflects not only its senior position in the organization's capital structure, but also the substantial security provided by the utility's essential electric and gas transmission, distribution and generation assets.

PCG's ratings incorporate this more onerous political and legislative environment, the continued high degree of exposure to wildfires and the potential for future wildfire costs to be incurred by the utility under inverse condemnation. The possibility for additional wildfire events remains high due to both climate change and population growth in high fire-threat areas. However, the financial impact of future wildfire events should be mitigated by PG&E's participation in California's recently established wildfire insurance fund as well as the new, but untested, regulatory cost recovery framework outlined by AB1054[1], the wildfire bill passed by the state legislature and approved by the Governor in 2019.

AB1054 did not eliminate or alter the application of inverse condemnation, so California utilities are still responsible for paying wildfire victims for wildfire damages, regardless of fault. However, the law improves utility liquidity and enhances their ability to recover wildfire costs from ratepayers by making the prudency standard more favorable and capping the cost disallowance related to wildfire claims to 20% of T&D equity rate base over any three-year period.

Over the next three years, we expect PCG's ratio of cash flow from operations pre-working capital changes (CFO pre-W/C) to debt to be in the 12-15% range and utility PG&E's ratio of CFO pre-W/C to debt to be in the 14-16% range, including planned wildfire claim securitization bonds as on-credit debt. We expect some improvement in the companies' financial profiles through increased cash flow generation and debt reduction, particularly at the parent level. Upon exit, holding company debt will represent about 12% of consolidated debt. However, we expect holdco debt to steadily decline as the company plans to pay down this debt meaningfully over the next five years.

We acknowledge that PCG's credit metrics generally reflect a financial profile that is typically commensurate with a low investment-grade rated utility holding company. However, financial metrics alone are not representative of PCG's overall credit risk profile because of the elevated political risk and legal challenges that continue to persist. These include the company being on probation because of the 2010 San Bruno pipeline explosion, that will continue after the bankruptcy exit, highlighting the company's history of safety and governance issues. In addition, the utility needs to continue to invest heavily in hardening its grid and bolstering its wildfire risk mitigation efforts within its service territory. This will be an ongoing process in the face of climate change and extreme weather events and largely offsets the relatively strong financial metrics.

ESG considerations are a key driver of both PCG and PG&E's ratings and primarily focus on the elevated environmental risk that arises from the organization's significant exposure to wildfires that ultimately lead to its bankruptcy filing last year. PG&E's equipment has been found to be the cause of several major fires over the last few years. The wildfires, which the state of California believes is partly driven by climate change, have added to the state's urgency to combat climate change. Although the state has added significant protection with the aforementioned wildfire insurance fund, the negative financial impact of wildfires could continue to undermine the utility's financial stability and make it more difficult to carry out its decarbonization mandates to combat climate change.

Aside from wildfires, PG&E has moderate carbon transition risk compared to the rest of the US regulated sector due partly to the utility's exit from coal-fired generation many years ago. Additionally, over the long-term, PG&E continues to transition to a pure T&D utility as it self-generates only about half of its electric load with the remaining sourced through purchased power agreements. California's public policy response to climate change issues, which includes aggressive carbon targets and renewable portfolio standards as well as other developments such as community choice aggregators and the growth of rooftop solar, have created additional risk and uncertainty for utilities.

From a generation standpoint, less than 18% of PG&E's 2019 electric load was supplied by owned natural gas power plants. About 43% of its electric load was supplied through power purchase agreements, the majority of which are with renewables and hydro facilities, a positive ESG consideration. The remaining approximately 40% of its electric load was largely self-generated and consisted mostly of nuclear and hydro power.

Our credit analysis of PCG and PG&E also incorporates social risks primarily related to health and safety, demographic and societal trends, as well as customer relations as the company works to provide reliable and affordable service to customers and safe working conditions to employees. Taking into account PG&E's history of safety problems, including the San Bruno pipeline incident, infrastructure linked to wildfire ignitions and the impact of public safety power shutoffs on customers, PG&E has higher social risks compared to the typically moderate social risks experienced by most regulated electric and gas utility peers.

The coronavirus outbreak, weak global economic outlook and asset price declines are creating a severe and extensive credit shock across many sectors, regions and markets. The combined credit effects of these developments are unprecedented. We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety.

We expect PG&E to be resilient to recessionary pressures related to the coronavirus because of its rate-regulated business model and regulatory mechanisms such as decoupling revenues. Nevertheless, we are watching for electricity and gas usage declines, utility bill payment delinquency, and the regulatory response to counter these effects on earnings and cash flow. As the events related to the coronavirus continue, we are taking into consideration a wider range of potential outcomes, including more severe downside scenarios. We note that California's moratorium on utility disconnections until April 2021 is one of the longest in the US, which could result in PG&E of having higher than average customer bill payment delinquencies compared to peers. The effects of the pandemic could result in financial metrics that are weaker than expected; however, we see these issues as temporary and not reflective of the long-term financial or credit profile of PCG.

As for governance, we consider PCG's management and financial strategy to be in a period of transition and uncertainty as the company exits from bankruptcy and recently added 11 new members to its 14-person Board of Directors while also searching for a permanent CEO as the current CEO is set to retire on June 30, 2020.

Liquidity

PCG's SGL-2 speculative grade liquidity (SGL) rating reflects a good liquidity profile supported by relatively stable cash flow generation and a high degree of availability under external credit facilities. After the bankruptcy exit, we expect PG&E to generate negative free cash flow as capital expenditures remain significant as the utility continues to invest heavily in wildfire mitigation. PCG's liquidity will be bolstered by the company's inability to distribute common stock dividends to shareholders until it achieves a specific earnings target, which we do not expect to occur until 2023.

We project PCG to have about $250 million of cash on the balance sheet upon exit and full access to $4 billion of revolving credit facilities. The credit facilities include PCG's $500 million senior secured (stock pledge only) revolver and PG&E's $3.5 billion senior secured (all asset pledge) revolver, which includes a $1.5 billion letter of credit sublimit. Both facilities three years after the date of emergence, but each has two one-year extension options with lenders approval. If bill payment delinquencies or under-collections continue to rise due to the coronavirus pandemic, we expect the company may need to draw on its revolving credit facilities to cover cash flow shortfalls.

These facilities do not include a material adverse change clause. The PCG credit facility has two financial maintenance covenants including a limit on debt to capitalization of no more than 70% and solely to the extent the credit facility is drawn as of the end of any quarter, a minimum cash coverage ratio of at least 1.5x prior to the date of the first dividend declaration and of at least 1.0x thereafter. The PG&E credit facility only has one financial maintenance covenant which limits the debt to capitalization ratio to no more than 65%.

Outlook

PCG and PG&E's stable outlooks reflect our expectation that the utility will reduce wildfire risks and liabilities in its service territory through its significant wildfire mitigation investments and better maintenance of its infrastructure. The stable outlook also reflects our view that the California regulatory and legislative environment will remain unique and complicated, but ultimately credit supportive of the state's utilities, including the operation of the wildfire insurance fund during the next and future wildfire seasons. The stable outlook also incorporates our expectation that the companies' financial profiles will slowly strengthen through increased cash flow generation and holding company debt reduction.

FACTORS THAT COULD LEAD TO AN UPGRADE OR DOWNGRADE OF THE RATINGS

Factors that could lead to an upgrade

Because of the pending changes at the Board and senior management, execution risk related to planned equity issuance, and a lack of a track record after exiting from bankruptcy, an upgrade of PCG or PG&E's ratings is unlikely in the near term. Positive rating momentum could occur if PG&E is successful in its wildfire mitigation investments and is able to reduce both wildfire risk and potential liabilities. At the same time, positive rating momentum could occur as a result of a material strengthening of the organization's financial profile from improved cash flow generation and debt reduction, particularly at the parent.

Factors that could lead to a downgrade

PCG and PG&E's ratings could be downgraded if the company is not successful in reducing wildfire risks in its service territory, wildfire liabilities increase materially as a result of new fires, or if there is a failure by state regulators to successfully implement the provisions of AB 1054, including the liability cap, improved prudency standards and access to the wildfire insurance fund, in a consistent and credit supportive manner. Downward rating pressure could also occur if the companies' financial profiles deteriorate such that PCG's ratio of CFO pre-W/C to debt is sustained below 10% or if PG&E's ratio of CFO pre-W/C to debt is sustained below 13%.

PG&E Corporation is a regulated utility holding company headquartered in San Francisco, California that conducts nearly all of its business through Pacific Gas and Electric Company, a regulated vertically integrated utility serving northern and central California. PG&E is regulated by the California Public Utilities Commission and by the Federal Energy Regulatory Commission. PCG and PG&E are expected to exit from their Chapter 11 bankruptcy filing in July 2020. Upon emergence, PCG's assets are expected to be over $85 billion with total reported debt of approximately $38 billion. PG&E serves approximately 5.4 million electric distribution customers and 4.5 million natural gas customers.

The principal methodology used in these ratings was Regulated Electric and Gas Utilities published in June 2017 and available at https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_1072530 . Alternatively, please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

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Moody's general principles for assessing environmental, social and governance (ESG) risks in our credit analysis can be found at https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_1133569 .

At least one ESG consideration was material to the credit rating action(s) announced and described above.

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REFERENCES/CITATIONS

[1] Assembly Bill 1054 - California Legislature website 12-Jul-2019

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Credit Conditions North America:

Unprecedented Uncertainty Slams Credit

March 31, 2020

(Editor's Note: S&P Global Ratings' Credit Conditions Committees meet quarterly to review macroeconomic conditions in each of four regions (Asia-Pacific, Emerging Markets ex-Asia, North America, and Europe). Discussions center on identifying credit risks and their potential ratings impact in various asset classes, as well as borrowing and lending trends for businesses and consumers. This commentary reflects views discussed in the North America committee on March 25, 2020. Given the fluidity of current conditions, we have chosen to publish a truncated version of our usual article this quarter.)

Key Takeaways

- **Overall**. The U.S. and Canadian economies have plunged into what will likely be historically severe recessions, with evaporating liquidity plaguing both corporate borrowers and the real economy. With the COVID-19 pandemic continuing to spread, predicting an end to this period of unprecedented uncertainty is fraught with variables.
- **Risks.** With coronavirus-containment measures hammering the U.S. labor market—almost 3.3 million Americans filed jobless claims in one week, by far a record—the concomitant demand shock threatens to prolong the economic slump and stifle an expected second-half recovery.
- **Credit.** Historically low interest rates and massive government stimulus are helping to bolster financial markets, but slumping cash flows and tight financing conditions are pressuring the credit quality of issuers across our rating practices; S&P Global Ratings has taken roughly 350 ratings actions on borrowers in North America at least partially due to the coronavirus outbreak's effects.

Credit Conditions in North America look set to remain extraordinarily difficult for borrowers at least into the second half of the year, with the economic stop associated with coronavirus-containment measures continuing with no clear end in sight. Intense pressure on the credit quality of borrowers worldwide won't soon subside, as cash flows slump and financing conditions materially diverge between investment- and speculative-grade borrowers.

Though our base case sees GDP growth rebounding in the second half as consumer demand revives and firms rush to fill back orders and restock inventories, much economic activity that depended on household discretionary spending will be lost permanently—with risk to the downside increasing in conjunction with escalating unemployment. Residual scars could linger, especially if social distancing becomes a "new normal" and/or business and consumer spending doesn't bounce back.

Economic conditions. With almost 200 million Americans directed to stay at home, the longest economic expansion in U.S. history has come to an abrupt halt. We forecast GDP will shrink 2.1% in the first quarter and a massive 12.7% in the second. The unemployment rate could exceed 13% in May, which would be the highest on record, going back to 1948. Even a strong second-half rebound won't be enough to get the world's biggest economy back to even for the year. We now expect a full-year contraction of 1.3% before the economy regains its growth path next year.

Roughly 3.3 million Americans filed initial jobless claims in the week ended March 20—almost five times the 1982 record high. This comes as a massive pullback in discretionary spending looks set to lead to the sharpest quarterly contraction in consumer outlays on record for April-June. In addition, we expect business investment and trade to shrink by the most since the Great Financial Crisis. And while we continue to forecast a U-shaped recovery in the second half, the path and severity of the coronavirus outbreak will dictate when the rebound will start.

The Federal Reserve has responded by slashing benchmark borrowing costs to effectively zero and announcing a slew of emergency measures to inject liquidity into the financial system and ensure the orderly functioning of markets—pledging to use "its full range of tools to support the economy." On the fiscal side, lawmakers have agreed to a $2 trillion stimulus package meant to address widespread health and economic problems created by the outbreak.

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While all of this will likely help, our assessment of the U.S. economy is dour across most private sectors. Indeed, it's not clear that the monetary and fiscal stimuli will fully offset the drag on economic activity. How much GDP contracts really hinges on when and how strongly consumer demand comes back to life, which, in turn, depends on the duration of containment/mitigation policies. In our deep-recession scenario, the possible economic damage would far exceed the Great Recession.

Similarly, we now forecast a full-year contraction in Canada's GDP, down 2% with a material increase in unemployment, as the economy is battered on two fronts: the effects of the COVID-19 pandemic and the tumble in oil prices. Rail blockades and the global recession will only make it worse. The Canadian economy is also more vulnerable to a drying up of international trade than its southern neighbor is, nor was the trend of GDP growth as strong as the U.S.' heading into the crisis.

Regionally, it's worth noting that the economic damage associated with the outbreak is nonlinear. That means, for example, that if containment takes twice as long as expected, the economic damage will be more than twice as bad. Therefore, recovery could take longer and be weaker (with more lost output) than projected.

Financing conditions. The lending environment in the U.S. has turned sharply negative. With a recession in full swing and expected to deepen in the second quarter, further credit market deterioration is expected, particularly for speculative-grade borrowers. As is typical of a recession, borrowing costs will likely remain elevated, keeping bond and loan issuance largely subdued. Extraordinary stimulus measures by the Fed will likely help bolster liquidity, but the benefits will be largely, if not exclusively, enjoyed by investment-grade issuers until the economic recovery takes hold. We expect defaults to increase markedly this year, which will further constrain a largely frozen issuance environment for weaker borrowers.

Before this latest crisis, a long stretch of low interest rates, combined with investors' thirst for yield, enabled more firms to increase leverage or to issue rated debt for the first time. In fact, the number of spec-grade issuers grew 44% in the past decade. This is important because lower ratings typically suffer more downgrades during downturns than higher ratings do. Our Negative Bias—the proportion of issuers with negative outlooks or on CreditWatch with negative implications—has risen considerably, to about 24% from 19% before this crisis. Further, 30% of spec-grade borrowers are rated 'B-' or lower—an all-time high. This is a level at which we see higher incidences of not only downgrades but defaults.

Sector trends. Borrowers face adversity on three fronts: the sudden stop in the global economy, the collapse in oil prices, and record volatility in the capital markets. Together, these conditions are putting significant pressure on borrowers' creditworthiness and will undoubtedly lead to increased defaults, with the magnitude of the effects varying substantially by industry, geography, and rating level. Currently, we expect the default rate to hit 10% by year-end, as collapsing demand from social distancing measures strains working capital, free operating cash flow, and liquidity; particularly for the weakest borrowers in the most at-risk industries.

Industries most exposed to the collapse in global demand—e.g., airlines, transportation, retail, gaming/casinos, lodging, oil and gas—or those heavily dependent on cross-border supply chains are likely to suffer most, both from slumping cash flows and much tighter financing conditions. S&P Global Ratings has already taken roughly 350 ratings actions on borrowers in North America at least partially due to the coronavirus outbreak's effects (see charts 1 and 2). Notably, the ratings on two large U.S. corporations—Ford Motor Co. and Delta Airlines Inc.—have slipped into speculative-grade. Both are vulnerable to slumping demand as consumer confidence crashes and job losses mount.

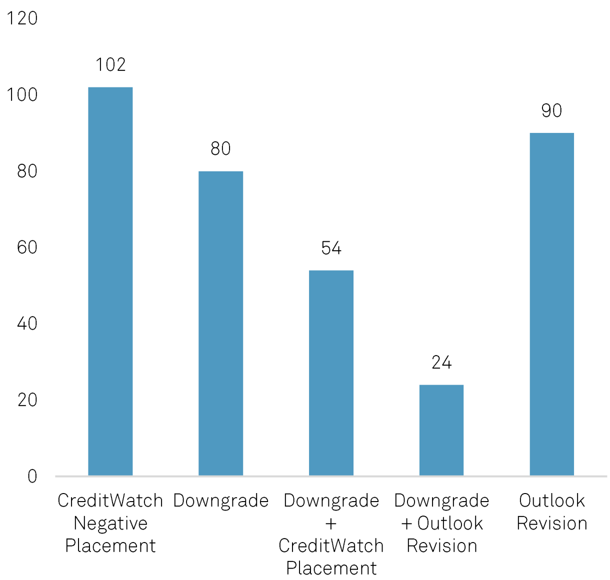
Protracted uncertainty regarding demand and supply/production disruptions are adding downside pressure to credit metrics across the rating spectrum. In terms of specific rating levels, we expect that companies rated 'B' and below will come under the most pressure, as these low ratings indicate higher vulnerability to adverse business and financial, and economic conditions. By contrast, we expect entities with investment-grade ratings to exhibit stronger resilience and have more flexibility to absorb the effects of a global recession—although this isn't to say we don't expect a certain number of rating actions on these companies, particularly for those in sectors most exposed to the economic disruption.

Meanwhile, companies' draws on bank credit facilities have surged and could exceed those during the Great Financial Crisis. But most banks are, in our view, better-positioned than they were then to handle this. Based on year-end 2019 data, banks subject to the liquidity coverage ratio (or LCR, a rule requiring them to hold enough high-quality liquid assets to cover cash outflows for 30 days) assumed that about $550 billion would be drawn. Banks have about $2.9 trillion of assets to withstand these draws—so even if borrowers draw the full $550 billion, banks' median LCR would still be close to required levels. Moreover, bank-deposit inflows have been robust, and the Fed's new round of quantitative easing should boost deposit levels further. And when borrowers draw on revolving credit lines, they typically deposit the funds in the banks whose lines they used.

Banks also have access to liquidity either by borrowing from the Federal Home Loan Bank or the discount window (with now longer payback terms). Moreover, the Fed has put in place facilities to help investment-grade corporates borrow without having to tap existing credit lines: the Commercial Paper Funding Facility, which helps them issue short-term commercial paper for working capital purposes; and the Primary Market Corporate Credit Facility, which helps them issue longer-term bonds.

Chart 1

North America COVID-19-Related Rating Actions As Of March 27, 2020

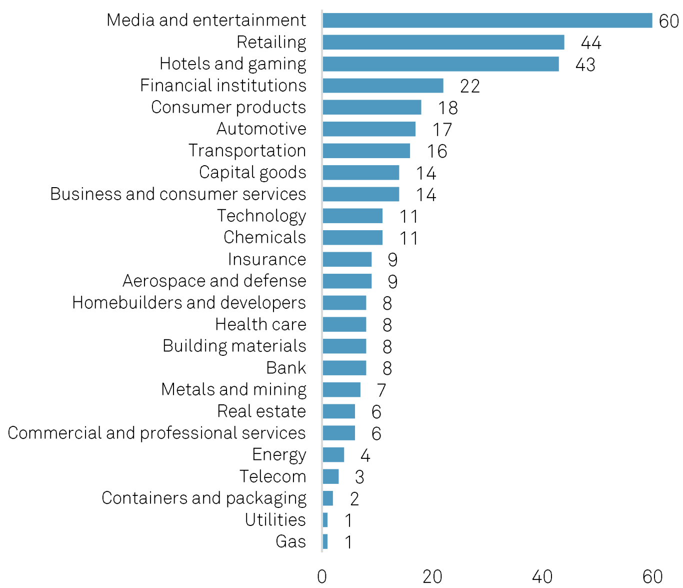


Note: These 350 rating actions pertain to ratings where we mention COVID-19 as one factor or in combination with others.

Source: S&P Global Ratings. COVID-19: Coronavirus-Related Public Rating Actions On Corporations And Sovereigns To Date, March 30, 2020.

Chart 2

North America COVID-19-Related Rating Actions By Sector As Of March 27, 2020



Note: These 350 rating actions pertain to ratings where we mention COVID-19 as one factor or in combination with others.

Source: S&P Global Ratings. COVID-19: Coronavirus-Related Public Rating Actions On Corporations And Sovereigns To Date, March 30, 2020.

S&P Global Ratings acknowledges a high degree of uncertainty about the rate of spread and peak of the coronavirus outbreak. Some government authorities estimate the pandemic will peak about midyear, and we are using this assumption in assessing the economic and credit implications. We believe the measures adopted to contain COVID-19 have pushed the global economy into recession (see our macroeconomic and credit updates here: www.spglobal.com/ratings). As the situation evolves, we will update our assumptions and estimates accordingly. "Coronavirus Impact: Key Takeaways From Our Articles" periodically summarizes our latest research related to COVID-19.

This report does not constitute a rating action.

Appendix 1: Top North America Risks

Table 1

Top North America Risks

Coronavirus outbreak widens substantially in the U.S.

Risk level*	Very low	Moderate	Elevated	**High**	Very high	Risk trend**	Improving	Unchanged	**Worsening**

Some government authorities estimate the pandemic will peak about midyear. However, should this prove not to be the case, then a protracted and more prolonged period of coronavirus-containment measures will further amplify the current U.S. economic recession. Our base case assumes GDP growth rebounding in the second half as consumer demand revives and firms rush to fill back orders and restock inventories. Absent this bounce back, economic activity dependent on increased household discretionary spending will be lost—spilling over into hardening unemployment. The drag on business activity and cash-flow for borrowers across S&P Global Ratings could thus persist into 2021.

Stresses on corporate funding continue to pressure credit quality

Risk level*	Very low	Moderate	Elevated	**High**	Very high	Risk trend**	Improving	Unchanged	**Worsening**

Recent financial-market volatility underscores the liquidity and financing risks that many highly leveraged borrowers face. Fiscal stimulus and moves by the Federal Reserve to slash interest rates, repair market liquidity, and reinvigorate credit across the borrower universe may all help, but corporate bond spreads have widened sharply, especially at the speculative-grade level where issuance has all but disappeared. The build-up in corporate debt over the past decade has led to a concentration of investment-grade ratings in the 'BBB' category and spec-grade ratings in the 'B' category. In this light, investors and regulators are focused on transition and liquidity risk.

Oil-price decline hurts Canada and U.S.

Risk level*	Very low	Moderate	Elevated	**High**	Very high	Risk trend**	Improving	Unchanged	**Worsening**

Diminished global demand prospects coupled with the plunge in oil prices amid the OPEC-Russia squabble casts a shadow over the economies of Canada and the U.S.—both of which are net oil exporters. Not only will the price collapse put the oil and gas industry to the test, it may also hurt related sectors while weighing on oil-producing provinces/states.

Trade disputes cloud world growth

Risk level*	Very low	Moderate	Elevated	**High**	Very high	Risk trend**	Improving	**Unchanged**	Worsening

As companies and markets turn their focus to coronavirus, trade concerns have become less pronounced—though the uncertainty overhang continues to weigh on business confidence and growth forecasts. The "Phase One" deal between the U.S. and China doesn't fully address the dispute over technology, intellectual property, and market access, with the economic headwinds from the COVID-19 potentially hindering China's ability to fulfill its 2020 Phase One pledge. As such, trade tension can potentially reemerge and coincide the U.S. presidential election cycle. Meanwhile, the U.S. and Europe remain in disagreement over digital-services taxes, which may again exacerbate tensions.

Cybersecurity threats to business activity

Risk level*	Very low	Moderate	**Elevated**	High	Very high	Risk trend**	Improving	**Unchanged**	Worsening

Increasing global interconnectedness means cyber risk poses a systemic threat and significant single-entity risk. As cyberattacks become more sophisticated, new targets and methods are emerging. Companies and governments face the risk of criminal, proxy, and direct state-sponsored cyber-attacks. This has led to a fast-growing cyber-insurance market, though insured losses from cyber-attacks are still small compared with economic losses.

Sources: S&P Global Ratings.

* **Risk levels** may be classified as very low, moderate, elevated, high, or very high, and are evaluated by considering both the likelihood and systemic impact of such an event occurring over the next one to two years. Typically these risks are not factored into our base case rating assumptions unless the risk level is very high.

** **Risk trend** reflects our current view on whether the risk level could increase or decrease over the next 12 months.

Appendix 2: COVID-19 Impact On North America Sectors

For analytical contacts, please see Appendix 4.

Table 2

COVID-19 impact on North America sectors

Sector	Impact*	Comment
Aerospace & Defense	High	The chilling effect of COVID-19 on air travel and the global economy will likely lead to order deferrals and cancellations. Cutbacks in airline capacity because of significant declines in air travel have reduced demand for aftermarket parts and services. Commercial aerospace companies will experience pressure in earnings and cash flow, and in turn see a reduction in headcount, furloughing employees, and other actions to offset some of the impact. Defense contractors are much less affected near-term.
Autos	High	Prolonged muted prospects for auto sales globally as the virus has impaired consumer discretionary spending this year. Specifically, we project that sales will decline 15%-20% in the U.S. Aftermarket suppliers are also under pressure, given less driving and sharply reduced consumer spending. Automakers have announced temporary production shutdowns and have switched to liquidity protection mode. However, during a complete production shutdown, a company's ability to cover its fixed costs deteriorates sharply, which would lead to faster cash burn.
Building Materials	Medium	Supply chain risks from China have largely abated with good logistics and higher costs, so that inventories are stocked in western Europe and North America ahead of a sharp drop in demand in the important spring and summer selling seasons. Even though the total manufactured products exposure is 15-20%, various components could still cause a backup in output.
Capital Goods	Medium	There has been direct impact from supply chain disruption as most issuers have facilities in China. From a demand standpoint, it is a growing concern as some issuers have meaningful exposure in China and outside the U.S. Company margins will likely suffer for 2020 due to lower production volumes and incremental operating expenses stemming from the effects of the COVID-19 pandemic.
Chemicals	High	The pandemic and related recessionary conditions we expect across the globe will reduce demand this year for most chemical products. Exceptions to this reduction will include chemicals used in sanitation, and similar applications. We expect demand declines from key end markets including auto, and general industrial to reduce demand for both commodity and specialty chemicals, although commodity petrochemicals may be hit harder. Our base case considers a decline in EBITDA for many chemical companies relative to 2019, and a related weakening in credit metrics, which will create downward pressure on credit quality in general.
Consumer Products	Medium	We expect a divergence in performance of sectors in the consumer products universe in the short term. U.S. consumer products companies in shelf-stable foods, home-cleaning products, and personal care are well-positioned to benefit from shelter-in-place mandates and consumers' health concerns. We believe this will have a modest positive impact on credit quality. This is attributable to the initial spike in demand from pantry loading and consumers now replenishing at a rapid rate because of shift to at-home consumption. That said, there is heightened risks for sectors exposed to social activity and discretionary spending. COVID-19 has heightened the risk of rating downgrades for consumer discretionary issuers, reduced revenues, and tight leverage headroom. Issuers with links to the retail and restaurant sectors are vulnerable.
Financial Institutions	Medium	The Fed's return to quantitative easing, zero interest rates, and commercial paper (CP) funding and primary dealer credit facilities should bolster market and bank liquidity, lowering the probability banks will face liquidity strains resulting from the coronavirus crisis and bolstering their ability and willingness to meet client demands for funding. Still, the crisis and ultra-low interest rates could lead to substantially lower earnings and significantly worse asset quality, particularly in industries more affected by the virus outbreak.
Forest Products	Medium	The impact has been limited because this is a highly automated industry often in remote areas or small urban centers in the U.S. and Canada, but has become a growing concern as we start to see a trickling effect that hinders commodity demand.

		There is a greater risk of deficit and increased draws on credit facilities, mainly tied to the current uncertain macroeconomic, notably linked to COVID-19 and the potential for logistical disruptions.
Gaming, Leisure & Lodging	High	Given the rapid increase in reported restrictions, the travel downturn could persist into the second quarter. Containment may occur by the end of the second quarter followed by a slow recovery. Restrictions on travel and consumer activity for a prolonged period is causing cancellations and an unprecedented decline in revenue at travel-related companies and out-of-home entertainment providers. Gaming operator and gaming equipment sectors are facing an unprecedented decline in revenue resulting from the temporary closures of casinos across the U.S.
Health Care & Pharmaceuticals	Medium	We anticipate limited rating actions for the health care universe. However, the situation is evolving and the longer and more widespread the outbreak, the higher the potential for more negative ratings actions. Hospitals, surgical centers, dental and other healthcare providers that rely on more discretionary, lower acuity procedures will see a significant decline in patient volume, and that can have an adverse ripple effect on manufacturers supplying the sector. Hospitals also face the potential that increased COVID-19 patients could stress near-term capacity and disrupt operations. Subsectors such as pharmaceuticals and life sciences may be more resilient, but would be increasingly hurt if the drop in activity were to become more prolonged.
Homebuilders	Medium	U.S homebuilders are seeing a negative effect on foot traffic now, which has turned into better sales conversion from more serious buyers. Looking ahead, however, job losses and potential construction site closures cloud the picture for new orders over the next few months in a previously healthy U.S. housing market.
Insurance	Medium	Volatile financial market and recessionary economic conditions test balance sheet strength of the U.S. insurance sector. Asset risk is the most immediate risk factor. P/C insurers hold record unaffiliated common stock. Life insurers' high 'BBB' exposure presents elevated credit risk from corporates most vulnerable to the containment measures and the energy sector. Unprecedented low interest rates pressure life insurers' reserve adequacy and spread income prospects. However, the sector has been effectively navigating this headwind for over a decade.
Media & Entertainment	High	The pandemic is having meaningfully immediate negative impact across event organizers, live-events companies, travel-related companies, and movie exhibitors. More than 25 ratings actions on those sectors most exposed have already been taken. The broadest threat to media is a pullback in advertising spending. Advertising, which remains a key revenue component for much of the media industry, is already being reduced for certain media subsectors, with little ability to offset the majority of the declines.
Metals & Mining	High	Copper & steel inventories rose as COVID-19 led to an industrial slowdown in China, demand-pull for intermediate metals products globally has stalled as the outbreak has spread. Expect several rating actions within the following weeks because of our lower metal price assumptions (lower by 5%-10%). High yield issuers could breach leverage triggers with 2021 maturities on the horizon.
Midstream Energy	High	The combination of the pandemic and the oil price war is hurting the U.S. midstream energy sector. Volume declines and counterparty credit quality are the top risks to the sector but the severity of these risks to midstream credit profiles is uncertain. Investment-grade companies are better-positioned than their spec-grade peers to deal with the severe supply and demand shocks as many companies are self-funding, credit facilities have been extended, and liquidity on revolvers is sufficient. Spec-grade companies are unable to access the capital markets and a prolonged downturn will likely cause significant credit deterioration in 2021.
Oil & Gas	High	The industry is facing a severe supply-demand imbalance. The price of oil has plummeted, political risks have amplified, and producers are facing negative investor sentiment, capital markets access, and coronavirus concerns. We assume Brent oil price will recover to US$50/bbl level in 2021 from US$30/bbl this year based on our expectation that COVID-19 will be contained this year leading to demand recovery; and both OPEC and Russia might come up an agreement or some U.S. shale players will be forced out of market.
Oil Refineries	High	Independent oil refiners' margins are under pressure from falling demand, and the drop in oil prices may significantly impact working capital and reduce cash positions. We believe first quarter EBITDA will be weaker than expected, due to the substantial decline in demand for jet fuel and gasoline. Cracks for both products has been negative at times, and anemic

		demand in the second quarter will likely require massive cuts to utilization. A prolonged demand response due to COVID-19 could damage credit quality.
Public Finance	Medium	USPF is seeing pressure sector wide, some on the revenue side (transport, higher education, sales tax collections), and others from growing expenditures (health care). The volatility ties directly to credit deterioration; in cases where revenue growth is slowing and expenditures are rising, the imbalance can grow quickly.
REITs	Medium	The indirect impact from sharply slower economic growth and financial market volatility could be felt across all property types as the effects of social distancing, travel restrictions, and lower oil prices will take time to deteriorate the financial health of tenants. We expect rating downside on North American REITs to be mitigated by key credit strengths underpinning the sector, including cash flow stability, tenant diversity, and better balance sheets relative to the prior recession.
Regulated Utilities	Low	We believe that the majority of North American regulated utilities are well-positioned to handle the immediate impact of COVID-19. However, the pandemic could hurt some companies, especially those issuers already facing downside ratings pressure prior to the arrival of the coronavirus. Some electric utilities with disproportionate exposure to commercial and industrial class of customers could be vulnerable to reduced sales volumes, absent any regulatory counter mechanisms such as decoupling.
Retail & Restaurants	High	Credit risks to the retail and restaurant sector have increased dramatically as the effort to contain COVID-19 results in store closures, changes to shopping habits, and heightened risk of a broad based macroeconomic decline. Sales will likely decline substantially in the short-term, with the hardest-hit issuers in casual dining and retail exposed to social distancing and discretionary spending (e.g., mall-based retailers). There are rating actions across the spectrum taking place with the vast majority concentrated in these retail segments.
Sovereign	Low	We expect investment-grade sovereigns will show stronger resilience and more flexibility to withstand the shock. The ratings of countries with greater economic resilience, stronger financial profile, and better policy-making are likely to come under less pressure compared with others. In contrast, those at the lower end of our scale are more vulnerable to downgrades, given their inherently weaker finances and greater vulnerability to global shocks.
Structured Finance	Medium	Given the forecasts for weaker economic growth and higher unemployment, we expect some weakening in structured finance collateral performance, which was stable through most of the first quarter. Further, our ratings outlook has turned cautious, and we predict a stable-to-negative or negative trend for certain sectors. Risks remain to the downside, especially if economic forecasts worsen. Although we note that the ultimate impact of the COVID-19 pandemic yet uncertain, we believe it is likely to affect some sectors more than others. Current areas of focus include CLOs, whole business ABS, small business ABS, aircraft ABS, subprime auto ABS (non-IG), dealer floorplan ABS, retail & lodging backed CMBS, and non-QM RMBS.
Technology	Medium	COVID-19 will hurt enterprise and consumer IT spending, particularly, hardware and semiconductor segments. However, we expect some of the deferred spending to return gradually in the latter half of this year through heavy government stimulus in the U.S., China, and elsewhere. We expect significant negative ratings actions throughout the year as the impact of the revenue deferral, or revenue destruction in some cases, begins to emerge. Liquidity is a key concern among speculative-grade issuers given the market dislocation.
Telecom	Low	Telecom and cable providers can withstand the effects of a surge in COVID-19 cases with limited impact to credit quality given their recurring, subscription-based business models. There are a handful of companies that have exposure to vulnerable sectors such as transportation and tourism, which could hurt their financial and operating performance in the near-term. In addition, issuers that have exposure to small- and mid-sized business customers are at risk since they are most likely to churn in a recession.
Transportation	High	The ultimate impact of the coronavirus outbreak on our global airline ratings will depend on the duration and severity of the crisis, and the type and severity of measures airlines and governments take to mitigate it. Capacity reductions, along with sharply lower oil prices, will be insufficient to offset the decline in its travel demand. The global airline sector has weakened substantially and the pandemic threatens credit quality of operators. The aircraft-leasing sector should fare better than airlines in this coronavirus-related

		economic downturn, but will still face pressure on their revenues and cash flow. Freight transportation is less affected but will be hurt indirectly through the unfolding global recession.
Unregulated (Merchant) Power	Medium	Most merchant power companies engage in ratable hedging and a high proportion—typically 90%—of their 2020 economic generation is hedged. Still, we expect companies with load shape risk (volumetric risk in hedges) and/or a higher proportion of Large commercial and industrial (LCI) customers will be disproportionately affected. We expect some companies that do not have a countercyclical retail power business to offset the risks in wholesale power business to experience some credit pressures should the current environment last into the third quarter. With average peak electric demand showing signs of declining about 10% at this stage, prompt and forward prices will decline. Decline in forward prices will expose these companies to backwardation in future cash flows due to lower priced hedges, or the prospects of higher merchant exposure in the hope for better pricing discovery later in the year.

*The impact descriptor above (high, medium, low) is our qualitative view of the risk. It does not directly translate to risk of rating actions, which depend on a number of factors including initial headroom under a rating coupled with the expected length and severity of the epidemic.

Appendix 3: Economic Data And Forecast Summaries

Table 3

U.S. – S&P Global Ratings Economic Outlook

	2019	2020f	2021f	2022f	2023f
Real GDP (year % ch.)	2.3	-1.3	3.2	2.5	2.0
Real consumer spending (year % ch.)	2.6	-1.4	2.6	2.8	2.2
Real equipment investment (year % ch.)	1.3	-6.3	6.3	5.6	4.3
Real nonresidential structures investment (year % ch.)	-4.3	-11.8	4.9	4.7	3.1
Real residential investment (year % ch.)	-1.5	1.9	2.7	3.0	3.2
Core CPI (year % ch.)	2.2	0.9	1.9	2.8	2.3
Unemployment rate (%)	3.7	7.1	5.7	4.7	3.8
Housing starts (annual total in mil.)	1.3	1.3	1.3	1.3	1.3
S&P Case-Shiller Home Price Index (Dec. to Dec. % ch.)	3.5	3.5	2.3	2.3	3.3
Federal Reserve's fed funds policy target rate range (year-end %)	1.5-1.75	0-0.25	0-0.25	0.5-0.75	1.25-1.5

Note: All numbers are in annual average basis, except the Fed's policy rate and housing starts. Core CPI is consumer price index excluding energy and food components. f—forecast. Forecasts were generated before the third estimate of Q4 2019 GDP was published by the BEA. Source: Oxford Economics, S&P Global Economics Forecasts.

Table 4

Canada – S&P Global Ratings Economic Outlook

	2019	2020f	2021f	2022f
Real GDP (year % ch.)	1.6	-2.0	3.4	2.0
Real consumer spending (year % ch.)	1.6	-0.8	2.8	2.3
Real private business fixed investment (year % ch.)	-0.8	-4.7	4.5	3.2
Core CPI (year % ch.)	2.1	1.7	1.9	1.7
Unemployment rate (%)	5.7	6.7	6.0	5.5
Housing starts (annual total in thousands)	209	195	198	207
CAD/USD exchange rate (per US$1)	1.33	1.40	1.37	1.34
Government of Canada 10-year bond yield (%)	1.59	1.18	1.47	1.50
Bank of Canada overnight rate (%, end of period)	1.75	0.25	0.75	1.00

Note: All numbers are in annual average basis, except central bank rates and housing starts. Core CPI is consumer price index excluding energy and food components. f—forecast. Source: StatCan, Oxford Economics, S&P Global Economics Forecasts.

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NEW REGULATORY FINANCE

Roger A. Morin, PhD

2006
PUBLIC UTILITIES REPORTS, INC.
Vienna, Virginia

5. Standard & Poor's
6. Morningstar
7. BARRA

Value Line is the largest and most widely circulated independent investment advisory service, and influences the expectations of a large number of institutional and individual investors. The Value Line data are commercially available on a timely basis to investors in paper format or electronically. Value Line betas are derived from a least-squares regression analysis between weekly percent changes in the price of a stock and weekly percent changes in the New York Stock Exchange Average over a period of 5 years. In the case of shorter price histories, a smaller time period is used, but 2 years is the minimum. Value Line betas are computed on a theoretically sound basis using a broadly based market index, and they are adjusted for the regression tendency of betas to converge to 1.00. This necessary adjustment to beta is discussed below.

Practical and Conceptual Difficulties

Computational Issues. Absolute estimates of beta may vary over a wide range when different computational methods are used. The return data, the time period used, its duration, the choice of market index, and whether annual, monthly, or weekly return figures are used will influence the final result.

Ideally, the returns should be total returns, that is, dividends and capital gains. In practice, beta estimates are relatively unaffected if dividends are excluded. Theoretically, market returns should be expressed in terms of total returns on a portfolio of all risky assets. In practice, a broadly based value-weighted market index is used. For example, Merrill Lynch betas use the Standard & Poor's 500 market index, while Value Line betas use the New York Stock Exchange Composite market index. In theory, unless the market index used is the true market index, fully diversified to include all securities in their proportion outstanding, the beta estimate obtained is potentially distorted. Failure to include bonds, Treasury bills, real estate, etc., could lead to a biased beta estimate. But if beta is used as a relative risk ranking device, choice of the market index may not alter the relative rankings of security risk significantly.

To enhance statistical significance, beta should be calculated with return data going as far back as possible. But the company's risk may have changed if the historical period is too long. Weighting the data for this tendency is one possible remedy, but this procedure presupposes some knowledge of how risk changed over time. A frequent compromise is to use a 5-year period with either weekly or monthly returns. Value Line betas are computed based on weekly returns over a 5-year period, whereas Merrill Lynch betas are computed with monthly returns over a 5-year period. In an empirical study of utility

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SECTOR COMMENT

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US utility sector upgrades driven by stable and transparent regulatory frameworks

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» We recently upgraded most US investor-owned utilities and many of their holding companies due to our view that the US regulatory environment has improved over the past several years. Most of the companies placed on review for upgrade in November 2013[1] were upgraded in late January 2014, and most by one notch. Please see Appendix A for a list of companies that were upgraded.

» US regulated utilities appear financially secure, thanks to their suite of transparent and timely cost and investment recovery mechanisms. When compared with other regulatory environments in developed countries[2], the overall regulatory environment for US utilities has steadily improved over the past few years and is expected to remain supportive and constructive for at least the next 3-5 years.

» A more favorable regulatory environment allows US regulated utilities to generate relatively stable and predictable revenue and cash flow, which can support a material amount of leverage. But most US utilities maintain a conservative capital structure, where the ratios of debt to EBITDA and cash flow to debt hover in the 4.0x and 20% range, respectively. Key financial ratios are likely to decline over the next few years, as interest rates rise and tax payments increase with the expiration of bonus depreciation.

» US utilities own and operate enormous, capital intensive, long-lived critical infrastructure assets. They are often one of the larger companies residing in a particular state, they pay big property taxes and employ lots of people. The importance of utilities to state and local governments is not lost on elected officials, and utilities maintain very effective constituency outreach programs.

» Utilities have demonstrated strong, stable access to the capital markets. Utilities do not maintain high cash balances, but their committed credit facilities are typically syndicated across several banks and contain few, if any, borrowing constraints. However, a combination of significant capital investments and sizable shareholder dividends that are typically well beyond the cash generated from operations means that utilities are generally in a negative free cash flow position.

» A handful of companies placed on review in late 2013 were not upgraded. Some of the reasons include sizable non-utility businesses with higher business risk, or a large amount of debt at the holding company as a percentage of total consolidated debt. For a few issuers, ratings weren't upgraded because these companies were viewed as being appropriately positioned at their existing rating category, relative to their rated peers.

1 See press release: Moody's places ratings of most US regulated utilities on review for upgrade, November 08,2013.

2 For example: Australia, Canada, Japan, South Korea and the United Kingdom.

Supportive regulatory frameworks

Over the past few years, the US regulatory environment has been very supportive of utilities. We think this is partly a function of regulators acknowledging that their utility infrastructure needs a material amount of ongoing investment for maintenance, refurbishment and renovation purposes. Utility infrastructure is necessary to facilitate a growing economy, and since utility investments help create jobs, utilities have been able to garner support from both politicians and regulators to authorize prudently incurred investments in these critical assets. We also think regulators prefer to regulate financially healthy utilities. Recent legislation that helps utilities recover their costs and investments in a more timely manner are evidenced in Virginia, South Carolina, Florida and Illinois.

We think political risks are also manageable, in part, because elected officials are increasingly viewing their local utilities as a reliable source of investment into the local infrastructure. Investments bring jobs, and employment growth helps the economy. This is part of the "virtuous circle" for regulated utilities, and we see a few more years of continued smooth sailing, where elected officials, their regulators, consumer groups and utilities share a common understanding with respect to strengthening this infrastructure sector.

From a practical perspective, a few regulatory hot spots of contentiousness will flare up over our rating horizon, but it is unclear at this time as to which utilities might be affected. We have generally seen such situations result in outcomes that were difficult for utilities but not punitive, and they have generally been isolated incidents rather than a broad pandemic. As a result, we continue to keep an eye on the magnitude of rate increases, and how likely those rates can be absorbed by the service territory or market before consumers become intolerant, in order to identify utilities that are exceptions to the generally positive regulatory environment.

Stable and predictable financial profile

A transparent suite of timely recovery mechanisms helps utilities generate stable and predictable revenues and cash flows, which can support a material amount of leverage. But most US utilities maintain a relatively solid capital structure, where the ratios of debt to EBITDA and cash flow to debt hovers in the 4.0x and 20% range, respectively. Key financial ratios are likely to decline over the next few years, as interest rates rise and tax payments increase with the expiration of bonus depreciation.

In the table below, we illustrate the sector's financial stability by showing the historical medians for most of the companies included in our US utility rated universe. We show the 4-year (2009 – 2012) and 2-year (2011 – 2012) average medians by rating category. We also include the latest twelve months ended September 2013. In general, lower debt to EBITDA and dividend payout ratios correspond with higher credit ratings, as do higher cash flow to debt ratios. We note that A1 rated companies invest more heavily in their assets, relative to depreciation and amortization (D&A). Because we show these financial ratios by rating category, the rating category might include different kinds of companies included in our peer groups. For example, the Baa1 rating category might include parent holding companies (which also include hybrid integrated companies), vertically integrated, transmission and distribution, local gas distribution or transmission only companies.

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EXHIBIT 1

US regulated utilities – selected financial ratios, by rating category (medians)

	Debt / EBITDA			CFO / debt			Dividend payout			Cap Ex / D&A		
Rating	4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM
A1	2.7	2.8	3.0	31%	32%	25%	35%	33%	39%	2.4	2.7	2.7
A2	3.3	3.3	3.5	27%	26%	22%	67%	70%	64%	1.8	1.9	2.0
A3	3.9	4.0	4.0	22%	23%	22%	56%	67%	52%	2.1	1.9	2.2
Baa1	4.1	4.2	4.0	19%	20%	19%	61%	64%	52%	1.8	1.9	2.2
Baa2	4.3	4.3	4.5	17%	17%	17%	56%	56%	78%	1.7	1.9	2.1
Baa3	4.2	4.4	4.3	18%	17%	18%	120%	91%	99%	1.3	1.5	1.4

We also examined the broad peer group of utilities by sector classification. For example, we looked at the selected financial ratios for parent holding companies, vertically integrated utilities, transmission and distribution utilities and natural gas local distribution companies. We note that the financial ratios by sector classification means that both A3 and Baa3 rated companies might be included in the "Vertically Integrated" peer group and in other peer groups. We observe that the ratio of cash flow to debt is better for the utilities than it is for the parent holding companies[3].

EXHIBIT 2

US regulated utilities – selected financial ratios, by sector classification

		Debt / EBITDA			CFO / debt			Dividend payout			Cap Ex / D&A		
Sector		4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM
Holding companies	Median	4.5	4.7	4.4	18%	18%	17%	68%	69%	69%	2.3	2.3	2.5
	Total	4.1	4.3	4.2	19%	19%	18%	67%	73%	78%	2.0	2.1	2.1
LDC's	Median	4.0	4.0	4.1	24%	22%	22%	75%	70%	76%	2.0	2.2	3.1
	Total	3.5	3.5	3.4	26%	25%	23%	60%	61%	58%	2.1	2.3	2.5
T&D (electric or gas)	Median	4.0	3.7	4.2	21%	22%	20%	97%	88%	57%	1.6	1.9	1.5
	Total	3.7	3.7	3.7	22%	22%	20%	92%	86%	67%	1.5	1.8	1.9
Transmission	Median	2.3	2.3	2.5	37%	33%	26%	82%	92%	71%	5.7	6.4	6.4
	Total	3.9	3.9	4.1	20%	19%	16%	80%	83%	58%	4.7	5.3	5.5
Vertically Integrated	Median	3.7	3.7	3.7	22%	23%	20%	53%	59%	56%	2.0	2.0	2.1
	Total	3.6	3.6	3.6	23%	23%	23%	59%	64%	68%	2.1	2.1	2.1

3 See Appendix A for a table of selected financial ratios by sector classification, by rating

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Critical infrastructure assets

US utilities own and operate enormous, capital intensive, long-lived critical infrastructure assets. They are often cited as being one of the larger companies residing in a particular state, pay big property taxes and employ lots of people. The importance of utilities to state and local governments is not lost on elected officials, and utilities maintain very effective constituency outreach programs[4].

EXHIBIT 3

US regulated utilities – selected financial data, by rating category ($ billions)

	Revenues			EBITDA			CFO			Debt		
Rating	4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM
Medians												
A1	$2.6	$2.7	$2.8	$0.8	$0.8	$0.8	$0.6	$0.7	$0.6	$2.1	$2.2	$2.4
A2	$1.6	$1.5	$1.4	$0.4	$0.5	$0.5	$0.4	$0.4	$0.4	$1.5	$1.6	$1.7
A3	$1.7	$1.7	$1.7	$0.4	$0.5	$0.5	$0.4	$0.4	$0.4	$1.7	$1.8	$1.9
Baa1	$1.6	$1.6	$1.6	$0.4	$0.4	$0.5	$0.3	$0.4	$0.4	$1.7	$1.8	$1.9
Baa2	$1.6	$1.6	$1.6	$0.8	$0.5	$0.5	$0.3	$0.4	$0.4	$2.0	$2.1	$2.3
Baa3	$1.7	$1.7	$1.6	$0.5	$0.5	$0.5	$0.4	$0.4	$0.4	$2.2	$2.2	$2.3
Total												
A1	$50.3	$50.2	$51.3	$15.8	$16.3	$17.5	$13.2	$13.7	$14.2	$50.7	$54.8	$58.3
A2	$86.4	$85.4	$86.6	$25.6	$27.1	$29.0	$22.2	$23.6	$22.8	$86.6	$92.0	$98.9
A3	$151.3	$154.0	$166.8	$47.5	$49.9	$54.2	$39.3	$42.5	$45.3	$187.3	$199.4	$221.6
Baa1	$468.5	$473.4	$499.6	$144.4	$150.8	$160.0	$117.3	$125.7	$130.9	$576.9	$610.6	$668.0
Baa2	$1.7	$1.6	$1.6	$32.7	$32.2	$40.4	$25.5	$26.9	$27.1	$125.1	$129.1	$135.8
Baa3	$5.4	$5.6	$5.6	$17.6	$18.8	$18.2	$1.7	$1.8	$1.8	$81.3	$89.6	$94.8

EXHIBIT 4

US regulated utilities – selected financial data, by sector classification ($ billions)

		Revenue			EBITDA			CFO			Total Debt		
Sector		4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM
Holding companies	Median	$4.0	$4.1	$4.5	$1.1	$1.1	$1.2	$0.9	$1.0	$0.9	$5.2	$5.3	$5.2
	Total	$337.4	$342.1	$358.4	$106.3	$109.7	$121.9	$84.7	$89.8	$92.1	$437.5	$467.0	$509.5
LDC's	Median	$0.7	$0.7	$0.6	$0.1	$0.2	$0.2	$0.1	$0.1	$0.1	$0.6	$0.6	$0.6
	Total	$26.8	$25.7	$26.0	$5.9	$6.3	$6.5	$5.4	$5.4	$5.1	$20.5	$22.0	$22.3
T&D (electric or gas)	Median	$1.4	$1.2	$1.1	$0.3	$0.4	$0.3	$0.3	$0.3	$0.3	$1.3	$1.3	$1.4
	Total	$74.7	$70.5	$67.3	$21.3	$21.8	$22.5	$16.8	$17.7	$16.5	$78.1	$80.0	$84.2
Transmission	Median	$0.3	$0.3	$0.3	$0.2	$0.2	$0.2	$0.1	$0.1	$0.1	$0.4	$0.5	$0.6
	Total	$2.0	$2.2	$2.5	$1.4	$1.5	$1.7	$1.1	$1.1	$1.2	$5.5	$6.0	$7.1
Vertically Integrated	Median	$1.7	$1.7	$1.7	$0.5	$0.5	$0.5	$0.4	$0.4	$0.4	$1.7	$1.8	$1.9
	Total	$195.3	$197.9	$202.7	$60.1	$62.9	$65.5	$49.2	$52.4	$53.6	$215.9	$227.7	$237.5

4 See Appendix B for a table of selected financial data, by sector classification by rating

Strong, Stable access to capital

Our view of the supportive US utility regulatory environments resulted in several rating upgrades where companies attained an A2 rating from A3, or Baa2 from Baa3. Consistent with these long term rating changes, some utilities also achieved a change in their short-term commercial paper (CP) ratings. For more information on the linkage between long term ratings and short term ratings, please see Moody's Rating Symbols and Definitions.

EXHIBIT 5

Selected companies that received short-term commercial paper rating changes*

Name	Sector	Old Rating	New Rating	Rating Outlook	Short term Rating
Questar Corporation	Holdco	A3	A2	Stable	P-1 from P-2
Wisconsin Energy Corporation	Holdco	A3	A2	Stable	P-1 from P-2
DTE Gas Company	LDC	A3	A2	Stable	P-1 from P-2
Northern Illinois Gas Company	LDC	A3	A2	Stable	P-1 from P-2
Peoples Gas Light and Coke Company	LDC	A3	A2	Stable	P-1 from P-2
Consolidated Edison Company of New York, Inc.	T&D (electric or gas)	A3	A2	Stable	P-1 from P-2
PECO Energy Company	T&D (electric or gas)	A3	A2	Stable	P-1 from P-2
Public Service Electric and Gas Company	T&D (electric or gas)	A3	A2	Stable	P-1 from P-2
Atmos Energy Corporation	LDC	Baa1	A2	Stable	P-1 from P-2
DTE Electric Company	Vertically Integrated	A3	A2	Stable	P-1 from P-2
Northern States Power Company (Minnesota)	Vertically Integrated	A3	A2	Stable	P-1 from P-2
Northern States Power Company (Wisconsin)	Vertically Integrated	A3	A2	Stable	P-1 from P-2
Southern California Edison Company	Vertically Integrated	A3	A2	Stable	P-1 from P-2
Piedmont Natural Gas Company, Inc.	LDC	A3	A2	Stable	P-1 from P-2
South Jersey Gas Company	LDC	A3	A2	Stable	P-1 from P-2
Vectren Utility Holdings, Inc.	Vertically Integrated	A3	A2	Stable	P-1 from P-2
Virginia Electric and Power Company	Vertically Integrated	A3	A2	Stable	P-1 from P-2
Pinnacle West Capital Corporation	Holdco	Baa2	Baa1	Stable	P-2 from P-3
Ameren Corporation	Holdco	Baa3	Baa2	Stable	P-2 from P-3
NiSource Finance	Holdco	Baa3	Baa2	Stable	P-2 from P-3
Union Electric Company	Vertically Integrated	Baa2	Baa1	Stable	P-2 from P-3
Kansas City Power & Light Greater MO Op.	Vertically Integrated	Baa3	Baa2	Stable	P-2 from P-3

*Not all short-term ratings are listed here. Instead, we show a list of upgrades associated with the short term commercial paper rating. This list does not include utilities that may have had short-term ratings on industrial development bonds, such as Duke Indiana and Duke Carolinas. In Duke's case, both companies had their short-term IDB ratings upgraded (both VMIG and Prime ratings), but are not included on our list, but are available on the individual company's press releases.

Utility credit facilities are usually unsecured, so we tend to examine the few instances of secured revolving credits more closely . In many cases, security for credit facilities was initially granted when the utility incurred financial stress and/or was rated below investment grade. Similar to first mortgage bonds, secured credit facilities at the utility level are mostly viewed as having a materially lower risk of incurring any losses given a default. As a result, the costs and fees for secured credit facilities are typically lower than unsecured credit facilities, which regulators may view in a positive light, although we typically view utilities with secured credit facilities as possessing somewhat less financial flexibility.

One of the big credit positives that unsecured credit facilities provide utilities is the "ability" to raise capital or secure continued liquidity through a secured facility. This is a type of financial flexibility that can be useful for utilities experiencing a period of financial distress, since the security may be

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granted in exchange for accommodations from lenders such as an increase in facility size, longer maturities, or easing of financial covenants or other terms.

EXHIBIT 6

Selected companies with secured credit facilities

Name	Sector	Old	New	Outlook	Comment
Avista Corp.	Vertically Integrated	Baa2	Baa1	Stable	Secured Revolver
Consumers Energy Company	Vertically Integrated	Baa1	A3	Stable	Secured Revolver
Oncor Electric Delivery Company LLC	T&D (electric or gas)	Baa3	Baa3	Stable	Secured Revolver
Puget Energy, Inc.	Holdco	Ba1	Baa3	Stable	Cross - Over / secured rev.
UNS Energy Corporation	Holdco	Baa3	Baa2	Stable	Secured Revolver
Westar Energy, Inc.	Holdco	Baa2	Baa1	Stable	Secured Revolver

Notable upgrades

Two companies were upgraded by 2-rating notches, Edison International (EIX: A3 stable) and Western Massachusetts Electric Company (WMECO: A3 stable). Prospectively, both companies are increasing the stability and predictability of their revenues and cash flows, because they are becoming more regulated.

EXHIBIT 7

Selected companies with 2 notch rating upgrades

Name	Sector	Old	New	Outlook
Atmos Energy Corporation	LDC	Baa1	A2	Stable
Edison International	Holdco	Baa2	A3	Stable
Western Massachusetts Electric Company	T&D (electric or gas)	Baa2	A3	Stable

For EIX, the increase in regulated revenues and cash flows (as a percentage of the total) will result from the divestiture of its risky non-utility businesses. In this case, EIX has benefitted because the former merchant generation operations at Edison Mission Energy (EME not rated) are no longer part of the consolidated entity, and we view the litigation risk from suits by EME creditors as manageable for EIX.

With the recent completion of a large transmission project in December 2013, WMECO is increasing the portion of its revenues derived from FERC-regulated transmission only assets. The FERC regulatory environment is viewed as being both transparent and predictable over the long term, with a very timely suite of cost recovery mechanisms and a reasonable assurance of a guaranteed return.

Four companies crossed over to the investment grade rating category from the non-investment grade category. Three are parent holding companies, all of which own solid investment grade utility operating subsidiaries.

EXHIBIT 8

Selected companies that crossed-over into investment grade from non-investment grade

Name	Sector	Old	New	Outlook
PNM Resources, Inc.	Holdco	Ba1	Baa3	Positive
Entergy Texas, Inc.	Vertically Integrated	Ba1	Baa3	Stable
Puget Energy, Inc.	Holdco	Ba1	Baa3	Stable
IPALCO	Holdco	Ba1	Baa3	Stable

For Entergy Texas Inc (ET: Baa3 stable), where we think Texas regulation is less favorable for non-ERCOT, vertically integrated utilities than they are on the unbundled transmission and distribution utilities, we see a steadily improving financial profile, including a sustainable production of cash flow to debt in the low-teen's, at a minimum. However, ET has the most most challenging regulatory relations of all the Texas utilities.

Puget Energy's (PE: Baa3 Stable)cross over to investment grade reflects an expectation for sustained improvement in the company's financials, due to supportive regulatory treatment. For example, the most recent rate case decision for its utility Puget Sound Energy, Inc. (PSE: Baa1, stable) by the Washington Utilities and Transportation Commission's (WUTC) allowance for a full electric and gas revenue decoupling mechanism and a series of predetermined annual delivery rate increases, including cost escalation factors.

Five issuers in two corporate families, Cleco Corporation (Cleco: Baa2, positive) and PNM Resources Inc. (PNM: Baa3, positive), continue to exhibit materially favorable regulatory or financial trends, reflected in the positive rating outlooks assigned at the conclusion of our review. For the remainder of the companies, stable rating outlooks were the norm.

EXHIBIT 9

Selected companies with positive rating outlooks

Name	Sector	Old	New	Outlook	Comment
Cleco Corporation	Holdco	Baa3	Baa2	Positive	
Cleco Power LLC	Vertically Integrated	Baa2	Baa1	Positive	
PNM Resources, Inc.	Holdco	Ba1	Baa3	Positive	Cross - Over
Texas-New Mexico Power Company	T&D (electric or gas)	Baa2	Baa1	Positive	
Public Service Company of New Mexico	Vertically Integrated	Baa3	Baa2	Positive	

For PNM, as soon as its San Juan Generating Station environmental compliance requirement is resolved, or close to it, and assuming financial metrics remain consistent with our expectations, additional rating upgrades could be considered. For Cleco, the positive outlooks reflect our expectation that Cleco Power LLC (CNL: Baa1, positive) will receive a constructive outcome on its latest regulatory filing, including the extension of its formula rate plan for another five-year period. This would follow the December 2013 approval received from the Louisiana Public Service Commission to transfer the Coughlin power plant to CLN.

EXHIBIT 10

Selected companies still on review for possible upgrade

Name	Sector	Old	New	Outlook	Comment
Brooklyn Union Gas Company	LDC	A3	A3	RUR – up	
Key Span Gas East Corp	LDC	A3	A3	RUR - up	
Niagara Mohawk Power Corp	T&D (electric or gas)	A3	A3	RUR – up	
New England Power Corp	T&D (electric or gas)	A3	A3	RUR - uP	

Companies not upgraded

For some holding companies with material non-utility businesses, rating upgrades were constrained. Our analysis was heavily influenced by the size, composition and strategy of those non-utility businesses. We widened the notching between some parent holding companies and their operating subsidiaries, especially if there was significant non-utility subsidiary debt or parent holding company debt. Negative rating consequences might also hold back the rating at the utility subsidiary, since parent holding company debt could be viewed as a proxy for utility subordinated debt or preferred stock.

As part of our review process, several corporate families are now characterized by a wider rating notching differential between the parent and one or more utility subsidiaries.

EXHIBIT 11

Parent holding companies with a three notch differential from one or more subsidiaries

Parent	Rating	Subsidiary	Rating	Notch differential
NextEra	Baa1	Florida Power & Light	A1	3
Sempra	Baa1	San Diego Gas & Electric	A1	3
Exelon Corp	Baa2	PECO Energy	A2	3
Dominion Resources	Baa2	VEPCO / DomGas	A2	3
PS Enterprises Group	Baa2	Public Service Electric & Gas	A2	3
Southern Company	Baa1	Alabama Power	A1	3
Integrys Energy	Baa1	Wisconsin Public Service	A1	3
Duquesne Light Holdgs.	Baa3	Duquesne Light Company	A3	3

In the table below, we show the utilities and holdcos that were placed on review for upgrade but were not upgraded. For these companies, ratings were confirmed at their existing rating categories[5].

EXHIBIT 12

Selected companies that were not upgraded

Name	Sector	Old	New	Outlook	Summary Rationale
American Transmission Company LLC	Transmission	A1	A1	Stable	Credit supportive FERC regulation already incorporated
Madison Gas and Electric Company	Vertically Integrated	A1	A1	Stable	Credit supportive regulation already incorporated
NSTAR Electric Company	T&D (electric or gas)	A2	A2	Stable	Credit supportive regulation already incorporated
International Transmission Company	Transmission	A3	A3	Stable	Credit supportive FERC regulation already incorporated
ITC Midwest LLC	Transmission	A3	A3	Stable	Credit supportive FERC regulation already incorporated
Michigan Electric Transmission Company, LLC	Transmission	A3	A3	Stable	Credit supportive FERC regulation already incorporated
Otter Tail Power Company	Vertically Integrated	A3	A3	Stable	Supportive regulation already incorporated
Integrys Energy Group, Inc.	Holdco	Baa1	Baa1	Stable	Non-utility business / Holdco debt
ITC Great Plains LLC	Transmission	Baa1	Baa1	Stable	Credit supportive FERC regulation already incorporated
Hawaiian Electric Company, Inc.	Vertically Integrated	Baa1	Baa1	Stable	Declining metrics, higher leverage
Duke Energy Kentucky, Inc.	Vertically Integrated	Baa1	Baa1	Stable	Declining metrics, higher leverage
Dominion Resources Inc.	Holdco	Baa2	Baa2	Stable	Non-utility business / Holdco debt
Hawaiian Electric Industries, Inc.	Holdco	Baa2	Baa2	Stable	Declining metrics, higher leverage
LG&E and KU Energy LLC	Holdco	Baa2	Baa2	Stable	Holdco debt
Bay State Gas Company	LDC	Baa2	Baa2	Stable	Supportive regulation already incorporated

[5] See Appendix C for a table of selected companies that were not placed on review for upgrade on 8 November 2013.

EXHIBIT 12

Selected companies that were not upgraded

Name	Sector	Old	New	Outlook	Summary Rationale
ITC Holdings Corp.	Transmission	Baa2	Baa2	Stable	Credit supportive FERC regulation already incorporated
Entergy Arkansas, Inc.	Vertically Integrated	Baa2	Baa2	Stable	Supportive regulation already incorporated
Kentucky Power Company	Vertically Integrated	Baa2	Baa2	Stable	Supportive regulation already incorporated
Duquesne Light Holdings, Inc.	Holdco	Baa3	Baa3	Stable	Non-utility business / Holdco debt
Pepco Holdings, Inc.	Holdco	Baa3	Baa3	Stable	Holdco debt
PPL Corporation	Holdco	Baa3	Baa3	Stable	Holdco debt
Atlantic City Electric Company	T&D (electric or gas)	Baa2	Baa2	Stable	Supportive regulation already incorporated

For a few companies, such as Madison Gas and Electric Company (MG&E: A1, stable) and NSTAR Electric Company (NSTAR Electric: A2, stable), their ratings already captured our view about the credit supportiveness of their regulatory environment and they exhibit prospective financials that are commensurate with their rating category. Their ratings also compare well with similarly rated utilities that operate in commensurately sized metro areas. The same can be said for Otter Tail Power Company (OTP: A3, stable), where we confirmed the utility at A3 and upgraded the parent holding company Otter Tail Corporation (OTC: Baa2, stable) to Baa2, thus narrowing the notching differential between the parent and the subsidiary.

The FERC regulated transmission companies, namely American Transmission Company LLC (ATC: A, stable) and ITC Holdings Corp. (ITC: Baa2, stable) and its operating subsidiaries, were not upgraded because the credit supportive FERC regulatory framework is already sufficiently incorporated into our credit analysis. Moreover, unlike most state regulatory jurisdictions, which are improving, we see the FERC maintaining a relatively steady level of supportiveness, which is high.

We summarize the rationale behind our rating confirmations for the rest of the companies in the pages that follow.

American Transmission Company (A1, stable)

The rating confirmation for American Transmission Company (ATC) reflects our view of the supportive regulatory framework of the FERC. We believe ATC's A1 issuer rating is well positioned reflecting the relatively stable and predictable cash flows supported by a federal regulatory framework governed by the FERC that promotes a tariff framework that allows timely recovery of operating and investment costs. The rating also considers ATC's low business risk profile, which is characterized by limited exposure to demand volatility and solid market position. The rating is constrained by ATC's small size, lack of geographic diversification, financial metrics that are weak for the rating but mitigated by the favorable FERC regulatory framework and the funding requirements associated with the company's significant capital expenditure program.

Our view of the supportive federal regulatory framework governed by the FERC is balanced against the current Section 206 complaint filed against the regional rate used by Transmission Owners in the Midcontinent Independent System Operator, Inc. (MISO) in November 2013. To date, FERC has taken no action on this complaint, which the TOs have filed a motion to dismiss. While it is too early in the process to determine the ultimate credit impact of any final outcome from the Section 206 complaint on ATC, we believe the final resolution of a similar Section 206 complaint filed at FERC currently being litigated against TOs in the New England ISO will provide some clarity on how similar cases will be treated going forward as to FERC's policies on these matters. We expect a final resolution by the FERC on the New England Section 206 complaint by the second quarter of 2014.

Given that ATC's credit metrics are expected to continue to be weak for its rating, ongoing favorable regulatory support provided by the FERC regulatory construct represents an essential factor in ATC's ability to maintain its financial strength.

ITC Holdings Corp (Baa2, stable) & subsidiaries

The rating confirmation for ITC Holdings Corp (ITC) and its subsidiaries reflects our view of the supportive regulatory framework of the FERC. We believe ITC Holdings' Baa2 senior unsecured rating is well positioned reflecting the relatively stable and predictable cash flows provided by its electric transmission operating subsidiaries and a solid market position. The Baa2 rating is constrained by the significant amount of debt maintained at the parent level and consolidated credit metrics that are weak for the rating but mitigated by the favorable FERC regulatory framework. The rating also considers the significant capital expenditure program currently being undertaken at ITC Holdings' operating subsidiaries.

Our view of the supportive federal regulatory framework governed by the FERC is balanced against the current Section 206 complaint filed against the regional rate used by Transmission Owners in the MISO including ITC's MISO-based subsidiaries (ITC Transmission, METC and ITC Midwest) in November 2013. To date, FERC has taken no action on this complaint, which the TOs have filed a motion to dismiss. While it is too early in the process to determine the ultimate credit impact of any final outcome from the Section 206 complaint on ITC's MISO-based subsidiaries, we believe the final resolution of a similar Section 206 complaint filed at FERC currently being litigated against the TOs in the New England ISO will provide some clarity on how similar cases will be treated going forward as to FERC's policies on these matters. We expect a final resolution by the FERC on the New England Section 206 complaint by the second quarter of 2014. Given that ITC's credit metrics are expected to continue to be weak for its rating, ongoing favorable regulatory support provided by the FERC regulatory construct represents an essential factor in ITC's ability to maintain its financial strength.

The ratings of ITC's subsidiaries reflect the same supportive FERC regulatory framework that provides a robust set of timely recovery mechanisms and healthy returns resulting in strong credit metrics. However, ITC's subsidiary ratings are constrained by the significant leverage at its parent, ITC Holdings, Corp. ITC has historically issued debt at the parent level to finance acquisitions, which accounts for approximately 70% of total parent level debt, as well as to finance equity infusions to its transmission subsidiaries. This holdco/opco financing approach used within the industry creates a benefit of double leverage by having higher equity ratios at the utility subsidiaries. As of September 30, 2013, parent level debt represented approximately 54% of ITC's consolidated debt. ITC has indicated it expects to continue funding its operations with internally generated cash, revolving credit facilities and long-term debt at the operating subsidiaries and parent as necessary.

Madison Gas &Electric Company (A1, stable)

The rating confirmation of MG&E's rating reflects our view that the utility already capture the regulatory environment in Wisconsin as above average relative to its integrated utility peers. The rating further acknowledges that MG&E's credit metrics have historically been strong for the rating category but are expected to soften as the company funds its near term capital expenditure program with a mix of internally generated funds and incremental debt, but should remain in line with comparable A1 rated utilities. Finally, the rating captures MG&E's comparatively small and concentrated service territory relative to the other utilities in the same rating category.

NSTAR Electric Company (A2, stable)

The rating confirmation of NSTAR Electric reflects our view that the regulatory environment in Massachusetts is slightly above average for T&D utilities, and those associated benefits have already been incorporated with NSTAR's current rating. The rating further acknowledges that NSTAR Electric's credit metrics are commensurate with the mid range of the A-rating category and that it compares well relative to other A2-rated transmission and distribution peers operating in a single metro area. It also captures that NSTAR Electric has a standalone $450 million committed credit facility and that the utility's historical ability to report significant amounts of positive free cash flow has diminished in recent years.

Otter Tail Power Company (A3, stable)

The rating confirmation of OTP reflects the overall credit supportive regulatory environments which the utility currently operates; a robust suite of recovery mechanisms that provide timely recovery of prudent costs and investments; and reasonably diverse service territory spread across three states. The rating also factors in the expected slight decline in financial metrics due to the current substantial capex program to grow rate base, including sizeable investments in transmission assets, as well as the continued pressure from material upstream dividend distributions to help the parent meet its somewhat aggressive dividend policy.

Duke Energy Kentucky, Inc (Baa1, stable)

The rating confirmation of Duke Energy Kentucky, Inc. reflects adequate but declining financial metrics, increasing capital expenditures, and anticipated higher debt levels that offset the generally credit supportive regulatory environment in Kentucky. The utility's cash flow pre-working capital to debt ratio has fallen from the 25% range in 2011 and prior years to the 20% range more recently, and is likely to fall into the high teens as debt levels rise. The utility has not filed for a rate increase in several years and has no immediate plans to file a base rate case. Duke Energy Kentucky Inc's small size and status as a subsidiary of Baa1 rated Duke Energy Ohio, which was not placed on review for upgrade in November, are also rating constraints.

Hawaiian Electric Industries, Inc. (Baa2, stable) and utility subsidiary

The rating confirmation of Hawaiian Electric Company, Inc. (HECO: Baa1, stable) reflects a weak financial profile. The ratings of Hawaiian Electric Industries, Inc (HEI: Baa2, stable)) at current levels reflect the relatively stable earnings and cash flow historically provided by both the vertically integrated utility businesses at HECO and the stable banking operations at American Savings Bank. The ratings also recognize the challenges at HECO and its subsidiaries, which have some of the highest retail electric rates in the country. The utility operations face heavy pressure from regulators and stakeholders to reduce rates and dependence on fuel oil. While rate reduction initiatives involving infrastructure improvements and new generation may present investment opportunities for the utilities, they also present the potential for under-recovery. HEI projects $2.9 billion of capital expenditures at the utilities over the next five years, which is sizable compared with the total authorized rate base of $2.2 billion. HECO benefits from a robust suite of regulatory mechanisms to mitigate this risk, including the revenue adjustment mechanism (RAM), which allows for rate base additions in between rate cases. The banking subsidiary, which provides about one-third of operating income to HEI, is managing well through the housing downturn and the low net interest margin environment.

Integrys Energy Group (Baa1, stable)

The confirmation of Integrys Energy Group's (Integrys: Baa1, stable) rating takes into consideration the company's sizable non-regulated energy marketing business, currently making up about 10-15% of consolidated earnings as well as the substantial amount of debt held at the parent. Today's rating action assumes Integrys' management will keep holding company debt around 30% of consolidated debt, while maintaining the size of its unregulated segment at current levels. It further assumes that management would take necessary actions to address any deterioration in its business risk profile if required in the future.

Bay State Gas Company (Baa2, stable)

The rating confirmation of Bay State Gas Company (Bay State: Baa2, stable) reflects the inter-company relationship with its parent, NiSource. This intercompany relationship constrains Bay State's rating at the parent rating level because Bay State's debt is being guaranteed by its Baa2 rated parent.

Dominion Resources Inc. (Baa2 stable)

The rating confirmation of Dominion Resources Inc (Dominion: Baa2, stable) reflects high leverage at the parent holding company. We also see weak near term cash flow generation at the non-utilities businesses; a sustained period of high capital investments, much of which is associated with a risky, multi-year construction program to construct an LNG export terminal (which will also create some asset concentration risk), and; a more welcoming stance towards corporate financial engineering, which contribute to a more complex capital structure and a net reduction of financial flexibility.

Duquesne Light Holdings, Inc (Baa3, stable)

The rating confirmation of Duquesne Light Holdings, Inc (DLH: Baa3, stable)) reflects the high level of parent company debt and unregulated operations which do not benefit from our more favorable view of the US regulatory environment.

Pepco Holdings Inc. (Baa3, stable) and subsidiary

The rating confirmation of Pepco Holdings Inc.'s (PHI: Baa3, stable) reflects meaningful parent company debt and an aggressive dividend payout policy primarily funded through incremental debt issuances prevented upward movement in its rating.

Despite generally improving regulatory environments across the US, Atlantic City Electric Company's (ACE: Baa2, stable) regulatory construct has not benefitted from similar developments. For instance, unlike the majority of its sister utilities, ACE does have access to a decoupling mechanism that would improve the predictability of its earnings by eliminating fluctuations based on weather and changes in customer usage patterns. Furthermore, ACE continues to wrestle with significant lag in its earnings which keep the company's financial metrics squarely in the mid-Baa range.

Kentucky Power Company (Baa2, stable)

The rating confirmation of Kentucky Power Company (KEPCO: Baa2, stable) reflects the high leverage, a large capital expenditure program and weak financial metrics. The settlement outcome of last October clears the path to complete the transfer of the Mitchell Plant (including considerations of potential greenhouse initiatives), and the conversion of the Big Sandy Unit 1 to natural gas. KEPCO'S financial metrics for LTM third-quarter 2013, are reasonably within the range for the rating category. However, on a forward looking basis, a large capital expenditure program and increased leverage will contribute to weaker financial metrics such as CFO pre-WC to debt averaging between 12-14% and CFO pre WC – Div to debt between 9-11%.

Entergy Arkansas, Inc. (Baa2, stable)

The rating confirmation of Entergy Arkansas Inc. (EA: Baa2, stable) reflects less favorable rate case outcomes in May 2010 and December 2013. Arkansas operates under traditional rate of return regulation rather than the more credit supportive formula rate plans in place in Louisiana and Mississippi, where Entergy's other large subsidiaries operate. The rate of return regulation contributes to regulatory lag at EA. Under Arkansas regulation, the test year is either fully historical or 6 months historical and 6 months projected. However, there are fuel and certain other riders that help offset some aspects of the lag.

LTM third-quarter 2013 metrics are consistent with that of fiscal year end 2012, with Cash Flow Interest Coverage of 4.5x and CFO pre-WC to debt of 13%. According to Moody's adjusted projections, EA will be able to maintain appropriate metrics for the rating, including CFO pre-WC to debt, and CFO pre-WC – Div to debt of around 16% and 14% respectively.

PPL Corporation (Baa3, stable)

The rating confirmation of PPL Corporation (PPL: Baa3, stable) reflects the upgrades of its US regulated utilities, which represent 31% of consolidated earnings, but these upgrades were not sufficient to shift PPL's consolidated credit profile as their financial metrics remain weak for its rating category. LKE did not receive an upgrade because of the high debt level at LKE relative to the consolidated LKE. Moreover, because there is free movement of cash between PPL and LKE, PPL has a constraining effect on LKE's ratings.

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Appendix A: Selected utility sector rating changes

Name	Sector	Old	New	Outlook
AES Corporation, (The)	HoldCo	Ba3	Ba3	Stable
Indianapolis Power & Light Company	Integrated	Baa2	Baa1	Stable
IPALCO Enterprises, Inc.	HoldCo	Ba1	Baa3	Stable
AGL Resources Inc.	HoldCo	Baa1	A3	Stable
AGL Resources Inc.	HoldCo	Baa1	A3	Stable
Atlanta Gas Light Company	LDC	A3	A2	Stable
Northern Illinois Gas	LDC	A3	A2	Stable
Pivotal Utility Holdings	LDC	A3	A2	Stable
ALLETE, Inc.	Integrated	Baa1	A3	Stable
Superior Water, Light and Power Company	Integrated	Baa1	A3	Stable
Alliant Energy Corporation	HoldCo	Baa1	A3	Stable
Wisconsin Power and Light Company	Integrated	A2	A1	Stable
Ameren Corporation	HoldCo	Baa3	Baa2	Stable
Ameren Illinois Company	T&D	Baa2	Baa1	Stable
Union Electric Company	Integrated	Baa2	Baa1	Stable
American Electric Power Company, Inc.	HoldCo	Baa2	Baa1	Stable
AEP Texas Central Company	T&D	Baa2	Baa1	Stable
AEP Texas North Company	T&D	Baa2	Baa1	Stable
Appalachian Power Company	Integrated	Baa2	Baa1	Stable
Indiana Michigan Power Company	Integrated	Baa2	Baa1	Stable
Public Service Company of Oklahoma	Integrated	Baa1	A3	Stable
Southwestern Electric Power Company	Integrated	Baa3	Baa2	Stable
Atmos Energy Corporation	LDC	Baa1	A2	Stable
Avista Corp.	Integrated	Baa2	Baa1	Stable
MidAmerican Energy Holdings Co.	HoldCo	Baa1	A3	Stable
MidAmerican Energy Company	Integrated	A2	A1	Stable
MidAmerican Funding, LLC	HoldCo	A3	A2	Stable
PacifiCorp	Integrated	Baa1	A3	Stable
NV Energy Inc.	HoldCo	Baa3	Baa2	Stable
Nevada Power Company	Integrated	Baa2	Baa1	Stable
Sierra Pacific Power Company	Integrated	Baa2	Baa1	Stable
Black Hills Corporation	HoldCo	Baa2	Baa1	Stable
Black Hills Power, Inc.	Integrated	Baa1	A3	Stable
CenterPoint Energy, Inc.	HoldCo	Baa2	Baa1	Stable
CenterPoint Energy Houston Electric, LLC	T&D	Baa1	A3	Stable

Name	Sector	Old	New	Outlook
CH Energy Group, Inc.	HoldCo	not rated		
Central Hudson Gas & Electric Corporation	T&D	A3	A2	Stable
Cleco Corporation	HoldCo	Baa3	Baa2	Positive
Cleco Power LLC	Integrated	Baa2	Baa1	Positive
CMS Energy Corporation	HoldCo	Baa3	Baa2	Stable
Consumers Energy Company	Integrated	Baa1	A3	Stable
Consolidated Edison, Inc.	HoldCo	Baa1	A3	Stable
Consolidated Edison Company of New York, Inc.	T&D	A3	A2	Stable
Orange and Rockland Utilities, Inc.	T&D	Baa1	A3	Stable
Dominion Resources Inc.	HoldCo	Baa2	Baa2	Stable
Dominion Gas Holdings	LDC	A3	A2	Stable
Virginia Electric and Power Company	Integrated	A3	A2	Stable
DTE Energy Company	HoldCo	Baa1	A3	Stable
DTE Electric Company	Integrated	A3	A2	Stable
DTE Gas Company	LDC	A3	A2	Stable
Duke Energy Corporation	HoldCo	A3	Baa1	Stable
Duke Energy Carolinas, LLC	Integrated	A2	A1	Stable
Duke Energy Florida, Inc.	Integrated	Baa1	A3	Stable
Duke Energy Indiana, Inc.	Integrated	A3	A2	Stable
Duke Energy Progress, Inc.	Integrated	A2	A1	Stable
Progress Energy, Inc.	HoldCo	Baa2	Baa1	Stable
Duquesne Light Holdings, Inc.	HoldCo	Baa3	Baa3	Stable
Duquesne Light Company	T&D	Baa1	A3	Stable
Edison International	HoldCo	Baa2	A3	Stable
Southern California Edison Company	Integrated	A3	A2	Stable
El Paso Electric Company	Integrated	Baa2	Baa1	Stable
Empire District Electric Company (The)	Integrated	Baa2	Baa1	Stable
Portland General Electric Company	Integrated	Baa1	A3	Stable
Entergy Corporation	HoldCo	Baa3	Baa3	Stable
Entergy Gulf States Louisiana, LLC	Integrated	Baa2	Baa1	Stable
Entergy Louisiana, LLC	Integrated	Baa2	Baa1	Stable
Entergy Mississippi, Inc.	Integrated	Baa3	Baa2	Stable
Entergy Texas, Inc.	Integrated	Ba1	Baa3	Stable

Name	Sector	Old	New	Outlook
Exelon Corporation	HoldCo	Baa2	Baa2	Stable
Baltimore Gas and Electric Company	T&D	Baa1	A3	Stable
Commonwealth Edison Company	T&D	Baa2	Baa1	Stable
PECO Energy Company	T&D	A3	A2	Stable
Great Plains Energy Incorporated	HoldCo	Baa3	Baa2	Stable
Kansas City Power & Light Company	Integrated	Baa2	Baa1	Stable
Kansas City Power & Light Greater MO Oper	Integrated	Baa3	Baa2	Stable
Iberdrola S.A.	HoldCo	Baa1	Baa1	Negative
Central Maine Power Company	T&D	Baa1	A3	Stable
New York State Electric and Gas Corporation	T&D	Baa1	A3	Stable
Rochester Gas & Electric Corporation	T&D	Baa2	Baa1	Stable
IDACORP, Inc.	HoldCo	Baa2	Baa1	Stable
Idaho Power Company	Integrated	Baa1	A3	Stable
Integrys Energy Group, Inc.	HoldCo	Baa1	Baa1	Stable
North Shore Gas Company	LDC	A3	A2	Stable
Peoples Gas Light and Coke Company	LDC	A3	A2	Stable
Wisconsin Public Service Corporation	Integrated	A2	A1	Stable
Laclede Group, Inc. (The)	LDC	Baa2	Baa1	Stable
Laclede Gas Company	LDC	Baa1	A3	Stable
LDC HOLDINGS LLC	HoldCo	not rated		
PNG Companies LLC	LDC	Baa3	Baa2	Stable
New Jersey Resources Corp	HoldCo	not rated		
New Jersey Natural Gas Company	LDC	Aa3	Aa2	Stable
NextEra Energy, Inc.	HoldCo	Baa1	Baa1	Stable
Florida Power & Light Company	Integrated	A2	A1	Stable
NiSource Inc.	HoldCo	(P)Ba2 (preferred)	(P)Ba1 (preferred)	Stable
NiSource Finance	HoldCo	Baa3	Baa2	Stable
Northern Indiana Public Service Company	Integrated	Baa2	Baa1	Stable
Northeast Utilities	HoldCo	Baa1	Baa1	Stable
Connecticut Light and Power Company	T&D	Baa2	Baa1	Stable
Public Service Company of New Hampshire	Integrated	Baa2	Baa1	Stable
Western Massachusetts Electric Company	T&D	Baa2	A3	Stable
Yankee Gas Services Company	LDC	Baa2	Baa1	Stable
NorthWestern Corporation	Integrated	Baa1	A3	Stable

Name	Sector	Old	New	Outlook
OGE Energy Corp.	HoldCo	Baa1	A3	Stable
Oklahoma Gas & Electric Company	Integrated	A2	A1	Stable
Otter Tail Corporation	HoldCo	Baa3	Baa2	Stable
Pepco Holdings, Inc.	HoldCo	Baa3	Baa3	Stable
Delmarva Power & Light Company	T&D	Baa2	Baa1	Stable
Potomac Electric Power Company	T&D	Baa2	Baa1	Stable
Piedmont Natural Gas Company, Inc.	LDC	A3	A2	Stable
Pinnacle West Capital Corporation	HoldCo	Baa2	Baa1	Stable
Arizona Public Service Company	Integrated	Baa1	A3	Stable
PNM Resources, Inc.	HoldCo	Ba1	Baa3	Positive
Public Service Company of New Mexico	Integrated	Baa3	Baa2	Positive
Texas-New Mexico Power Company	T&D	Baa2	Baa1	Positive
PPL Corporation	HoldCo	Baa3	Baa3	Stable
Kentucky Utilities Co.	Integrated	Baa1	A3	Stable
Louisville Gas & Electric	Integrated	Baa1	A3	Stable
PPL Electric Utilities Corporation	T&D	Baa2	Baa1	Stable
Public Service Enterprise Group Incorporated	HoldCo	(P)Baa2	(P)Baa2	Stable
Public Service Electric and Gas Company	T&D	A3	A2	Stable
Puget Energy, Inc.	HoldCo	Ba1	Baa3	Stable
Puget Sound Energy, Inc.	Integrated	Baa2	Baa1	Stable
Questar Corporation	HoldCo	A3	A2	Stable
Questar Gas Company	LDC	A3	A2	Stable
SEMCO Energy, Inc.	LDC	Baa2	Baa1	Stable
Sempra Energy	HoldCo	Baa1	Baa1	Stable
San Diego Gas & Electric Company	Integrated	A2	A1	Stable
Southern California Gas Company	LDC	A2	A1	Stable
SourceGas Holdings LLC	HoldCo	not rated		
SourceGas LLC	LDC	Baa3	Baa2	Stable
South Jersey Industries Inc	HoldCo	not rated		
South Jersey Gas Company	LDC	A3	A2	Stable
Southern Company (The)	HoldCo	Baa1	Baa1	Stable
Alabama Power Company	Integrated	A2	A1	Stable
Gulf Power Company	Integrated	A3	A2	Stable

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Name	Sector	Old	New	Outlook
Southwest Gas Corporation	LDC	Baa1	A3	Stable
TECO Energy, Inc.	HoldCo	Baa2	Baa1	Stable
Tampa Electric Company	Integrated	A3	A2	Stable
UGI Corporation	HoldCo	not rated		
UGI Utilities, Inc.	LDC	A3	A2	Stable
UIL Holdings Corporation	HoldCo	Baa3	Baa2	Stable
Berkshire Gas Company	LDC	Baa2	Baa1	Stable
Connecticut Natural Gas Corporation	LDC	Baa1	A3	Stable
Southern Connecticut Gas Company	LDC	Baa2	Baa1	Stable
United Illuminating Company	T&D	Baa2	Baa1	Stable
UNS Energy Corporation	HoldCo	Baa3	Baa2	Stable
Tucson Electric Power Company	Integrated	Baa2	Baa1	Stable
UNS Electric, Inc.	Integrated	Baa2	Baa1	Stable
UNS Gas, Inc.	LDC	Baa2	Baa1	Stable
Vectren Utility Holdings, Inc.	HoldCo	A3	A2	Stable
Indiana Gas Company, Inc.	LDC	A3	A2	Stable
Southern Indiana Gas & Electric Company	Integrated	A3	A2	Stable
Westar Energy, Inc.	HoldCo	Baa2	Baa1	Stable
WGL Holdings, Inc.	HoldCo	no long term rating		
Washington Gas Light Company	LDC	A2	A1	Stable
Wisconsin Energy Corporation	HoldCo	A3	A2	Stable
Wisconsin Electric Power Company	Integrated	A2	A1	Stable
Wisconsin Gas LLC	LDC	A2	A1	Stable
Xcel Energy Inc.	HoldCo	Baa1	A3	Stable
Northern States Power Company (Minnesota)	Integrated	A3	A2	Stable
Northern States Power Company (Wisconsin)	Integrated	A3	A2	Stable
Public Service Company of Colorado	Integrated	Baa1	A3	Stable
Southwestern Public Service Company	Integrated	Baa2	Baa1	Stable

Appendix B: Selected financial ratios – by sector classification, by rating

		Debt / EBITDA			CFO / debt			Dividend payout			Cap Ex / D&A		
Name		4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM
Holding companies	Median	4.3	4.3	3.8	21%	22%	23%	51%	60%	62%	2.7	2.8	2.7
A2 and A3 rated	Total	4.1	4.2	4.3	21%	20%	19%	56%	59%	60%	2.2	2.2	2.2
Holding companies	Median	4.6	5.0	3.8	19%	15%	18%	66%	71%	59%	1.7	1.8	1.5
Baa1 rated	Total	4.1	4.2	4.4	19%	19%	18%	65%	65%	74%	2.2	2.3	2.2
Holding companies	Median	5.4	5.3	5.2	14%	15%	16%	71%	79%	110%	2.0	2.0	1.9
Baa2 ad lower rated	Total	4.1	4.3	3.9	19%	19%	17%	83%	99%	103%	1.7	1.9	2.0
LDC's	Median	3.9	3.8	3.8	24%	23%	19%	71%	78%	79%	1.9	2.3	2.4
A - rated	Total	3.3	3.3	3.4	27%	26%	23%	63%	65%	58%	2.0	2.3	2.6
LDC's	Median	3.8	3.9	3.4	26%	21%	26%	82%	76%	74%	1.7	1.9	2.0
Baa1 and Baa2 rated	Total	4.0	4.0	3.3	23%	21%	23%	42%	39%	52%	2.3	2.0	2.1
T&D (electric or gas)	Median	2.9	2.8	2.7	27%	30%	26%	60%	67%	37%	1.7	2.0	1.8
A - rated	Total	3.5	3.5	3.6	24%	26%	22%	67%	67%	57%	1.8	2.0	2.1
T&D (electric or gas)	Median	5.0	4.6	4.3	16%	16%	16%	72%	69%	55%	1.9	2.0	2.3
Baa1 rated	Total	3.9	3.8	3.8	21%	20%	18%	98%	89%	66%	1.6	1.8	2.1
T&D (electric or gas)	Median	3.6	4.1	4.5	21%	18%	19%	155%	141%	87%	1.0	1.0	1.0
Baa2 and lower rated	Total	3.6	3.7	3.8	20%	20%	20%	133%	127%	95%	1.2	1.4	1.3
Transmission	Median	2.3	2.3	2.5	37%	33%	26%	82%	92%	71%	5.7	6.4	6.4
	Total	3.9	3.9	4.1	20%	19%	16%	80%	83%	58%	4.7	5.3	5.5
Vertically Integrated	Median	3.6	3.7	4.1	25%	25%	17%	29%	29%	33%	2.0	1.9	1.8
A1 rated	Total	3.1	3.2	3.2	27%	26%	25%	45%	46%	63%	2.3	2.4	2.0
Vertically Integrated	Median	3.6	3.6	3.7	22%	20%	18%	76%	80%	61%	2.2	2.2	2.2
A2 rated	Total	3.2	3.2	3.1	27%	26%	25%	57%	58%	51%	2.2	2.1	2.1
Vertically Integrated	Median	3.9	4.0	4.0	22%	22%	20%	50%	64%	48%	2.1	1.9	2.2
A3 rated	Total	3.8	3.8	3.8	22%	23%	23%	66%	84%	71%	2.0	1.9	2.1
Vertically Integrated	Median	3.8	3.9	4.2	18%	18%	17%	69%	74%	73%	1.8	1.8	2.1
Baa1 rated	Total	4.2	4.1	4.5	19%	19%	19%	67%	70%	103%	1.9	2.0	2.2
Vertically Integrated	Median	5.8	5.7	5.4	14%	16%	17%	55%	47%	74%	2.1	1.9	2.1
Baa2 and lower rated	Total	4.4	4.3	4.0	16%	18%	17%	65%	46%	65%	2.3	2.4	2.4

Appendix C: Selected financial data – by sector classification, by rating

		Revenue			EBITDA			CFO			Total Debt		
Name		4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM	4-yr avg	2-yr avg	LTM
Holding companies	Median	$4.0	$4.1	$4.5	$1.1	$1.2	$1.4	$1.0	$1.2	$1.2	$4.9	$5.3	$5.2
A2 and A3 rated	Total	$90.5	$92.4	$103.7	$28.6	$30.2	$34.0	$24.1	$25.8	$27.9	$117.6	$126.9	$147.2
Holding companies	Median	$5.9	$5.5	$7.2	$1.6	$1.7	$2.4	$1.3	$1.2	$1.7	$7.3	$8.6	$9.2
Baa1 rated	Total	$111.0	$111.0	$114.9	$35.3	$36.5	$37.5	$27.5	$29.3	$29.7	$145.7	$153.8	$163.4
Holding companies	Median	$3.2	$3.2	$3.1	$1.0	$1.0	$1.0	$0.7	$0.8	$0.8	$5.1	$5.3	$5.1
Baa2 ad lower rated	Total	$135.9	$138.7	$139.8	$42.3	$43.0	$50.4	$33.0	$34.7	$34.5	$174.2	$186.3	$198.8
LDC's	Median	$0.9	$0.9	$0.8	$0.2	$0.2	$0.2	$0.2	$0.2	$0.2	$0.7	$0.8	$0.8
A - rated	Total	$19.0	$18.6	$18.7	$4.5	$4.9	$5.1	$4.1	$4.3	$4.0	$14.9	$16.4	$17.7
LDC's	Median	$0.4	$0.4	$0.4	$0.1	$0.1	$0.1	$0.1	$0.1	$0.1	$0.3	$0.3	$0.3
Baa1 and Baa2 rated	Total	$7.7	$7.1	$7.4	$1.4	$1.4	$1.4	$1.3	$1.2	$1.0	$5.6	$5.6	$4.6
T&D (electric or gas)	Median	$1.7	$1.6	$1.6	$0.6	$0.6	$0.7	$0.5	$0.5	$0.5	$1.7	$1.8	$1.8
A - rated	Total	$27.4	$25.8	$25.3	$7.9	$8.1	$8.5	$6.5	$7.2	$6.6	$27.4	$28.3	$30.7
T&D (electric or gas)	Median	$1.3	$1.2	$1.2	$0.3	$0.4	$0.4	$0.3	$0.3	$0.3	$1.6	$1.7	$1.8
Baa1 rated	Total	$31.4	$30.4	$28.3	$8.2	$8.6	$9.0	$6.7	$6.6	$6.1	$32.1	$32.8	$34.2
T&D (electric or gas)	Median	$1.3	$1.1	$0.9	$0.4	$0.3	$0.3	$0.3	$0.2	$0.3	$1.3	$1.3	$1.4
Baa2 and lower rated	Total	$16.0	$14.4	$13.7	$5.2	$5.1	$5.1	$3.6	$3.8	$3.8	$18.6	$18.9	$19.3
Transmission	Median	$0.3	$0.3	$0.3	$0.2	$0.2	$0.2	$0.1	$0.1	$0.1	$0.4	$0.5	$0.6
	Total	$2.0	$2.2	$2.5	$1.4	$1.5	$1.7	$1.1	$1.1	$1.2	$5.5	$6.0	$7.1
Vertically Integrated	Median	$3.4	$3.5	$3.7	$1.0	$1.1	$1.2	$0.9	$1.0	$0.8	$3.7	$4.1	$4.8
A1 rated	Total	$39.7	$39.7	$40.7	$13.0	$13.5	$14.7	$10.9	$11.2	$11.7	$40.2	$43.2	$46.6
Vertically Integrated	Median	$3.3	$3.3	$3.3	$0.9	$0.9	$1.0	$0.7	$0.7	$0.6	$3.2	$3.4	$3.6
A2 rated	Total	$40.1	$40.7	$42.4	$12.8	$13.7	$14.9	$11.0	$11.3	$11.5	$40.8	$43.6	$46.8
Vertically Integrated	Median	$1.7	$1.7	$1.7	$0.4	$0.5	$0.5	$0.4	$0.4	$0.4	$1.7	$1.8	$1.9
A3 rated	Total	$66.4	$67.2	$68.6	$20.3	$21.0	$21.5	$16.6	$18.2	$18.8	$76.1	$79.2	$80.9
Vertically Integrated	Median	$1.5	$1.5	$1.6	$0.4	$0.4	$0.4	$0.3	$0.3	$0.3	$1.5	$1.6	$1.7
Baa1 rated	Total	$36.8	$37.7	$38.0	$10.5	$11.1	$10.6	$8.2	$8.9	$8.9	$43.6	$45.8	$47.7
Vertically Integrated	Median	$1.2	$1.2	$1.3	$0.3	$0.3	$0.3	$0.2	$0.3	$0.3	$1.6	$1.6	$1.6
Baa2 and lower rated	Total	$12.3	$12.5	$12.9	$3.5	$3.7	$3.9	$2.5	$2.8	$2.6	$15.2	$15.8	$15.6

Appendix D: Companies not placed on review for upgrade

Name	Sector	Old	New	Outlook	Comment
Northwest Natural Gas Company	LDC	A3	A3	Negative	Not placed on review on November 8
Public Service Co. of North Carolina, Inc.	LDC	A3	A3	Stable	Not placed on review on November 8
Georgia Power Company	Vertically Integrated	A3	A3	Stable	Not placed on review on November 8
Pacific Gas & Electric Company	Vertically Integrated	A3	A3	Stable	Not placed on review on November 8
Interstate Power and Light Company	Vertically Integrated	A3	A3	Stable	Not placed on review on November 8
Oncor Electric Delivery Company LLC	T&D (electric or gas)	Ba2	Ba2	Stable	Not placed on review on November 8
DPL Inc.	Holdco	Ba2	Ba2	Stable	Not placed on review on November 8
Entergy New Orleans, Inc.	Vertically Integrated	Ba2	Ba2	Stable	Not placed on review on November 8
NextEra Energy, Inc.	Holdco	Baa1	Baa1	Stable	Not placed on review on November 8
PG&E Corporation	Holdco	Baa1	Baa1	Stable	Not placed on review on November 8
Sempra Energy	Holdco	Baa1	Baa1	Stable	Not placed on review on November 8
Southern Company (The)	Holdco	Baa1	Baa1	Stable	Not placed on review on November 8
Duke Energy Ohio, Inc.	T&D (electric or gas)	Baa1	Baa1	Stable	Not placed on review on November 8
Monongahela Power Company	T&D (electric or gas)	Baa1	Baa1	Stable	Not placed on review on November 8
Ohio Power Company	T&D (electric or gas)	Baa1	Baa1	Stable	Not placed on review on November 8
Mississippi Power Company	Vertically Integrated	Baa1	Baa1	Stable	Not placed on review on November 8
Exelon Corporation	Holdco	Baa2	Baa2	Stable	Not placed on review on November 8
Public Service Enterprise Group Incorporated	Holdco	Baa2	Baa2	Stable	Not placed on review on November 8
CenterPoint Energy Resources Corp.	LDC	Baa2	Baa2	Stable	Not placed on review on November 8
Jersey Central Power & Light Company	T&D (electric or gas)	Baa2	Baa2	Negative	Not placed on review on November 8
Metropolitan Edison Company	T&D (electric or gas)	Baa2	Baa2	Stable	Not placed on review on November 8
Ohio Edison Company	T&D (electric or gas)	Baa2	Baa2	Stable	Not placed on review on November 8
Pennsylvania Electric Company	T&D (electric or gas)	Baa2	Baa2	Stable	Not placed on review on November 8
Pennsylvania Power Company	T&D (electric or gas)	Baa2	Baa2	Stable	Not placed on review on November 8
South Carolina Electric & Gas Company	Vertically Integrated	Baa2	Baa2	Stable	Not placed on review on November 8
Entergy Corporation	Holdco	Baa3	Baa3	Stable	Not placed on review on November 8
FirstEnergy Corp.	Holdco	Baa3	Baa3	Negative	Not placed on review on November 8
SCANA Corporation	Holdco	Baa3	Baa3	Stable	Not placed on review on November 8
Cleveland Electric Illuminating Company (The)	T&D (electric or gas)	Baa3	Baa3	Stable	Not placed on review on November 8
Dayton Power & Light Company	T&D (electric or gas)	Baa3	Baa3	Stable	Not placed on review on November 8
Potomac Edison Company (The)	T&D (electric or gas)	Baa3	Baa3	Stable	Not placed on review on November 8
Toledo Edison Company	T&D (electric or gas)	Baa3	Baa3	Stable	Not placed on review on November 8

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» US Coal Industry: US Coal Industry Faces Steady but Weak 2014, With No Relief in Sight, December 2013 (161317)

Special Comments:

» US Oil and Gas Industry: Promise of Stronger Valuations Expands MLP Model Beyond Traditional Midstream Home, January 2014 (163537)

» May The FERC Be With You: FERC Remains Supportive of Electric Transmission Investment, but Regulatory Risks Are Growing, May 2013 (153066)

» YieldCos: Fantastic for Shareholders; Less So for Bondholders, November 2013 (160121)

» Pacific Northwest Utilities: Regulatory Support Paves Way for Improving Credit Profiles, November 2012 (146170)

» The 21st Century Electric Utility: Substantial uncertainties exist when assessing long-term credit implications, May 2010 (124891)

» Vogtle Nuclear Project Highlights Credit Strengths and Weaknesses of Three Electric Utility Business Models, October 2013 (159411)

Rating Methodology:

» Regulated Electric and Gas Utilities, December 2013 (157160)

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Report Number: 163726

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S&P Global
Market Intelligence

November 12, 2019
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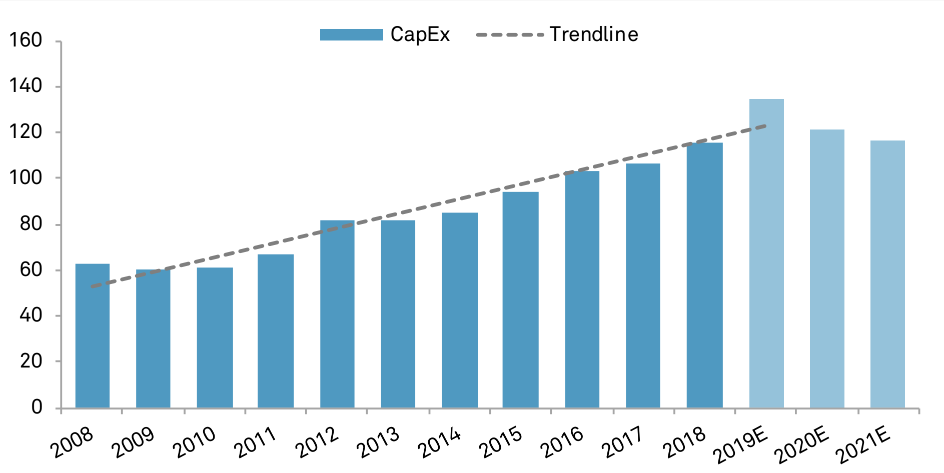
RRA Regulatory Focus
Adjustment Clauses

A State-by-State Overview

In the face of the robust expansion of utility capital expenditures in recent years, increases in various expenses, and sluggish demand growth in most parts of the U.S., industry stakeholders have developed innovative strategies to achieve timely rate recognition. As shown in the image below, CapEx for the companies covered by Regulatory Research Associates, a group within S&P Global Market Intelligence, is estimated to exceed $134 billion for the full year 2019, more than twice the amount spent in 2008.

Energy utility actual and estimated capital expenditures ($B)



Compiled Oct. 16, 2019.
Source: S&P Global Market Intelligence

A key component of these strategies has been the implementation of adjustment clauses to address recovery of these expenditures as well as issues related to rising/volatile costs and lackluster sales growth. These mechanisms have contributed to steady earnings growth in the sector. Utility earnings for the 12 months ended June 30, 2019, grew modestly, with an average gain of 1.4% over prior-year results. In terms of projected energy industry profitability, S&P Global Market Intelligence consensus EPS projections call for electric utility EPS to grow 2.8% in 2019 for companies in the RRA utility universe, with 4.7% expansion forecast in 2020 and 4.6% in 2021. Multi-utility EPS is forecast to grow 2.3% in 2019 and 6.4% and 6.8% in 2020 and 2021, respectively.

A defining characteristic of an adjustment clause is that it effectively shifts the risk associated with recovery of the expense in question from shareholders to customers. If the clause operates as designed, the company is able to change its rates to recover its costs on a current basis, without any negative effect on the bottom line and without the expense and delay that accompany a rate case filing.

For Detailed Data

Click here to see supporting data tables.

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The electric and natural gas utilities' use of adjustment clauses to recover variations in certain costs outside of the traditional rate case process has its origins in the 1973 Arab oil embargo, when fuel costs skyrocketed, leaving the utilities with no way to recover the increased costs in a timely manner. At that time, the only remedy for the utilities was to file a rate case; however, rate proceedings frequently took more than a year to litigate, and fuel prices climbed more rapidly than the utilities could obtain rate recognition of the increased costs. Certain jurisdictions permitted the utilities to have more than one rate case pending simultaneously, though most did not.

In the years following the embargo, utility earnings were under considerable pressure, a situation that prompted some jurisdictions to establish a more constructive framework to allow more timely recovery of cost increases that were beyond the control of the utilities.

The result was the creation of the fuel adjustment clause, or FAC, essentially a single-issue ratemaking process whereby a utility is permitted to implement periodic rate adjustments to reflect changes in its cost of fuel. The utility is generally authorized to defer incremental variations in its fuel costs to offset any effect on earnings from the variation. The deferred amount is then recovered from, or refunded to, ratepayers in the next FAC rate adjustment. In some circumstances, the FAC includes a forward-looking component that is subject to true-up provisions. In addition to fuel costs, most jurisdictions allow the utilities' purchased power expense to be included in the FAC.

Over the ensuing years, the use of adjustment clauses has expanded greatly. Adjustment clauses are generally reserved for expenses that are outside the control of the utility or are required by law or rule. Some jurisdictions have approved the use of adjustment clauses for recovery of environmental compliance, energy efficiency and conservation program expenses, transmission charges allocated to the utility by the Federal Energy Regulatory Commission, and/or expenses related to meeting renewable resource requirements. Such mechanisms have also been approved to pass through to customers all or a portion of the margins that the company receives from selling excess power or pipeline capacity in the open market through off-system sales.

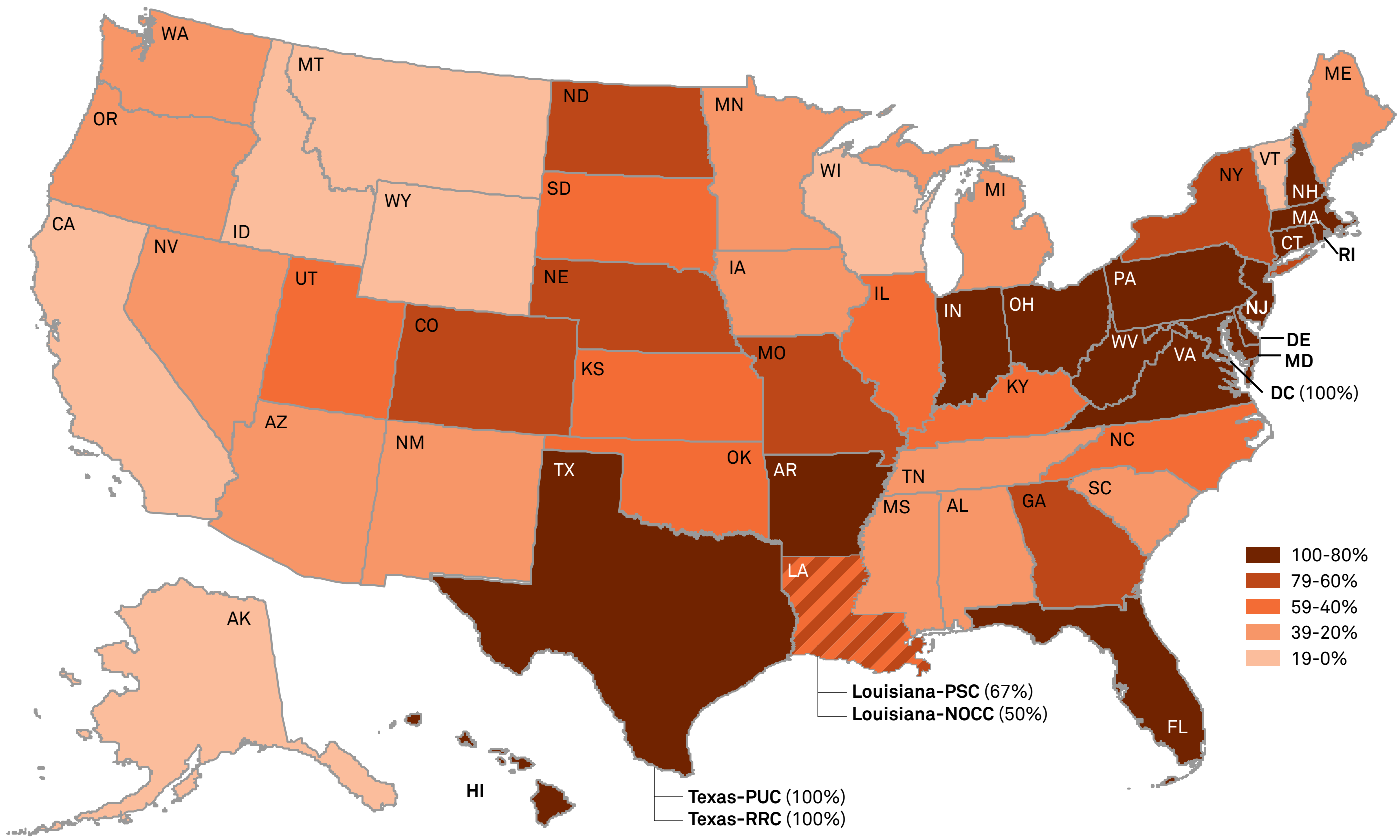
Another type of adjustment clause, a decoupling mechanism, enables utilities to offset the effect on revenues of fluctuations in sales caused by customer participation in energy efficiency programs, deviations from "normal" temperature patterns, or economic conditions. RRA considers a decoupling mechanism that adjusts for all three of these factors to be a "full" decoupling mechanism and designates those that address only one or two of these factors as "partial" decoupling mechanisms. RRA also assigns a partial decoupling tag to those mechanisms that include rate caps or other limitations.

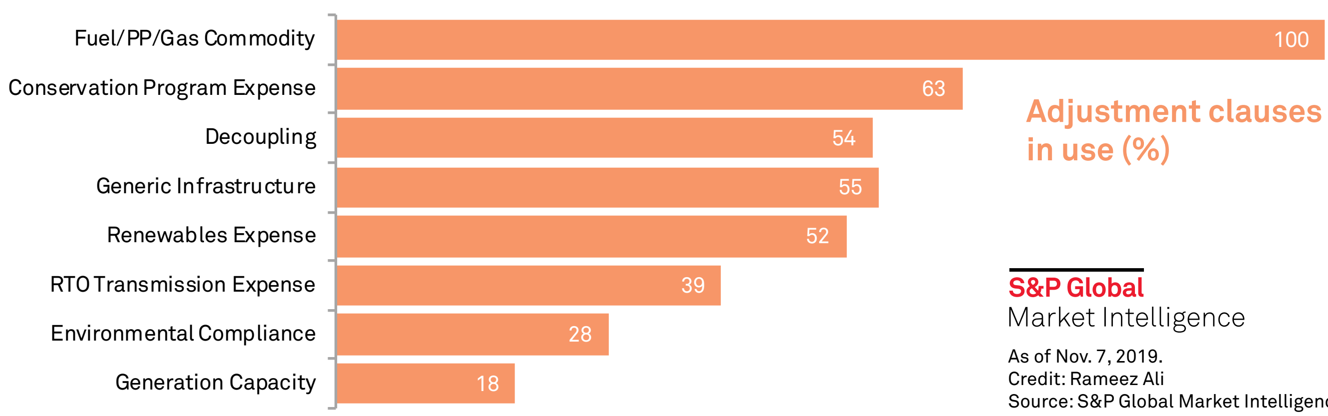
More recently and with greater frequency, commissions have approved mechanisms that permit the costs associated with the construction of new generation capacity or delivery infrastructure to be reflected in rates, effectively including these items in rate base without a full rate case. In some instances, these mechanisms may even provide the utilities a cash return on construction work in progress. As shown in the top image on the next page, these types of mechanisms are more common in the Eastern U.S. and less so in the West.

As shown in the graphic on the next page, certain types of adjustment clauses are more prevalent than others. For example, those that address electric fuel and gas commodity charges are in place in all jurisdictions. Also, about two-thirds of all utilities have riders in place to recover costs related to energy efficiency programs, and roughly **half** of the utilities utilize some type of decoupling mechanism.

This report covers the key adjustment clauses used by the largest electric and gas utilities in the 53 jurisdictions covered by RRA. This report does not address surcharges that have been approved to enable a utility to recover specific one-time items, e.g., excess storm-restoration costs incurred in a given year, because under that scenario, the utility is recovering over a defined period of time a fixed amount that has already been incurred.

Utilities with adjustment clauses for new capital (%)





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As of Nov. 7, 2019.
Credit: Rameez Ali
Source: S&P Global Market Intelligence

This report also does not include expense trackers, which provide for the deferral of variations in certain costs for potential recovery at a future time when the commission will consider the net accumulated balance for inclusion in rates. Although an expense tracker is designed to keep the utility's earnings whole, rates and cash flows do not change on a current basis. Expense trackers are sometimes authorized to account for variations in pension-related costs. Although there are similarities between each of these types of ratemaking provisions, only adjustment clauses allow rates to change on an expedited basis in accordance with cost changes.

The accompanying table includes footnotes (denoted by "✓*" or "--*"), beginning on the next page, where a clarification regarding the specific adjustment clause is necessary. Further details concerning the adjustment clauses included in this report can be found in each of RRA's Commission Profiles.

Regulatory agency abbreviations

ACC	Arizona Corporation Commission
ARC	Alaska Regulatory Commission
BPU	Board of Public Utilities (New Jersey)
DPU	Department of Public Utilities (Massachusetts)
ICC	Illinois Commerce Commission
IUB	Iowa Utilities Board
KCC	Kansas Corporation Commission
NCUC	North Carolina Utilities Commission
NOCC	New Orleans City Council
OCC	Oklahoma Corporation Commission
PRC	Public Regulation Commission (New Mexico)
PSC	Public Service Commission
PUC	Public Utility(ies) Commission
PURA	Public Utilities Regulatory Authority (Connecticut)
RRC	Railroad Commission (Texas)
SCC	State Corporation Commission (Virginia)
URC	Utility Regulatory Commission (Indiana)
WUTC	Washington Utilities and Transportation Commission

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RRA Regulatory Focus: Adjustment Clauses

Use of adjustment clauses (as of November 2019)

State/ Company	Ultimate parent ticker	Type of service	Type of adjustment clause: Electric fuel/gas commodity/purch. power	Conserv. program expense	Decoupling: Full	Decoupling: Partial	Renewables expense	Environmental compliance	New capital: Generation capacity	New capital: Generic infrastructure	RTO-related transmission expense	Other
ALABAMA												
Alabama Power Co.	SO	Elec.	✓ *	--	--	--	✓	✓ *	✓ *	--	--	✓ *
Spire Alabama Inc.	SR	Gas	✓ *	--	--	✓ *	--	--	--	--	--	✓ *
Spire Gulf Inc.	SR	Gas	✓ *	--	--	✓ *	--	--	--	--	--	✓ *
ALASKA												
Alaska Electric Light and Power Co.	AVA	Elec.	✓	--	--	--	--	--	--	--	--	--
Enstar Natural Gas Co.	ALA	Gas	✓	--	--	--	--	--	--	--	--	--
ARIZONA												
Arizona Public Service Co.	PNW	Elec.	✓	✓	--	✓ *	✓	✓	--	--	✓	✓ *
Southwest Gas Corp.	SWX	Gas	✓	✓	✓	-- *	--	--	--	✓ *	--	✓ *
Tucson Electric Power Co.	FTS	Elec.	✓	✓	--	✓ *	✓	✓	--	--	--	✓ *
UNS Electric Inc.	FTS	Elec.	✓	✓	--	✓ *	✓	--	--	--	✓	✓ *
UNS Gas Inc.	FTS	Gas	✓	--	--	✓ *	--	--	--	--	--	✓ *
ARKANSAS												
Arkansas Oklahoma Gas Corp.	--	Gas	✓	✓	✓	--	--	--	--	✓ *	--	✓ *
CenterPoint Energy Resources Corp.	CNP	Gas	✓	✓	✓	--	--	--	--	✓ *	--	✓ *
Entergy Arkansas LLC	ETR	Elec.	✓	✓	--	✓ *	✓	--	✓ *	✓ *	✓	✓ *
Oklahoma Gas and Electric Co.	OGE	Elec.	✓ *	✓	--	✓ *	✓	✓	✓	--	✓	✓ *
Black Hills Energy Arkansas Inc.	BKH	Gas	✓	✓	✓	--	--	--	--	✓ *	--	✓ *
Southwestern Electric Power Co.	AEP	Elec.	✓	✓	--	✓ *	--	✓	✓	--	✓	✓ *
CALIFORNIA												
Pacific Gas & Electric Co.	PCG	Elec.	✓	--	✓	--	--	--	--	--	--	✓ *
Pacific Gas & Electric Co.	PCG	Gas	✓	--	✓	--	--	--	--	--	--	--
San Diego Gas & Electric Co.	SRE	Elec.	✓	--	✓	--	--	--	--	--	--	✓ *
San Diego Gas & Electric Co.	SRE	Gas	✓	--	✓	--	--	--	--	--	--	--
Southern California Edison Co.	EIX	Elec.	✓	--	✓	--	--	--	--	--	--	✓ *
Southern California Gas Co.	SRE	Gas	✓	--	✓	--	--	--	--	--	--	--
Southwest Gas Corp.	SWX	Gas	✓	--	✓	--	--	--	--	--	--	--
COLORADO												
Black Hills Colorado Electric Inc.	BKH	Elec.	✓	✓	--	--	✓	--	✓ *	✓ *	--	✓ *
Public Service Co. of Colorado	XEL	Elec.	✓	✓	--	-- *	✓	✓ *	✓ *	✓ *	--	✓ *
Public Service Co. of Colorado	XEL	Gas	✓	✓	--	✓ *	--	--	--	✓ *	--	--
Black Hills Gas Distribution LLC	BKH	Gas	✓	✓	--	--	--	--	--	--	--	--
CONNECTICUT												
Connecticut Light and Power Co.	ES	Elec.	-- *	✓	✓ *	--	--	--	--	✓ *	✓	--
Connecticut Natural Gas Co.	IBE	Gas	✓	✓	✓ *	--	--	--	--	✓ *	--	--
Southern Connecticut Gas Co.	IBE	Gas	✓	✓	✓ *	--	--	--	--	✓ *	--	--
United Illuminating Co.	IBE	Elec.	-- *	✓	✓ *	--	--	--	--	--	✓	--
Yankee Gas Services Co.	ES	Gas	✓	✓	✓ *	--	--	--	--	✓ *	--	--
DELAWARE												
Chesapeake Utilities Corp.	CPK	Gas	✓	--	--	--	--	✓ *	--	✓ *	--	✓ *
Delmarva Power & Light Co.	EXC	Elec.	-- *	--	--	--	--	--	--	✓ *	✓	✓ *
Delmarva Power & Light Co.	EXC	Gas	✓	--	--	--	--	✓ *	--	✓ *	--	✓ *
DISTRICT OF COLUMBIA												
Potomac Electric Power Co.	EXC	Elec.	-- *	--	--	✓ *	✓ *	--	--	✓ *	--	✓ *
Washington Gas Light	ALA	Gas	✓	--	--	--	✓ *	--	--	✓ *	--	✓ *

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RRA Regulatory Focus: Adjustment Clauses

Use of adjustment clauses (as of November 2019)

Type of adjustment clause

State/ Company	Ultimate parent ticker	Type of service	Electric fuel/gas commodity/purch. power		Conserv. program expense	Decoupling: Full		Decoupling: Partial		Renewables expense	Environmental compliance		New capital: Generation capacity		New capital: Generic infrastructure		RTO-related transmission expense	Other	
FLORIDA																			
Florida Power & Light Co.	NEE	Elec.	✓		✓	--		--		--	✓		✓	*	--	*	--	✓	*
Duke Energy Florida LLC	DUK	Elec.	✓		✓	--		--		--	✓		✓	*	--	*	--	✓	*
Florida Public Utilities Co.	CPK	Elec.	✓		✓	--		--		--	✓		✓	*	--	*	--	✓	*
Florida Public Utilities Co.	CPK	Gas	✓		✓	--		--		--	✓		--		✓	*	--	✓	*
Gulf Power Co.	NEE	Elec.	✓		✓	--		--		--	✓		✓	*	--	*	--	✓	*
Peoples Gas System	EMA	Gas	✓		✓	--		--		--	✓		--		✓	*	--	✓	*
Pivotal Utility Holdings Inc.	NEE	Gas	✓		✓	--		--		--	✓		--		✓	*	--	✓	*
Tampa Electric Co.	EMA	Elec.	✓		✓	--		--		--	✓		✓	*	--	*	--	✓	*
GEORGIA																			
Atlanta Gas Light Co.	SO	Gas	--	*	--	--	*	--		--	✓	*	--		✓	*	--	--	
Georgia Power Co.	SO	Elec.	✓		--	--		--		--	--		✓	*	--		--	--	
Liberty Utilities (Peach State Nat. Gas) Corp.	AQN	Gas	✓	*	--	✓	*	--		--	--		--		--		--	--	
HAWAII																			
Hawaiian Electric Co. Inc.	HE	Elec.	✓		✓	✓		--		✓	--		✓	*	✓	*	--	✓	*
Hawaii Electric Light Co. Inc.	HE	Elec.	✓		✓	✓		--		✓	--		✓	*	✓	*	--	✓	*
Maui Electric Co. Ltd.	HE	Elec.	✓		✓	✓		--		✓	--		✓	*	✓	*	--	✓	*
IDAHO																			
Avista Corp.	AVA	Elec.	✓	*	✓	✓	*	--		--	--		--		--		--	--	
Avista Corp.	AVA	Gas	✓		✓	✓	*	--		--	--		--		--		--	--	
Idaho Power Co.	IDA	Elec.	✓	*	✓	✓	*	--		--	--		--		--		--	--	
PacifiCorp	BRK.A	Elec.	✓	*	✓	--		--		--	--		--		--		--	--	
ILLINOIS																			
Ameren Illinois Co.	AEE	Elec.	--	*	✓	--		--		✓	✓	*	--		--		✓	✓	*
Ameren Illinois Co.	AEE	Gas	✓		✓	--		✓	*	--	✓	*	--		✓	*	--	✓	*
Commonwealth Edison Co.	EXC	Elec.	--	*	✓	--		--		✓	✓	*	--		✓	*	✓	✓	*
Liberty Utilities (Midstates Natural Gas) Corp.	AQN	Gas	✓		✓	--		✓	*	--	--		--		--		--	✓	*
MidAmerican Energy Co.	BRK.A	Elec.	✓	*	✓	--		--		✓	--		--		--		✓	✓	*
MidAmerican Energy Co.	BRK.A	Gas	✓		✓	--		--		--	--		--		--	*	--	✓	*
North Shore Gas Co.	WEC	Gas	✓		✓	--		✓	*	--	✓	*	--		✓	*	--	✓	*
Northern Illinois Gas Co.	SO	Gas	✓		✓	--		✓	*	--	✓	*	--		✓	*	--	✓	*
Peoples Gas Light & Coke Co.	WEC	Gas	✓		✓	--		✓	*	--	✓	*	--		✓	*	--	✓	*
INDIANA																			
Duke Energy Indiana LLC	DUK	Elec.	✓		✓	--		✓	*	✓	✓	*	✓	*	✓	*	✓	✓	*
Indiana Gas Co.	CNP	Gas	✓		✓	✓		--		--	--		--		✓	*	--	✓	*
Indiana Michigan Power Co.	AEP	Elec.	✓		✓	--		✓	*	✓	✓	*	--		✓	*	✓	✓	*
Indianapolis Power & Light Co.	AES	Elec.	✓		✓	--		✓	*	✓	✓	*	--		--	*	✓	✓	*
Northern Indiana Public Service Co.	NI	Elec.	✓		✓	--		✓	*	✓	✓	*	--		✓	*	✓	✓	*
Northern Indiana Public Service Co.	NI	Gas	✓		✓	--		--		--	--		--		✓	*	--	✓	*
Southern Indiana Gas & Electric Co.	CNP	Elec.	✓		✓	--		✓	*	--	✓	*	--		✓	*	✓	✓	*
Southern Indiana Gas & Electric Co.	CNP	Gas	✓		✓	✓		--		--	--		--		✓	*	--	✓	*
IOWA																			
Black Hills Iowa Gas Utility Co.	BKH	Gas	✓		✓	--		--		--	--		--		✓		--	✓	*
Interstate Power & Light Co.	LNT	Elec.	✓		✓	--		--		✓	✓	*	--		--		✓	✓	*
Interstate Power & Light Co.	LNT	Gas	✓		✓	--		--		--	--		--		--		--	✓	*
MidAmerican Energy Co.	BRK.A	Elec.	✓		✓	--		--		✓	✓	*	--		--		✓	✓	*
MidAmerican Energy Co.	BRK.A	Gas	✓		✓	--		--		--	--		--		--		--	✓	*

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Use of adjustment clauses (as of November 2019)

State/ Company	Ultimate parent ticker	Type of service	Electric fuel/gas commodity/purch. power	Conserv. program expense	Decoupling: Full	Decoupling: Partial	Renewables expense	Environmental compliance	New capital: Generation capacity	New capital: Generic infrastructure	RTO-related transmission expense	Other
KANSAS												
Atmos Energy Corp.	ATO	Gas	✓	-- *	--	✓ *	--	--	--	✓ *	--	✓ *
Black Hills/Kansas Gas Utility Co.	BKH	Gas	✓	-- *	--	✓ *	--	--	--	✓ *	--	✓ *
Empire District Electric Co.	AQN	Elec.	✓	✓ *	--	--	--	✓	--	--	✓	✓ *
Evergy Kansas Central Inc.	EVRG	Elec.	✓	✓ *	--	✓ *	✓	✓	--	--	✓	✓ *
Evergy Kansas South Inc.	EVRG	Elec.	✓	✓ *	--	✓ *	✓	✓	--	--	✓	✓ *
Evergy Metro Inc.	EVRG	Elec.	✓	✓ *	--	--	--	--	--	✓ *	✓	✓ *
Kansas Gas Service Co.	OGS	Gas	✓	-- *	--	✓ *	--	--	--	✓ *	--	✓ *
KENTUCKY												
Atmos Energy Corp.	ATO	Gas	✓	✓	--	✓ *	--	--	--	✓ *	--	✓ *
Columbia Gas of Kentucky Inc.	NI	Gas	✓	✓	--	✓ *	--	--	--	✓ *	--	✓ *
Delta Natural Gas Co.	--	Gas	✓	✓	--	✓ *	--	--	--	✓ *	--	✓ *
Duke Energy Kentucky Inc.	DUK	Elec.	✓	✓	--	✓ *	✓	✓ *	--	--	--	✓ *
Duke Energy Kentucky Inc.	DUK	Gas	✓	✓	--	✓ *	--	--	--	--	--	✓ *
Kentucky Power Co.	AEP	Elec.	✓	✓	--	✓ *	✓	✓ *	--	--	--	✓ *
Kentucky Utilities Co.	PPL	Elec.	✓	✓	--	✓ *	✓	✓ *	--	--	--	✓ *
Louisville Gas & Electric Co.	PPL	Elec.	✓	✓	--	✓ *	✓	✓ *	--	--	--	✓ *
Louisville Gas & Electric Co.	PPL	Gas	✓	✓	--	✓ *	--	--	--	✓ *	--	✓ *
LOUISIANA-NOCC												
Entergy New Orleans LLC	ETR	Elec.	✓	✓	--	✓ *	--	✓ *	✓ *	--	✓	✓ *
Entergy New Orleans LLC	ETR	Gas	✓	--	--	--	--	--	--	--	--	✓ *
LOUISIANA PSC												
Atmos Energy Corp.	ATO	Gas	✓	--	--	✓ *	--	--	--	✓ *	--	--
CenterPoint Energy Resources Corp.	CNP	Gas	✓	--	--	✓ *	--	--	--	--	--	--
Cleco Power LLC	--	Elec.	✓	✓	--	✓ *	--	✓ *	✓ *	✓ *	✓ *	✓ *
Entergy Louisiana LLC	ETR	Elec.	✓	✓	--	✓ *	--	✓ *	✓ *	✓ *	✓ *	✓ *
Entergy Louisiana LLC	ETR	Gas	✓	--	--	✓ *	--	--	--	✓ *	--	--
Southwestern Electric Power Co.	AEP	Elec.	✓	✓	--	✓ *	--	✓ *	--	--	--	✓ *
MAINE												
Central Maine Power Co.	IBE	Elec.	-- *	--	✓ *	--	--	--	--	--	--	✓ *
Emera Maine	EMA	Elec.	-- *	--	--	--	--	--	--	--	--	--
Maine Natural Gas	IBE	Gas	✓	--	--	--	--	--	--	--	--	--
Northern Utilities, Inc.	UTL	Gas	✓	--	--	--	--	✓ *	--	✓ *	--	--
MARYLAND												
Baltimore Gas & Electric Co.	EXC	Elec.	-- *	✓	✓	--	--	--	--	-- *	--	✓ *
Baltimore Gas & Electric Co.	EXC	Gas	✓	✓	✓	--	--	--	--	✓ *	--	✓ *
Columbia Gas of Maryland Inc.	NI	Gas	✓	✓	--	✓ *	--	--	--	✓ *	--	✓ *
Delmarva Power & Light Co.	EXC	Elec.	-- *	✓	✓	--	--	--	--	-- *	--	--
Potomac Edison Co.	FE	Elec.	-- *	✓	--	--	--	--	--	✓ *	--	✓ *
Potomac Electric Power Co.	EXC	Elec.	-- *	✓	✓	--	--	--	--	-- *	--	✓ *
Washington Gas Light Co.	ALA	Gas	✓	✓	--	✓ *	--	--	--	✓ *	--	✓ *
MASSACHUSETTS												
Bay State Gas Co.	NI	Gas	✓	✓ *	✓	--	--	✓ *	--	✓ *	--	✓ *
Berkshire Gas Co.	IBE	Gas	✓	✓ *	✓	--	--	✓ *	--	✓ *	--	✓ *
Boston Gas Co./Colonial Gas Co.	NGG	Gas	✓	✓ *	✓	--	--	✓ *	--	✓ *	--	✓ *
Fitchburg Gas & Electric	UTL	Elec.	-- *	✓ *	✓	--	✓ *	--	--	✓ *	✓	✓ *
Fitchburg Gas & Electric	UTL	Gas	✓	✓ *	✓	--	--	✓ *	--	✓ *	--	✓ *
Liberty Utilities (New England Natural Gas Co.) C	AQN	Gas	✓	✓ *	✓	--	--	✓ *	--	✓ *	--	✓ *
Massachusetts Electric Co.	NGG	Elec.	-- *	✓ *	✓	--	✓ *	--	✓ *	✓ *	✓	✓ *
NSTAR Electric Co.	ES	Elec.	-- *	✓ *	✓	--	✓ *	--	--	✓ *	✓	✓ *
NSTAR Gas Co.	ES	Gas	✓	✓ *	✓	--	--	✓ *	--	✓ *	--	✓ *

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Use of adjustment clauses (as of November 2019)

			Type of adjustment clause									
State/ Company	Ultimate parent ticker	Type of service	Electric fuel/gas commodity/purch. power	Conserv. program expense	Decoupling Full	Decoupling Partial	Renewables expense	Environmental compliance	New capital Generation capacity	New capital Generic infrastructure	RTO-related transmission expense	Other
MICHIGAN												
Consumers Energy Co.	CMS	Elec.	✓	✓	-- *	--	✓	--	--	--	✓ *	--
Consumers Energy Co.	CMS	Gas	✓	✓	--	✓ *	--	--	--	✓ *	--	--
DTE Electric Co.	DTE	Elec.	✓	✓	-- *	--	✓	--	--	--	✓ *	--
DTE Gas Co.	DTE	Gas	✓	✓	--	✓ *	--	--	--	✓ *	--	--
Indiana Michigan Power Co.	AEP	Elec.	✓	✓	-- *	--	✓	--	--	--	--	✓ *
Michigan Gas Utilities Corp.	WEC	Gas	✓	✓	--	--	--	--	--	--	--	--
SEMCO Energy Gas Co.	ALA	Gas	✓	✓	--	--	--	--	--	✓ *	--	--
Upper Peninsula Power Co.	--	Elec.	✓	✓	-- *	--	✓	--	--	--	✓ *	--
Wisconsin Electric Power Co.	WEC	Elec.	✓	✓	-- *	--	✓	--	--	--	--	--
MINNESOTA												
ALLETE (Minnesota Power)	ALE	Elec.	✓	✓	--	--	✓	✓	--	--	✓	✓
CenterPoint Energy Resources Corp.	CNP	Gas	✓	✓	--	✓ *	--	--	--	--	--	--
Minnesota Energy Resources Corp.	WEC	Gas	✓	✓	--	✓ *	--	--	--	✓ *	--	--
Northern States Power Co.-Minnesota	XEL	Elec.	✓	✓	--	✓ *	✓	✓	--	--	✓	--
Northern States Power Co.-Minnesota	XEL	Gas	✓	✓	--	--	--	--	--	✓ *	--	--
Otter Tail Power Co.	OTTR	Elec.	✓	✓	--	--	✓	✓	--	--	✓	--
MISSISSIPPI												
Atmos Energy Corp.	ATO	Gas	✓	✓	--	✓ *	--	--	--	✓ *	--	--
Entergy Mississippi LLC	ETR	Elec.	✓	✓	--	✓ *	--	✓ *	--	--	✓	✓ *
Mississippi Power Co.	SO	Elec.	✓	✓	--	✓ *	--	✓ *	--	--	--	✓ *
MISSOURI												
Empire District Electric Co.	AQN	Elec.	✓	--	--	-- *	-- *	✓ *	--	--	✓ *	✓ *
Empire District Gas Co.	AQN	Gas	✓	--	--	-- *	--	--	--	--	--	✓ *
Evergy Metro Inc.	EVRG	Elec.	✓	✓ *	--	✓ *	✓ *	✓ *	--	✓ *	✓ *	✓ *
Evergy Missouri West Inc.	EVRG	Elec.	✓	✓ *	--	✓ *	✓ *	✓ *	--	✓ *	✓ *	✓ *
Spire Missouri Inc. - East	SR	Gas	✓	--	--	✓ *	--	--	--	✓ *	--	✓ *
Spire Missouri Inc. - West	SR	Gas	✓	--	--	-- *	--	--	--	✓ *	--	✓ *
Liberty Utilities (Midstates Natural Gas) Corp.	AQN	Gas	✓	--	--	✓ *	--	--	--	✓ *	--	✓ *
Union Electric Co.	AEE	Elec.	✓	✓ *	--	✓ *	✓ *	✓ *	--	✓ *	✓ *	✓ *
Union Electric Co.	AEE	Gas	✓	--	--	✓ *	--	--	--	✓ *	--	✓ *
MONTANA												
MDU Resources Group Inc.	MDU	Elec.	✓	✓	--	--	--	--	--	--	--	✓ *
MDU Resources Group Inc.	MDU	Gas	✓	✓	--	✓ *	--	--	--	--	--	✓ *
NorthWestern Corp.	NWE	Elec.	✓ *	✓	--	--	✓	--	--	--	--	✓ *
NorthWestern Corp.	NWE	Gas	✓	✓ *	--	--	--	--	--	--	--	✓ *
NEBRASKA												
Black Hills Gas Distribution LLC	BKH	Gas	✓	--	--	--	--	--	--	✓ *	--	✓ *
Black Hills Nebraska Gas Utility Co. LLC	BKH	Gas	✓	--	--	--	--	--	--	✓ *	--	✓ *
Northwestern Corp.	NWE	Gas	✓	--	--	--	--	--	--	-- *	--	✓ *
NEVADA												
Nevada Power Co.	BRK.A	Elec.	✓	✓	--	✓ *	--	--	--	--	--	--
Sierra Pacific Power Co.	BRK.A	Elec.	✓	✓	--	✓ *	✓	--	--	--	--	--
Sierra Pacific Power Co.	BRK.A	Gas	✓	--	--	--	--	--	--	--	--	--
Southwest Gas Corp.	SWX	Gas	✓	--	✓ *	--	--	--	--	✓ *	--	✓ *
NEW HAMPSHIRE												
Liberty Utilities Co. (EnergyNorth Natural Gas)	AQN	Gas	✓	--	✓ *	--	--	--	--	✓ *	--	--
Liberty Utilities Co. (Granite State Electric)	AQN	Elec.	-- *	--	--	✓ *	--	--	--	✓ *	--	--
Northern Utilities Inc.	UTL	Gas	✓	--	--	✓ *	--	--	--	--	--	--
Public Service Co. of New Hampshire	ES	Elec.	✓ *	--	--	✓ *	--	--	--	✓ *	✓	--
Unitil Energy Systems Inc.	UTL	Elec.	-- *	--	--	✓ *	--	--	--	✓ *	--	--

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State/ Company	Ultimate parent ticker	Type of service	Type of adjustment clause: Electric fuel/gas commodity/purch. power	Conserv. program expense	Decoupling: Full	Decoupling: Partial	Renewables expense	Environmental compliance	New capital: Generation capacity	New capital: Generic infrastructure	RTO-related transmission expense	Other
NEW JERSEY												
Atlantic City Electric Co.	EXC	Elec.	-- *	✓ *	--	--	✓	-- *	--	✓ *	--	✓ *
Jersey Central Power & Light Co.	FE	Elec.	-- *	✓ *	--	--	✓	✓ *	--	✓ *	--	✓ *
New Jersey Natural Gas Co.	NJR	Gas	✓ *	✓ *	✓ *	--	--	✓ *	--	✓ *	--	✓ *
Elizabethown Gas Co.	SJI	Gas	✓ *	✓ *	--	✓ *	--	✓ *	--	✓ *	--	✓ *
Public Service Electric & Gas Co.	PEG	Elec.	-- *	✓ *	--	--	✓	-- *	--	✓ *	--	✓ *
Public Service Electric & Gas Co.	PEG	Gas	✓ *	✓ *	--	✓ *	--	✓ *	--	✓ *	--	✓ *
Rockland Electric Co.	ED	Elec.	-- *	✓ *	--	--	✓	-- *	--	✓ *	--	✓ *
South Jersey Gas Co.	SJI	Gas	✓ *	✓ *	✓ *	--	--	✓ *	--	✓ *	--	✓ *
NEW MEXICO												
El Paso Electric Co.	EE	Elec.	✓	✓	--	--	--	--	--	--	--	✓ *
New Mexico Gas Co.	EMA	Gas	✓	✓	--	--	--	--	--	--	--	✓ *
Public Service Co. of New Mexico	PNM	Elec.	✓	✓	--	--	✓	✓ *	--	✓ *	--	✓ *
Southwestern Public Service Co.	XEL	Elec.	✓	✓	--	--	✓	--	--	--	--	✓ *
NEW YORK												
Brooklyn Union Gas Co.	NGG	Gas	✓	--	✓	--	--	✓ *	--	✓ *	--	--
Central Hudson Gas & Electric Corp.	FTS	Elec.	-- *	--	✓	--	✓	--	--	--	--	✓ *
Central Hudson Gas & Electric Corp.	FTS	Gas	✓	--	✓	--	--	✓	--	✓ *	--	✓ *
Consolidated Edison Co. of New York, Inc.	ED	Elec.	-- *	--	✓	--	✓	--	--	--	--	✓ *
Consolidated Edison Co. of New York, Inc.	ED	Gas	✓	--	✓	--	--	--	--	✓ *	✓	--
KeySpan Gas East Corp.	NGG	Gas	✓	--	✓	--	--	--	--	✓ *	--	--
National Fuel Gas Distribution Corp.	NFG	Gas	✓	--	✓	--	--	--	--	✓ *	--	--
New York State Electric & Gas Corp.	IBE	Elec.	-- *	--	✓	--	✓	--	--	--	--	✓ *
New York State Electric & Gas Corp.	IBE	Gas	✓	--	✓	--	--	--	--	✓ *	--	✓ *
Niagara Mohawk Power Corp.	NGG	Elec.	-- *	--	✓	--	✓	--	--	--	--	--
Niagara Mohawk Power Corp.	NGG	Gas	✓	--	✓	--	--	--	--	✓ *	--	--
Orange & Rockland Utilities, Inc.	ED	Elec.	-- *	--	✓	--	✓	--	--	--	--	--
Orange & Rockland Utilities, Inc.	ED	Gas	✓	--	✓	--	--	--	--	✓ *	--	--
Rochester Gas and Electric Corp.	IBE	Elec.	-- *	--	✓	--	✓	--	--	--	--	✓ *
Rochester Gas and Electric Corp.	IBE	Gas	✓	--	✓	--	--	--	--	✓ *	--	✓ *
NORTH CAROLINA												
Duke Energy Carolinas LLC	DUK	Elec.	✓	✓ *	--	-- *	✓ *	✓ *	--	--	--	--
Duke Energy Progress LLC	DUK	Elec.	✓	✓ *	--	-- *	✓ *	✓ *	--	--	--	--
Piedmont Natural Gas Co. Inc.	DUK	Gas	✓	✓	✓ *	--	--	--	--	✓ *	--	--
Public Service Co. of North Carolina	D	Gas	✓	--	✓ *	--	--	--	--	✓ *	--	--
Virginia Electric & Power Co.	D	Elec.	✓	✓ *	--	-- *	✓ *	✓ *	--	--	--	--
NORTH DAKOTA												
MDU Resources Group Inc.	MDU	Elec.	✓	--	--	--	--	✓ *	✓ *	✓ *	--	--
MDU Resources Group Inc.	MDU	Gas	✓	--	--	✓ *	--	--	--	--	--	--
Northern States Power Co. -Minnesota	XEL	Elec.	✓	--	--	--	--	-- *	--	✓ *	--	✓ *
Northern States Power Co. -Minnesota	XEL	Gas	✓	--	-- *	--	--	--	--	--	--	--
Otter Tail Power Co.	OTTR	Elec.	✓	--	--	--	--	✓ *	✓ *	✓ *	--	✓ *
OHIO												
Cleve. Elec. Illum./Ohio Ed./Toledo Ed.	FE	Elec.	-- *	✓ *	--	✓ *	✓	--	--	✓ *	✓	✓ *
Columbia Gas of Ohio Inc.	NI	Gas	-- *	✓	-- *	--	--	--	--	✓ *	--	✓ *
Dayton Power & Light Co.	AES	Elec.	-- *	✓ *	--	✓ *	✓	--	--	✓ *	✓	✓ *
Duke Energy Ohio Inc.	DUK	Elec.	-- *	✓ *	--	✓ *	✓	--	--	✓ *	✓	✓ *
Duke Energy Ohio Inc,	DUK	Gas	✓ *	--	-- *	--	--	✓ *	--	✓ *	--	✓ *
East Ohio Gas Co.	D	Gas	-- *	✓	-- *	--	--	--	--	✓ *	--	✓ *
Ohio Power Co.	AEP	Elec.	-- *	✓ *	--	✓ *	✓	--	--	✓ *	✓	✓ *
Vectren Energy Delivery of Ohio Inc.	CNP	Gas	-- *	✓	-- *	--	--	--	--	✓ *	--	✓ *

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Use of adjustment clauses (as of November 2019)

State/ Company	Ultimate parent ticker	Type of service	Electric fuel/gas commodity/purch. power	Conserv. program expense	Decoupling: Full	Decoupling: Partial	Renewables expense	Environmental compliance	New capital: Generation capacity	New capital: Generic infrastructure	RTO-related transmission expense	Other
OKLAHOMA												
CenterPoint Energy Resources Corp.	CNP	Gas	✓	✓ *	--	✓ *	--	--	--	--	--	✓ *
Oklahoma Gas & Electric Co.	OGE	Elec.	✓	✓ *	--	✓ *	✓	✓ *	--	✓ *	✓	✓ *
Oklahoma Natural Gas Co.	OGS	Gas	✓	✓ *	--	✓ *	--	--	--	--	--	✓ *
Public Service Co. of Oklahoma	AEP	Elec.	✓	✓ *	--	✓ *	✓	-- *	--	✓	✓	✓ *
OREGON												
Avista Corp.	AVA	Gas	✓	✓	✓ *		--	--	--	--	--	--
Cascade Natural Gas Corp.	MDU	Gas	✓	--	--	✓ *	--	✓ *	--	--	--	--
Idaho Power Co.	IDA	Elec.	✓	✓	--	--	✓	--	--	--	--	--
Northwest Natural Gas Co.	NWN	Gas	✓	✓ *	--	✓ *	--	✓ *	--	--	--	--
PacifiCorp	BRK.A	Elec.	✓	✓	--	--	✓	--	✓ *	--	--	✓ *
Portland General Electric Co.	POR	Elec.	✓	✓	--	✓ *	✓	✓ *	✓ *	--	--	--
PENNSYLVANIA												
Columbia Gas of Pennsylvania Inc.	NI	Gas	✓ *	--	--	✓ *	--	--	--	✓ *	--	✓ *
Duquesne Light Co.	--	Elec.	-- *	✓ *	--	--	-- *	--	--	✓ *	✓	✓ *
Equitable Gas Co. LLC	--	Gas	✓ *	--	--	--	--	--	--	✓ *	--	✓ *
Metropolitan Edison Co.	FE	Elec.	-- *	✓ *	--	--	-- *	--	--	✓ *	✓	✓ *
National Fuel Gas Distribution Corp.	NFG	Gas	✓ *	--	--	--	--	--	--	-- *	--	✓ *
PECO Energy Co.	EXC	Elec.	-- *	✓ *	--	--	-- *	--	--	✓ *	--	✓ *
PECO Energy Co.	EXC	Gas	✓ *	✓	--	--	--	--	--	✓ *	--	✓ *
Pennsylvania Electric Co.	FE	Elec.	-- *	✓ *	--	--	-- *	--	--	✓ *	✓	✓ *
Pennsylvania Power Co.	FE	Elec.	-- *	✓ *	--	--	-- *	--	--	✓ *	--	✓ *
Peoples Natural Gas Co. LLC	--	Gas	✓ *	--	--	--	--	--	--	✓ *	--	✓ *
PPL Electric Utilities Corp.	PPL	Elec.	-- *	✓ *	--	--	-- *	--	--	✓ *	✓	✓ *
UGI Central Penn Gas Inc.	UGI	Gas	✓ *	--	--	--	--	--	--	✓ *	--	✓ *
UGI Penn Natural Gas Inc.	UGI	Gas	✓ *	-- *	--	--	--	--	--	✓ *	--	✓ *
UGI Utilities Inc.	UGI	Elec.	-- *	✓ *	--	--	-- *	--	--	✓ *	--	✓ *
UGI Utilities Inc.	UGI	Gas	✓ *	--	--	--	--	--	--	✓ *	--	✓ *
West Penn Power Co.	FE	Elec.	-- *	✓ *	--	--	-- *	--	--	✓ *	--	✓ *
RHODE ISLAND												
Narragansett Electric Co.	NGG	Elec.	-- *	✓	✓	--	--	--	--	✓ *	--	✓ *
Narragansett Electric Co.	NGG	Gas	✓	✓ *	✓	--	--	✓ *	--	✓ *	--	✓ *
SOUTH CAROLINA												
Duke Energy Progress LLC	DUK	Elec.	✓	✓	--	--	--	✓ *	-- *	--	--	--
Duke Energy Carolinas LLC	DUK	Elec.	✓	✓	--	--	--	✓ *	-- *	--	--	--
Piedmont Natural Gas Co. Inc.	DUK	Gas	✓	✓	--	✓ *	--	--	--	--	--	--
Dominion Energy South Carolina Inc.	D	Elec.	✓	✓	--	--	--	✓ *	✓ *	--	--	--
Dominion Energy South Carolina Inc.	D	Gas	✓	✓	--	✓ *	--	--	--	--	--	--
SOUTH DAKOTA												
Black Hills Power Inc.	BKH	Elec.	✓	✓ *	--	✓ *	✓ *	✓	--	--	✓	✓ *
MDU Resources Group Inc.	MDU	Elec.	✓	--	--	--	--	✓ *	--	✓ *	✓ *	--
MDU Resources Group Inc.	MDU	Gas	✓	✓	--	✓ *	--	--	--	--	--	--
Northern States Power Co. -Minnesota	XEL	Elec.	✓	✓ *	--	✓ *	--	✓	✓ *	✓ *	--	✓ *
NorthWestern Corp.	NWE	Elec.	✓	✓	--	--	--	--	--	--	--	--
NorthWestern Corp.	NWE	Gas	✓	--	--	--	--	--	--	--	--	--
Otter Tail Power Corp.	OTTR	Elec.	✓	✓ *	--	--	✓ *	✓	✓ *	✓	--	--
TENNESSEE												
Atmos Energy Corp.	ATO	Gas	✓	--	--	✓ *	--	--	--	--	--	✓ *
Chattanooga Gas Co.	SO	Gas	✓	--	✓ *	--	--	--	--	--	--	✓ *
Kingsport Power Co.	AEP	Elec.	✓	--	--	--	--	--	--	--	--	--
Piedmont Natural Gas Co. Inc.	DUK	Gas	✓	--	--	✓ *	--	--	--	✓	--	✓ *

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RRA Regulatory Focus: Adjustment Clauses

Use of adjustment clauses (as of November 2019)

State/ Company	Ultimate parent ticker	Type of service	Type of adjustment clause									
					Decoupling				New capital			
			Electric fuel/gas commodity/purch. power	Conserv. program expense	Full	Partial	Renewables expense	Environmental compliance	Generation capacity	Generic infrastructure	RTO-related transmission expense	Other
TEXAS PUC												
AEP Texas	AEP	Elec.	-- *	✓	--	--	--	--	--	✓ *	✓ *	--
CenterPoint Energy Houston Electric	CNP	Elec.	-- *	✓	--	--	--	--	--	✓ *	✓ *	✓ *
Cross Texas Transmission	--	Elec.	-- *	--	--	--	--	--	--	✓ *	--	--
El Paso Electric Co.	EE	Elec.	✓ *	✓	--	--	--	--	-- *	✓ *	-- *	✓ *
Electric Transmission Texas LLC	BRK.A/AEP	Elec.	-- *	--	--	--	--	--	--	✓ *	✓	--
Entergy Texas Inc.	ETR	Elec.	✓ *	✓	--	--	--	--	-- *	✓ *	--	✓ *
Lone Star Transmission LLC	NEE	Elec.	-- *	--	--	--	--	--	--	✓ *	--	--
Oncor Electric Delivery Co. LLC	SRE	Elec.	-- *	✓	--	--	--	--	--	✓ *	✓ *	--
Sharyland Utilities LLC	--	Elec.	-- *	--	--	--	--	--	--	✓ *	--	✓
Southwestern Electric Power Co.	AEP	Elec.	✓ *	✓	--	--	--	--	-- *	✓ *	✓	--
Southwestern Public Service Co.	XEL	Elec.	✓ *	✓	--	--	--	--	-- *	✓ *	✓	✓ *
Texas-New Mexico Power	PNM	Elec.	-- *	✓	--	--	--	--	--	✓ *	✓ *	✓ *
Wind Energy Transmission Texas LLC	--	Elec.	-- *	--	--	--	--	--	--	✓ *	--	--
TEXAS RRC												
Atmos Energy Corp.	ATO	Gas	✓ *	--	--	✓ *	--	--	--	✓ *	--	✓ *
CenterPoint Energy Resources Corp.	CNP	Gas	✓ *	--	--	--	--	--	--	✓ *	--	--
Texas Gas Service Co. Inc.	OGS	Gas	✓ *	--	--	✓ *	--	--	--	✓ *	--	--
UTAH												
PacifiCorp	BRK.A	Elec.	✓	✓	--	--	✓ *	--	--	--	--	--
Questar Gas Co.	D	Gas	✓	✓	✓ *	--	--	--	--	✓ *	--	✓ *
VERMONT												
Green Mountain Power Corp.	--	Elec.	✓ *	--	--	--	--	--	--	--	--	--
VIRGINIA												
Appalachian Power Co.	AEP	Elec.	✓ *	✓ *	--	--	✓ *	-- *	✓ *	-- *	✓ *	✓ *
Columbia Gas of Virginia Inc.	NI	Gas	✓	✓ *	--	✓ *	--	--	--	✓ *	--	✓ *
Kentucky Utilities Co.	PPL	Elec.	✓ *	-- *	--	--	-- *	--	--	-- *	--	--
Roanoke Gas Co.	RGCO	Gas	✓	--	--	✓ *	--	--	--	✓ *	--	--
Virginia Electric & Power Co.	D	Elec.	✓ *	✓ *	--	--	✓ *	✓ *	✓ *	✓ *	✓ *	✓ *
Virginia Natural Gas	SO	Gas	✓	-- *	--	✓ *	--	--	--	✓ *	--	--
Washington Gas Light Co.	ALA	Gas	✓	-- *	--	✓ *	--	--	--	✓ *	--	✓ *
WASHINGTON												
Avista Corp.	AVA	Elec.	✓ *	✓	--	✓ *	✓	--	--	--	--	--
Avista Corp.	AVA	Gas	✓	✓	--	✓ *	--	--	--	--	--	--
Cascade Natural Gas Corp.	MDU	Gas	✓	✓	--	✓ *	--	--	--	✓	--	--
Northwest Natural Gas Co.	NWN	Gas	✓	✓	--	--	--	--	--	--	--	--
PacifiCorp	BRK.A	Elec.	✓ *	✓	--	✓ *	✓	--	--	--	--	--
Puget Sound Energy Inc.	--	Elec.	✓	✓	--	✓ *	✓	--	--	--	--	--
Puget Sound Energy Inc.	--	Gas	✓	✓	--	✓ *	--	--	--	✓	--	--
WEST VIRGINIA												
Appalachian Power Co./Wheeling Power Co.	AEP	Elec.	✓	✓	--	--	✓	-- *	-- *	-- *	--	✓ *
Hope Gas Inc.	D	Gas	✓	--	--	--	--	--	--	✓ *	--	✓ *
Monongahela Power Co.	FE	Elec.	✓	✓	--	--	--	--	--	✓ *	--	✓ *
Mountaineer Gas Co.	--	Gas	✓	--	--	--	--	--	--	✓ *	--	✓ *
Potomac Edison Co.	FE	Elec.	✓	✓	--	--	--	--	--	✓ *	--	✓ *

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Use of adjustment clauses (as of November 2019)

State/ Company	Ultimate parent ticker	Type of service	Type of adjustment clause: Electric fuel/gas commodity/purch. power	Conserv. program expense	Decoupling: Full	Decoupling: Partial	Renewables expense	Environmental compliance	New capital: Generation capacity	New capital: Generic infrastructure	RTO-related transmission expense	Other
WISCONSIN												
Madison Gas & Electric Co.	MGEE	Elec.	✓ *	-- *	--	--	✓	--	-- *	-- *	--	✓ *
Madison Gas & Electric Co.	MGEE	Gas	✓	--	--	--	--	--	-- *	-- *	--	✓ *
Northern States Power Co. -Wisconsin	XEL	Elec.	✓ *	-- *	--	--	--	--	-- *	-- *	--	✓ *
Northern States Power Co. -Wisconsin	XEL	Gas	✓	--	--	--	--	--	-- *	-- *	--	✓ *
Wisconsin Electric Power Co.	WEC	Elec.	✓ *	-- *	--	--	✓	--	-- *	-- *	--	✓ *
Wisconsin Electric Power Co.	WEC	Gas	✓	--	--	--	--	--	-- *	-- *	--	✓ *
Wisconsin Gas LLC	WEC	Gas	✓	--	--	--	--	--	-- *	-- *	--	✓ *
Wisconsin Power & Light Co.	LNT	Elec.	✓ *	-- *	--	--	--	--	-- *	-- *	--	✓ *
Wisconsin Power & Light Co.	LNT	Gas	✓	--	--	--	--	--	-- *	-- *	--	✓ *
Wisconsin Public Service Corp.	WEC	Elec.	✓ *	-- *	--	--	--	--	-- *	-- *	--	✓ *
Wisconsin Public Service Corp.	WEC	Gas	✓	--	--	--	--	--	-- *	-- *	--	✓ *
WYOMING												
Black Hills Wyoming Gas	BKH	Gas	✓	✓	--	✓ *	--	--	--	✓ *	--	--
Cheyenne Light Fuel & Power Co.	BKH	Elec.	✓	✓	--	✓ *	✓ *	--	--	--	--	✓ *
MDU Resources Group Inc.	MDU	Elec.	✓	--	--	--	✓ *	--	--	--	--	--
MDU Resources Group Inc.	MDU	Gas	✓	--	--	✓ *	--	--	--	--	--	--
PacifiCorp	BRK.A	Elec.	✓	✓	--	--	✓ *	✓ *	--	--	--	✓ *
Questar Gas Co.	D	Gas	✓	--	--	✓ *	--	--	--	--	--	--

Key:
✓ Adjustment clause exists for the company/state/operation.
* See text for further information.
As of: Nov. 7, 2019.

FOOTNOTES

Alabama

Electric fuel/gas commodity/purchased power — The certificated new plant, or Rate CNP, adjustment clause for Alabama Power Co. provides for recovery of costs, excluding fuel, associated with certified purchased power agreements. Adjustments under the clause are subject to a staff and Alabama PSC review process that includes public hearings. Alabama Power also utilizes an energy cost recovery adjustment clause. Spire Alabama and Spire Gulf utilize a competitive fuel clause that allows the companies to immediately adjust prices to compete with any alternate fuel or gas supply source, with no loss of earnings margin.

Decoupling — Spire Alabama Inc. has a temperature adjustment rider, and Spire Gulf Inc. uses a weather impact normalization factor.

Environmental compliance/generation capacity — The Rate CNP adjustment clause used by Alabama Power provides for recovery of costs related to the commercial operation of certified generating facilities, certified purchased power agreements and environmental mandates. Recoverable environmental costs include applicable operation and maintenance expenses, depreciation and a return on capital beginning with 2005 investments, and a true-up of prior-period over/under-recovered amounts. Such costs are generally subject to PSC review but not to a full evidentiary hearing.

Other — The tariffs of the major energy utilities include adjustment provisions to reflect changes in income taxes and certain general and local taxes.

Arizona

Decoupling — Arizona Public Service Co., or APS, utilizes a lost fixed cost recovery, or LFCR, mechanism designed to make the company whole for contributions to fixed-cost recovery that are lost due to customer participation in energy efficiency and distributed energy, such as rooftop solar, programs. The LFCR is capped at 1% of annual revenues, with any excess being deferred with interest to be recovered through a future annual adjustment.

A full decoupling mechanism, called the delivery charge adjustment, is in place for Southwest Gas Corp. The mechanism compares actual revenues with revenues authorized in the company's last general rate case.

Tucson Electric Power Co., or TEP, also operates under an LFCR mechanism designed to mitigate the revenue impact of lost sales associated with the ACC's energy efficiency standards and the distributed generation requirements under the commission's renewable energy standards. The annual adjustments are capped at 2% of retail revenues, with any excess to be deferred for future recovery. The LFCR mechanism also includes a provision through which TEP recovers lost revenues associated with "reliability must-run generation."

UNS Electric Inc. also utilizes an LFCR mechanism under which the company is permitted to implement annual rate adjustments related to any shortfall in recovery of fixed costs due to energy efficiency and distributed generation. The LFCR is not intended to recover fixed costs due to other factors, such as weather or general economic conditions and, as such, is not considered a full decoupling mechanism. The annual adjustments are to be capped at 1%, with any amount in excess of 1% to be deferred for future recovery.

UNS Gas Inc. is subject to an incentive-based LFCR plan that allows the company to attain greater amounts of fixed-cost recovery as it meets its commission-defined energy efficiency goals. Residential customers are permitted to opt out of the LFCR provisions if they agree to a rate structure that incorporates a higher basic service fixed monthly charge. The LFCR is capped at 1% of annual revenues, with any excess being deferred with interest to be recovered through a future annual adjustment.

Generic infrastructure — A surcharge is in place for Southwest Gas that pertains to a distribution pipeline replacement program associated with pre-1970 vintage steel pipes. Southwest Gas also has a mechanism in place that provides for the recovery of costs associated with programs through which the company replaces certain assets located on customers' properties with assets that are owned and operated by the utility.

Other — All utilities recover franchise fees through an adjustable line item on the monthly bill.

Arkansas

Electric fuel/gas commodity/purchased power — Oklahoma Gas and Electric Co.'s, or OG&E's, energy cost recovery rider provides for the flow-through to ratepayers of 100% of the Arkansas jurisdictional proceeds from the sale of excess SO2 emission allowances as well as a share of the value of "green credits" resulting from the monetized environmental benefits of generation at the company's Centennial Wind Farm equal to the portion of the project dedicated to serving the Arkansas jurisdiction. Entergy Arkansas LLC, or EA, utilizes a capacity cost recovery rider.

Decoupling — A generic framework, effectively a partial decoupling mechanism, is in place that provides for the electric and gas utilities to recover the lost contribution to fixed costs associated with energy efficiency-related usage reductions and to retain a portion of the net benefits related to the these programs. The gas utilities have been using full decoupling mechanisms for several years.

Generation capacity —EA utilizes a capacity acquisition rider to recover costs associated with its investment in certain generation facilities and a capacity cost recovery rider to flow through the net costs related to the company's purchases of capacity to serve retail customers.

Generic infrastructure — EA uses a rider to recover costs associated with certain government-mandated investments. A gas main replacement program is in place for CenterPoint Energy Resources Corp., or CER, Black Hills Energy Arkansas Inc., or BHEA, and Arkansas Oklahoma Gas Corp., or AOG, under which the companies are authorized to recover the cost of replacing cast-iron and bare-steel gas mains and associated services through a mechanism. BHEA and CER also have an at-risk meter relocation program rider in place to permit timely recovery of the costs associated with moving meters from customers' property lines to the structures being served.

Other — EA uses a storm recovery charges rider to collect from ratepayers the amounts required to service its related securitization bonds. OG&E uses a "smart grid" rider. AOG, CER, EA, OG&E, BHEA and Southwestern Electric Power Co. have mechanisms in place to recover variations in certain taxes and franchise fees.

California

Other — The California PUC on Oct. 24, 2019, authorized the state's largest electric utilities to impose a non-bypassable charge on ratepayers that will be matched equally with contributions from the utilities to help establish a $21 billion wildfire insurance fund. The fund is intended to improve the financial stability of utilities against growing liabilities associated with wildfires in the state and promote electric service reliability, while also offering some protections to ratepayers. Consideration of the charge by the PUC was mandated by Assembly Bill 1054, a broad response by the state legislature to the growing threat of catastrophic wildfires. The charge will take effect in 2020 and replace an existing charge established by the Department of Water Resources after the state's 2001 energy crisis.

Colorado

Decoupling — An adjustment clause is in place for Public Service Company of Colorado's, or PSCO's, gas operations that provides for recovery of lost revenues associated with customer participation in demand-side management programs.

For PSCO's electric operations, the Colorado PUC approved a pilot partial decoupling mechanism for the company's residential and small commercial customers in 2017. However, the mechanism is not yet in place. Annual adjustments under the mechanism are to be capped at 3% of class revenues.

Environmental compliance — A rider is in place for PSCO that provides for a cash return on construction work in progress, or CWIP, and addresses costs associated with the installation of environmental controls at the coal-fired Pawnee and Hayden facilities.

Generation capacity — Black Hills Colorado Electric Utility Inc., or BHCE, has a rider in place that reflects the company's investment in the gas-fired LM6000 plant at the Pueblo Generating Station. The rider was not rolled into base rates in the company's last rate case and is accorded a lower ROE than that established for BHCE's other Colorado jurisdictional operations. The rider is to remain in place until BHCE's next rate case. A similar rider is in place for PSCO that reflects the company's investment in the Cherokee natural gas combined-cycle plants and certain environmental controls at other facilities.

Generic infrastructure — PSCO and BHCE are permitted to recover through a transmission cost adjustment, or TCA, clause, prudent costs incurred in planning, developing and completing construction or expansion of transmission facilities for which the Colorado PUC has granted a certificate of public convenience and necessity or has otherwise determined to be necessary. Through the TCA, the utilities may earn a cash return on CWIP for investments in grid reliability or new or upgraded transmission facilities.

PSCO operates under a pipeline system integrity adjustment mechanism for its gas operations, through which the company recovers the costs associated with reliability improvements and compliance with certain federal safety regulations. The mechanism is to remain in place through 2021.

Other — PSCO utilizes an adjustment clause for steam service, under which it recovers the difference between its actual cost of fuel and the costs recovered in base rates.

PSCO shares with customers margins from generation-based short-term energy trading and proprietary trading through its fuel and purchased power adjustment mechanism. BHCE's fuel cost/purchased power expense cost adjustment mechanism includes off-system sales margin-sharing provisions.

Connecticut

Electric fuel/gas commodity/purchased power — Connecticut Light and Power Co., or CL&P, and United Illuminating Co. no longer own generation, and both are permitted to recover, on a current basis, their full costs of providing generation service to those customers who do not choose an alternative supplier. These costs are flowed to ratepayers outside of a rate case.

Decoupling — State law mandates the adoption of decoupling mechanisms for electric and gas utilities. All of the state's energy utilities have decoupling mechanisms in place.

Generic infrastructure — A system expansion reconciliation mechanism is in place that permits the gas utilities to reconcile gas-expansion-related revenue annually between rate cases. Yankee Gas Services Co., Connecticut Natural Gas Co. and Southern Connecticut Gas Co. also utilize a distribution integrity management program mechanism that allows for recovery, between rate cases, of the costs associated with main replacement activity. A capital tracker is in place for CL&P for capital additions for system resiliency and grid modernization.

Delaware

Electric fuel/gas commodity/purchased power — In conjunction with the implementation of retail competition, Delmarva Power and Light Co.'s electric fuel adjustment was largely eliminated. Power to meet standard offer service needs is now procured competitively and reflected in rates on a current basis.

Environmental compliance — Chesapeake Utilities Corp. has a rider in place to recover environmental costs associated with cleaning up former manufactured gas plants. Delmarva has a mechanism in place for its gas operations to recover costs associated with the clean-up of a manufactured gas plant.

Generic infrastructure — State law allows electric and natural gas utilities to implement a distribution system improvement charge. Similar to the surcharge used by water utilities that operate in the state, electric and natural gas utilities are allowed to add a charge to customer bills for replacement capital improvements made to the distribution system between rate cases.

Other — Chesapeake Utilities has a mechanism in place to recover variations in certain taxes and fees. Delmarva is permitted to recover the cost of relocation of aerial and underground facilities required or necessitated by the Department of Transportation or other government agency projects.

District of Columbia

Electric fuel/gas commodity/purchased power — Fuel and purchased power adjustment clauses are permitted by law. However, with the onset of electric retail competition, Potomac Electric Power Co., or Pepco, divested most of its generation assets, and those that were not divested have since been retired. Pepco purchases the power to meet its standard offer service, or SOS, requirements via a competitive bidding process, and prices paid by SOS customers reflect the weighted average of the winning bids. SOS prices are adjusted on a current basis.

Decoupling — A bill stabilization adjustment mechanism is in place for Pepco that is designed to mitigate the volatility of revenues and customer bills caused by abnormal weather and customer participation in energy efficiency programs.

Renewables expense — The utilities' rates include a charge to fund the Sustainable Energy Trust Fund; amounts collected are remitted to the third-party Sustainable Energy Utility. Additionally, Pepco and Washington Gas Light Co., or WGL, have in place a charge to contribute to the Energy Assistance Trust Fund.

Generic infrastructure — State law provides for the district to issue bonds, finance or securitize a portion of the costs associated with a plan under which Pepco is to relocate certain above-ground distribution facilities below ground. In addition, the bill authorizes the District of Columbia PSC to approve a mechanism to achieve rate recognition of the unsecuritized portion of the project. Pepco has a mechanism in place to recover costs associated with work performed to underground certain electric power lines in the District. The utility also has a rider in place to recover costs imposed on it associated with work performed by the District Department of Transportation to place underground certain electric power lines in the District.

The PSC has approved a $1 billion, 40-year accelerated pipeline replacement program for WGL and a related mechanism.

Other — Part of WGL's purchased gas charge provides for recovery of uncollectible expenses related to gas commodity charges. WGL is permitted to recover carrying costs on storage balances and over/under-collected gas costs through separate charges. Pepco and WGL have a mechanism in place to recover variations in certain taxes and fees.

Florida

Generation capacity — Electric utilities are permitted to recover all prudently incurred site-selection and preconstruction costs, including carrying charges, for nuclear and integrated gasification combined-cycle, or IGCC, power plants through the capacity cost recovery clause, or CCRC. A cash return on construction work in progress for nuclear plant construction and uprates and IGCC construction is also reflected in the CCRC.

DEF is allowed to petition the commission for cost recovery for installation of solar generation capacity through a solar base rate adjustment, or SoBRA, mechanism. Tampa Electric Co., or TE, also has a SoBRA mechanism. The SoBRA replaced the generation base rate adjustment previously in place for TE. Florida Power & Light Co. is authorized to recover the costs of solar generation through a SoBRA upon each unit's commercial operation date if it is determined to be cost-effective and the costs are reasonable.

Generic infrastructure — Peoples Gas System utilizes a rider to recover the costs associated with accelerating the replacement of cast-iron and bare-steel distribution pipes on its system. The smaller gas utilities, Florida Public Utilities Co., the Florida division of Chesapeake Utilities, and Pivotal Utility Holdings Inc., use similar riders.

On June 27, 2019, Gov. Ron DeSantis signed into law legislation establishing a storm protection plan cost recovery clause for electric utilities in the state. The law allows utilities to seek more timely recovery of storm hardening investments outside a general rate case. The law requires utilities to submit to the PSC a 10-year plan explaining "the systematic approach the utility will follow to achieve the objectives of reducing restoration costs and outage times associated with extreme weather events and enhancing reliability." Such grid-hardening activities include burying transmission lines and vegetation management. The PSC in June 2019 opened a rulemaking to implement the legislation.

Other — Certain fees and taxes, such as franchise fees and gross receipts taxes, are recovered through a line item on customer bills, with the charge adjusted based on customer usage. The fuel and purchased power cost recovery clause reflects gains from economy energy sales. Electric utilities are provided a storm cost recovery mechanism, allowing them to petition the PSC to recover costs incurred from storms that exceed and/or deplete their storm reserve and to replenish the reserve.

Georgia

Electric fuel/gas commodity/purchased power — As a result of the restructuring of the natural gas industry in Georgia, Atlanta Gas Light Co., or ATGL, no longer procures gas for its customers and, thus, is no longer subject to the purchased gas adjustment mechanism, or PGAM. The much smaller Liberty Utilities (Peach State Natural Gas) Corp., which is still regulated under a non-restructured framework, utilizes a non-automatic PGAM.

Decoupling — Liberty Utilities (Peach State Natural Gas) is subject to the Georgia rate adjustment mechanism, or GRAM, an alternative regulatory framework. The GRAM provides for a "revenue true-up," under which the company is to compare actual revenues to the previous revenue projection. ATGL operates under a straight fixed-variable rate design.

Environmental compliance — ATGL is authorized to recover cleanup costs related to former manufactured gas plant sites through an environmental response cost recovery rider, or ERCRR. Costs that are recoverable under the ERCRR include investigation, testing, remediation and/or litigation costs or other liabilities.

Generation capacity — A nuclear construction cost recovery tariff is in place for Georgia Power, or GP, that enables GP to earn a cash return on construction work in progress related to the Plant Vogtle Units 3 and 4 nuclear units. The tariff is revised annually.

Generic infrastructure — The PSC approved a strategic infrastructure development and enhancement, or STRIDE, program for ATGL in 2009, specifying infrastructure investments for a 10-year period. Every three years, ATGL is required to file its proposed program for the next three years for Georgia PSC review and approval. The incremental costs associated with the program's investment are included in base rates each Oct. 1.

Hawaii

Generation capacity/generic infrastructure — As part of their alternative regulation frameworks, Hawaiian Electric Co. Inc., Hawaii Electric Light Co. Inc. and Maui Electric Co. Ltd. are permitted to recognize, between rate cases, rate base additions and increases in operations and maintenance expenses as well as certain depreciation and amortization expenses.

Other — An integrated resource planning, or IRP, cost recovery charge is in place for the state's utilities to facilitate recovery of the planning costs associated with the IRP process. A public benefit fund charge is in place for the large electric utilities. The charge addresses costs related to energy efficiency programs managed by a third-party administrator.

Idaho

Electric fuel/gas commodity/purchased power — Avista Corp.'s power cost adjustment enables the company to defer, in a balancing account, for subsequent recovery/refund to customers, 90% of the difference between actual net power costs and the amount included in retail rates. Idaho Power Co., or IP, has a similar mechanism in place with a sharing provision under which annual rate adjustments reflect 95% of the cost variations associated with water supply for hydroelectric production, wholesale energy prices and retail load changes. An energy cost adjustment mechanism is in place for PacifiCorp that allows for the recovery of 90% of the difference between actual power costs and those included in rates.

Decoupling — IP operates under a decoupling mechanism referred to as a fixed cost adjustment, or FCA, which is designed to adjust the company's electric rates to recover fixed costs independent of the volume of energy sales. The FCA calculation reflects actual sales, and there is a 3% cap on annual rate increases that may be implemented under the mechanism. Unrecovered balances are to be carried forward to future years, with interest.

Avista Corp. operates under an electric and gas decoupling mechanism, also referred to as an FCA. There is a 3% annual cap on rate increases that may be implemented under the mechanism. Unrecovered balances are to be carried forward to future years, with interest.

Illinois

Electric fuel/gas commodity/purchased power — Historically, the large electric utilities, namely Ameren Illinois Co., or AI, and Commonwealth Edison Co., or ComEd, were permitted to recover fuel costs and the energy component of purchased power costs through a monthly automatic fuel adjustment clause, or FAC. Their FACs were discontinued in conjunction with the implementation of electric industry restructuring. The power to meet the utilities' standard offer service, or SOS, obligations is now procured competitively. SOS costs and revenues are subject to an annual true-up mechanism. MidAmerican Energy Co. continues to use an FAC, as the company was not subject to all the provisions of the restructuring law and continues to own generation plants to serve its customers. The company's FAC allows recovery of the costs associated with purchasing emission allowances.

Decoupling — AI, Liberty Utilities (Midstates Natural Gas) Corp., Northern Illinois Gas Co., or NI-Gas, North Shore Gas Co. and Peoples Gas Light and Coke Co. have volume balancing adjustment riders in place that account for the impact on fixed cost recovery of energy efficiency efforts and weather.

Environmental compliance — AI uses a hazardous materials adjustment clause rider, largely to address asbestos-related litigation and remediation costs. AI, ComEd, Peoples, North Shore and NI-Gas use riders to recover costs related to the investigation and cleanup of manufactured gas plants.

Generic infrastructure — AI, ComEd, North Shore and NI-Gas have riders in place to recover certain costs associated with maintaining infrastructure in accordance with requirements imposed by local governments. In accordance with state law, the ICC is permitted to approve adjustment clauses for the local gas distribution companies to recover the costs associated with their infrastructure replacement programs, and the ICC has done so for Peoples, NI-Gas and AI.

Other — As permitted by state statutes, AI, ComEd, Liberty Utilities, NI-Gas, Peoples, North Shore and MidAmerican Energy utilize riders to facilitate recovery of variations in bad-debt costs. AI, ComEd, Liberty Utilities, MidAmerican Energy, Peoples, North Shore and NI-Gas have mechanisms in place to recover variations in certain taxes and franchise fees.

Indiana

Decoupling — Indianapolis Power and Light Co.'s, or IP&L's, Indiana Michigan Power Co.'s, or IMP's, Duke Energy Indiana Co.'s, or DEI's, Northern Indiana Public Service Company's, or NIPSCO's, and Southern Indiana Gas and Electric's, or SIGECO's, electric energy efficiency riders provide for recovery of net lost revenues and shared savings, subject to commission approval.

Environmental compliance — State law allows the Indiana URC to authorize electric utilities to recover, through a rate adjustment mechanism, 80% of the costs associated with certain federally mandated emissions-control and transmission/distribution reliability projects. The remaining 20% of such costs are to be deferred for future recovery. Environmental cost recovery riders are in place for DEI, NIPSCO, IP&L, IMP and SIGECO. Through these riders, the utilities are permitted to recover the related operations and maintenance costs and depreciation expenses after the environmental facilities become operational as well as a return on the related investment. These riders also provide for recovery of the net costs associated with the purchase of emission allowance credits.

Generation capacity — With respect to DEI's Edwardsport integrated gasification combined-cycle plant, the company was authorized to earn a cash return on construction work in progress associated with the plant, which commenced commercial operation in 2013, through a rider. The company now recovers the plant's operating costs through the rider.

Generic infrastructure — State law allows the URC to authorize utilities to implement a transmission, distribution and storage system improvement charge rider to facilitate recovery of the costs associated with certain electric and gas infrastructure expansion projects, including those intended to improve safety or reliability, modernize the utility's system or improve an area's economic development prospects. The URC has approved such a rider for DEI, Indiana Gas Co., or IG, SIGECO's electric and gas operations and NIPSCO's electric and gas operations. IMP and NIPSCO use a rider to recover costs associated with certain government-mandated investments. SIGECO uses a rider to recover the costs associated with clean energy investments.

Other — DEI, IMP, IP&L, NIPSCO and SIGECO are permitted to share with ratepayers, through a rider, off-system sales margins that vary from the amount reflected in the companies' base rates. SIGECO utilizes a rider that reflects: municipal wholesale margins; net emission allowance costs; interruptible sales billing credits; non-fuel purchased power costs; and ratepayers' share of the difference between actual wholesale power margins and the level of such margins included in base rates. SIGECO and IG have riders in place for a portion of the incremental changes in unaccounted-for gas costs and the gas-cost component of bad debts. NIPSCO includes unaccounted-for gas costs in a rider.

Iowa

Environmental compliance — Incremental revenues and costs associated with sales or purchases of emission allowances may be reflected in Interstate Power and Light Co.'s, or IP&L's, and MidAmerican Energy Co.'s energy adjustment clauses.

Other — Black Hills Iowa Gas Utility Co., IP&L and MidAmerican Energy have mechanisms in place to recover variations in certain taxes and franchise fees.

Kansas

Conservation program expense/decoupling — State law allows electric and gas utilities to request KCC approval to implement energy efficiency-related cost-recovery mechanisms. Evergy Kansas Central Inc. and Evergy Kansas South Inc., formerly known as Westar Energy and Kansas Gas and Electric, respectively, participate in certain energy efficiency programs and recover program-related costs and related lost revenues through the companies' energy efficiency cost-recovery riders. Weather normalization adjustment clauses are in place for Atmos Energy Corp., Black Hills/Kansas Gas Utility Co., or KGU, and Kansas Gas Service Co., or KGS.

Generic infrastructure — Evergy Metro Inc., formerly known as Kansas City Power and Light Co., has a rider in place to recover the costs associated with certain projects to underground transmission and distribution infrastructure. State law permits local gas distribution companies to utilize a gas system reliability surcharge, or GSRS, mechanism to recover the costs associated with gas distribution system replacement projects between base rate proceedings, subject to annual true-up. Atmos, KGS and KGU have a GSRS in place.

Other — Although not an adjustment clause per se, the KCC is statutorily authorized to permit the utilities to file "abbreviated" rate cases within 12 months of a commission rate order in the utility's most recent base rate proceeding. Such filings must incorporate all the regulatory procedures, principles and rate-of-return parameters established by the KCC in that order.

Evergy Metro Inc., Evergy Kansas Central Inc., Evergy Kansas South Inc. and Empire District Electric Co. flow to ratepayers, through their energy cost adjustment mechanisms, off-system sales margins that vary from a base level and the net cost of emissions allowances. Evergy Metro Inc., Evergy Kansas Central Inc., Evergy Kansas South Inc., Empire, Atmos, KGU and KGS have mechanisms in place to recover variations in certain taxes and franchise fees. KGU recovers 100% of the gas cost component of bad-debt expense through the company's purchased gas adjustment clause filings.

Kentucky

Decoupling — Weather normalization adjustment mechanisms are in place for Atmos Energy Corp., Columbia Gas of Kentucky Inc., or CGK, Delta Natural Gas Co., or Delta, Duke Energy Kentucky Inc.'s, or DEK's gas operations, and Louisville Gas and Electric's, or LG&E's, gas operations. DEK, LG&E, Atmos, CGK and Delta utilize energy efficiency riders to facilitate recovery of costs associated with gas energy efficiency programs; these riders include certain incentive provisions and permit recovery of lost revenues related to these programs. LG&E, DEK, Kentucky Utilities Co., or KU, and Kentucky Power Co., or KP, also utilize a similar mechanism for their electric businesses.

Environmental compliance — DEK, LG&E, KU and KP are permitted to recover the costs associated with environmental-related investments, including the cost of emission allowances, and earn a cash return on the related construction work in progress through a cost-recovery mechanism.

Generic infrastructure — Atmos, CGK, Delta and LG&E utilize riders to facilitate recovery of certain costs associated with their gas distribution infrastructure replacement programs.

Other — Off-system sales, or OSS, sharing mechanisms are in place for DEK's electric operations and for KP. 100% of DEK's emission allowance sales margins flow to ratepayers through the OSS mechanism. LG&E and KU allocate a portion of their OSS margins to ratepayers through the fuel adjustment clause proceedings. Atmos, CGK, Delta, DEK, KP, LG&E and KU have mechanisms in place to recover variations in certain taxes and franchise fees.

Louisiana - NOCC

Decoupling — Entergy New Orleans LLC, or ENO's, fuel clause includes, only for legacy Entergy Louisiana Algiers service territory customers, a provision that provides for the recovery of the lost contribution to fixed costs associated with customer participation in energy efficiency programs.

Environmental compliance — An environmental adjustment clause is in place for ENO, through which the company recovers costs associated with the purchase and use of emission allowances.

Generation capacity — A rider is in place for ENO, through which the company reflects capacity costs associated with the Ninemile 6 plant.

Other — ENO uses a storm reserve rider for both its electric and gas operations.

Louisiana PSC

Decoupling — Energy efficiency riders are in place for the state's electric utilities through which the companies recover costs associated with administering their programs and the lost contribution to fixed costs associated with customer participation in the programs. CenterPoint Energy Resources Corp., Atmos Energy and the gas operations of Entergy Louisiana LLC, or EL, utilize weather normalization adjustment mechanisms.

Environmental compliance — The electric utilities may use an environmental adjustment clause to recover from ratepayers the costs associated with the acquisition of emissions credits to comply with federal, state and local environmental standards. In addition, the utilities credit ratepayers through the clause any revenues associated with the sale or transfer of emission allowances.

Generation capacity — A component of EL's formula rate plan, or FRP, provides for the recovery of costs associated with new generation and capacity additions, including the Ninemile 6 facility. Cleco Power LLC's FRP includes provisions to reflect in rates certain capacity additions.

Generic infrastructure — Cleco's FRP includes provisions to reflect in rates certain infrastructure costs. As part of its rate stabilization clause, Atmos has a mechanism in place that provides for the recovery of costs associated with system integrity management programs. An infrastructure investment recovery rider is in place for EL's gas operations. EL's FRP includes a provision that reflects transmission capital additions in rates.

RTO-related transmission expense — EL and Cleco recover certain transmission-related costs through their FRPs.

Other — Customers' share of Southwestern Electric Power Co.'s, or SWEPCO's, off-system sales margins flow through the company's fuel adjustment clause. Economic development riders are in place for EL, Cleco and SWEPCO.

Maine

Electric fuel/gas commodity/purchased power — Electric fuel adjustment clauses are no longer utilized due to the implementation of retail choice. For the most part, the state's electric utilities no longer own generation and, by law, are not allowed to provide standard offer service, or SOS. SOS providers are selected through a bidding process conducted by the Maine PUC. The full cost of SOS is recovered from ratepayers.

Decoupling — Central Maine Power Co., or CMP, is subject to a full decoupling mechanism, with any related annual adjustments capped at 2% of distribution revenues and any under-collections in excess of the capped to be deferred for future recovery. No cap is applied to the amount of over-collections to be returned to ratepayers.

Environmental compliance — Northern Utilities Inc. recovers manufactured gas site remediation expenses through an environmental remediation charge.

Generic infrastructure — In 2013, the PUC adopted a targeted infrastructure replacement adjustment, or TIRA, for Northern Utilities. The TIRA allowed for annual recovery of the company's investments in targeted operational and safety-related infrastructure replacement and upgrade projects, including the company's cast-iron replacement program. The TIRA had an initial term of four years and covered targeted capital expenditures in 2013 through 2016. In February 2018, the PUC approved an extension of the TIRA to allow for the recovery of investments in calendar years 2017 through 2024 or the year following the end of investment in eligible facilities under the company's cast-iron replacement program. Rate increases under the TIRA are subject to a 4% rate cap of weather-normalized distribution revenues. However, Northern Utilities is permitted to seek PUC approval to adjust the rate cap if the cap has been exceeded two times.

Other — CMP is permitted to recover variations in storm costs versus the levels included in base rates through a rider.

Maryland

Electric fuel/gas commodity/purchased power — The electric fuel rate adjustment was eliminated, coincident with the implementation of competition in the provision of electric supply. The power to meet default service requirements is obtained via competitive bids and the costs are recovered from ratepayers on a current basis.

Decoupling — Columbia Gas of Maryland Inc., or CGM, and Washington Gas Light Co., or WGL, have revenue-normalization adjustment mechanisms in place for residential customers only that address customer participation in energy efficiency/conservation programs. However, the companies have separate weather normalization mechanisms in place that apply to all customer classes.

Generic infrastructure — The PSC has approved limited-term electric infrastructure mechanisms, known as grid resiliency charges. Such mechanisms were in place for Potomac Electric Power Co., or Pepco, Delmarva Power & Light Co. and Baltimore Gas and Electric, or BGE, but have since expired. A grid resiliency program and recovery mechanism was approved for Potomac Edison Co. in March 2019, covering the years 2019 through 2022.

State law permits the Maryland PSC to authorize gas utilities to implement riders to reflect costs associated with approved accelerated infrastructure replacement programs, establishing the Strategic Infrastructure Development and Enhancement, or STRIDE, program. The PSC has approved gas STRIDE programs and associated riders for BGE, WGL and CGM.

Other — BGE, CGM, Potomac Edison, Pepco and WGL have mechanisms in place to recover variations in certain taxes and fees.

Massachusetts

Electric fuel/gas commodity/purchased power — Quarterly electric fuel and purchased power adjustments were eliminated coincident with the start of retail competition. Rates for basic service, known as default service, are market-based; such rates reflect the competitive contracts for basic service supply entered into by the distribution utility. The utilities are not at risk for fluctuations in market prices.

Conservation program expense/environmental compliance/other — The Massachusetts DPU has adopted energy efficiency reconciliation factors, or EERF, for the state's electric utilities. The EERF is a fully reconciling funding mechanism designed to recover the costs associated with the state's electric energy efficiency investments that are in excess of the level collected from other funding sources, including the systems benefits charge, proceeds from the forward capacity market and proceeds from the Regional Greenhouse Gas Initiative.

Local gas distribution adjustment clauses, or LDACs, are in place, with rate changes implemented on a semiannual basis, to reflect recovery of reconcilable gas distribution-related costs that are not included in base rates. Such expenses may include demand-side management costs, environmental response costs associated with manufactured gas plants, residential arrearage management programs, low-income discounts, pension and related costs, the revenue requirement on targeted infrastructure recovery factors, gas system enhancement plan, or GSEP, investment, and attorney general expenses. LDACs are applicable to all firm customers.

Renewables expense/generation capacity — A solar cost adjustment tariff is in place for NSTAR Electric Co., Massachusetts Electric Co.'s, or ME's, and Fitchburg Gas and Electric Co.'s, or FG&E's, investments in certain solar generation facilities.

Generic infrastructure — Under state law, each of the LDCs files with the DPU a plan, called a GSEP to address aging or leaking natural gas infrastructure. The related costs/investments may be recovered through a GSEP provision.

Initially, LDCs that seek to participate in the program must file a plan that is designed to remove leak-prone cast-iron and unprotected steel piping from the LDC's system over a 20-year period. Participating LDCs must file by Oct. 1 of each year a list of projects the utility plans to complete during the upcoming construction season as well as proposed adjustments to distribution rates effective May 1 of the following year that will allow for recovery of program-related costs. The law specifies the criteria that the DPU must apply during its evaluation of the LDC's plan, and, if the plan meets those criteria, the Department must approve the plan and the adjusted distribution rates. On or before May 1 of each year during an LDC's program, the LDC must file final documentation for projects completed during the prior year to demonstrate substantial compliance with its plan in effect for that year and that project costs were reasonably and prudently incurred. The LDC's May 1 filing reconciles the estimated costs that were approved for recovery to the actual costs incurred during the year, and adjustments to distribution rates, for recovery or refund, are made accordingly. The ROE authorized in the company's most recent rate case is to be utilized in its GSEP. Annual changes in the revenue requirement eligible for recovery may not exceed 1.5% of the company's most recent calendar year total firm revenues, including gas revenues attributable to sales and transportation customers. Any revenue requirement approved by the DPU in excess of the cap may be deferred for recovery in the following year.

A capital cost adjustment mechanism is in place for FG&E's electric division that permits the company to recover costs associated with post-test-year capital additions. The mechanism contains an annual spending cap and a cap on annual rate increases under the mechanism of 1% of total revenues, with any amounts above the cap to be deferred for future recovery with carrying charges. To the extent that FG&E's capital expenditures exceed the amount it is allowed to recover through the mechanism, the company can seek to include such investment in rate base in its next base distribution rate proceeding.

The state's electric utilities utilize a cost recovery mechanism for grid modernization investments. NSTAR Electric also utilizes an annual reconciling factor for its resiliency tree work program.

Other — Recovery mechanisms for pension and post-employment benefits other than pensions are in place for ME, NSTAR Electric, NSTAR Gas, FG&E, Liberty Utilities (New England Gas), Boston Gas, Colonial Gas and Bay State Gas. Such costs are to be recovered through the LDAC reconciliation mechanism for gas utilities and a separate rate component for electric utilities.

Michigan

Decoupling — The Michigan PSC had approved the implementation of electric revenue decoupling mechanisms, or RDMs, for Consumers Energy Co., or CE, Upper Peninsula Power Co., or UPP, and DTE Electric Co., or DTE E; however, the Michigan Court of Appeals has ruled that the PSC does not have statutory authority to approve RDMs for electric utilities. In addition, state law now permits the PSC to adopt electric revenue decoupling mechanisms only for small electric utilities.

State law permits a gas utility that spends at least 0.5% of its revenue on energy efficiency programs to institute an RDM. A gas RDM is currently in place for DTE Gas, or DTE-G, and CE.

Generic infrastructure — DTE-G utilizes an infrastructure recovery mechanism, or IRM, that enables it to earn a return of and on the costs associated with capital investment in the company's meter move-out, accelerated main replacement, and pipeline integrity programs. In a 2017 rate case decision, the PSC authorized CE's gas operations an IRM that enables the company to recover incremental capital investments beyond the test year in both 2018 and 2019, subject to reconciliation. However, CE withdrew its request for a continuation of the IRM in a gas rate case decided Sept. 26, 2019.

SEMCO Energy Gas Co. has a rider that provides recovery relating to its main replacement program which allows the company to accelerate the replacement of older portions of its system.

RTO-related transmission expense — CE, DTE-E and UPP recover transmission costs through the power supply cost-recovery mechanism.

Other — An economic development rider for certain large-use customers is in place for Indiana Michigan Power Co.

Minnesota

Decoupling — Minnesota Energy Resources Corp., or MER, is operating under a pilot revenue decoupling mechanism, or RDM, that applies to the company's residential and small commercial/industrial rate classes. There is a 10% symmetrical cap on revenue changes generated through the application of the RDM, and the mechanism utilizes per-customer distribution revenues for each rate group.

CenterPoint Energy Resources Corp., or CER, operates under an RDM that applies to all customer classes except market-rate customers and is subject to a cap on annual adjustments under the mechanism that is equal to 10% of non-gas margin revenue after removing conservation costs.

Northern States Power Co.-Minnesota, or NSP-M has an electric RDM in place such that full decoupling is to be applied to residential and non-demand metered commercial customer classes subject to a 3% cap; an annual true-up with a 3% cap is to be utilized for the non-decoupled customer classes.

Generic infrastructure — NSP-M uses a gas utility infrastructure cost rider to recover the costs associated with certain gas infrastructure upgrades, especially those that are safety-related, outside of a general rate case.

MER uses a rider for costs associated with the company's Rochester Natural Gas Extension Project under the state's natural gas extension project statute.

Mississippi

Decoupling — Atmos Energy utilizes a weather normalization adjustment rider that is in place during the months of November through April. Entergy Mississippi LLC, or EM, Mississippi Power Co., or MP, and Atmos have energy efficiency riders in place that provide for recovery of program costs and the lost contributions to fixed costs associated with such programs.

Environmental compliance — EM and MP are permitted to recover emission allowance expenses through their fuel adjustment clauses. MP utilizes an environmental compliance overview plan that establishes procedures to facilitate the Mississippi PSC's review of the company's environmental compliance strategy and provides for rate recovery of costs, including the cost of capital, associated with PSC-approved environmental projects on an annual basis outside of a base rate case.

Generic infrastructure — A rider designed to recover costs associated with certain system integrity projects is in place for Atmos.

Other — EM and MP have in place an ad valorem tax adjustment rider. A storm reserve rider is in place for EM.

Missouri

Conservation program expense/decoupling — Legislation enacted in June 2018 provides for the Missouri PSC to approve decoupling mechanisms for the electric utilities that address the impact on revenues of variations in usage due to the effects of weather and conservation initiatives. Evergy Metro Inc., formerly known as Kansas City Power and Light Co., has in place a mechanism that provides for recovery of demand-side management program-related costs and a related "throughput disincentive" and may provide for a performance incentive based upon measurable, verified energy efficiency savings. Evergy Missouri West Inc., formerly known as KCP&L-Greater Missouri Operations Co., and Union Electric Co., or UE, have similar mechanisms in place for their electric operations. Local gas distribution companies may request PSC approval of a mechanism to reflect the impact on revenues of changes in customer usage due to variations in weather and/or conservation. Spire Missouri Inc. has a weather normalization rider in place for its east and west territories, as does Liberty Utilities (Midstates Natural Gas) Corp. UE uses a rider that is effectively a partial decoupling mechanism for residential and commercial customers.

Renewables expense — The PSC's rules specify that electric utilities may file for a renewable energy standards rate adjustment mechanism, or RESRAM, to reflect prudently incurred costs or a pass-through of benefits received as a result of compliance with the state's renewable energy standards. The RESRAM is to be capped at a 1% annual rate impact. Evergy Missouri West Inc. and UE have a RESRAM in place. Evergy Metro Inc. and Evergy Missouri West Inc. have a rider in place that allows certain customers to voluntarily obtain the generation output from renewable energy resources.

Environmental compliance — The PSC's rules pertaining to environmental cost recovery mechanisms, or ECRMs, specify that a portion of the utility's environmental costs may be recovered through an ECRM and a portion may be recovered through base rates. The annual recovery of these costs is to be capped at 2.5% of the utility's Missouri gross jurisdictional revenues, less certain taxes. None of the utilities currently have an ECRM in place. However, Empire District Electric Co., Evergy Metro Inc., Evergy Missouri West Inc. and UE recover emission allowance costs through their fuel adjustment clauses, or FACs.

Generic infrastructure — Evergy Metro Inc., Evergy Missouri West Inc. and UE use a rider to recover costs associated with certain government-mandated investments. Liberty Utilities (Midstates Natural Gas) Corp., Spire Missouri Inc., Missouri Gas Energy, or MGE, and UE utilize an infrastructure system replacement surcharge to recover costs associated with certain gas distribution system replacement projects.

RTO-related transmission expense — Empire's, Evergy Metro Inc.'s, Evergy Missouri West Inc.'s and UE's FACs reflect variations in certain transmission-related costs.

Other — Off-system sales margins that vary from the levels included in base rates flow through the FACs of Empire, Evergy Metro Inc., Evergy Missouri West Inc. and UE. Liberty Utilities (Midstates Natural Gas), Empire, Evergy Metro Inc., Evergy Missouri West Inc., Spire Missouri Inc., MGE and UE have mechanisms in place to recover variations in certain taxes and franchise fees.

Montana

Electric fuel/gas commodity/purchased power — In accordance with the state's restructuring statutes, NorthWestern Corp. sold its generation assets and entered into purchased power contracts with competitive suppliers to serve provider-of-last-resort customers.

NorthWestern recovers supply costs through a power costs and credits adjustment mechanism that allows the company to adjust for differences between the recovered and actual amounts of the utility's base power costs and credits, transitional costs and qualifying facility, or QF, costs. Regarding the base power costs and credits, 90% of the difference between the recorded and actual costs is rebated to customers when costs are less than revenues or recorded as a surcharge when costs are greater than the revenues. For transitional and QF costs, 100% of the difference is rebated to customers when costs are less than the revenues or surcharged to ratepayers when costs are greater.

Conservation program expense — NorthWestern's gas operations are able to recover costs associated with public purpose programs for cost-effective local energy conservation and low-income weatherization efforts.

Decoupling — MDU Resources Group Inc. utilizes a mechanism to recover the costs associated with gas conservation programs as well as to recoup revenues lost as a result of the programs.

Other — A competitive transition charge mechanism is in place for NorthWestern through which the company recovers electric restructuring-related out-of-market costs associated with certain purchased power contracts. A similar transition charge is in place for the company's gas operations. NorthWestern is also currently reflecting, in its gas commodity mechanism on an interim basis, costs related to certain natural gas production assets it recently acquired, pending a review by the PSC. For MDU, off-system sales margins are allocated to ratepayers and shareholders through the fuel clause. MDU recovers universal service program gas costs through a rider. MDU has a mechanism in place to recover variations in certain taxes and fees.

Nebraska

Generic infrastructure — Gas utilities are allowed to apply for approval to use an infrastructure system replacement cost recovery, or ISRCR, rider. The ISRCR rider is to provide for timely recovery of certain capital investments outside of a general rate case and is to be capped at 10% of a utility's Nebraska-jurisdictional annual base revenue level. Following PSC approval, an ISRCR rider is to expire upon the earlier of the implementation of new rates stemming from the conclusion of a general rate case filed subsequent to the PSC's approval of the ISRCR rider or 60 months. Black Hills Nebraska Gas Utility has an ISRCR rider in place. Black Hills Gas Distribution, or BHGD, has a forward-looking system safety and integrity rider tariff and a system and integrity rider charge in place.

Other — BHGD uses a rider through which the company recovers external rate case expenses of the Office of the Public Advocate and the PSC that are assessed to the utility. All the utilities have line items on their bills through which variations in franchise fees are recovered.

Nevada

Decoupling — The lost revenues associated with energy efficiency and conservation programs for Sierra Pacific Power and Nevada Power are recovered using a periodically adjusted balancing account, referred to as a lost revenue adjustment mechanism.

State law and PUC rules include provisions, such as revenue decoupling, to address disincentives to gas company participation in energy conservation programs. Southwest Gas has a decoupling mechanism in place.

Generic infrastructure — PUC rules allow for the establishment of a gas infrastructure replacement mechanism that will permit the utilities to recover between rate cases the revenue requirement associated with their gas infrastructure replacement projects. Southwest Gas currently has such a rider in place.

Other — Southwest Gas utilizes a mechanism designed to allow the company to recover from or refund to ratepayers the difference between actual bad-debt expenses and the level reflected in base rates.

New Hampshire

Electric fuel/gas commodity/purchased power — Fuel and purchased power adjustment clauses had been utilized prior to the implementation of retail choice in the early 2000s. Public Service Company of New Hampshire, or PSNH, now recovers its power costs through a periodically adjusted default service rate, which reflects the revenue requirements of its generating assets and the cost of power purchases. It also includes a reconciliation of the difference between the company's costs and revenues for the previous period.

Liberty Utilities (Granite State Electric) and Unitil Energy Systems sold their generation as part of their restructuring agreements. These distribution-only companies supply default energy service through a request-for-proposals process supervised by the PUC.

Decoupling — In 2016, the PUC established an energy efficiency resource standard, or EERS, for New Hampshire's electric and gas utilities that became effective Jan. 1, 2018. The utilities implemented lost revenue adjustment mechanisms, or LRAMs, effective Jan. 1, 2017, to recover lost revenue due to the installation of energy efficiency measures. The PUC ordered the utilities to seek approval of a decoupling mechanism or other lost-revenue recovery mechanism as an alternate to the LRAM in their first distribution rate cases after the first EERS triennium, if not before.

In a rate case decided on April 17, 2018, for Liberty Utilities (EnergyNorth Natural Gas) Corp., the PUC adopted a full decoupling mechanism effective Nov. 1, 2018. The PUC said adoption of the decoupling mechanism "reduces the risk that Liberty will not recover its authorized revenue requirement" and "the stabilized cash flow should improve the company's credit rating and thus its access to lower cost debt." In light of the decoupling mechanism, the PUC ordered Liberty Utilities to file its next rate case using a historical test year no later than Dec. 31, 2020, to reset test-year revenues.

Generic infrastructure — A cast-iron/bare-steel rate adjustment mechanism is in effect for Liberty Utilities (EnergyNorth Natural Gas). Reliability enhancement and vegetation management programs and accompanying riders are in effect for Liberty Utilities (Granite State Electric), PSNH and Unitil Energy Systems. The programs provide for recovery of both the capital investment and increases to operation and maintenance expenses necessary for ongoing system reliability and vegetation management efforts.

New Jersey

Electric fuel/purchased power/gas commodity — Both electric and gas customers may purchase power from competitive suppliers. Electric utilities procure power to meet customer basic generation service in the wholesale market and are permitted to flow these costs to ratepayers on a dollar-for-dollar basis through the basic generation service charge. For local gas distribution companies, basic gas supply service charges for non-switching residential and small-commercial customers are adjusted periodically to reflect fluctuations in gas commodity prices.

Conservation program expense — Costs associated with the NJ Clean Energy Program, a legislatively mandated initiative to encourage the initiation of energy efficiency and renewable energy programs, are included for recovery through the non-bypassable societal benefits charge on customer bills.

Decoupling — Weather normalization clauses are in place for Elizabethtown Gas and the gas operations of Public Service Electric and Gas, or PSEG. A version of a revenue decoupling mechanism is in place for New Jersey Natural Gas, or NJNG, and South Jersey Gas, or SJG. Operation of the mechanisms is contingent on the companies achieving certain capacity-reduction targets and earnings tests as specified in their BPU-approved conservation incentive programs.

Environmental compliance — The electric and gas utilities were permitted to recover through a rider costs, including a return on the related investment, associated with participation in the Regional Greenhouse Gas Initiative, including energy efficiency, demand response and solar initiatives. Participation in the initiative was suspended by former Gov. Chris Christie in 2011. Jersey Central Power and Light, or JCPL, Pivotal Utility Holdings, PSEG, NJNG and SJG are permitted to recover costs associated with former manufactured gas plant site cleanup outside of base rates through an adjustment mechanism. Such expenses are deferred and recovered over rolling seven-year periods, including carrying costs on the unamortized balance.

Generic infrastructure — Following Hurricane Sandy, the BPU directed utilities to develop mitigation and hardening infrastructure modernization plans and indicated that it would be open to innovative cost recovery mechanisms for such plans. The BPU subsequently approved modernization plans and related recovery mechanisms for several utilities: PSEG — the Energy Strong program; Atlantic City Electric Co., or ACE — PowerAhead; Rockland Electric —

Storm Hardening Program; NJNG — the Reinvestment in System Enhancement program and the Safe Acceleration and Facility Enhancement program; Elizabethtown Gas — Elizabethtown Natural Gas Distribution Utility Reinforcement Effort; and South Jersey Gas — the Storm Hardening and Reliability program.

In December 2017, the BPU adopted a rule outlining an infrastructure investment program, or IIP. The IIP framework allows for expedited rate treatment of BPU-approved infrastructure improvement programs on an ongoing basis. ACE, PSEG and JCPL have filed for approval of plans under the new rule.

Other — All utilities have mechanisms in place to recover variations in certain taxes and fees. In addition, electric utilities recover certain costs associated with low-income customer assistance programs and other public-policy driven initiatives through a societal benefits charge. Costs associated with the restructuring-related buyout/buy-down of electric non-utility generation contracts and other regulatory asset balances are recovered through non-bypassable charges.

New Mexico

Environmental compliance — An SO2 rider is in place for Public Service Co. of New Mexico, or PSNM, through which customers are credited their share of revenues from allowance sales.

Generic infrastructure — PSNM has riders in place that are designed to recover costs associated with undergrounding distribution projects in Rio Rancho and Albuquerque.

Other — All utilities have mechanisms in place to recover variations in certain state and local taxes and franchise fees.

New York

Electric fuel/gas commodity/purchased power — Historically, all energy utilities used an electric fuel adjustment clause, or FAC. With electric industry restructuring, however, generation was divested, and the electric companies have largely transitioned from the FAC to a market power adjustment clause, or MAC, or a commodity adjustment clause, or CAC. The MAC/CAC allows the distribution utilities to flow through the costs of power procured to serve customers who have not selected an alternative supplier.

Generic infrastructure — The state's gas utilities use riders to recover certain costs associated with the replacement of leak-prone pipe above targeted miles established in rates.

Environmental compliance — Brooklyn Union Gas Co. has a site investigation and remediation, or SIR, mechanism in place. If actual SIR expenses exceed the rate allowance by $25 million, the company can implement a surcharge for the recovery of up to 2% of its prior-year aggregate revenues.

Other — New York State Electric and Gas Corp., or NYSEG, Rochester Gas and Electric Corp., or RG&E, and Central Hudson Gas and Electric Corp., or CHG&E, have rate adjustment mechanisms, or RAMs, in place that return to or collect from ratepayers eligible deferrals and costs on a timely basis subject to a cap. For NYSEG and RG&E, RAM-eligible deferrals are property taxes, major storm, gas leak prone pipe, certain Reforming the Energy Vision, or REV, costs and fees, and for NYSEG only, electric pole attachments.

For CHG&E's electric and gas operations, the RAM will return or collect the net balance of reconciliations for the following cost elements: property taxes, major storm, gas leak-prone pipe, and certain REV costs and SIR. While the other major utilities do not have RAMs, all major New York utilities reconcile such major cost elements as pension and other post-employment benefits, property taxes and SIR and may defer for future recovery any costs not provided in current rates. Consolidated Edison Co. of New York Inc. recovers via the MAC incentives earned under its earning adjustment mechanisms as well as costs and incentives related to non-wires alternatives.

North Carolina

Conservation program expense — State law authorizes the NCUC to approve an annual rider outside of a general rate case for electric utilities to recover all reasonable and prudent costs incurred for the adoption and implementation of demand-side management, or DSM, and energy efficiency, or EE, programs. The NCUC has authorized the major electric utilities to retain a percentage of the net savings associated with their DSM/EE programs.

Decoupling — Piedmont Natural Gas utilizes a margin decoupling mechanism/tracker that decouples the recovery of authorized margins from sales levels. Public Service Co. of North Carolina, or PSNC, also has such a mechanism in place.

Renewables expense — Costs incurred by electric utilities to procure renewable energy are recoverable through the fuel adjustment clause, or FAC, and the renewable energy portfolio standard, or REPS, rider, subject to certain caps. The avoided cost is recoverable through the FAC, and payments in excess of the avoided cost are recoverable through the REPS rider. Incremental operations and maintenance costs and annual research and development expenses up to $1 million are also recoverable through the REPS rider. The cost of utility-owned renewable generating facilities is recovered through a combination of the FAC, the REPS rider and base rates.

Environmental compliance — The costs of certain reagents, such as limestone, used in reducing or treating electric power plant emissions may be recovered through the FAC.

Generic infrastructure — Piedmont Natural Gas uses an integrity management rider, or IMR, that allows the company to track and recover capital expenditures incurred to comply with federal pipeline safety and integrity requirements outside of a general rate case. PSNC uses an IMR to recover capital expenditures related to the company's transmission and distribution pipeline integrity management programs.

North Dakota

Decoupling — MDU Resources', or MDU's, gas operations are subject to a weather normalization adjustment mechanism that is in effect for the winter heating season from Nov. 1 through May 1. Northern States Power-Minnesota, or NSP-M, operates under straight fixed-variable gas rates.

Generation capacity — MDU operates under a generation resource recovery rider through which it recovers costs associated with its Reciprocating Internal Combustion Engine Project at its Lewis & Clark Station, which will then be rolled into rate base during MDU's first rate case after Dec. 31, 2019.

In a recently approved rate case settlement, Otter Tail Power was authorized to establish a generation cost recovery rider to reflect costs associated with the utility's proposed Astoria Station and Merricourt Wind projects. Regarding the Hoot Lake plant, Otter Tail is to evaluate any retirement-related changes to costs of service and include them in the Generation Cost Recovery rider until they can be transferred into base rates.

Environmental compliance/generic infrastructure — Electric utilities are permitted to earn a cash return on construction work in progress through a separate rate adjustment mechanism for investments in transmission infrastructure and for federally mandated environmental compliance projects. Once the facilities achieve commercial operation, the facilities are reflected in rate base as part of a general rate proceeding, and the surcharge terminates. NSP is operating under a transmission cost recovery rider. MDU and Otter Tail are operating under separate transmission and environmental cost recovery riders.

Otter Tail transferred costs related to environmental reagents and emissions allowance expenses out of base rates and into a newly established energy adjustment rider. Additionally, Otter Tail transferred Coyote Station's, a coal-fired power plant, lime expense out of base rates and into the rider.

Generic infrastructure — Otter Tail, MDU and NSP-M recover costs associated with investments in renewable energy facilities through a renewable resource cost recovery rider.

Other — Through NSP-M's fuel and purchased power adjustment, or FPPA, clause, the company shares equally with ratepayers prospective "non-asset-based" wholesale power margins, or WPMs. Through its FPPA clause, Otter Tail allocates ratepayers' share of asset-based WPMs.

Ohio

Electric fuel/gas commodity/purchased power/generic infrastructure/other — As a result of electric industry restructuring, utilities operate under electric security plans, or ESPs, that provide for the pass-through of the utilities' cost of power to serve standard service offer customers.

The current ESPs for Cleveland Electric Illuminating Co., or CEI, Ohio Edison Co., or OE, and Toledo Edison Co., or TE, include delivery capital recovery riders that reflect a return of and on incremental distribution, sub-transmission and general plant-in-service investments not already included in the companies' base rates.

Under Duke Energy Ohio's, or DEO's, current ESP, the company's generation requirements for non-switching customers are procured and priced through a competitive bid process, or CBP. The related riders are fully bypassable for switching customers.

Ohio Power Co.'s, or OP's, ESP allows the company to utilize riders for costs related to distribution investment, enhanced service reliability and storm damage recovery.

Dayton Power and Light Co.'s, or DP&L's, ESP includes a distribution modernization rider that provides credit support to the company.

East Ohio Gas Co., or EOG, Columbia Gas of Ohio Inc., or CGO, and Vectren Energy Delivery of Ohio, or VEDO, conduct auctions for competitive suppliers to bid to directly serve customers. The companies had previously obtained their gas supplies through negotiated bilateral contracts, but under the current plan, the companies conduct an auction that allows suppliers to compete to supply portions of the gas supply requirements. Customers who do not choose a specific competitive supplier are randomly assigned a supplier based on the auction results. DEO is the only major gas utility in the state to continue to use the gas cost recovery clause.

Conservation program expense/decoupling — The ESPs for each of the Ohio electric utilities include a rider that allows for recovery of energy efficiency program costs and lost distribution margin associated with these programs. OP has a full decoupling mechanism in place for residential and small commercial customers. Ohio's gas distribution companies, namely EOG, CGO, VEDO and DEO all operate under straight fixed-variable prices.

Environmental compliance — DEO recovers certain costs related to former manufactured gas plant sites through a rider.

Generic infrastructure — The current ESPs in place for CEI/OE/TE, DP&L and DEO include riders that reflect costs associated with incremental distribution-related investments not already included in base rates. OP's ESP allows the company to utilize riders for costs related to distribution investment. CGO has a rider in place for infrastructure replacement costs. VEDO has riders in place through which it recovers the costs associated with certain infrastructure replacement investments. EOG has riders in place to recover costs related to its pipeline infrastructure replacement program and its installation of automated meter-reading equipment. DEO uses a rider to recover the costs associated with its gas delivery infrastructure improvement program.

Other — DEO has a rider in place for incremental vegetation management costs. All utilities have mechanisms in place to recover variations in certain taxes and fees. CEI/OE/TE, OP, DP&L, DEO, EOG, CGO and VEDO have riders in place to recover variations in uncollectible expense.

Oklahoma

Conservation program expense/decoupling — Oklahoma Gas and Electric Co., or OG&E, and Public Service Co. of Oklahoma, or PSO, utilize riders to recover the costs associated with energy efficiency programs, related lost revenues and certain incentives. CenterPoint Energy Resources Corp., or CER, and Oklahoma Natural Gas Co., or ONG, utilize a weather normalization mechanism and also recover the costs associated with their energy efficiency programs and certain incentives through their performance-based ratemaking plan riders.

Environmental compliance/other — OCC rules permit the commission to approve requests to recover costs associated with environmental compliance through a rider. OG&E's storm cost recovery rider includes provisions that require a credit to ratepayers for the Oklahoma jurisdictional portion of net revenues received from the sale of SO2 credits.

Generic infrastructure — OG&E uses a rider for the Oklahoma jurisdictional costs associated with certain transmission projects that have been approved by the Southwest Power Pool and that have been completed by the company.

Other — OG&E uses a storm cost recovery rider to reflect differences between the level of storm costs reflected in base rates and the level of such costs actually incurred in a given year. Ratepayers' share of off-systems sales margins flow through PSO's fixed-cost adjustment rider. OCC rules permit the commission to allow utilities to recover security/safety-related costs through a surcharge/rate rider. OG&E, PSO, CER and ONG have a mechanism in place to recover variations in certain taxes and franchise fees. ONG has a rider in place for costs related to lost, used and unaccounted-for gas.

Oregon

Conservation program expense — Northwest Natural Gas, or NWNG, is authorized to recover costs associated with its energy efficiency program for industrial customers.

Decoupling — An electric revenue decoupling mechanism is to be in effect for Portland General Electric, or PGE, through 2022. The mechanism is designed to provide for the recovery of the revenue shortfall resulting from reduced consumption patterns associated with residential and certain commercial customers' conservation efforts.

NWNG uses a decoupling mechanism designed to counteract the impact on revenues of changes in average residential and commercial customers' consumption patterns due to conservation efforts. The company has a separate weather-adjusted rate mechanism in place for these customers.

Cascade Natural Gas, or CNG, has a partial decoupling mechanism, which adjusts for both conservation-related demand reductions and deviations from normal weather. The mechanism has no set termination date but is currently under review.

A full decoupling mechanism is in place for Avista's residential and commercial rate groups. The mechanism was reviewed by the PUC in Avista's general rate case that concluded in October 2019 (Docket No. UG-366).

Environmental compliance — CNG employs an environmental remediation cost adjustment to recover costs for a former manufactured plant. NWNG utilizes a site remediation and recovery mechanism to provide for recovery of costs incurred and that continue to be incurred for environmental remediation of legacy manufactured gas plant operations. PGE has an environmental remediation cost recovery adjustment that recovers the costs and revenues associated with the Portland Harbor Superfund site and other environmental obligations.

Generation capacity — Pacificorp is authorized to recover costs associated with its Lake Side 2 generation investment and interconnection as well as costs to construct or otherwise acquire renewable generation facilities and the associated transmission. PGE is authorized to recover the revenue requirements of qualifying company-owned or contracted new renewable energy resource and energy storage projects associated with renewable energy resources not otherwise included in rates.

Other — Pacificorp collects a surcharge to fund costs of removing dams on the Klamath River.

Pennsylvania

Electric fuel/gas commodity/purchased power/renewables expense — In conjunction with electric industry restructuring, the electric energy cost rate was eliminated. Generation required to meet provider-of-last-resort, or POLR, obligations for each company is competitively procured and priced. Renewable resource requirements are included in this process. Prices for POLR service are adjusted on a current basis as each procurement occurs.

A non-automatic procedure is in place for recovery of fluctuations in gas costs. Such filings may be made no more often than once every 12 months; however, quarterly updates to reflect unrecovered gas costs from the prior quarter are permitted.

Conservation program expense — State law and PUC rules allow electric distribution utilities to recover on an expedited basis through an adjustment clause outside of a rate case the costs associated with legislatively mandated/PUC-approved energy conservation programs. Such programs are in place for Duquesne Light, Metropolitan Edison, or MetEd, Pennsylvania Electric, or Penelec, Pennsylvania Power, or PPC, West Penn Power, or WPP, PECO Energy, PPL Electric Utilities, or PPL-E, and UGI Utilities electric operations, or UGIU Electric.

Decoupling — Columbia Gas of Pennsylvania, or CGP, has a weather normalization adjustment in place for residential customers.

Generic infrastructure — State law allows the PUC to approve automatic adjustment clauses to recognize, between general rate cases, utility investments in certain infrastructure projects. Distribution system improvement charges, or DSICs, have been approved for CGP, Duquesne Light, PECO's gas and electric operations, PPL-E, Peoples Natural Gas, Equitable Gas, UGI Central Penn Gas, UGI Penn Natural Gas, Peoples TWP, MetEd, Penelec, PPC and WPP. National Fuel Gas is the only RRA-covered company that does not use a DSIC. Adjustments occur quarterly, unless the company is found to be earning in excess of the ROE set in the company's last rate case or of a generic benchmark set by the PUC if the company's most recent ROE authorization was more than three years prior to the proposed adjustment.

MetEd, Penelec, PPC and WPP recover costs associated with smart-meter deployment plans through a rider between rate cases.

Other — All utilities have mechanisms in place to recover variations in certain taxes and franchise fees. PECO recovers nuclear decommissioning costs through a rider. PPL-E has an expedited cost recovery mechanism in place to address storm restoration costs that vary from certain levels. PPL-E recovers universal service program costs through a rider. MetEd, Penelec, PPC and WPP also have riders in place for universal service and uncollectible costs.

Rhode Island

Electric fuel/gas commodity/purchased power — Prior to the implementation of electric industry restructuring, automatic fuel adjustment clauses were used by the utilities. In accordance with the restructuring law and PUC-approved restructuring plans, investor-owned utilities are to provide standard offer service to customers who do not select an alternative provider through 2020. The cost of providing this service is fully recoverable, with such rates reset on a periodic basis.

Conservation program expense/environmental compliance — Narragansett Electric Co., or NE, utilizes an annual distribution adjustment clause, or DAC, for its gas operations to recover costs associated with energy efficiency programs and environmental response.

Generic infrastructure — State law permits NE to submit for PUC approval annual infrastructure spending plans for its electric and gas operations and recovery of expenses associated with an inspection and maintenance program and a vegetation management program.

Other — A pension adjustment mechanism is in place for NE's electric and gas operations that reconciles actual pension and other post-employment benefits expense to the level reflected in base rates. NE recovers electric commodity-related uncollectibles, including associated administrative costs, through its standard offer service rate. In addition, the company recovers transmission-related bad debt through a transmission-related uncollectible mechanism. NE reflects credits associated with margins from non-firm sales and transportation, earnings sharing and service quality adjustments through the DAC.

South Carolina

Decoupling — Weather normalization adjustments are in place for the gas operations of South Carolina Electric and Gas, or SCE&G, and Piedmont Natural Gas that apply only to residential and small commercial customers.

Environmental compliance — Emissions allowance costs and the cost of certain materials used in reducing or treating electric power plant emissions are reflected in the fuel clause.

Generation capacity — The South Carolina Legislature on June 28, 2018, overrode Gov. Henry McMaster's veto of House Bill 4375, which among other things, prospectively repeals the state's Base Load Review Act, or BLRA; thus, no future projects could fall under its purview.

Previously, under the BLRA, the PSC was permitted to issue a BLRA order, which constituted an upfront determination that a generating plant is "used and useful" and that associated proposed capital expenditures are prudent and ultimately should be reflected in rates as long as the plant is constructed within the estimated construction schedule, including contingencies and capital budget. For nuclear plants only, if requested by a utility, the BLRA order would specify initial revised rates reflecting the utility's pre-construction and development costs. At least one year after its filing of a BLRA application, and no more frequently than annually thereafter, the utility was permitted to file for PSC approval of revised rates reflecting a cash return on a nuclear plant's construction work in progress, or CWIP.

The PSC had already issued a BLRA order for SCE&G's two-unit expansion of its V.C. Summer nuclear plant, and the company is currently earning a cash return on part of the plant's CWIP. However, in July 2017, SCE&G ceased construction and abandoned the two new Summer units. In addition, H.B. 4375 reduced the amount in rates that SCE&G had been collecting under the BLRA. As part of its agreement to acquire SCE&G parent company SCANA Corp., Dominion Energy Inc. agreed to provide refunds and restitution to SCE&G customers associated with the Summer project of $2 billion over 20 years. SCE&G will exclude from rate recovery $2.4 billion of costs related to the project. SCE&G also will not file an application for a general rate case with the South Carolina Public Service Commission with a requested effective date earlier than January 2020 under the merger agreement.

South Dakota

Conservation program expense/decoupling — A DSM cost adjustment mechanism is in place for Northern States Power-Minnesota, or NSP-M, through which the company recovers costs associated with DSM/efficiency programs. The mechanism includes a 30% bonus to account for lost margins related to DSM/efficiency measures. Black Hills Power, or BHP, operates under an efficiency adjustment rider through which the company recovers the cost of its energy efficiency programs as well as any lost revenues associated with the programs. Weather impacts are not reflected in the mechanism.

MDU Resources Group Inc.'s gas operation has a mechanism in place which allows the utility to recover costs of a portfolio of conservation programs, including a DSM financial performance incentive. The gas utility also utilizes a weather normalization mechanism.

Otter Tail Power has a mechanism in place that recovers costs associated with its investment in energy efficiency programs.

Renewables expense — Otter Tail has a rider in place, on a voluntary basis, which allows customers to purchase wind-generated energy in 100-kWh blocks. Black Hills Power utilizes a voluntary renewable energy tariff for commercial retail customers with an aggregate usage of 300,000 kWh or more per year and for government accounts desiring renewable energy.

Environmental compliance — MDU is permitted to recover costs incurred by complying with federal and state environmental mandates. Costs may include capital costs and operating expenses incurred for environmental improvements to existing generating facilities.

Generation capacity/generic infrastructure — NSP-M utilizes an infrastructure rider to recover costs associated with certain generation, transmission and distribution capital additions once the related facilities have achieved commercial operation and to reflect certain changes in property taxes. NSP-M also has a transmission cost recovery rider in place.

MDU's electric operation has in place a transmission cost recovery rider in which the utility is permitted to recover the net balance of the capital and operating costs and revenue credits of transmission-related expenses and revenues. Costs to be recovered under the transmission recovery shall include new or modified transmission facilities, such as transmission lines and other transmission-related equipment such as substations, transformers and other equipment constructed to improve the power delivery capability or reliability of the transmission system, as well as federally regulated costs charged to or incurred by MDU to increase regional transmission capacity or reliability that are not reflected in the rates established in the most recent general rate case. MDU also has an infrastructure rider in place that recovers the costs associated with infrastructure investments.

Otter Tail has a mechanism in place that allows the utility to share back revenues associated with new load growth and to recover costs associated with new generation facilities.

Other — Through its fuel and purchased power adjustment clause, BHP credits ratepayers a portion of the margins from renewable energy credit sales and power marketing income. NSP-M operates under certain wholesale power margin sharing provisions and allocates ratepayers' share of any such margins through its fuel clause. NSP-M also credits ratepayers a portion of revenues generated from renewable energy credit sales through its fuel clause.

Tennessee

Decoupling — Weather normalization adjustment, or WNA, clauses are in place for Atmos Energy and Piedmont Natural Gas, or PNG. A full revenue decoupling mechanism is in place for Chattanooga Gas', or CG's, residential and small commercial customers. A WNA rider is also in place for CG's industrial, commercial and other customers that do not operate under the decoupling mechanism.

Other — Atmos Energy, PNG and CG utilize riders related to capacity management and release, off-system sales, and capacity assignment.

Atmos and CG operate under riders through which the companies share with ratepayers gross profit margin reductions associated with large industrial or commercial customers that are served under negotiated contracts and are able to bypass the utilities' distribution system. Through its purchased gas adjustment rider, PNG recovers margin losses associated with bypassable customers being served under negotiated contracts.

Texas PUC

Electric fuel/purchased power — For vertically integrated electric utilities in territories that have not implemented retail competition, fuel and purchased power costs are recovered through a separate fuel factor, that may be adjusted, following hearings, based on projected fuel costs for the period the fuel factor will be in effect, subject to true-up. Capacity costs associated with purchased power are recovered through base rates, while energy costs are reflected in the fuel factor.

For companies that implemented retail competition, i.e., within the Electric Reliability Council of Texas, the transmission and distribution utilities do not participate in generation procurement, and fuel/purchased power adjustment clauses were eliminated.

Generation capacity — Legislation enacted in June 2019 allows vertically integrated utilities, i.e., El Paso Electric, or EPE, Entergy Texas, Southwestern Electric Power, or SWEPCO, and Southwestern Public Service, or SWPS, to seek recovery of new generation investment through a limited-issue rider.

Generic infrastructure — The PUC may approve periodic distribution cost recovery factors, or DCRFs for both vertically integrated and transmission-and-distribution-only electric utilities. The PUC may prohibit a utility from implementing a rate change under the mechanism if the commission determines that the utility is earning in excess of its authorized return prior to the adjustment. Amounts approved for recovery under the DCRF are to be rolled into base rates in the utility's subsequent rate case. DCRFs have been approved for AEP Texas, CenterPoint Energy Houston Electric, EPE, Entergy Texas, Oncor Electric Delivery, Sharyland Utilities, SWEPCO and SWPS.

State law permits the utilities to recover costs associated with deployment of advanced metering technology through a separate surcharge, and the PUC has for the most part approved such mechanisms when requested. Advanced metering surcharges are in place for AEP Texas, CenterPoint, Entergy Texas, Oncor Electric Delivery and Texas-New Mexico Power, or TNMP.

For the service territories in which retail competition has been implemented, i.e., within ERCOT, transmission service providers are permitted to file up to twice annually, outside of a base rate case, to implement rate changes to reflect new transmission facilities through an interim transmission cost-of-service, or TCOS, mechanism. TCOS mechanisms have been approved for AEP Texas, CenterPoint, Oncor and TNMP, as well as transmission-only entities such as Cross Texas Transmission, Electric Transmission of Texas, Lone Star Transmission, Sharyland Utilities and Wind Energy Transmission Texas.

Utilities that have not implemented retail competition may file once annually between rate cases for adjustments to reflect new investment in transmission facilities. This procedure is known as a transmission cost recovery factor, or TCRF, mechanism.

RTO-related transmission expense — Transmission revenue requirements established through either base rates or the TCOS procedure are allocated among the distribution service providers, or DSPs, within ERCOT based on PUC-approved load-based allocation factors established under the commission's "transmission matrix." The DSPs are permitted to adjust rates twice annually to reflect changes in wholesale transmission costs assigned to the DSP by ERCOT. These changes flow through a mechanism also known as a TCRF, which is in place for AEP Texas, CenterPoint, Oncor and TNMP.

In a 2018 rate case, Entergy Texas proposed a rider for the recovery of costs assigned to the company's retail business by the Federal Energy Regulatory Commission, but the proposal was withdrawn as part of a settlement.

Other — A rider is in place for Entergy that allows for recovery of variations in storm costs versus the level included in base rates on a current basis. CenterPoint, Entergy and TNMP have adjustment clauses in place to reflect changes in municipal franchise fees. EPE has a rider in place to recover lost revenue associated with the provision of discounted service to military bases, while SWPS recovers lost revenue associated with the provision of discounts to state universities through a rider.

Texas RRC

Gas commodity — Purchased gas cost recovery factors, or GCRFs, may be implemented under certain circumstances. The RRC has approved the use of GCRFs for Atmos Energy, Texas Gas Service, or TGS, and CenterPoint Energy Resources, or CER.

Decoupling — Weather normalization adjustments are in place for Atmos and TGS.

Generic infrastructure — Surcharge mechanisms for gas reliability infrastructure program, or GRIP, costs are in place for CER's Houston, South Texas, Beaumont/East Texas and Texas Coast Divisions. A similar mechanism is in place for most of the cities served by Atmos' Mid-Tex and West Texas Divisions. Operations in the City of Dallas and its environs, which are part of the Mid-Tex Division, are subject to a Dallas Annual Rate Review Mechanism that takes into account several factors including new infrastructure investment. The remaining Mid-Tex Division is subject to an annual formula ratemaking tariff, known as the annual Rate Review Mechanism, or RRM, which takes into account several factors including new infrastructure investment. Certain cities within the West Texas division are subject to a similar tariff, while others, such as Amarillo and Lubbock, operate with annually updated GRIP mechanisms. An annual cost-of-service adjustment mechanism, similar to the RRM, is in place for TGS.

Other — Gas-commodity-related uncollectibles are recovered through Atmos' GCRF.

Utah

Decoupling — A weather normalization adjustment, or WNA, is in place for Questar Gas; however, customers may elect not to participate in the WNA. Questar Gas also utilizes a conservation-enabling tariff, or CET, which decouples non-gas revenues from the volume of gas used by general service, or GS customers. Under the CET, a margin-per-customer target is specified for each month, with non-weather-related differences to be deferred and recovered from, or refunded to, GS customers via periodic rate adjustments. Annual CET accruals are limited to 5% of base distribution non-gas, or DNG, revenues. Per a settlement adopted in the PSC's review of Dominion Resources' acquisition of Questar Gas parent Questar Corp., incremental CET accruals that exceed the 5% cap do not earn interest, as had previously been permitted. The amortization of CET accruals is limited to 2.5% of the total Utah-jurisdictional base DNG GS revenues. Together, the WNA and CET act as a full revenue decoupling mechanism.

Renewables expense — PacifiCorp operates under a renewable energy credit, or REC, mechanism that tracks variations in REC revenues from a base level established in the most recent general rate case, with any differences to flow to customers via an annual credit or surcharge. Separately, an adjustment mechanism is in place for PacifiCorp through which the company recovers costs associated with its solar program.

Generic infrastructure — A pilot infrastructure replacement adjustment mechanism is in place for Questar Gas that permits the company to recover between rate cases the incremental costs associated with the replacement of high-pressure natural gas feeder lines. The mechanism is to be adjusted at least annually and has an annual budget cap.

Other — Questar Gas flows ratepayers' share of its capacity release revenue via its semiannual gas-cost pass-through proceedings.

Vermont

Electric fuel/gas commodity/purchased power — Power cost adjustment, or PCA, mechanisms are permitted, provided that the mechanisms are part of an alternative regulation plan. Green Mountain Power Corp has a PCA in place under which the company absorbs up to $307,000 of power cost overruns and is permitted to keep $150,000 of power cost savings per quarter.

Virginia

Electric fuel/gas commodity/purchased power — Electric energy and capacity charges for "economy" purchases are included in the electric fuel factor calculation. Energy charges associated with reliability purchases may flow through the fuel factor, but capacity charges are recovered through base rates.

Conservation program expense — State law permits the SCC to approve rider mechanisms for the recovery of utilities' conservation and energy efficiency program costs. Such mechanisms are in place for Virginia Electric and Power, or VEPCO, Appalachian Power, or APCO, and Columbia Gas of Virginia, or CGV.

Decoupling — A weather normalization adjustment, or WNA, rider is in place for Virginia Natural Gas, or VNG, and Washington Gas Light, or WGL, Atmos Energy, CGV and Roanoke Gas.

A separate revenue normalization adjustment, or decoupling, mechanism is in place that is designed to mitigate the impact on WGL's, VNG's and CGV's revenues of customers' participation in energy conservation programs.

Renewables expense — The SCC may approve riders for the recovery of costs associated with meeting an SCC-approved voluntary renewable portfolio standard, or RPS, plan known as the RPS-RAC. Such riders are in place for APCO and VEPCO. State law initially included an incentive for compliance, but this was removed.

Environmental compliance — State statutes permitted the electric utilities to seek SCC approval to begin recovering costs associated with environmental compliance and reliability improvement programs through an environmental and reliability factor, or ERF. In 2006, the SCC authorized APCO to implement an ERF that was in place through 2010, after which the related revenue requirement was rolled into base rates. In 2013, the SCC authorized APCO to implement a new environmental revenue adjustment clause, known as an E-RAC. The E-RAC has expired.

As permitted by state law, the SCC has approved an adjustment mechanism, known as Rider E, under which VEPCO is permitted to recover costs incurred to comply with the U.S. Environmental Protection Agency and Virginia Waste Management Board regulations related Clean Water Act requirements and for the storage and disposal of coal combustion residuals, or CCR, commonly referred to as coal ash, produced at the company facilities that continue to burn coal to produce electricity.

Generation capacity — Legislation enacted in 2007 required the SCC to approve riders for the recovery of investment in certain types of generation facilities, including a cash return on CWIP.

Legislation enacted in 2016 authorizes an investor-owned electric utility to recover the costs of purchasing certain solar generation facilities through a rate adjustment clause. A bill enacted in 2017 added pumped storage and hydroelectric generation facilities to the list of assets that are eligible to be included in VEPCO's/APCO's generation riders and investments to extend the lives of nuclear plants. Legislation enacted in 2018 calls for the SCC to approve recovery through riders of utility-owned solar and wind resources.

Several riders have been approved for VEPCO and APCO under these statutes.

Generic infrastructure — The SCC may approve annually adjusted riders for the recovery of costs/investments, including a cash return on construction work in progress, or CWIP, associated with utility projects to replace existing overhead distribution facilities of 69 kV or less located within the Commonwealth with underground facilities. Such a rider is in place for VEPCO.

The SCC may also allow a natural gas utility that invests in natural gas facility replacement projects to recover, in the form of a rider, a return on investment, a revenue conversion factor, depreciation, property taxes and carrying costs on over/under-recovery of the related costs. Eligible infrastructure replacement is defined as natural gas facility replacement projects that (i) enhance safety or reliability by reducing system integrity risks associated with customer outages, corrosion, equipment failures, material failures or natural forces; (ii) do not increase revenues by directly connecting the infrastructure replacement to new customers; (iii) reduce or have the potential to reduce greenhouse gas emissions; (iv) are commenced on or after Jan. 1, 2010; and (v) are not included in the natural gas utility's rate base in its most recent rate case. Such riders have been approved for CGV, Roanoke Gas, VNG and WGL.

RTO-related transmission expense — VEPCO uses a transmission cost recovery rider, known as Rider T, to reflect charges allocated to the utility by the PJM Interconnection. A similar mechanism, known as the T-RAC, is in place for APCO.

Other — WGL and CGV are permitted to recover carrying charges on storage gas balances and over/under-collected gas costs, hexane costs and commodity-related uncollectibles expense through an adjustment mechanism. APCO and VEPCO have mechanisms in place to recover variations in certain taxes and franchise fees.

Washington

Electric fuel/gas commodity/purchased power — Avista Corp.'s energy recovery mechanism includes a graduated sharing of differences from a benchmark level. Power cost adjustment mechanisms are in place for PacifiCorp and Puget Sound Energy, or PSE, that allow for variations in power costs to be apportioned, on a graduated scale, between the company and customers.

Decoupling — Revenue decoupling mechanisms were approved for PSE's electric and gas operations in general rate cases decided in December 2017.

Full decoupling mechanisms for Avista's electric and gas operations are to be in place through 2019, incorporate an earnings test and demand-reduction targets, and specify caps on the increases to be implemented under the mechanism. In the company's current rate proceedings, Avista has proposed extending its decoupling mechanisms through March 2025.

Cascade Natural Gas' decoupling mechanism incorporates an earnings test and a conservation target as well as caps on annual increases.

PacifiCorp's decoupling mechanism incorporates an earnings test and demand reduction targets as well as caps increases that may be implemented under the mechanism.

West Virginia

Environmental compliance/generation capacity/generic infrastructure — In the past, the PSC has approved temporary riders to provide recognition between rate cases of certain electric generation and infrastructure investments.

State law allows the PSC to approve expedited cost recovery mechanisms associated with commission-approved multiyear gas infrastructure improvement plans; such treatment has been approved for Mountaineer Gas and Hope Gas.

Monongahela Power Co., Potomac Edison and Appalachian Power Co./Wheeling Power Co. use a vegetation management rider.

Other — The utilities have mechanisms in place to recover variations in certain taxes and franchise fees.

Wisconsin

Electric fuel/gas commodity/purchased power — Under the Wisconsin PSC's electric fuel rules, which apply to the state's five largest investor-owned utilities, each utility forecasts monthly and annual fuel and purchased power costs on a prospective basis. If a company's actual fuel and purchased power costs are outside a monthly or cumulative monthly variance range around the forecasts and the utility can demonstrate that these costs will likely be outside the annual range, the PSC may conduct a hearing to establish new rates. Currently, the annual variance range is plus or minus 2%. An electric utility is permitted to defer any fuel costs that are outside of its annual symmetrical variance range for subsequent recovery or refund. However, the utility is prohibited from recovering deferrals if the company is found to be earning in excess of its authorized equity return.

Conservation program expense — Wisconsin has a statewide energy efficiency and renewable resources program called Focus on Energy, which is funded through a non-bypassable charge on customer bills. Program cost recovery is handled via individual rate cases. A conservation escrow account is used for voluntary energy efficiency and programs. Program costs are recovered through rates, the money goes into an escrow account, and then the costs are adjusted in the next rate case.

Generation capacity/generic infrastructure/other — At times, the PSC has authorized the utilities to file a limited-issue reopener, or LIR, of a previously completed base rate case instead of a full rate case. The LIR provides for recognition of certain specified investments and/or expenses and does not involve the re-determination of rate of return.

Other — All utilities have mechanisms in place to recover variations in certain taxes and franchise fees.

Wyoming

Decoupling — Cheyenne Light Fuel and Power's, or CLF&P's, demand-side management, or DSM, mechanism for its electric operations includes a provision that provides for the recovery of "lost margins" associated with customer participation in the DSM programs.

Black Hills Wyoming Gas*, formally known as Black Hills Gas Distribution, has a partial decoupling mechanism in place for small and medium general service class distribution customers. The mechanism does not address revenue variations due to weather. The utility, also formally part of CLF&P's gas operations, has a DSM mechanism similar to CLF&P's electric operations.

Questar Gas has a weather normalization adjustment mechanism in place.

MDU Resources Group's gas operation utilizes an optional weather normalization mechanism.

Renewables expense/environmental compliance — Optional renewable energy riders are in place for CLF&P, MDU Resources and PacifiCorp. PacifiCorp operates under an adjustment mechanism that is designed to recover from or refund to ratepayers 100% of the difference between actual renewable energy and SO2 emission allowance credit revenue levels and the levels reflected in base rates.

PacifiCorp has in place a voluntary bulk renewable energy rider that serves the utility's nonresidential electric customers and requires a minimum purchase of 121,200 kWh per year.

CLF&P utilizes a voluntary renewable energy tariff serves commercial retail customers with an aggregate usage of 300,000 kWh or more per year and government accounts desiring renewable energy.

Generic infrastructure — Black Hills Wyoming Gas, formally known as CLF&P's gas operations, utilizes a pipeline safety and integrity mechanism to recover costs associated with the investments in pipeline infrastructure.

Other — Through an incentive provision of its fuel clause, CLF&P allocates a portion of off-system sales margins to ratepayers.

** BHWG consists of four legacy Black Hills Wyoming subsidiaries and gas assets: CLF&P's gas operations; Black Hills Energy, a division of CLF&P, also known as Black Hills Northeast Wyoming and formerly known as MGTC Inc.; Black Hills Northwest Wyoming Gas Utility Co. LLC, formerly known as Energy West Wyoming; and Black Hills Gas Distribution LLC, formerly known as SourceGas.*

Edison Electric Institute

Alternative Regulation for Emerging Utility Challenges: 2015 Update

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Contents

I. Introduction

Investor-owned electric utilities in the United States are buffeted today by varied and rapid changes in the business conditions they face. For vertically integrated electric utilities ("VIEUs") and utility distribution companies ("UDCs") alike, the traditional cost of service approach to rate regulation is often not ideal for helping utilities cope with these changes. Alternative approaches to regulation ("Altreg") can often help utilities secure better outcomes for their customers and shareholders.

The changing business climate stems primarily from three root causes. One is pressure, from policymakers and many customers, for the power industry to lighten its environmental footprint. In addition to evolving renewable portfolio standards at the state level, utilities must comply with an array of federal initiatives such as the Environmental Protection Agency's Clean Power Plan. Demand-side management ("DSM") programs and tightening building codes and appliance standards encourage energy efficiency. Some customers seek power from greener sources than the increasingly clean portfolios of utilities. Self generation from rooftop solar is one means to this end, and its cost is falling. Customer-sited distributed generation ("DG") must be accommodated, and utilities must purchase power surpluses that these facilities generate at regulated rates.

A second force for change is technological progress in metering and distribution. Advanced metering infrastructure and other smart grid technologies can improve reliability and facilitate integration of intermittent renewables. Time-sensitive pricing can encourage customers to use the grid in less costly ways. New value-added optional products and services can be offered which benefit customers.

A third force for change is increased concern about the reliability and resiliency of grid service. Some facilities are approaching advanced age, and some need more protection from severe weather. Many customers seek better quality service.

These forces are having important practical effects on utilities. Growth in the demand for their traditional services has slowed, and utilities face competition from distributed energy resources ("DERs"). Nevertheless, some utilities need capital expenditures ("capex") for cleaner generating capacity, smart grid facilities, increased resiliency, and replacement of aging assets. Many new facilities don't automatically trigger revenue growth. Increased marketing flexibility is needed to meet competitive challenges and complex, changing customer needs.

Under traditional regulation, the base rates that compensate utilities for costs of non-energy inputs are reset only in general rate cases with historical test years. These lengthy proceedings require a detailed review of all costs and their allocation amongst the utility's retail services. Revenue from secondary sources (e.g., off-system sales) is imputed against the revenue requirement.

Most base rate revenue is drawn from volumetric and other usage charges. Since the cost of base rate inputs is driven more by capacity than system use in the short run, a utility's finances are sensitive between rate cases to the gap between growth in system use and capacity. A convenient proxy for this gap is the growth in use per customer (aka "average use"). The need for rate cases increases when average use declines.

Traditional regulation is ill-suited for addressing many of today's challenges. Growth in average use was once positive, and the resulting incremental revenues helped utilities finance rising cost without rate cases. Today, growth in the average use of residential and commercial customers is typically static and often negative. Utilities needing normal or high capital expenditures are then compelled to file rate cases more frequently. These involve high regulatory cost and are nonetheless frequently uncompensatory when they involve historical test years. Frequent rate cases also reduce utility opportunities to increase earnings from improved cost containment and marketing. Traditional regulation also does not allow for many value-added or optional rates and services. Improved utility performance is thus discouraged at a time when it is increasingly needed to respond to competitive pressures.

Increased financial attrition has been a factor in the long-term decline of average credit ratings among investor-owned electric utilities. This is illustrated in Figure 1. Higher risk raises financing costs and can discourage needed investments.

Alternative approaches to regulation have been developed which handle today's business conditions better. Some, such as multiyear rate plans, formula rates, and fully-forecasted test years, can involve sweeping regulatory change. Others, like revenue decoupling and cost trackers, target specific challenges.

This survey, now updated to include precedents through mid-2015, explains Altreg options and details precedents in the regulation of retail electric utility rates. A summary of states that currently use these approaches is featured in Table 1. Information is also provided on precedents for gas and water distributors and for energy utilities in Australia, Canada, and Britain. This year's survey also discusses marketing flexibility, a new Altreg area of growing interest to EEI members.

Figure 1

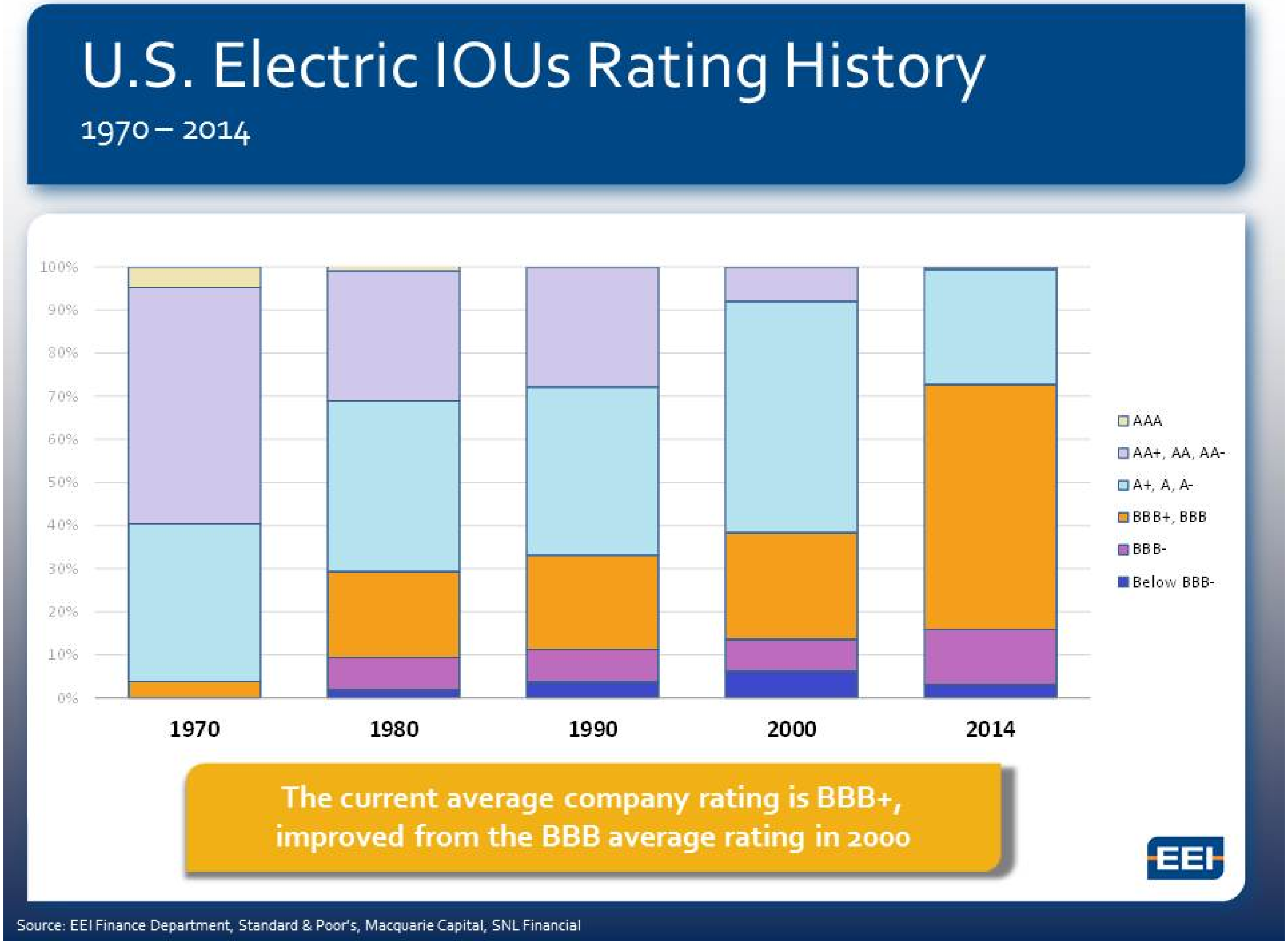

U.S. Electric IOUs Rating History
1970 – 2014
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1970
1980
1990
2000
2014
AAA
AA+, AA, AA-
A+, A, A-
BBB+, BBB
BBB-
Below BBB-
The current average company rating is BBB+, improved from the BBB average rating in 2000
EEI
Source: EEI Finance Department, Standard & Poor's, Macquarie Capital, SNL Financial

Table 1

Alternative Regulation Tools: An Overview of Current Precedents

State	Capital Cost Trackers	Measures that Relax the Use/Revenue Link			Multiyear Rate Plans[1]	Retail Formula Rate Plans	Forward Test Years
		Decoupling True Up Plans	Lost Revenue Adjustment Mechanisms	Fixed Variable Retail Pricing			
Alabama	Electric & Gas					Electric & Gas	Yes
Alaska							
Arizona	Electric, Gas, & Water	Gas only	Electric & Gas		Electric only		
Arkansas	Electric & Gas	Gas only	Electric & Gas				
California	Electric & Gas	Electric & Gas			Electric & Gas		Yes
Colorado	Electric & Gas				Electric only		
Connecticut	Electric, Gas, & Water	Electric & Gas	Gas only	Electric & Gas			Yes
Delaware	Electric, Gas, & Water						
District of Columbia	Electric & Gas	Electric only					
Florida	Electric & Gas			Gas only	Electric only		Yes
Georgia	Electric & Gas	Gas only		Gas only	Electric only	Gas only	Yes
Hawaii	Electric only	Electric only			Electric only		Yes
Idaho	Electric only	Electric only					
Illinois	Gas & Water	Gas only		Electric & Gas		Electric only	Yes
Indiana	Electric, Gas, & Water	Gas only	Electric only		Gas only		
Iowa	Gas only			Gas only	Electric only		
Kansas	Gas only		Electric only	Gas only			
Kentucky	Electric & Gas		Electric & Gas	Gas only			Yes
Louisiana	Electric only		Electric only		Electric only	Electric & Gas	Yes
Maine	Electric, Gas, & Water	Electric only		Gas only	Gas only		Yes
Maryland	Electric & Gas	Electric & Gas					
Massachusetts	Electric & Gas	Electric & Gas	Electric & Gas		Gas only		
Michigan	Gas only	Gas only					Yes

Table 1 continued

State	Capital Cost Trackers	Measures that Relax the Use/Revenue Link			Multiyear Rate Plans[1]	Retail Formula Rate Plans	Forward Test Years
		Decoupling True Up Plans	Lost Revenue Adjustment Mechanisms	Fixed Variable Retail Pricing			
Minnesota	Electric & Gas	Electric & Gas					Yes
Mississippi	Electric & Gas		Electric & Gas	Electric only		Electric & Gas	Yes
Missouri	Gas & Water			Gas only			
Montana	Electric & Gas		Gas only				
Nebraska	Gas only			Gas only			
Nevada	Gas only	Gas only	Electric only				
New Hampshire	Electric, Gas, & Water			Gas only	Electric & Gas		
New Jersey	Electric, Gas, & Water	Gas only					
New Mexico							Yes
New York	Gas & Water	Electric & Gas	Gas only	Electric & Gas	Electric & Gas		Yes
North Carolina	Gas & Water	Gas only	Electric only				
North Dakota	Electric only			Gas only	Electric only		Yes
Ohio	Electric, Gas, & Water	Electric only	Electric only	Gas only	Electric only		
Oklahoma	Electric only		Electric only	Electric & Gas		Gas only	
Oregon	Electric & Gas	Electric & Gas	Electric & Gas				Yes
Pennsylvania	Electric, Gas, & Water			Gas only			Yes
Rhode Island	Electric & Gas	Electric & Gas					Yes
South Carolina	Electric only		Electric only			Gas only	
South Dakota	Electric only						
Tennessee	Gas only	Gas only		Gas only		Gas only	Yes
Texas	Electric & Gas			Gas only		Gas only	
Utah	Gas only	Gas only					Yes
Vermont				Gas only			
Virginia	Electric & Gas	Gas only		Gas only	Electric only		
Washington	Gas only	Electric & Gas			Electric & Gas		
West Virginia	Electric only						
Wisconsin				Gas only			Yes
Wyoming	Electric only	Gas only	Electric & Gas	Electric & Gas			Yes

[1] This column excludes plans involving rate freezes without extensive supplemental funding from trackers.

II. Cost Trackers

A cost tracker is a mechanism for expedited recovery of specific utility cost (e.g., outside of a rate case). Balancing accounts are typically used to track unrecovered costs. Cost recovery is often implemented using tariff sheet provisions called riders.

Trackers are used in various situations where they are more practical than rate cases for addressing particular costs. Utilities usually recover fuel and purchased power costs via trackers because the volatility and substantial size of these costs would otherwise lead to frequent rate cases and materially impact utility risk. Other volatile expenses that are sometimes addressed with trackers include those for pensions, severe storms, and uncollectible bills.

A second use of trackers is for costs incurred due to policies of government agencies. Examples here include franchise fees and certain taxes. Tracking costs like these is fair to utilities and encourages government agencies to consider the impact of their policies on customer bills.

Trackers are also used to compensate utilities for costs that are rapidly rising and don't otherwise trigger new revenue, whether or not they are volatile or mandated. This encourages needed expenditures and reduces risk and the frequency of rate cases. Examples of operation and maintenance ("O&M") expenses that are sometimes tracked due in large measure to their rapid growth include those for health care.

Trackers for some costs have multiple rationales. DSM expenses, for example, are often sizable and sometimes grow rapidly.[1] Utility DSM programs are often mandated. Additionally, DSM can slow growth in the average use of power and reduce the need for plant additions, important sources of earnings growth for utilities. Tracking DSM expenses helps to balance utility incentives to embrace DSM.

Capital cost trackers typically address the accumulating depreciation, return on asset value, and taxes that result from the capex.[2] Capital costs can qualify for tracker treatment on several grounds. Major plant additions are volatile. Capex might be necessitated by highway construction or changes in government safety, reliability, or environmental standards. Capex is sometimes large enough to cause brisk cost growth that would otherwise occasion frequent rate cases.

An early use of capital cost trackers in the electric utility industry was to address construction costs of large power plants. These plants can take years to construct. An allowance in rates for a return on funds used during construction was traditionally not permitted until assets were used and useful and a rate case was filed. Deferred recovery of the allowance strains utility cash flow, increases financing expenses, and induces more rate "shock" when the value of the plant and construction financing is finally added to the rate base.

[1] This survey only documents capital cost trackers. Trackers for DSM expenses are ubiquitous so that there is less need for documentation.

[2] Recovery is sometimes achieved by keeping a rate case open beyond the date of a final decision for the limited purpose of adding assets to the revenue requirement.

Many commissions have addressed these problems by making a return on construction work in progress ("CWIP") eligible for immediate recovery. Capital cost trackers have often been used in lieu of frequent rate cases to obtain CWIP recovery.

Capital costs of distribution system modernization are sometimes recovered using trackers for somewhat different reasons. The annual expenditure may not be as large as that for large generation units, and construction of specific assets usually takes less than a year. However, the capex can still be sizable and doesn't automatically trigger new revenue when completed. A tracker for accelerated modernization costs can help a company modernize its grid and improve its services without frequent rate cases.

Capital costs of generation emissions controls are often accorded tracker treatment. These controls are occasioned by the emissions policies of state and federal agencies. Additionally, the facilities do not produce revenue and some facilities typically become used and useful each year over a series of years.

There are varied treatments of costs in approved capital trackers. Regulators often approve tracked capex budgets in advance, usually after considerable deliberation. Procedures for reviewing the need for generation plant additions are especially well established. Once a budget is set, the treatment of variances between actual and budgeted cost becomes an issue. Some trackers permit conventional prudence review treatment of cost overruns. In other cases, no adjustments are subsequently made if cost exceeds the budget. In between these extremes are mechanisms in which deviations, of prescribed magnitude, from budgeted amounts are shared formulaically (e.g., 50-50) between the utility and its customers. Utilities are also permitted sometimes to share in the benefits of capex underspends. The prudence of tracked capex is often subject to a final review when the cost is added to rate base, a step that usually occurs in the next rate case.

Recent precedents for capital cost trackers are listed in Table 2 and Figures 2 and 3. It can be seen that the precedents are numerous and continue to grow. This is the most widely used Altreg tool in the United States. For electric utilities, trackers for emissions controls, generation capacity, advanced metering infrastructure, and general system modernization have been especially common in recent years. Trackers for gas distributors typically address the cost of replacing old cast iron and bare steel mains. Trackers for water utilities, sometimes called distribution system improvement charges, are also common for accelerated modernization.

Figure 2: Recent Capital Cost Tracker Precedents by State: Energy Utilities

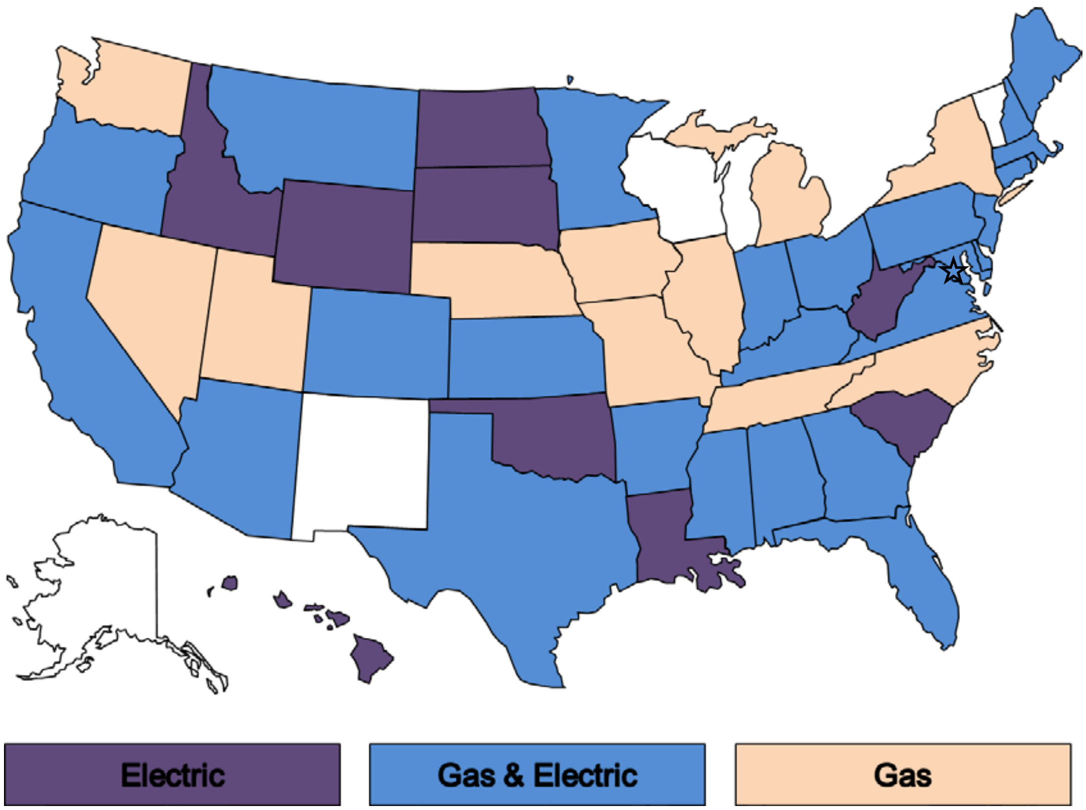


Figure 3: Recent Capital Cost Tracker Precedents by State: Water Utilities

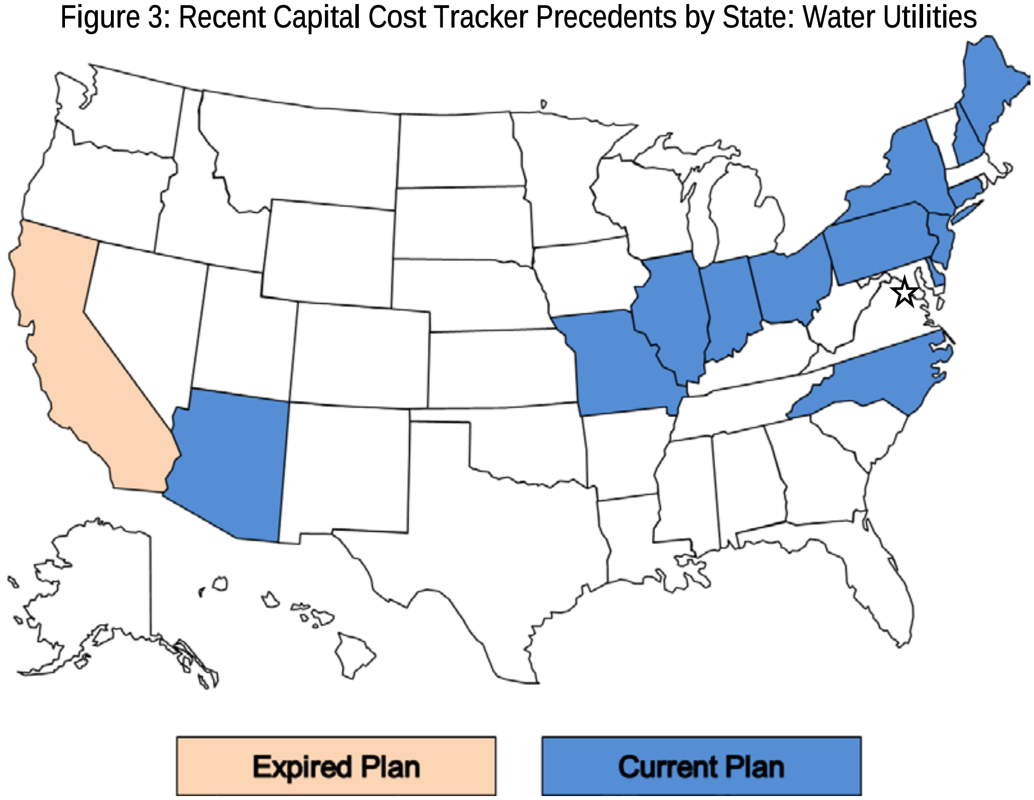


Table 2

Recent Capital Cost Tracker Precedents

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
AL	Alabama Power	Electric	Rate Certificated New Plant	Any approved by Commission through CPCN	Dockets 18117 and 18416 (November 1982)
AL	Mobile Gas Service	Gas	Cast Iron Replacement Factor	Replacement of cast iron mains	Docket 24794 (November 1995)
AR	Arkansas Oklahoma Gas	Gas	Act 310 Surcharge	Relocations of pipelines mandated by government agencies	Docket 12-088-U (July 2013)
AR	Arkansas Oklahoma Gas	Gas	System Safety Enhancement Rider	Replacement of bare steel mains, mains on low pressure systems, mains that are subject of an advisory notice by government that company deems to be unsatisfactory	Docket 13-078-U (July 2014)
AR	CenterPoint Energy Arkla	Gas	Main Replacement Rider	Replacement of cast iron and bare steel mains and services	Docket 06-161-U (October 2007)
AR	CenterPoint Energy Arkla	Gas	Government Mandated Expenditure Surcharge Rider	Replacements resulting from highway and street rebuilding	Docket 10-108-U (March 2011)
AR	Empire District Electric	Electric	Alternative Generation Environmental Recovery Rider	Environmental	Docket 15-010-U (August 2015)
AR	Oklahoma Gas & Electric	Electric	Smart Grid Rider	Systemwide smart grid implementation	Docket 10-109-U (August 2011)
AR	SourceGas Arkansas	Gas	At-Risk Meter Relocation Program Rider	Installation of new services for meters relocated due to motor vehicle collision risk	Docket 13-079-U (July 2014)
AR	SourceGas Arkansas	Gas	Main Replacement Program Rider	Replacement of bare steel and coated steel mains, mains that are subject of an advisory notice by government that company deems to be unsatisfactory, and associated services	Docket 13-079-U (July 2014)
AR	SourceGas Arkansas	Gas	Act 310 Surcharge	Bare steel and cast iron pipeline replacement, in-line inspection project, emissions controlling catalysts for compressor station engines, greenhouse gas monitoring of some regulator stations, highway relocation projects	Docket 13-072-U (April 2014)
AR	SWEPCO	Electric	Alternative Generation Recovery Rider	New generation	Docket 09-008-U (November 2009)
AR	SWEPCO	Electric	Rider Environmental Compliance Surcharge	Environmental	Docket 15-021-U (October 2015)
AZ	Arizona Public Service	Electric	Renewable Energy Standard Adjustment Schedule	Renewables not recovered in base rates	Docket E-01345A-08-0172
AZ	Arizona Public Service	Electric	Environmental Improvement Surcharge	Environmental improvement projects	Docket E-01345A-11-0224 (May 2012)
AZ	Arizona Public Service	Electric	Four Corners Rate Rider Surcharge	Generation	Docket E-01345A-11-0224 (December 2014)
AZ	Arizona Water Company	Water	Arsenic Cost Recovery Mechanism	Investments to reduce arsenic in water supply	Various (operating regions have separate decisions approving ACRMs)
AZ	Arizona Water Company - Eastern Group	Water	System Improvement Benefits Mechanism	Replacement of leak prone mains and related services, meters, and hydrants, replace meters that do not have lead free brass, other replacements for mains, services, meters, and hydrants that are at the end of their useful life	Decision 73938 (June 2013)
AZ	Southwest Gas	Gas	Customer Owned Yard Line Cost Recovery Mechanism	Replacement and ownership of customer-owned yard lines that have been shown to be leaking	Docket G-01551A-10-0458 (January 2012)
AZ	Tucson Electric Power	Electric	Environmental Compliance Adjustor	Miscellaneous environmental projects	Decision 73912 (June 2013)
CA	Pacific Gas & Electric	Electric	Smart Grid Memorandum Account	Smart grid projects that received DOE matching funds	Decision 09-09-029 (September 2009)
CA	Pacific Gas & Electric	Gas Transmission	Pipeline Safety Implementation Plan	Pipeline replacement, automated valve installation, and upgrades to pipeline	Decision 12-12-030 (December 2012)
CA	Pacific Gas & Electric	Electric	Smart Grid Pilot Deployment Project Balancing Account	Pilot programs for smart grid line sensors, volt/VAR optimization, detection and location of distribution line outages and faulted circuits, and information technology investments to improve short term demand forecasting for power procurement	Decision 13-03-032 (March 2013)
CA	San Diego Gas & Electric	Electric & Gas	Advanced Metering Infrastructure Balancing Account	AMI	Decision 07-04-043 (April 2007)
CA	San Diego Gas & Electric	Electric	Energy Storage Balancing Account	Projects to store solar energy	Decision 13-05-010 (May 2013)
CA	San Diego Gas & Electric	Gas	Post-2011 Distribution Integrity Management Program Balancing Account	DIMP related costs	Decision 13-05-010 (May 2013)
CA	San Diego Gas & Electric	Gas	Transmission Integrity Management Program Balancing Account	TIMP related costs	Decision 13-05-010 (May 2013)
CA	San Diego Gas & Electric	Gas Transmission	Safety Enhancement Capital Cost Balancing Account	Replacement of mains that fail pressure tests or that cannot be pressure tested	Decision 14-06-007 (June 2014)
CA	Southern California Edison	Electric	SmartConnect Balancing Account	Advanced metering infrastructure project	Decision 08-09-039 (September 2008)
CA	Southern California Edison	Electric	Solar PV Balancing Account	Solar generation	Decision 09-06-049 (June 2009)
CA	Southern California Gas	Gas	Advanced Metering Infrastructure Balancing Account	AMI	Decision 10-04-027 (April 2010)
CA	Southern California Gas	Gas	Post-2011 Distribution Integrity Management Program Balancing Account	DIMP related costs	Decision 13-05-010 (May 2013)
CA	Southern California Gas	Gas	Transmission Integrity Management Program Balancing Account	TIMP related costs	Decision 13-05-010 (May 2013)
CA	Southern California Gas	Gas Transmission	Safety Enhancement Capital Cost Balancing Account	Replacement of mains that fail pressure tests or that cannot be pressure tested	Decision 14-06-007 (June 2014)
CO	Black Hills Colorado Electric	Electric	Transmission Cost Adjustment Rider	Transmission projects	Docket 09-014E, Decision C09-0271 (March 2009)
CO	Black Hills Colorado Electric	Electric	Clean Air Clean Jobs Act Rider	Gas-fired generation	Docket 14AL-0393E, Decision C14-1504 (December 2014)
CO	Public Service Company of Colorado	Electric	Transmission Cost Adjustment	Transmission projects	Docket 07A-339E, Decision C07-1085 (December 2007)
CO	Public Service Company of Colorado	Gas	Pipeline Safety Integrity Adjustment	Gas distribution and transmission integrity management programs, main replacement, partial recovery of two large pipeline replacements	Docket 10-AL-963G (August 2011)

Table 2 continued

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
CO	Public Service Company of Colorado	Electric	Clean Air Clean Jobs Act Rider	Miscellaneous environmental projects including gas-fired generation, scrubbers	Proceeding 14A-680E, Decision C15-0292 (March 2015)
CO	Rocky Mountain Gas	Gas Transmission	System Safety and Integrity Rider	TIMP, DIMP, and other safety regulatory compliance projects	Docket 13AL-0046G, Decision R14-0114 (February 2014)
CT	Aquarion Water Company of Connecticut	Water	Water Infrastructure and Conservation Adjustment	Replacement of infrastructure including mains, valves, services, meters, and hydrants that have reached the end of their useful life or are no longer able to function as intended	Docket 08-06-21WI01 (December 2008)
CT	Connecticut Light & Power	Electric	System Resiliency Plan	Structural hardening	Docket 12-07-06 (January 2013)
CT	Connecticut Natural Gas	Gas	System Expansion Reconciliation Mechanism	System expansion	Docket 13-06-02 (November 2013)
CT	Connecticut Natural Gas	Gas	DIMP True-Up Mechanism	Cast iron and bare steel main replacement	Docket 13-06-08; (January 2014)
CT	Connecticut Water	Water	Water Infrastructure and Conservation Adjustment	Replacement of infrastructure including mains, valves, services, meters, and hydrants that have reached the end of their useful life or are no longer able to function as intended	Docket 08-10-15WI01 (March 2009)
CT	Southern Connecticut Gas	Gas	System Expansion Reconciliation Mechanism	System expansion	Docket 13-06-02 (November 2013)
CT	Torrington Water	Water	Water Infrastructure and Conservation Adjustment	Replacement of infrastructure including mains, valves, services, meters, and hydrants that have reached the end of their useful life or are no longer able to function as intended	Docket 09-06-17WI01 (December 2009)
CT	United Water Connecticut	Water	Water Infrastructure and Conservation Adjustment	Replacement of infrastructure including mains, valves, services, meters, and hydrants that have reached the end of their useful life or are no longer able to function as intended	Docket 09-06-17WI01 (December 2009)
CT	Yankee Gas Services	Gas	System Expansion Reconciliation Mechanism	System expansion	Docket 13-06-02 (November 2013)
DC	Potomac Electric Power	Electric	Underground Project Charge	Undergrounding of specific feeders	Formal Case 1116 (November 2014)
DC	Washington Gas Light	Gas	Plant Recovery Adjustment	Remediation/replacement of mechanical couplings	Formal Case 1027 (December 2009)
DC	Washington Gas Light	Gas	Accelerated Pipe Replacement Plan Adjustment	Replacement of cast iron mains, bare steel mains and services and "black plastic" services	Formal Case 1115 (January 2015)
DE	Artesian Water	Water	Distribution System Improvement Charge	Replacement of infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 01-474 (December 2001)
DE	Delmarva Power & Light	Gas	Utility Facility Relocation Charge	Replacements due to mandated relocations that are not otherwise reimbursed	Docket 12-546 (October 2013)
DE	Delmarva Power & Light	Electric	Utility Facility Relocation Charge	Replacements due to mandated relocations that are not otherwise reimbursed	Docket 13-115 (August 2014)
DE	Sussex Shores Water	Water	Distribution System Improvement Charge	Replacement of infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 01-470 (December 2001)
DE	Tidewater Utilities	Water	Distribution System Improvement Charge	Replacement of infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 03-210 (May 2003)
DE	United Water Delaware	Water	Distribution System Improvement Charge	Replacement of infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 01-481 (December 2001)
FL	Chesapeake Utilities	Gas	Gas Reliability Infrastructure Program Tariff	Replacement of bare steel mains and services	Docket 120036-GU (September 2012)
FL	Florida City Gas	Gas	Safety and Access Verification Expedited Program	Replacement of unprotected steel mains, relocation of certain gas mains in rear lot easements	Docket 150116-GU (September 2015)
FL	Florida Power and Light	Electric	Environmental Cost Recovery Clause	Miscellaneous environmental projects	Docket 080281-EI (August 2008)
FL	Florida Power and Light	Electric	Capacity Cost Recovery Clause	Nuclear power	Docket 090009-EI (November 2009)
FL	Florida Power and Light	Electric	Generation Base Rate Adjustment	Generation	Docket 120015-EI (December 2012)
FL	Florida Public Utilities	Gas	Gas Reliability Infrastructure Program Tariff	Replacement of bare steel mains and services	Docket 120036-GU (September 2012)
FL	Gulf Power	Electric	Environmental Cost Recovery Clause	Miscellaneous environmental projects	Docket 930613-EI (January 1994)
FL	Peoples Gas System	Gas	Cast Iron/Bare Steel Replacement Rider	Replacement of bare steel and cast iron pipes	Docket 110320-GU (September 2012)
FL	Progress Energy Florida	Electric	Environmental Cost Recovery Clause	Miscellaneous environmental projects	Docket 050078-EI (September 2005)
FL	Progress Energy Florida	Electric	Capacity Cost Recovery Clause	Nuclear power	Docket 090009-EI (November 2009)
FL	Progress Energy Florida	Electric	Generation Base Rate Adjustment	Generation	Docket 130208 (November 2013)
FL	Tampa Electric	Electric	Environmental Cost Recovery Clause	Miscellaneous environmental projects	Docket 960688-EI (August 1996)
GA	Atlanta Gas Light	Gas	Pipeline Replacement Program Cost Recovery Rider	Replacement of cast iron and bare steel pipe	Docket 29950 as STRIDE tracker in 2009
GA	Atlanta Gas Light	Gas	Strategic Infrastructure Development and Enhancement Surcharge	Pre-1985 plastic mains and services replacement, planned customer expansions, and infrastructure improvements that sustain reliability and operational flexibility	Docket 8516-U and 29950 (October 2009 and August 2013)
GA	Atmos Energy (now Liberty Utilities)	Gas	Pipe Replacement Surcharge	Replace cast iron and bare steel pipe	Docket 12509-U (December 2000)
GA	Georgia Power Company	Electric	Environmental Compliance Cost Recovery	Miscellaneous environmental projects	Docket 25060-U (December 2007)
GA	Georgia Power Company	Electric	Nuclear Construction Cost Recovery	Nuclear generation	Docket 27800, Senate Bill 31
HI	Hawaii Electric Light	Electric	Renewable Energy Infrastructure Program Surcharge	Renewable energy infrastructure	Docket 2007-0416 (December 2009)
HI	Hawaiian Electric Company	Electric	Renewable Energy Infrastructure Program Surcharge	Renewable energy infrastructure	Docket 2007-0416 (December 2009)
HI	Maui Electric	Electric	Renewable Energy Infrastructure Program Surcharge	Renewable energy infrastructure	Docket 2007-0416 (December 2009)
IA	Black Hills Energy	Gas	System Safety Maintenance Adjustment	Replacement of steel and pvc pipe, relocations mandated by local governments	Docket RPU-2012-0004 (March 2013)
ID	PacifiCorp	Electric	Energy Cost Adjustment Mechanism	Lake Side II generation facility	Case PAC-E-13-04 (October 2013)

Table 2 continued

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
IL	Ameren Illinois	Gas	Rider Qualifying Infrastructure Plant	Replacement of prone to leak distribution and transmission pipe, installation of AMI and communications infrastructure, replacing or installing transmission or distribution facilities to establish over-pressure protection, replacement of difficult to locate mains and services, replacement of high pressure transmission pipelines without a recorded maximum allowable operating pressure, replacements to facilitate an upgrade from a low pressure system to a high pressure system	Docket 14-0573 (January 2015)
IL	Consumers Illinois Water Company (Kankakee, Vermilion, Woodhaven Districts)	Water	Qualifying Infrastructure Plant Surcharge Rider	Replacement of non-revenue producing infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 01-0561 (December 2001)
IL	Illinois-American Water (Chicago Metro Division)	Water	Qualifying Infrastructure Plant Surcharge Rider	Replacement of non-revenue producing infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 09-0251 (March 2010)
IL	Illinois-American Water (Single Tariff Pricing Zone)	Water	Qualifying Infrastructure Plant Surcharge Rider	Replacement of non-revenue producing infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 04-0336 (December 2004)
IL	Northern Illinois Gas	Gas	Rider Qualifying Infrastructure Plant	Replacement of cast iron pipe, non-cast iron pipe, and copper services; relcoation of meters from inside customers' premises; upgrading of system from low pressure to medium pressure; replacement or installation of regulator stations, regulators, valves and associated facilities to establish over-pressure protection	Docket 14-0292 (July 2014)
IL	Peoples Gas Light & Coke	Gas	Rider Qualifying Infrastructure Plant	Replacement of cast and ductile iron, relcoation of meters from inside customers' premises, upgrading of system from low pressure to medium pressure, replacement of high pressure transmission pipelines at higher risk of failure or lacking records, installation of regulator stations to establish over-pressure protection	Docket 13-0534 (January 2014)
IN	Duke Energy Indiana	Electric	Qualified Pollution Control Property	Miscellaneous environmental projects	Cause 41744 (February 2001)
IN	Duke Energy Indiana	Electric	Integrated Coal Gasification Combined Cycle Generating Facility Revenue Recovery Adjustment	Integrated gasification combined cycle generating plant	Docket 43114 (November 2007)
IN	Indiana Michigan Power	Electric	Clean Coal Technology Rider	Miscellaneous environmental projects	Cause 43636 (June 2009)
IN	Indiana Water Service	Water	Distribution System Improvement Charge	Replacement of non-revenue producing infrastructure (e.g., existing mains, services, meters, and hydrants)	Cause 42743 DSIC-1 (December 2004)
IN	Indiana-American Water	Water	Distribution System Improvement Charge	Replacement of non-revenue producing infrastructure (e.g., existing mains, services, meters, and hydrants)	Cause 42351 DSIC-1 (February 2003)
IN	Indianapolis Power & Light	Electric	Environmental Compliance Cost Recovery	Miscellaneous environmental projects	Cause 42170 (November 2002)
IN	Northern Indiana Public Service	Electric	Environmental Cost Recovery Mechanism	Miscellaneous environmental projects	Cause 42150 (November 2002)
IN	Northern Indiana Public Service	Electric	Transmission, Distribution & Storage System Improvement Charge	Investments to maintain the capacity deliverability of system and replacement of aging infrastructure, economic development	Cause 44370 and 44371 (February 2014)
IN	Northern Indiana Public Service	Gas	Distribution System Improvement Charge	Gas system deliverability and system integrity projects, rural main extensions	Cause 44403 TDSIC 1 (January 2015)
IN	Utility Center Inc.	Water	Distribution System Improvement Charge	Replacement of non-revenue producing infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 42416 DSIC-1 (June 2003)
IN	Vectren Energy Delivery (Indiana Gas and Southern Indiana Gas & Electric)	Gas	Compliance and System Improvement Adjustment	System and pressure improvements, storage operations, instrumentation and communications equipment, public improvement projects, service replacements, and economic development	Cause 44429 (August 2014)
KS	Atmos Energy	Gas	Gas System Reliability Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Docket 10-ATMG-133-TAR (December 2009)
KS	Black Hills Energy (Aquila)	Gas	Gas System Reliability Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Docket 08-AQLG-852-TAR (July 2008)
KS	Kansas Gas Service	Gas	Gas System Reliability Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Docket 10-KGSG-155-TAR (December 2009)
KS	Midwest Energy	Gas	Gas System Reliability Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Docket 09-MDWE-722-TAR (May 2009)
KY	Atmos Energy	Gas	Pipe Replacement Program Rider	Replacement of bare steel service lines, curb valves, meter loops, and mandated relocations	Docket 2009-00354 (May 2010)
KY	Columbia Gas	Gas	Advanced Main Replacement Rider	Replacement of cast iron and bare steel mains and services	Docket 2009-00141 (September 2009)
KY	Delta Natural Gas	Gas	Pipe Replacement Program Surcharge	Replacement of bare steel pipe, service lines, curb valves, meter loops, and mandated pipe relocations	Case 2010-00116 (October 2010)
KY	Kentucky Power	Electric	Environmental Cost Recovery Surcharge	Miscellaneous environmental projects	Docket 2002-00169 (March 2003)
KY	Kentucky Utilities	Electric	Environmental Cost Recovery Surcharge	Miscellaneous environmental projects	Case 93-465 (July 1994)
KY	Louisville Gas & Electric	Electric	Environmental Cost Recovery Surcharge	Miscellaneous environmental projects	Case 94-332 (April 1995)
KY	Louisville Gas & Electric	Gas	Gas Line Tracker	Replacement and transfer of ownership of customer owned service risers	Case 2012-00222 (December 2012)
LA	Cleco Power	Electric	Infrastructure and Incremental Costs Recovery	Projects to be determined in subsequent filings to Commission	Docket U-30689 and U-32779 (October 2010 and June 2014)
LA	Entergy Gulf States Louisiana	Electric	Formula Rate Plan-3	Acquisition of generating facility, new generating facility or refurbishment of existing generating facility if the revenue requirement related to the project exceeds $10 million	Docket U-32707 (December 2013)
LA	Entergy Louisiana	Electric	Formula Rate Plan 7	Cost of Ninemile 6 natural gas generating facility; New generating facility, acquisition of a generating facility, or refurbishment of existing generating facility if the revenue requirement related to the project exceeds $10 million	Docket U-32708 and 31971 (January 2014 and April 2012)
MA	Bay State Gas	Gas	Targeted Infrastructure Recovery Factor	Replacement of bare steel mains and services	DPU 09-30
MA	Bay State Gas	Gas	Gas System Enhancement Adjustment Factor	Replacement of non-cathodically protected steel, cast iron, and wrought iron mains and associated services, service tie-ins, encroached pipe, and meters	DPU 14-134
MA	Berkshire Gas	Gas	Gas System Enhancement Adjustment Factor	Replacement of non-cathodically protected steel, cast iron mains and associated services, encroached pipe, and meter sets composed of non-cathodically protected steel, cast iron or copper	DPU 14-131
MA	Fitchburg Gas & Electric Light	Gas	Gas System Enhancement Adjustment Factor	Replacement of cast main and unprotected steel mains and services and encroached pipe	DPU 14-130

Table 2 continued

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
MA	Massachusetts Electric	Electric	Net CapEx Factor	Potentially all distribution investments	DPU 09-39
MA	Massachusetts Electric	Electric	Solar Cost Adjustment Provision	Solar generation	DPU 09-38
MA	Massachusetts Electric	Electric	Smart Grid Adjustment Provision	Pilot smart grid investments including AMI, high speed communications network, in-home energy management devices, distribution automation, advanced capacitor control, advanced grid monitoring, remote fault indicators	DPU 11-129
MA	Nantucket Electric	Electric	Solar Cost Adjustment Provision	Solar generation	DPU 09-38
MA	Nantucket Electric	Electric	Smart Grid Adjustment Provision	Pilot smart grid investments including AMI, high speed communications network, in-home energy management devices, distribution automation, advanced capacitor control, advanced grid monitoring, remote fault indicators	DPU 11-129
MA	National Grid (Boston-Essex Gas and Colonial Gas	Gas	Targeted Infrastructure Recovery Factor	Replacement of bare steel, cast iron, and wrought iron mains, services, meters, meter installations, and house regulators	DPU 10-55
MA	National Grid (Boston-Essex Gas and Colonial Gas	Gas	Gas System Enhancement Adjustment Factor	Replacement of non-cathodically protected steel, cast iron, and wrought iron mains and associated services, inside services, service tie-ins, encroached pipe, and meters	DPU 14-132
MA	New England Gas	Gas	Targeted Infrastructure Recovery Factor	Replacement of non-cathodically protected steel mains and services and small diameter cast-iron and wrought iron	DPU 10-114
MA	New England Gas	Gas	Gas System Enhancement Adjustment Factor	Replacement of non-cathodically protected steel, cast iron, and wrought iron mains and associated services, inside services, service tie-ins, encroached pipe, and meters	DPU 14-133
MA	NSTAR Electric	Electric	Capital Projects Scheduling List	Stray voltage inspection survey and remediation program; double pole inspections, replacements, and restorations; and manhole inspection, repair, and upgrade	DTE 05-85 and DPU 10-70-B
MA	NSTAR Electric	Electric	Smart Grid Adjustment Factor	Smart grid pilot	DPU-09-33
MA	Western Massachusetts Electric	Electric	Solar Program Cost Adjustment	Solar generation	DPU 09-05
MD	Baltimore Gas & Electric	Electric	Electric Reliability Investment Surcharge	Upgrades to improve poorest performing feeders, selective undergrounding, expanded recloser development on 13kV and 34 kV lines, diverse routing of 34 kV supply circuits	Case 9326 (December 2013)
MD	Baltimore Gas & Electric	Gas	Strategic Infrastructure Development and Enhancement Program	Replacement of bare steel mains and services, cast iron mains, copper services, and pre-1982 plastic "Ski Bar" risers	Case 9331 (January 2014)
MD	Columbia Gas of Maryland	Gas	Strategic Infrastructure Development and Enhancement Program	Replacement of bare steel and cast iron mains and bare steel services	Case 9332 (August 2014)
MD	Delmarva Power & Light	Electric	Grid Resiliency Charge	Feeder hardening	Case 9317 (September 2013)
MD	Potomac Electric Power	Electric	Grid Resiliency Charge	Feeder hardening	Case 9311 (July 2013)
MD	Washington Gas Light	Gas	Strategic Infrastructure Development and Enhancement Program Rider	Replacement of bare and unprotected steel mains and services, targeted copper and pre-1975 plastic services, mechanically coupled pipe main and services, and cast iron mains	Case 9335 (May 2014)
ME	Central Maine Power	Electric	Customer Relationship Management & Billing Rate Adjustment	Customer relationship management & billing system replacement	Docket 2015-00040 (October 2015)
ME	Maine Water Company	Water	Water Infrastructure Charge	Replacement of stationary physical plant assets needed to operate a water system	Various orders separately issued for operating divisions
ME	Northern Utilities	Gas	Targeted Infrastructure Recovery Adjustment	Cast iron, bare steel, and unprotected coated steel mains and services replacements, replacement of farm tap regulators	Docket 2013-00133 (December 2013)
MI	Consumers Energy	Gas	Enhanced Infrastructure Replacement Program	Cast iron replacements	Case U-17643 (January 2015)
MI	Michigan Consolidated Gas (now DTE Gas)	Gas	Infrastructure Recovery Mechanism	Replacement of cast iron mains, replacement of indoor meters with outdoor meters, pipeline integrity projects designed to comply with federal and state safety standards	Case U-16999 (April 2013)
MI	SEMCO Gas	Gas	Main Replacement Rider	Replacement of cast iron and unprotected steel mains and service lines	Case U-16169 and U-17824 (January 2011 and June 2015)
MN	Interstate Power & Light	Electric	Renewable Energy Recovery Adjustment	Renewable generation	Docket M-10-312 (December 2013)
MN	Minnesota Power	Electric	Arrowhead Regional Emission Abatement Rider	Miscellaneous environmental projects	Docket M-05-1678 (June 2006)
MN	Minnesota Power	Electric	Transmission Cost Recovery Rider	Incremental transmission investment	Docket M-07-965 (December 2007)
MN	Minnesota Power	Electric	Renewable Resource Rider	Renewable generation	Docket M-10-273 (July 2010)
MN	Minnesota Power	Electric	Rider for Boswell Unit 4 Emission Reduction	Miscellaneous environmental projects	Docket M-12-920 (November 2013)
MN	Northern States Power (Xcel Energy)	Electric	Metropolitan Emissions Reduction Project (later called Environmental Improvement Rider)	Miscellaneous environmental projects	Docket M-02-633 (March 2004)
MN	Northern States Power (Xcel Energy)	Electric	Transmission Cost Recovery Rider	Incremental transmission investment	Docket M-06-1103 (November 2006)
MN	Northern States Power (Xcel Energy)	Electric	Renewable Energy Standard Cost Recovery Rider	Renewable generation	M-07-872 (March 2008)
MN	Northern States Power (Xcel Energy)	Gas	State Energy Policy Rider	Cast iron replacements	Docket M-08-261 (November 2008)
MN	Northern States Power (Xcel Energy)	Electric	Mercury Cost Recovery Rider	Miscellaneous environmental projects	Docket M-09-847 (November 2009)
MN	Otter Tail Power	Electric	Renewable Resource Cost Recovery Rider	Renewable generation	Docket M-08-119 (August 2008)
MN	Otter Tail Power	Electric	Transmission Cost Recovery Rider	Incremental transmission investment	Docket M-09-881 (January 2010)
MO	AmerenUE	Gas	Infrastructure System Replacement Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Case GT-2008-0184 (February 2008)
MO	Atmos Energy	Gas	Infrastructure System Replacement Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Docket GO-2009-0046 (October 2008)
MO	Laclede Gas	Gas	Infrastructure System Replacement Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Docket GR-2007-0208 (July 2007)
MO	Missouri American Water	Water	Infrastructure System Replacement Surcharge	Replacement of mains, associated valves and hydrants, main cleaning and relining projects	Case WO-2004-0116 (December 2003)
MO	Missouri Gas Energy	Gas	Infrastructure System Replacement Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Docket GR-2009-0355 (February 2010)

Table 2 continued

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
MS	Atmos Energy	Gas	Supplemental Growth Rider	Extraordinary service expansions to new industrial customers for economic development	Docket 2013-UN-23 (July 2013)
MS	Centerpoint Energy	Gas	Supplemental Growth Rider	Extraordinary service expansions to new commercial and industrial customers for economic development	Docket 13-UN-214 (October 2013)
MS	Mississippi Power	Electric	Enviromental Compliance Overview Plan Rate	Miscellaneous environmental projects	Docket 92-UA-0058 and 92-UN-0059 (July 1992)
MT	Northwestern Energy	Electric	NA - Amounts recovered through electric supply service rates	Generation	Docket D.2008.6.69 (November 2008)
MT	Northwestern Energy	Gas	Natural Gas Supply Tracker	Battle Creek natural gas production resources	Docket D2012.3.25 (November 2012)
NC	Aqua North Carolina	Water	Water System Improvement Charge	Replacement of distribution system mains, valves, services, meters, and hydrants, main extensions, projects to comply with primary drinking water standards, unreimbursed facility relocation costs due to highways	Docket W-218, Sub 363 (May 2014)
NC	Aqua North Carolina	Water	Sewer System Improvement Charge	Replacement of pumps, motors, blowers, and other mechanical equipment, collection main extensions designed to implement solutions to wastewater problems, improvements necessary to reduce inflow and infiltration to the collection systems as required by state and federal law and regulations, unreimbursed costs of highway relocations	Docket W-218, Sub 363 (May 2014)
NC	Carolina Water Service	Water	Water System Improvement Charge	Replacement of distribution system mains, valves, services, meters, and hydrants, main extensions, projects to comply with primary drinking water standards, unreimbursed facility relocation costs due to highways	Docket W-354, Sub 336 (March 2014)
NC	Carolina Water Service	Water	Sewer System Improvement Charge	Replacement of pumps, motors, blowers, and other mechanical equipment, collection main extensions designed to implement solutions to wastewater problems, improvements necessary to reduce inflow and infiltration to the collection systems as required by state and federal law and regulations, unreimbursed costs of highway relocations	Docket W-354, Sub 336 (March 2014)
NC	Piedmont Natural Gas	Gas	Integrity Management Rider	Investments driven by federal pipeline safety and integrity requirements	Docket G-9, Sub 631 (December 2013)
ND	Montana-Dakota Utilities	Electric	Environmental Cost Recovery Tariff	Miscellaneous environmental projects	Case PU-13-85 (December 2013)
ND	Montana-Dakota Utilities	Electric	Generation Resource Recovery Rider Tariff	New Generation	Case PU-14-108 (August 2014)
ND	Northern States Power- MN	Electric	Transmission Cost Rider	Transmission projects	Case PU-12-813 (February 2014)
ND	Northern States Power- MN	Electric	Renewable Energy Rider	North Dakota based renewable generation	Case PU-12-813 (February 2014)
ND	Otter Tail Power	Electric	Renewable Resource Rider	Renewables	Case PU-06-466 (May 2008)
ND	Otter Tail Power	Electric	Transmission Facility Cost Recovery Tariff	Transmission investments required to serve retail customers	Case PU-11-682 (April 2012)
ND	Otter Tail Power	Electric	Environmental Cost Recovery Tariff	Miscellaneous environmental projects	Case PU-13-84 (December 2013)
NE	Black Hills Nebraska Gas Utility	Gas	Infrastructure System Replacement Recovery Charge	Non-revenue increasing projects to replace existing assets	Application NG-0074
NE	SourceGas Distribution	Gas	Pipeline Replacement Charge	Projects entering service before May 2014 that are installed to comply with safety requirements as replacements for existing facilities, projects that will extend the useful life of existing assets or enhance pipeline integrity, facility relocations	Application NG-0072 (June 2013)
NE	SourceGas Distribution	Gas	System Safety and Integrity Rider	Projects entering service after April 2014 that comply with federal regulations including transmission and distribution integrity management plans or are facility relocations costing $20,000 or more	Application NG-0078 (October 2014)
NH	Aquarion Water of New Hampshire	Water	Water Infrastructure and Conservation Adjustment Charge	Projects to upgrade or replace non-revenue producing assets including main, valve, and hydrant replacement, main cleaning and relining, and non-reimbursable relocations	Docket DW 08-098 (September 2009)
NH	Energy North	Gas	Cast Iron/Bare Steel Replacement Program	Replacement of cast iron and bare steel pipe	Docket DG-107 (June 2007)
NH	Granite State Electric	Electric	Reliability Enhancement Plan Capital Investment Allowance	Feeder hardening and asset replacement	Docket DG-107 (June 2007)
NH	Public Service Company of New Hampshire	Electric	Energy Service	Miscellaneous environmental projects	DE 11-250 (April 2012)
NH	Public Service Company of New Hampshire	Electric	Reliability Enhancement Plan	Reliability improvements	DE 09-035, DE 11-250, and DE 14-238 (June 2015)
NJ	Elizabethtown Gas	Gas	Elizabethtown Natural Gas Distribution Utility Reinforcement Effort	System hardening	Docket GO13090826 (July 2014)
NJ	New Jersey American Water	Water	Distribution System Improvement Charge	Incremental non-revenue water main replacement, rehabilitation, or mandated relocation projects, service line replacements, valve and hydrant replacement	Docket WR12070669 (October 2012)
NJ	New Jersey Natural Gas	Gas	New Jersey Reinvestment in System Enhancement	Storm hardening projects	Docket GR13090828 (July 2014)
NJ	Public Service Electric and Gas	Electric	Solar Generation Investment Program	Solar generation	Docket EO09020125 (August 2009)
NJ	Public Service Electric and Gas	Electric & Gas	Capital Infrastructure Investment Program	Electric: reliability upgrades & feeder replacement, Gas: replacement of cast iron & bare steel mains and services	Dockets GO09010050, EO11020088, GO10110862 (April 2009 and July 2011)
NJ	Public Service Electric and Gas	Electric & Gas	Energy Strong Adjustment Mechanism	Electric: substation flood mitigation, gird reconfiguration strategies, and smart grid; Gas: Metering and regulating station flood mitigation, replacement of utilization pressure cast iron in flood prone areas	Docket EO13020155, GO13020156 (May 2014)
NJ	South Jersey Gas	Gas	Storm Hardening and Reliability Program	Replacement of low pressure mains and services with high pressure mains and services, removal of regulator stations, installation of excess flow valves in coastal areas	Docket GO13090814 (August 2014)
NJ	United Water New Jersey	Water	Distribution System Improvement Charge	Repair, replace, and/or clean mains, replace valves, hydrants, and service lines	Docket WR12080724 (October 2012)
NV	Southwest Gas	Gas	Gas Infrastructure Replacement Mechanism	Early vintage pipe replacements, conversion of master metered customers to individual meters	Docket 14-10002 (December 2014)

Table 2 continued

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
NY	Corning Natural Gas	Gas	Safety and Reliability Charge	Replacement of leak prone pipe and ancillary costs to maintain a safe and reliable system	Case 11-G-0280 (October 2015)
NY	Keyspan Energy Long Island	Gas	Leak Prone Pipe Surcharge	Accelerated leak prone pipe removal program	Case 12-G-0214 (December 2014 and March 2015)
NY	Long Island American Water	Water	System Improvement Charge	Iron removal, storage tank rehabilitiation, suction well rehabilitation at selected plants, customer information system	Case 11-W-0200 (March 2012)
NY	United Water New Rochelle	Water	Long Term Main Renewal Project	Cleaning and relining of mains	Case 99-W-0948 (August 2000)
NY	United Water New York	Water	Underground Infrastructure Renewal Program	Replacement of infrastructure including mains, valves, services, meters, and hydrants	Case 06-W-0131 (December 2006)
NY	United Water New York	Water	New Water Supply Source Surcharge	Projects to provide new sources of water in the short and long term	Case 06-W-0131 (December 2006)
OH	Aqua Ohio	Water	System Infrastructure Improvement Surcharge	Replacement of service lines, mains, hydrants, valves, main extensions to resolve documented water supply problems	Case 04-1824-WW-SIC (March 2005)
OH	Cleveland Electric Illuminating	Electric	Rider AMI	Ohio Site Deployment	Cases 09-1820-EL-ATA and 12-1230-EL-SSO
OH	Cleveland Electric Illuminating	Electric	Delivery Capital Recovery Rider	Distribution, subtransmission, general, and intangible plant not included in most recent rate case	Case 10-388-EL-SSO (August 2010)
OH	Columbia Gas	Gas	Infrastructure Replacement Program Rider	Replacement of cast iron and bare steel mains & services, AMI	Cases 08-0072-GA-AIR, 08-0073-GA-ALT, 08-0074-GA-AAM, and 08-0075-GA-AAM (December 2008); Case 09-1036-GA-RDR (April 2010)
OH	Duke Energy Ohio	Gas	Accelerated Main Replacement Program Rider	Replacement of bare steel and cast iron mains and services and faulty risers	1478-GA-ALT, and 01-1539-GA-AAM (May 2002); 07-0589-GA-AIR 07-0590-GA-ALT 07-0591-GA-AAM (May 2008)
OH	Duke Energy Ohio	Gas	Advanced Utility Rider	Gas AMI	Cases 07-0589-GA-AIR, 07-0590-GA-ALT, and 07-0591-GA-AAM (May 2008)
OH	Duke Energy Ohio	Electric	Infrastructure Modernization Distribution Rider	Electric AMI	Cases 08-920-EL-SSO and 08-921-EL-AAM and 08-922-EL-UNC and 08-923-EL-ATA (December 2008)
OH	Duke Energy Ohio	Electric	Distribution Capital Investment Rider	Distribution capital investments not recovered through other trackers	Case 14-841-EL-SSO (April 2015)
OH	East Ohio Gas d/b/a Dominion East Ohio	Gas	Pipeline Infrastructure Replacement Rider	Bare steel and cast iron pipelines & faulty riser replacements	Case 08-169-GA-ALT (October 2008)
OH	East Ohio Gas d/b/a Dominion East Ohio	Gas	Automated Meter Reading Charge	AMR	Cases 07-0829-GA-AIR and 06-1453-GA-UNC (October 2008); Case 09-38-GA-UNC (May 2009); Case 09-1875-GA-RDR (May 2010)
OH	Ohio American Water	Water	System Improvement Charge	Non-revenue producing service lines, hydrants, mains, valves, main extensions that improve supply problems, main cleaning	Case 05-577-WW-SIC (August 2005)
OH	Ohio Edison	Electric	Rider AMI	Ohio Site Deployment	Cases 09-1820-EL-ATA and 12-1230-EL-SSO
OH	Ohio Edison	Electric	Delivery Capital Recovery Rider	Distribution, subtransmission, general, and intangible plant not included in most recent rate case (filed in 2007)	Case 10-388-EL-SSO (August 2010)
OH	Ohio Power	Electric	Distribution Investment Rider	Net distribution capital additions since the date certain of most recent rate case not recovered through other riders	Case 11-346-EL-SSO
OH	Ohio Power	Electric	GridSMART Rider (Phase I)	Smart grid	Case 08-917-EL-SSO and 08-918-EL-SSO (March 2009)
OH	Toledo Edison	Electric	Rider AMI	Ohio Site Deployment	Cases 09-1820-EL-ATA and 12-1230-EL-SSO
OH	Toledo Edison	Electric	Delivery Capital Recovery Rider	Power distribution, subtransmission, general, and intangible plant not included in most recent rate case (filed in 2007)	Case 10-388-EL-SSO (August 2010)
OH	Vectren Energy Delivery	Gas	Distribution Replacement Rider	Replacement of cast iron and bare steel mains and services	Cases 07-1081-GA-ALT, 07-1080-GA-AIR and 08-0632-GA-AAM (January 2009)
OK	Oklahoma Gas & Electric	Electric	System Hardening Recovery Rider	Undergrounding and other circuit hardening	Cause PUD 20080387, Order 567670 (May 2009)
OK	Oklahoma Gas & Electric	Electric	Smart Grid Rider	Smart grid	Cause PUD 201000029 (July 2010)
OK	Oklahoma Gas & Electric	Electric	Crossroads Rider	Crossroads Wind Farm	Cause PUD 201000037 (July 2010)
OK	Public Service Company of Oklahoma	Electric	System Reliability Rider	Grid resiliency projects	Cause PUD 201300202 (January 2014)
OK	Public Service Company of Oklahoma	Electric	Advanced Metering Infrastructure Tariff	Advanced metering infrastructure deployment	Cause PUD 201300217 (April 2015)
OR	Northwest Natural Gas	Gas	System Integrity Program	Bare steel replacement, transmission integrity management program, distribution integrity management program	Docket UM 1406, Order 09-067 (March 2009)
OR	PacifiCorp	Electric	Renewable Adjustment Clause	Renewable generation	Docket UM 1330 (December 2007)
OR	PacifiCorp	Electric	Lake Side 2 Tariff Rider	Generation	Docket UE 263, Order 13-474 (December 2013)
OR	PacifiCorp	Electric	M2O Transmission Rider	Mona to Oquirrh transmission line only if line is placed into service within 6 months of May 31, 2013	Docket UE 246, Orders 12-493 and 13-195 (December 2012 and May 2013)
OR	Portland General Electric	Electric	Renewable Adjustment Clause	Renewable generation	Docket UM 1330 (December 2007)
PA	Columbia Gas	Gas	Distribution System Improvement Charge	Replacement of cast iron, bare steel, and first generation plastic mains and services, install excess flow valves, install or relocate automated meters, and replace risers, meter bars, and service regulators	P-2012-2338282 (March 2013)
PA	Columbia Water Company	Water	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-00021979
PA	Duquesne Light	Electric	Smart Meter Charge Rider	AMI	Docket M-2009-2123948 (April 2010)
PA	Equitable Gas	Gas	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-2013-2342745 (July 2013)
PA	Metropolitan Edison	Electric	Smart Meters Technologies Charge	AMI	Docket M-2009-2123950 (April 2010)

Table 2 continued

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
PA	PECO	Electric	Smart Meter Cost Recovery Rider	AMI	Docket M-2009-2123944 (April 2010)
PA	PECO	Electric	Distribution System Improvement Charge	Storm hardening and resiliency measures, underground cable replacement, substation retirements, and facility relocations	Docket P-2015-2471423 (October 2015)
PA	PECO	Gas	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-2013-2347340 (September 2015)
PA	Pennsylvania Electric	Electric	Smart Meters Technologies Charge	AMI	Docket M-2009-2123950 (April 2010)
PA	Pennsylvania Power	Electric	Smart Meters Technologies Charge	AMI	Docket M-2009-2123950 (April 2010)
PA	Pennsylvania-American Water	Water	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-000961031 (August 1996)
PA	Peoples Natural Gas	Gas	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-2013-2344596 (May 2013)
PA	Peoples TWP	Gas	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-2013-2344595 (May 2013)
PA	Philadelphia Gas Works	Gas	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-2012-2337737 (April 2013)
PA	Philadelphia Surburban Water	Water	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-00961035 (August 1996)
PA	PPL Electric Utilities	Electric	Act 129 Compliance Rider	AMI	Docket M-2009-2123945 (January 2010)
PA	PPL Electric Utilities	Electric	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., poles, wires)	Docket P-2012-2325034 (May 2013)
PA	UGI Central Penn Gas	Gas	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-2013-2398835 (September 2014)
PA	UGI Penn Natural Gas	Gas	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-2013-2397056 (September 2014)
PA	West Penn Power	Electric	Smart Meter Surcharge	AMI	Docket M-2009-2123951 (June 2011)
RI	Narragansett Electric (electric operations)	Electric	Electric Infrastructure, Safety, and Reliability Plan Factor	Replacements and load growth	Docket 4218 (December 2011)
RI	Narragansett Electric (gas operations)	Gas	Gas Infrastructure, Safety, and Reliability Plan Factor	Previous accelerated capital replacement program investments plus main and service replacements and reliability investments	Docket 4219 (September 2011)
SC	South Carolina Electric & Gas	Electric	NA	Nuclear generation	Docket 2008-196-E (March 2009)
SD	Black Hills Power	Electric	Environmental Improvement Adjustment tariff	Miscellaneous environmental projects	Docket EL11-001
SD	Black Hills Power	Electric	Phase in plan rate	Gas-fired generation	Docket EL12-062 (September 2013)
SD	Northern States Power- MN	Electric	Environmental Cost Recovery Tariff	Miscellaneous environmental projects	Docket EL07-026 (January 2009)
SD	Northern States Power- MN	Electric	Transmission Cost Recovery Tariff	Transmission	Docket EL07-007 (January 2009)
SD	Northern States Power- MN	Electric	Infrastructure Rider	Generation	Docket EL 12-046 (April 2013)
SD	Otter Tail Power	Electric	Transmission Cost Recovery Tariff	Retail sales portion of specific transmission projects	Docket EL 10-015 (November 2011)
SD	Otter Tail Power	Electric	Environmental Quality Cost Recovery Tariff	Miscellaneous environmental projects	Docket EL 14-082 (December 2014)
TN	Piedmont Natural Gas	Gas	Integrity Management Rider	Distribution and transmission integrity management planning as required by the US Department of Transportation	Docket 13-00118 (May 2014)
TX	AEP Texas Central	Electric	Advanced Metering System Surcharge	AMI	Docket 36928
TX	AEP Texas North	Electric	Advanced Metering System Surcharge	AMI	Docket 36928
TX	Atmos Energy Mid Tex	Gas	Gas Reliability Infrastructure Program	Incremental investment in new and replacement pipe, pipeline integrity including mains replacement	Texas Utilities Code 104.301 and Gas Utilities Docket 9615
TX	Atmos Energy Pipelines	Gas	Gas Reliability Infrastructure Program	Incremental investment in new and replacement pipe, pipeline integrity including mains replacement	Gas Utilities Dockets 9615 and 10640
TX	Atmos Energy West Texas Division	Gas	Gas Reliability Infrastructure Program	Incremental investment in new and replacement pipe, pipeline integrity including mains replacement	Texas Utilities Code 104.301 and Gas Utilities Docket 9608
TX	Centerpoint Energy Entex - Houston Division	Gas	Gas Reliability Infrastructure Program	Incremental investment in new and replacement pipe, pipeline integrity including mains replacement	Texas Utilities Code 104.301 and Gas Utilities Docket 10067
TX	Centerpoint Energy Houston Electric	Electric	Advanced Metering System Surcharge	AMI	Docket 35620 (August 2008)
TX	Centerpoint Energy Houston Electric	Electric	Distribution Cost Recovery Factor	Change in net distribution rate base since last rate case	Docket 44572 (August 2015)
TX	Oncor Electric Delivery	Electric	Advanced Metering System Surcharge	AMI	Docket 35718 (August 2008)
TX	Texas-New Mexico Power	Electric	Advanced Metering System Surcharge	AMI	Docket 38306 (July 2011)
UT	Questar Gas	Gas	Infrastructure Rate Adjustment Tracker	Replacement of aging high-pressure feeder lines	Docket 09-057-16 (June 2010)
VA	Appalachian Power	Electric	Environmental & Reliability Cost Recovery Surcharge	Miscellaneous environmental & reliability projects	Docket PUE-2007-00069 (December 2007)
VA	Appalachian Power	Electric	Environmental Rate Adjustment Clause	Miscellaneous environmental projects	Case PUE-2011-00035 (November 2011)
VA	Appalachian Power	Electric	Generation Rate Adjustment Clause	Dresden plant	Docket PUE-2011-00036 (January 2012)
VA	Atmos Energy	Gas	Infrastructure Reliability and Replacement Adjustment	Replacement of first generation plastic pipe and service lines and bare steel mains and services	Case PUE-2012-00049 (August 2012)
VA	Columbia Gas of Virginia	Gas	SAVE Rider	Replacement of bare steel and cast iron mains, some early plastic pipe, isolated bare steel services, and risers prone to failure	Case PUE-2011-00049 (November 2011)
VA	Roanoke Gas Company	Gas	SAVE Rider	Replacement of cast iron mains, bare steel mains and services and pre-1973 plastic pipe	Case PUE-2012-00030 (August 2012)
VA	Virginia Electric Power	Electric	Rider S	Virginia City Hybrid Energy Center	Case PUE-2007-00066 (March 2008)
VA	Virginia Electric Power	Electric	Rider R	Bear Garden Generating Station	Case PUE-2009-00017 (March 2010)
VA	Virginia Electric Power	Electric	Rider W	Warren County Power Station	Case PUE-2011-00042 (February 2012)
VA	Virginia Electric Power	Electric	Rider B	Biomass conversions	Case PUE-2011-00073 (March 2012)
VA	Virginia Electric Power	Electric	Rider BW	Brunswick County Power Station (natural gas combined cycle generating station)	Case PUE-2012-00128 (August 2013)

Table 2 continued

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
VA	Virginia Natural Gas	Gas	SAVE Rider	Replacement of first generation plastic mains, cast and wrought iron mains, bare and ineffectively coated steel mains, and service lines installed prior to 1971	Case PUE-2012-00012 (June 2012)
VA	Washington Gas Light	Gas	SAVE Rider	Replacement of bare and unprotected steel services and mains, mechanically coupled pipe, copper services, cast iron main, and pre-1975 plastic services	Cases PUE-2010-00087 and PUE-2012-00096 (April 2011 and November 2012)
WA	Cascade Natural Gas	Gas	Pipeline Replacement Program Cost Recovery Mechanism	Replacement of bare steel and poorly coated pipelines and distribution systems	Docket PG-131838 (October 2013)
WV	Appalachian Power	Electric	Construction/765kW Surcharge	Generation, environmental	Case 11-0274-E-GI (June 2011)
WV	Monongahela Power	Electric	Vegetation Management Surcharge	Capitalized distribution vegetation management expenses	Case 14-0702-E-42T (February 2015)
WV	Potomac Edison	Electric	Vegetation Management Surcharge	Capitalized distribution vegetation management expenses	Case 14-0702-E-42T (February 2015)
WV	Wheeling Power	Electric	Construction/765kW Surcharge	Generation, environmental	Case 11-0274-E-GI (June 2011)
WY	Black Hills Power	Electric	Cheyenne Prairie Generating Station rate rider tariff	Construction of Cheyenne Prairie Generating Station	Docket 20002-84-ET-12 (November 2012)
WY	Cheyenne Light, Fuel, & Power	Electric	Cheyenne Prairie Generating Station rate rider tariff	Construction of Cheyenne Prairie Generating Station	Docket 20003-123-ET-12 (November 2012)

III. Relaxing the Link Between Revenue and System Use

Policymakers are increasingly interested in relaxing the link between the revenues utilities realize, and the kWh and kW of system use by customers. This reduces the financial attrition that results from slowing growth in system use (given legacy rate designs) more efficiently than frequent rate cases. In addition, utilities have more incentive to embrace DSM. Three approaches to relaxing the revenue/usage link are well established: lost revenue adjustment mechanisms ("LRAMs"), revenue decoupling, and fixed/variable pricing.

A. Lost Revenue Adjustment Mechanisms

LRAMs keep utilities whole for short-term losses in base rate revenues that are due to their DSM programs (and potentially also DG). Recovery usually is effected through a special rate rider. Estimates of load losses are needed.

LRAMs encourage utilities to embrace DSM that is eligible for LRAM treatment. They do not provide recovery for the revenue impact of external forces, like DSM programs managed by independent agencies, which slow load growth. Estimates of load savings from utility DSM can be complex and are sometimes controversial. The scope of DSM initiatives addressed by LRAMs is therefore frequently limited to those for which load impacts are easier to measure. When usage charges are high, the utility remains at risk for revenue fluctuations in volumes and peak load due to weather, local economic activity, and other volatile demand drivers.

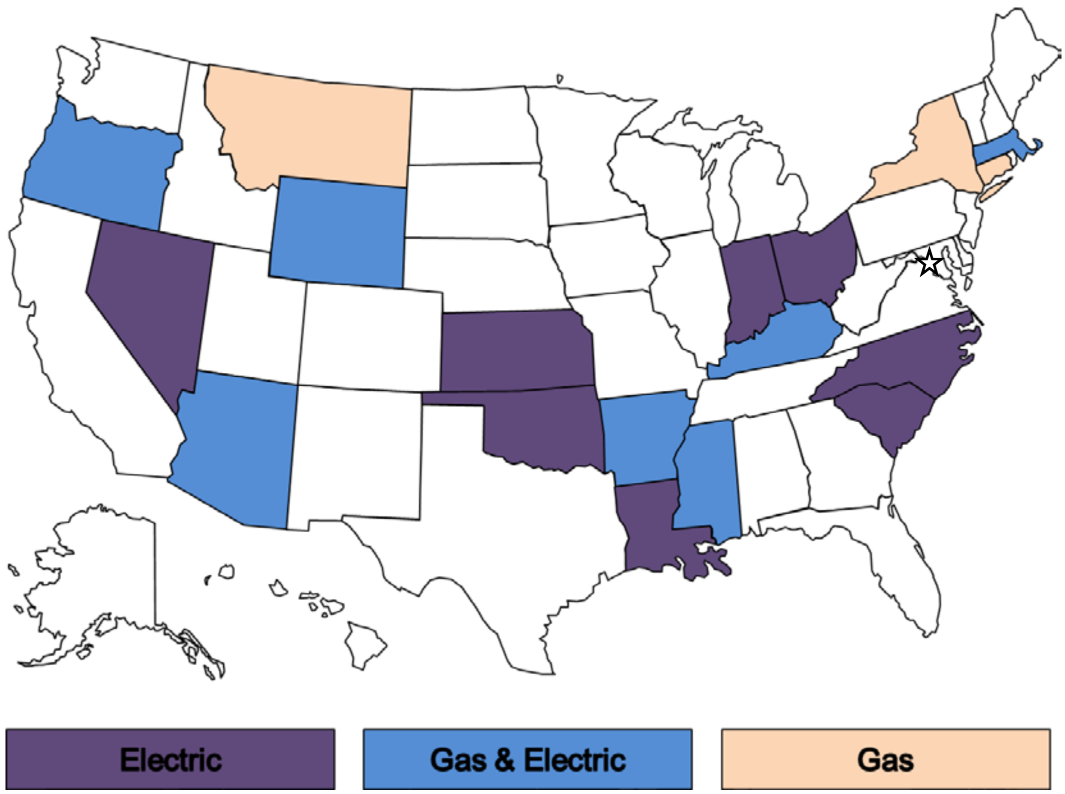
Precedents for LRAMs are detailed in Table 3 and Figure 4 below.[3] LRAMs are currently the most popular means of relaxing the link between revenue and system use in the US electric utility industry. Since our 2013 survey, LRAMs have been adopted for electric utilities in Arizona, Louisiana, and Mississippi. A few utilities have LRAMs that address DG. LRAMs are less popular for gas distributors since the declining average use they have typically experienced for many years is due chiefly to external forces that LRAMs don't address. Some utilities have LRAMs for some services and revenue decoupling for others. In New York, for example, some natural gas distributors have decoupling for residential and commercial customers and LRAMs for some large load customers.

B. Revenue Decoupling

Revenue decoupling adjusts a utility's rates periodically to help its actual revenue track its allowed revenue more closely. Most decoupling systems have two basic components: a revenue decoupling mechanism ("RDM") and a revenue adjustment mechanism ("RAM"). The RDM tracks variances between actual and allowed revenue and adjusts rates to reduce them. The RAM escalates allowed revenue to provide relief for growing cost pressures.

[3] Some mechanisms similar to LRAMs are excluded from this survey.

Figure 4: Current LRAMs by State



RDMs can make true ups annually or more frequently. More frequent adjustments cause actual revenue to track allowed revenue more closely so that rate adjustments are smaller. The size of the rate adjustment that is permitted in a given year is sometimes capped. A "soft" cap permits utilities to defer for later recovery account balances that cannot be drawn down immediately. A "hard" cap does not.

RDMs vary in the scope of services to which they apply. Quite commonly, only revenues from residential and commercial business customers are decoupled. These customers account for a high share of a distributor's base rate revenue and are often the primary focus of DSM programs. RDMs also vary in terms of the services for which revenues are pooled for true up purposes. In some plans all services are placed in the same "basket." Other plans have multiple baskets, and these insulate customers of services in each basket from changes in revenue for services in other baskets.

Some RDMs are "partial" in the sense that they exclude from decoupling the revenue impact of certain kinds of demand fluctuations. For example, true ups are sometimes allowed only for the difference between allowed revenue and weather normalized actuals. An RDM that instead accounts for *all* sources of demand variance is called a "full" decoupling mechanism.

Table 3

Current LRAM Precedents[1]

State	Company	Services	Approval Date	Case Reference
AR	Arkansas Oklahoma Gas	Gas	June 2011	Docket 07-077-TF, Order Number 30
AR	Centerpoint Energy Arkla	Gas	June 2011	Docket 07-081-TF, Order Number 31
AR	Entergy Arkansas	Electric	June 2011	Docket 07-085-TF, Order Number 40
AR	Oklahoma Gas & Electric	Electric	June 2011	Docket 07-075-TF, Order 26
AR	SourceGas Arkansas	Gas	June 2011	Docket 07-078-TF, Order 26
AR	Southwestern Electric Power	Electric	June 2011	Docket 07-082-TF, Orders 35 and 36
AZ	Arizona Public Service	Electric	May 2012	Docket E-01345A-11-0224, Decision 73l83
AZ	Tucson Electric Power	Electric	June 2013	Docket E-01933A-12-0291; Decision 73912
AZ	UNS Electric	Electric	September 2013	Docket E-04204A-12-0504; Decision 74235
AZ	UNS Gas	Gas	May 2012	Docket G-04204A-11-0158 Decision 73142
CT	Southern Connecticut Gas	Gas	August 1995	Docket 93-03-09
CT	Yankee Gas Service	Gas	January 2012	Docket 11-10-03
IN	Duke Energy Indiana (PSI)	Electric	February 2010	Cause 43374
IN	Indiana-Michigan Power	Electric	September 2010	Cause 43827
IN	Northern Indiana Public Service	Electric	May 2011	Cause 43618
IN	Southern Indiana Gas & Electric	Electric	August 2011 (large commercial and industrials), June 2012 (residential and small commercial)	Causes 43938 and 43405 DSMA 9 S1
KS	Kansas Gas & Electric	Electric	January 2011	Docket 10-WSEE-775-TAR
KS	Westar Energy	Electric	January 2011	Docket 10-WSEE-775-TAR
KY	Atmos Energy	Gas	September 2009	Case 2008-00499
KY	Columbia Gas of Kentucky	Gas	October 2009	Case 2009-00141
KY	Delta Natural Gas	Gas	July 2008	Docket 2008-00062
KY	Duke Energy Kentucky	Electric	December 1995 and February 2005	Cases 95-321 and 2004-00389
KY	Duke Energy Kentucky	Gas	February 2005	Case 2004-00389
KY	Kentucky Power	Electric	December 1995	Case 95-427
KY	Kentucky Utilities	Electric	May 2001	Case 2000-0459
KY	Louisville Gas & Electric	Electric & Gas	November 1993	Case 93-150
LA	Cleco Power	Electric	October 2014	Docket R-31106
LA	Entergy Gulf States Louisiana	Electric	October 2014	Docket R-31106
LA	Entergy Louisiana	Electric	October 2014	Docket R-31106
LA	Southwestern Electric Power	Electric	October 2014	Docket R-31106
MA	All Electric distributors	Electric	July 2012	D.P.U. 12-01A
MA	Berkshire Gas	Gas	October 1992	D.P.U. 91-154
MA	Commonwealth Gas d/b/a NSTAR Gas	Gas	November 1994	D.P.U. 94-128

Table 3 (cont'd)

State	Company	Services	Approval Date	Case Reference
MA	NSTAR Electric	Electric	April 1992, June 1994, and June 2010	D.P.U. 90-335, D.P.U. 94-2/3-CC, and D.P.U. 10-06
MS	Atmos Energy	Gas	August 2014	Docket 2014-UA-017
MS	Centerpoint Energy	Gas	August 2014	Docket 2014-UA-007
MS	Entergy Mississippi	Electric	September 2014	Docket 2009-UN-064
MS	Mississippi Power	Electric	March 2015	Docket 2014-UN-10
MT	Montana-Dakota Utilities	Gas	October 2006	Docket D2005.10.156; Order 6697c
NC	Duke Energy Carolinas	Electric	February 2010	Docket E-7, Sub 831
NC	Progress Energy Carolinas (Carolina Power & Light)	Electric	November 2009	Docket E-2, Sub 931
NC	Virginia Electric Power	Electric	October 2011	Docket E-22, Sub 464
NV	Nevada Energy	Electric	May 2011	Docket 10-10024
NV	Sierra Pacific Power	Electric	May 2011	Docket 10-10025
NY	Keyspan Long Island	Gas	December 2009	Case 06-G-1186; Currently effective for all customers not in RDM
NY	Keyspan New York	Gas	December 2009	Case 06-G-1185; Currently effective for all customers not in RDM
OH	American Electric Power (Ohio Power, Columbus Southern Power)	Electric	May 2010	Docket 09-1089-EL-POR; Effective for classes not included in RDM
OH	Dayton Power & Light	Electric	June 2009	Docket 08-1094-EL-SSO
OH	Duke Energy Ohio (Cincinnati Gas & Electric)	Electric	July 2007 and August 2012	Dockets 06-0091-EL-UNC and 11-4393-EL-RDR; Effective for classes not included in RDM
OH	First Energy Ohio (Cleveland Electric Illuminating, Toledo Edison, Ohio Edison)	Electric	March 2009	Docket 08-935-EL-SSO
OK	Empire District Electric	Electric	November 2009	Cause 200900146 Order 571326
OK	Oklahoma Gas & Electric	Electric	July 2008	Cause 200800059 Order 556179
OK	Public Service of Oklahoma	Electric	January 2010	Cause PUD 200900196; Order 572836
OR	Cascade Natural Gas	Gas	April 2006	Order 06-191; UG 167 Effective for classes not included in RDM
OR	Portland General Electric	Electric	September 2001	Order 01-836; UE 79 Effective for classes not included in RDM
OR	Avista Utilities	Gas	December 1993	Order 93-1881
SC	Duke Energy Carolinas	Electric	January 2010	Docket 2009-226-E Order 2010-79
SC	Progress Energy Carolinas	Electric	June 2009	Docket 2008-251-E Order 2009-373
SC	South Carolina Electric & Gas	Electric	July 2010	Docket 2009-261-E, Order 2010-472
WY	Cheyenne Light, Fuel, and Power	Electric & Gas	September 2011	Dockets 20003-108-EA-10 and 30005-140-GA-10
WY	Montana-Dakota Utilities	Electric	January 2007	Docket 20004-65-ET-06

[1] LRAMs listed here include only those mechanisms that compensate utilities for actual revenues lost due to DSM and DG.

The great majority of decoupling systems have a RAM since, if allowed revenue is static, the utility will experience financial attrition as its costs inevitably rise. Utilities that do not have RAMs in their decoupling systems often file frequent rate cases or are allowed to use capital cost trackers to address attrition. The more important issue in a proceeding to consider decoupling is therefore the design of the RAM rather than the need for one.

Most RAMs escalate allowed revenue only for customer growth. Escalation for customer growth is sensible because it is an important driver of cost and also highly correlated with other drivers such as peak demand. The need for rate cases is thereby reduced but is rarely eliminated since cost has other drivers such as input price inflation. When RAMs are escalated only for customer growth, utilities usually retain the freedom to file rate cases to address other cost factors and often do. Some RAMs are “broad-based” in the sense that they provide enough revenue growth to compensate the utility for several kinds of cost pressures. This can materially reduce the need for rate cases and provide a foundation for a multiyear rate plan.

Revenue decoupling compensates utilities for declining average use even if it is driven in part by external forces such as independently administered DSM programs. The lost revenue disincentive is removed for a wide array of utility initiatives to encourage DSM without requiring load impact calculations or rate designs that discourage DSM. To the extent that recovery of allowed revenue is ensured, utilities can use rate designs with usage charges more aggressively to foster DSM. This makes environmental intervenors strong supporters of decoupling. Controversy over billing determinants in rate cases with future test years is reduced.

Revenue decoupling is a popular means of relaxing the link between a utility’s revenue and customers’ kWh consumption. States that have tried gas and electric revenue decoupling are indicated on the maps below in Figures 5a and 5b, respectively. Revenue decoupling precedents in the United States and Canada are detailed in Table 4. In the electric utility industry, decoupling has been favored in states that strongly support DSM. Since our 2013 survey, decoupling has been adopted for electric utilities in Connecticut, Maine, Minnesota, and Washington state. Decoupling is the most widespread means of relaxing the revenue/usage link for gas distributors. This reflects the fact that gas distributors often experience declining average use and that this has been driven chiefly by external forces. Table 4 indicates the kinds of RAMs chosen in approved decoupling systems. Note that RAMs for electric utilities are frequently broad-based.

C. Fixed/Variable Pricing

Fixed/variable pricing is an approach to rate design that uses fixed charges (charges that do not vary with the actual sales volume or peak demand) to compensate utilities for fixed costs of service. For residential and small commercial services, customer charges (a flat monthly fee per customer) are the most common fixed charge used. Base revenue thus tends to grow at the gradual pace of customer growth. A *straight* fixed/variable (“SFV”) rate design recovers *all* base revenue through fixed charges. A rate design that recovers a substantial but smaller share of fixed costs through fixed charges is sometimes called *modified* fixed/variable pricing.

Figure 5a: Electric Revenue Decoupling by State

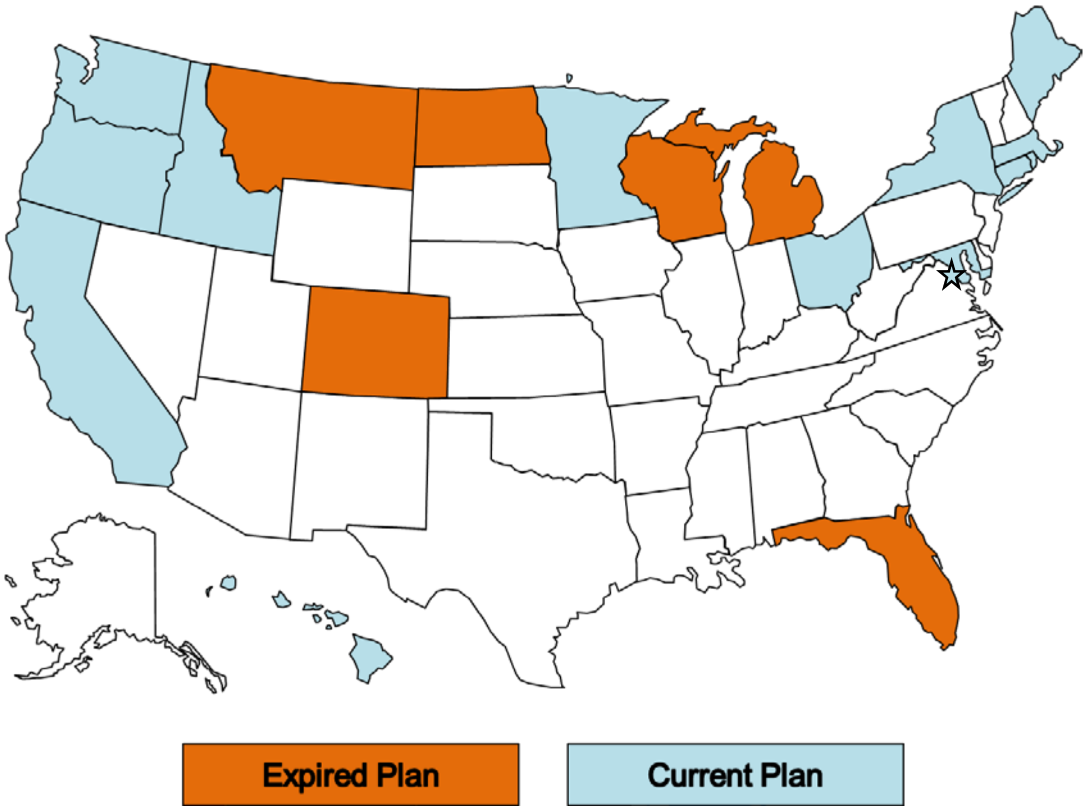


Figure 5b: Gas Revenue Decoupling by State

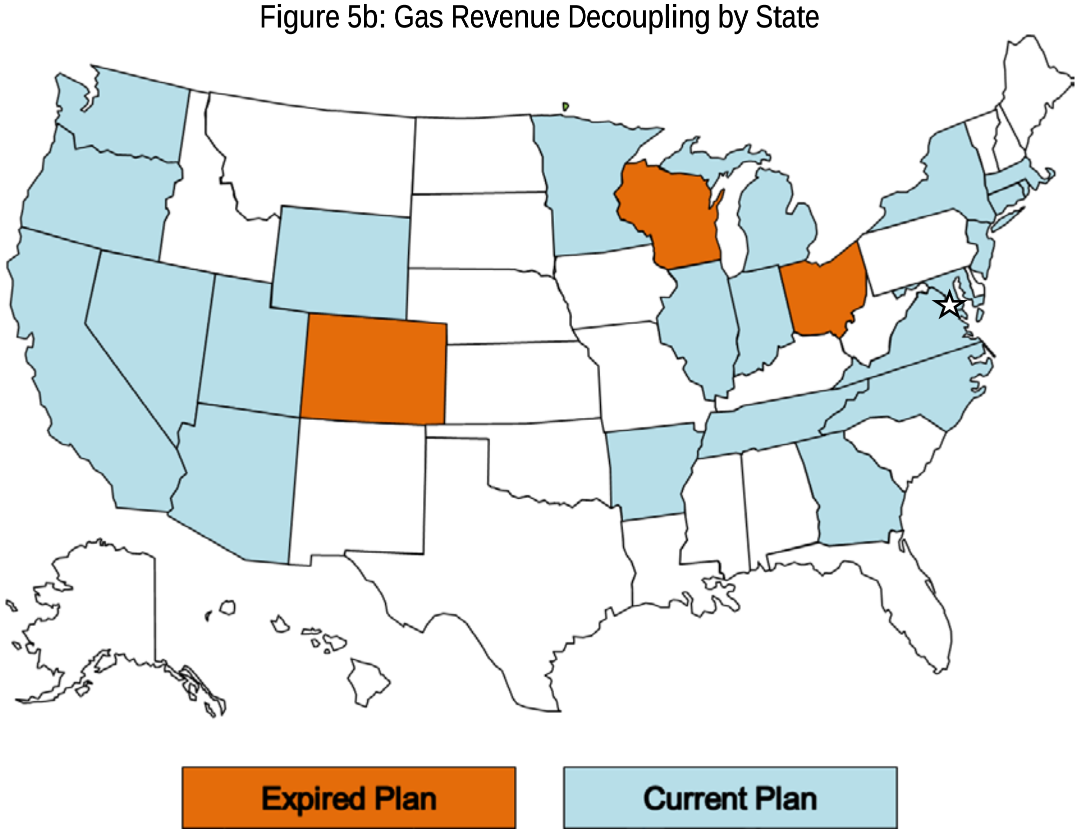


Table 4

Revenue Decoupling Precedents

Jurisdiction	Company Name	Services	Plan Years	Revenue Adjustment Mechanism	Case Reference
Current					
United States					
AR	Arkansas Oklahoma Gas	Gas	2014-open	No RAM but multiple capital cost trackers	Docket 13-078-U
AR	CenterPoint Energy	Gas	2008-2016	No RAM but multiple capital cost trackers	Dockets 06-161-U, 11-088-U, 12-057-TF, and 13-114-TF
AR	SourceGas Arkansas (Arkansas Western)	Gas	2014-open	No RAM but multiple capital cost trackers	Docket 13-079-U
AZ	Southwest Gas	Gas	2012-open	Customers	Docket G-01551A-10-0458
CA	Bear Valley Electric Service	Electric	2013-2016	Stairstep	Decision 14-11-002
CA	California Pacific Electric	Electric	2013-2015	Indexing	Decision 12-11-030
CA	Pacific Gas & Electric	Gas & Electric	2014-2016	Stairstep	Decision 14-08-032
CA	San Diego Gas & Electric	Gas & Electric	2012-2015	Stairstep	Decision 13-05-010
CA	Southern California Edison	Electric	2012-2014	Hybrid	Decision 12-11-051
CA	Southern California Gas	Gas	2012-2015	Stairstep	Decision 13-05-010
CA	Southwest Gas	Gas	2014-2018	Stairstep	Decision 14-06-028
CT	Connecticut Light & Power	Electric	2014-open	No RAM	Docket 14-05-06
CT	Connecticut Natural Gas	Gas	2014-open	No RAM	Docket 13-06-08
CT	United Illuminating	Electric	2013-open	Stairstep until July 2015, No RAM thereafter	Docket 13-01-19
DC	Potomac Electric Power	Electric	2010-open	Customers	Order 15556
GA	Atmos Energy	Gas	2012-open	No RAM but FRP type mechanism also in effect	Docket 34734
HI	Hawaiian Electric Company	Electric	2011-open	Hybrid	Dockets 2008-0274, 2008-0083, 2013-0141
HI	Hawaiian Electric Light Company	Electric	2012-open	Hybrid	Dockets 2008-0274, 2009-0164, 2013-0141
HI	Maui Electric	Electric	2012-open	Hybrid	Dockets 2008-0274, 2009-0163, 2013-0141
ID	Idaho Power	Electric	2012-open	Customers	Cases IPC-E-11-19, IPC-E-14-17
IL	North Shore Gas	Gas	2012-open	No RAM	Case 11-0280
IL	Peoples Gas Light & Coke	Gas	2012-open	No RAM but broad-based capital cost tracker	Case 11-0281
IN	Citizens Gas	Gas	2007-open	Customers	Cause 42767
IN	Indiana Gas	Gas	2011-2015	Customers	Cause 44019
IN	Indiana Gas	Gas	2016-2019	Customers	Cause 44598
IN	Indiana Natural Gas	Gas	2014-open	Customers	Cause 44453
IN	Vectren Southern Indiana	Gas	2011-2015	Customers	Cause 44019
IN	Vectren Southern Indiana	Gas	2016-2019	Customers	Cause 44598
MA	Bay State Gas	Gas	2015-2018	Revenue per Customer Stairstep	DPU 15-50
MA	Boston-Essex Gas	Gas	2010-open	Customers	DPU 10-55
MA	Colonial Gas	Gas	2010-open	Customers	DPU 10-55
MA	Fitchburg Gas & Electric	Gas	2011-open	Customers	DPU 11-02
MA	Fitchburg Gas & Electric	Electric	2011-open	No RAM	DPU 11-01
MA	Massachusetts Electric	Electric	2010-open	No RAM but broad-based capital cost tracker	DPU 09-39
MA	New England Gas	Gas	2011-open	Customers	DPU 10-114
MA	Western Massachusetts Electric	Electric	2011-open	No RAM	DPU 10-70
MD	Baltimore Gas & Electric	Electric	2008-open	Customers	Letter Orders ML 108069, 108061
MD	Baltimore Gas & Electric	Gas	1998-open	Customers	Case 8780
MD	Chesapeake Utilities	Gas	2006-open	Customers	Order 81054
MD	Columbia Gas of Maryland	Gas	2013-open	Customers	Order 85858
MD	Delmarva Power & Light	Electric	2007-open	Customers	Order 81518
MD	Potomac Electric Power	Electric	2007-open	Customers	Order 81517
MD	Washington Gas Light	Gas	2005-open	Customers	Order 80130
ME	Central Maine Power	Electric	2014-open	Customers	Docket 2013-00168

Table 4 (cont'd)

Jurisdiction	Company Name	Services	Plan Years	Revenue Adjustment Mechanism	Case Reference
Current (cont'd)					
United States (cont'd)					
MI	Consumers Energy	Gas	2015-open	No RAM	Case U-17643
MI	Michigan Consolidated Gas	Gas	2013-open	No RAM	Case U-16999
MI	Michigan Gas Utilities	Gas	2015-open	No RAM	Case U-17273
MN	CenterPoint Energy	Gas	2015-2018	Customers	GR-13-316
MN	Minnesota Energy Resources	Gas	2013-2016	Customers	GR-10-977
MN	Northern States Power - MN	Electric	2016-2018	Customers	GR-13-868
NC	Piedmont Natural Gas	Gas	2008-open	Customers	Docket G-9, Sub 550
NC	Public Service Co of NC	Gas	2008-open	Customers	Docket G-5, Sub 495
NJ	New Jersey Natural Gas	Gas	2014-open	Customers	Docket GR13030185
NJ	South Jersey Gas	Gas	2014-open	Customers	Docket GR13030185
NV	Southwest Gas	Gas	2009-open	Customers	D-09-04003
NY	Central Hudson G&E	Gas & Electric	2015-2018	Revenue per Customer Stairstep for Gas, Stairstep for Electric	Cases 14-E-0318, 14-G-0319
NY	Consolidated Edison	Gas	2014-2016	Revenue per Customer Stairstep	Case 13-G-0031
NY	Consolidated Edison	Electric	2014-2016	Stairstep	Case 13-E-0030
NY	Corning Natural Gas	Gas	2015-2017	Customers	Case 11-G-0280
NY	Keyspan Energy Delivery - Long Island	Gas	2010-open	Revenue per Customer Stairstep through 2012, Customers After 2012	Case 06-G-1186
NY	Keyspan Energy Delivery New York	Gas	2013-2014	Revenue per Customer Stairstep through 2014, Customers After 2014	Case 12-G-0544
NY	National Fuel Gas	Gas	2013-2015	Customers	Case 13-G-0136
NY	New York State Electric & Gas	Gas	2010-2013	Revenue per Customer Stairstep through 2013, Customers thereafter	Case 09-E-0715
NY	New York State Electric & Gas	Electric	2010-2013	Stairstep through 2013, No RAM thereafter	Case 09-G-0716
NY	Niagara Mohawk	Gas	2013-2016	Optional Revenue per Customer Stairstep	Case 12-G-0202
NY	Niagara Mohawk	Electric	2013-2016	Optional Stairstep	Case 12-E-0201
NY	Orange & Rockland Utilities	Gas	2015-2018	Revenue per Customer Stairstep	Case 14-G-0494
NY	Orange & Rockland Utilities	Electric	2015-2017	Stairstep	Case 14-E-0493
NY	Rochester Gas & Electric	Gas	2010-2013	Revenue per Customer Stairstep through 2013, Customers thereafter	Case 09-E-0717
NY	Rochester Gas & Electric	Electric	2010-2013	Stairstep through 2013, No RAM thereafter	Case 09-G-0718
NY	St. Lawrence Gas	Gas	2010-open	Revenue per Customer Stairstep through 2012, Customers thereafter	Case 08-G-1392
OH	AEP Ohio	Electric	2012-2018	Customers	Cases 11-351-EL-AIR, 13-2385-EL-SSO
OH	Duke Energy Ohio	Electric	2015-open	Customers	Case 14-841-EL-SSO
OR	Cascade Natural Gas	Gas	2013-2015	Customers	Order 13-079
OR	Northwest Natural Gas	Gas	2012-open	Customers	Order 12-408
OR	Portland General Electric	Electric	2014-2016	Customers	Order 13-459
RI	Narragansett Electric	Electric	2012-open	No RAM but broad-based capital cost tracker	Docket 4206
RI	Narragansett Electric	Gas	2012-open	Customers	Docket 4206
TN	Chattanooga Gas	Gas	2013-open	Customers	Docket 09-0183
UT	Questar Gas	Gas	2010-open	Customers	Docket 09-057-16
VA	Columbia Gas of Virginia	Gas	2013-2015	Customers	Case PUE-2012-00013
VA	Virginia Natural Gas	Gas	2013-2016	Customers	Case PUE-2012-00118
VA	Washington Gas Light	Gas	2013-2016	Customers	Case PUE-2012-00138
WA	Avista	Gas & Electric	2015-2019	Customers	Dockets UE-140188 and UG-140189
WA	Puget Sound Energy	Gas & Electric	2013-2016	Revenue per Customer Stairstep	Dockets UE-121697 and UG-121705
WY	Questar Gas	Gas	2012-open	Customers	Docket 30010-113-GR-11
WY	SourceGas Distribution	Gas	2011-open	Customers	Docket 30022-148-GR-10

Table 4 (cont'd)

Jurisdiction	Company Name	Services	Plan Years	Revenue Adjustment Mechanism	Case Reference
Current (cont'd)					
Canada					
BC	BC Hydro	Electric	2015-2016	Stairstep	Order G-48-14
BC	FortisBC	Electric	2014-2019	Indexing	Order G-139-14
BC	FortisBC Energy	Gas	2014-2019	Indexing	Order G-138-14
BC	Pacific Northern Gas	Gas	2003-open	Customers	N/A
ON	Enbridge Gas Distribution	Gas	2014-2018	Stairstep	EB-2012-0459
ON	Union Gas	Gas	2014-2018	Indexing	EB-2013-0202
Historic					
United States					
AR	Arkansas Oklahoma Gas	Gas	2007-2013	No RAM	Dockets 07-026-U, 07-077-TF
AR	Arkansas Western	Gas	2008-2013	No RAM	Docket 07-078-TF
CA	Bear Valley Electric Service	Electric	2009-2012	Stairstep	Decision 09-10-028
CA	Pacific Gas & Electric	Gas & Electric	1982-1983	Hybrid	Decision 93887
CA	Pacific Gas & Electric	Electric	1984-1985	Hybrid	Decision 83-12-068
CA	Pacific Gas & Electric	Electric	1986-1989	Hybrid	Decision 85-12-076
CA	Pacific Gas & Electric	Electric	1990-1992	Hybrid	Decision 89-12-057
CA	Pacific Gas & Electric	Gas & Electric	1993-1995	Hybrid	Decision 92-12-057
CA	Pacific Gas & Electric	Gas & Electric	2004-2006	Indexing	Decision 04-05-055
CA	Pacific Gas & Electric	Gas & Electric	2007-2010	Stairstep	Decision 07-03-044
CA	Pacific Gas & Electric	Gas & Electric	2011-2013	Stairstep	Decision 11-05-018
CA	Pacific Gas & Electric	Gas	1978-1981	No RAM	Decisions 89316, 91107
CA	PacifiCorp	Electric	1984-1985	Stairstep	Decision 89-09-034
CA	San Diego Gas & Electric	Gas & Electric	1982-1983	Hybrid	Decision 93892
CA	San Diego Gas & Electric	Gas & Electric	1986-1988	Hybrid	Decision 85-12-108
CA	San Diego Gas & Electric	Electric	1989-1993	Hybrid	Decision 89-11-068
CA	San Diego Gas & Electric	Gas & Electric	1994-1999	Hybrid	Decision 94-08-023
CA	San Diego Gas & Electric	Gas & Electric	2005-2007	Indexing	Decision 05-03-025
CA	San Diego Gas & Electric	Gas & Electric	2008-2011	Stairstep	Decision 08-07-046
CA	Southern California Edison	Electric	1983-1984	Hybrid	Decision 82-12-055
CA	Southern California Edison	Electric	1986-1991	Hybrid	Decision 85-12-076
CA	Southern California Edison	Electric	2001-2003	Indexing	Decision 02-04-055
CA	Southern California Edison	Electric	2004-2006	Hybrid	Decision 04-07-022
CA	Southern California Edison	Electric	2006-2008	Hybrid	Decision 06-05-016
CA	Southern California Edison	Electric	2009-2011	Stairstep	Decision 09-03-025
CA	Southern California Gas	Gas	1979-1980	No RAM	Decision 89710
CA	Southern California Gas	Gas	1981-1982	Stairstep	Decision 92497
CA	Southern California Gas	Gas	1983-1984	Hybrid	Decision dated December 8, 1982
CA	Southern California Gas	Gas	1986-1989	Hybrid	Decision 85-12-076
CA	Southern California Gas	Gas	1990-1993	Hybrid	Decision 90-01-016
CA	Southern California Gas	Gas	1998-2002	Indexing	Decision 97-07-054
CA	Southern California Gas	Gas	2005-2007	Indexing	Decision 05-03-025
CA	Southern California Gas	Gas	2008-2011	Stairstep	Decision 08-07-046
CA	Southwest Gas	Gas	2009-2013	Stairstep	Decision 08-11-048
CO	Public Service Company of Colorado	Gas	2008-2011	Customers	Decision C07-0568
CO	Public Service Company of Colorado	Electric	2012-2014	Stairstep	Decision C12-0494
CT	United Illuminating	Electric	2009-2013	Stairstep until 2011/No RAM for 2011 onwards	Docket 08-07-04
FL	Florida Power Corporation	Electric	1995-1997	Customers	Docket 930444
ID	Idaho Power	Electric	2007-2009	Customers	Case IPC-E-04-15
ID	Idaho Power	Electric	2010-2012	Customers	Case IPC-E-09-28
IL	North Shore Gas	Gas	2008-2012	Customers	Case 07-0241
IL	Peoples Gas Light & Coke	Gas	2008-2012	Customers	Case 07-0242
IN	Citizens Gas	Gas	2007-2011	Customers	Cause 42767
IN	Vectren Energy	Gas	2007-2011	Customers	Cause 43046
IN	Vectren Southern Indiana	Gas	2007-2011	Customers	Cause 43046
MA	Bay State Gas	Gas	2009-open	Customers	DPU 09-30
ME	Central Maine Power	Electric	1991-1993	Customers	Docket 90-085
MI	Consumers Energy	Electric	2009-2011	Customers	Case U-15645
MI	Consumers Energy	Gas	2010-2012	Customers	Case U-15986
MI	Detroit Edison	Electric	2010-2011	Customers	Case U-15768
MI	Michigan Consolidated Gas	Gas	2010-2012	Customers	Case U-15985
MI	Michigan Gas Utilities	Gas	2010-2013	Customers	Case U-15990
MI	Upper Peninsula Power	Electric	2010-2011	Customers	Case U-15988
MN	CenterPoint Energy	Gas	2010-2013	Customers	Docket GR-08-1075
MT	Montana Power Company	Electric	1994-1998	Customers	Docket 93.6.24

Table 4 (cont'd)

Jurisdiction	Company Name	Services	Plan Years	Revenue Adjustment Mechanism	Case Reference
Historic (cont'd)					
United States (cont'd)					
NC	Piedmont Natural Gas	Gas	2005-2008	Customers	Docket G-44 Sub 15
ND	Northern States Power - MN	Electric	2012	Not Applicable, plan only 1 year in duration	Case PU-11-55
NJ	New Jersey Natural Gas	Gas	2007-2010	Customers	Docket GR05121020
NJ	New Jersey Natural Gas	Gas	2010-2013	Customers	Docket GR05121020
NJ	South Jersey Gas	Gas	2007-2010	Customers	Docket GR05121019
NJ	South Jersey Gas	Gas	2010-2013	Customers	Docket GR05121019
NY	Central Hudson G&E	Gas	2009-open	Customers	Case 08-E-0888
NY	Central Hudson G&E	Electric	2009	No RAM	Case 08-E-0887
NY	Central Hudson G&E	Gas & Electric	2010-2013	Revenue per Customer Stairstep for Gas, Stairstep for Electric	Case 09-E-0588
NY	Central Hudson G&E	Gas & Electric	2013-open	Customers for Gas, No RAM for Electric	Case 12-M-0192
NY	Consolidated Edison	Electric	1992-1995	Stairstep	Opinion 92-8
NY	Consolidated Edison	Gas	2007-2010	Stairstep	Case 06-G-1332
NY	Consolidated Edison	Electric	2008-open	No RAM	Case 07-E-0523
NY	Consolidated Edison	Gas	2010-2013	Revenue per Customer Stairstep	Case 09-G-0795
NY	Consolidated Edison	Electric	2010-2013	Stairstep	Case 09-E-0428
NY	Corning Natural Gas	Gas	2012-2015	Revenue per Customer Stairstep	Case 11-G-0280
NY	Keyspan Energy Delivery - New York	Gas	2010-open	Revenue per Customer Stairstep	Case 06-G-1185
NY	Long Island Lighting Company	Electric	1992-1994	Stairstep	Opinion 92-8
NY	National Fuel Gas	Gas	2008-open	Customers	Case 07-G-0141
NY	New York State Electric & Gas	Electric	1993-1995	Stairstep	Opinion 93-22
NY	Niagara Mohawk	Electric	1990-1992	Stairstep	Case 94-E-0098
NY	Niagara Mohawk	Gas	2009-open	Customers	Case 08-G-0609
NY	Niagara Mohawk	Electric	2011-open	No RAM	Case 10-E-0050
NY	Orange & Rockland Utilities	Electric	2012-2015	Stairstep	Case 11-E-0408
NY	Orange & Rockland Utilities	Electric	2011-2012	No RAM	Case 10-E-0362
NY	Orange & Rockland Utilities	Electric	2008-2011	Stairstep	Case 07-E-0949
NY	Orange & Rockland Utilities	Electric	1991-1993	Stairstep	Case 89-E-175
NY	Orange & Rockland Utilities	Gas	2012-2015	Customers	Case 08-G-1398
NY	Orange & Rockland Utilities	Gas	2009-2012	Revenue per Customer Stairstep	Case 08-G-1398
NY	Rochester Gas & Electric	Electric	1993-1996	Stairstep	Opinion 93-19
OH	Duke Energy Ohio	Electric	2012-2014	Customers	Case 11-5905-EL-RDR
OH	Vectren Energy	Gas	2007-2009	Customers	Case 05-1444-GA-UNC
OR	Cascade Natural Gas	Gas	2007-2012	Customers	Order 06-191
OR	Northwest Natural Gas	Gas	2002-2005	Customers	Order 02-634
OR	Northwest Natural Gas	Gas	2005-2009	Customers	Order 05-934
OR	Northwest Natural Gas	Gas	2009-2012	Customers	Order 07-426
OR	PacifiCorp	Electric	1998-2001	Indexing	Order 98-191
OR	Portland General Electric	Electric	1995-1996	Stairstep	Order 95-0322
OR	Portland General Electric	Electric	2009-2010	Customers	Order 09-020
OR	Portland General Electric	Electric	2011-2013	Customers	Order 10-478
TN	Chattanooga Gas	Gas	2010-2013	Customers	Docket 09-0183
UT	Questar Gas	Gas	2006-2010	Customers	Docket 05-057-T01
VA	Virginia Natural Gas	Gas	2009-2012	Customers	Case PUE-2008-00060
VA	Washington Gas Light	Gas	2010-2013	Customers	Case PUE-2009-00064
WA	Avista	Gas	2007-2009	Customers	Docket UG-060518
WA	Avista	Gas	2009-2012	Customers	Docket UG-060518
WA	Avista	Gas	2013-2014	Revenue per Customer Stairstep	Docket UG-120437
WA	Cascade Natural Gas	Gas	2005-2010	Customers	Docket UG-060256
WA	Puget Sound & Power	Electric	1991-1995	Customers	Docket UE-901184-P
WI	Wisconsin Public Service	Gas & Electric	2009-2012	Customers	D-6690-UR-119
WI	Wisconsin Public Service	Gas & Electric	2013	Not Applicable, plan only 1 year in duration	Docket 6690-UR-121
WY	Questar Gas	Gas	2009-2012	Customers	Docket 30010-94-GR-08

Table 4 (cont'd)

Jurisdiction	Company Name	Services	Plan Years	Revenue Adjustment Mechanism	Case Reference
Historic (cont'd)					
Canada					
BC	BC Gas	Gas	1994-1995	Hybrid	Order G-59-94
BC	BC Gas	Gas	1996-1997	Hybrid	N/A
BC	BC Gas	Gas	1998-2000	Hybrid	Order G-85-97
BC	BC Gas	Gas	2000-2001	Hybrid	Order G-48-00
BC	BC Hydro	Electric	2009-2010	Hybrid	Order G-16-09
BC	BC Hydro	Electric	2011	Not Applicable, plan only 1 year in duration	Order G-180-10
BC	BC Hydro	Electric	2012-2014	Stairstep	Order G-77-12A
BC	FortisBC	Electric	2012-2013	Stairstep	Order G 110-12
BC	Terasen Gas	Gas	2008-2009	Hybrid	Order G-33-07
BC	Terasen Gas	Gas	2004-2007	Hybrid	Order G-51-03
BC	Terasen Gas	Gas	2010-2011	Hybrid	Order G-141-09
BC	Terasen Gas	Gas	2012-2013	Stairstep	Order G-44-12
ON	Enbridge Gas Distribution	Gas	2008-2012	Revenue per Customer Indexing	Docket EB-2007-0615
ON	Union Gas	Gas	2008-2012	Indexing	Docket EB-2007-0606

Fixed/variable pricing relaxes the revenue/usage link with low administrative cost since it requires neither decoupling true ups nor load impact calculations. When average use is declining, base revenue will grow more rapidly with fixed/variable pricing so that rate cases tend to be less frequent even if the decline is largely driven by external forces. Base revenue grows more slowly than under conventional rate designs if average use is rising. The short term disincentive is removed to embrace various DSM initiatives. However, fixed/variable pricing reduces a utility's ability to use usage charges as a tool for promoting DSM. For example, it does not encourage customers with electric vehicles to charge these vehicles at night. Note also that the principle of rate design gradualism often discourages regulators from immediately adopting SFV pricing.

SFV pricing has been used on a large scale by interstate gas transmission companies since the early 1990s. Precedents for fixed/variable pricing in retail ratemaking are listed below on Table 5 and Figure 6. It can be seen that fixed/variable pricing has to date been considerably more common for gas distributors than electric utilities. This again reflects the greater problem of declining average use that gas distributors have faced, and the fact that the decline has been driven largely by external forces. Since our 2013 survey, fixed/variable pricing has been implemented for an electric utility in Oklahoma.

In addition to the precedents listed here, utilities in Wisconsin and several other states have in recent years made sizable steps in the direction of fixed/variable pricing by redesigning rates for small volume customers to raise customer charges and lower volumetric charges substantially. Investor-owned utilities in Canada are typically permitted to raise a much higher portion of their revenue through fixed charges than are utilities in the United States. Most fixed/variable rate designs feature uniform fixed charges within service classes, but gas utilities in Florida, Georgia, and Oklahoma have fixed charges that vary in some fashion with long term consumption patterns.

Figure 6: Fixed/Variable Pricing Precedents by State

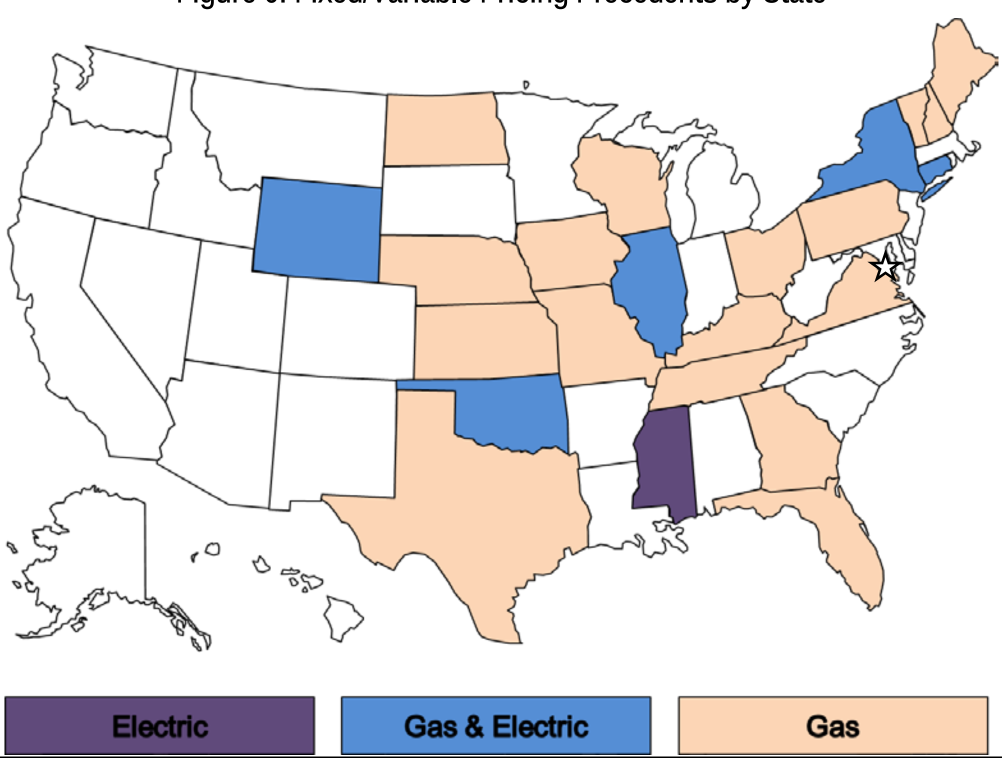


Table 5

Fixed Variable Residential Pricing Precedents[1]

Jurisdiction	Company Name	Services	Years in Place	Case Reference
CT	Connecticut Light & Power	Electric	2007-open	Docket 07-07-01
CT	Connecticut Natural Gas	Gas	2014-open	Docket 13-06-08
CT	United Illuminating	Electric	Occurred over period of years	No specific case
CT	Yankee Gas System	Gas	2011-open	Docket 10-12-02
FL	Peoples Gas System	Gas	2009-open	Docket 080318-GU
GA	Liberty Utilities	Gas	2015-open	Docket 34734
IA	Black Hills Energy	Gas	2009-open	Docket RPU-08-3
IL	Ameren CILCO	Gas	2008-2012	Case 07-0588
IL	Ameren CIPS	Gas	2008-2012	Case 07-0589
IL	Ameren IP	Gas	2008-2012	Case 07-0590
IL	Ameren Illinois	Gas	2012-open	Case 11-0282
IL	Ameren Illinois	Electric	Occurred over period of years	No specific case
IL	Commonwealth Edison	Electric	2011-2013	Case 10-0467
IL	Mt. Carmel Public Utilities	Gas	2013-open	Case 13-0079
IL	North Shore Gas	Gas	2008-open	Case 07-0241
IL	Peoples Gas Light & Coke	Gas	2008-open	Case 07-0242
KS	Atmos Energy	Gas	2010-open	Docket 10-ATMG-495-RTS
KS	Black Hills Energy (formerly Aquila)	Gas	2007-open	Docket 07-AQLG-431-RTS
KS	Kansas Gas Service	Gas	2012-open	Docket 12-KGSG-835-RTS
KY	Atmos Energy	Gas	2014-open	Case 2013-00148
KY	Columbia Gas	Gas	2013-open	Case 2013-00167
KY	Delta Natural Gas	Gas	2007-open	Case 2007-00089
KY	Duke Energy Kentucky	Gas	2010-open	Case 2009-00202
ME	Maine Natural Gas	Gas	Occurred over period of years	Docket 2009-00067
ME	Northern Utilities	Gas	2014-open	Docket 2013-00133
MO	AmerenUE	Gas	2007-open	Case GR-2007-0003
MO	Atmos Energy	Gas	2007-2010	Case GR-2006-0387
MO	Atmos Energy	Gas	2010-open	Case GR-2010-0192
MO	Empire District Gas	Gas	2010-open	Case GR-2009-0434
MO	Laclede Gas	Gas	2002-open	Case GR-2002-356
MO	Missouri Gas Energy	Gas	2007-open	Case GR-2006-0422
MS	Mississippi Power	Electric	Occurred over period of years	No specific case
ND	Xcel Energy	Gas	2005-open	Case PU-04-578
NE	SourceGas Distribution	Gas	2012-open	Docket NG-0067
NH	Liberty Utilities (EnergyNorth Natural Gas)	Gas	Occurred over period of years	No specific case
NH	Northern Utilities	Gas	2014-open	DG 13-086
NY	Central Hudson Gas & Electric	Electric & Gas	Occurred over period of years	No specific case
NY	Consolidated Edison	Electric & Gas	Occurred over period of years	No specific case
NY	Corning Gas	Gas	Occurred over period of years	No specific case
NY	Keyspan Energy Delivery - Long Island	Gas	Occurred over period of years	No specific case
NY	Keyspan Energy Delivery - New York	Gas	Occurred over period of years	No specific case
NY	National Fuel Gas	Gas	Occurred over period of years	No specific case

Table 5 (cont'd)

Jurisdiction	Company Name	Services	Years in Place	Case Reference
NY	New York State Electric & Gas	Electric	Occurred over period of years	No specific case
NY	Niagara Mohawk	Electric & Gas	Occurred over period of years	No specific case
NY	Orange & Rockland	Electric & Gas	Occurred over period of years	No specific case
NY	Rochester Gas & Electric	Electric & Gas	Occurred over period of years	No specific case
OH	Columbia Gas	Gas	2008-open	Case 08-0072-GA-AIR
OH	Dominion East Ohio	Gas	2008-2010	Case 07-830-GA-ALT
OH	Duke Energy Ohio (CG&E)	Gas	2008-open	Case 07-590-GA-ALT
OH	Vectren Energy Delivery of Ohio	Gas	2009-open	Case 07-1080-GA-AIR
OK	Arkansas Oklahoma Gas	Gas	2013-open	Cause PUD 201200236
OK	Centerpoint Energy	Gas	2010-open	Cause PUD 201000030
OK	Oklahoma Natural Gas	Gas	2004-open	Causes PUD 200400610, PUD 201000048, PUD 200900110
OK	Public Service Company of Oklahoma	Electric	2015-open	Cause PUD 201300217
PA	Columbia Gas	Gas	2013-open	Docket R-2012-2321748
TN	Atmos Energy	Gas	2012-open	Docket 12-00064
TN	Piedmont Natural Gas	Gas	2012-open	Docket 11-00144
TX	Atmos Energy - Mid-Tex Division	Gas	Occurred over period of years	No specific case
TX	Atmos Energy - West Texas Division	Gas	Occurred over period of years	No specific case
TX	Centerpoint Energy Houston Division	Gas	Occurred over period of years	No specific case
TX	Centerpoint Energy Beaumont/East Texas Division	Gas	Occurred over period of years	No specific case
VA	Columbia Gas of Virginia	Gas	Occurred over period of years	No specific case
VT	Vermont Gas Systems	Gas	Occurred over period of years	No specific case
WI	Madison Gas & Electric	Gas	2015-open	Docket 3270-UR-120
WI	Wisconsin Public Service	Gas	2015-open	Docket 6690-UR-123
WY	SourceGas Distribution	Gas	2011-open	Docket 30022-148-GR-10
WY	PacifiCorp (d/b/a Rocky Mountain Power)	Electric	2009-open	Docket 20000-333-ER-08

[1] Fixed variable pricing precedents include power and gas distributors that have a customer charge equal to or in excess of $15 (or $20 for vertically integrated electric utilities).

IV. Forward Test Years

General rate cases involve "test years" in which revenue requirements and billing determinants (e.g., the residential delivery volume) are jointly considered in ratesetting. A historical test year ends before the rate case is filed. A forward (a/k/a "fully forecasted") test year ("FTY") begins after the rate case is filed. An FTY typically begins about the time the rate case is expected to end and new rates take effect. Two-year forecasts may be required in this event which span both the year of the rate case and the rate effective year.[4] In between forward and historical test years is the option of a "partially forecasted" test year in which some months of historical data on utility operations are combined with some months of forecasted data. Under this approach, actual data for all months usually become available during the course of the rate case.

Historical test years tend to be uncompensatory when cost is growing faster than billing determinants. Annual rate cases with historical test years can alleviate but not eliminate underearning under these conditions. The effect on credit metrics can be material.[5] Where historical test years are used, there are thus added advantages to implementing other Altreg innovations discussed in this survey.

Forward test years can fully compensate utilities when cost growth exceeds growth in billing determinants. If this imbalance is chronic, however, FTYs do not eliminate the problem of frequent rate cases. It is therefore not unusual for regulators to combine FTYs with other Altreg remedies, such as cost trackers or multiyear rate plans.

Many approaches are used to forecast costs in FTY rate cases. Some companies rely on their budgeting process to make cost projections. Others normalize data for an historical reference period, adjusted for known and measurable changes, and then use indexing and other statistical methods to extend projections. A mixture of forecasting methods is common. For example, index-based forecasting may be used only for O&M expenses.

FTYs were adopted in many jurisdictions during the 1970s and 1980s, when rapid inflation and major plant additions coincided with oil shock-induced slowdowns in the growth of average use. Several additional states have recently moved in the direction of FTYs. Some of these states are in the West, where comparatively rapid economic growth has required more rapid buildout of utility infrastructure.

Current state policies concerning test years are summarized below in Figure 7 and Table 6. In many jurisdictions the use of partially or fully-forecasted test years is not standardized. For example, in some jurisdictions, including Illinois and North Dakota, utilities are allowed to select their type of rate case test year. Test year selection may also be made part of the rate case (e.g., Utah). A few jurisdictions allow forward test years to be used in rate cases or formula rate plans, but not both (e.g., Illinois and Arkansas).

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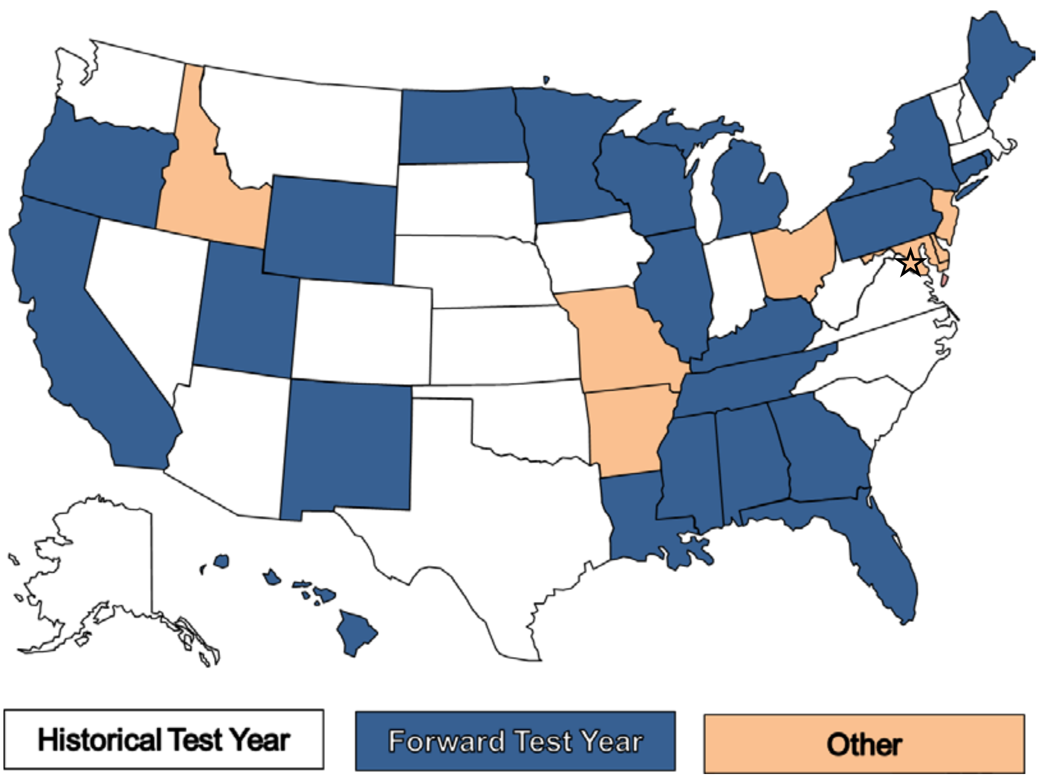
[4] A forward test year can in principle be the rate case year, and thereby not require two-year forecasts. Proposed rates can be established on an interim basis shortly after the filing.

[5] For evidence see "Forward Test Years for US Electric Utilities" by Mark Newton Lowry, David Hovde, Lullit Getachew, and Matt Makos, Edison Electric Institute, 2010.

Because of these complications, we have separated Table 6 into separate sections, specifying where FTYs are commonly used or occasionally used. Figure 7 shows jurisdictions where FTYs are commonly or occasionally used. Jurisdictions where partially-forecasted test years are commonly or occasionally used are in the category titled Other, with the remaining jurisdictions counted as historical test years.

The ranks of US jurisdictions that allow the use of forward test years have swollen and now encompass about half of the total. Since our 2013 survey, electric utilities in Pennsylvania have successfully used FTYs and utilities in Arkansas and Indiana have received legislative authorization for their use.[6][7] Forward test years are the norm in Canadian regulation.

Figure 7: Test Year Policy by State



[6] In addition, another electric utility in Mississippi was recently permitted to use a forward-looking formula rate plan.

[7] FTYs in Arkansas can only be used in formula rate plans.

Table 6

Test Year Approaches of US Jurisdictions

Fully-Forecasted Test Years Commonly Used (15)

Jurisdiction	Notes
Alabama	Utilities operate under forward-looking formula rate plans
California	
Connecticut	
FERC	Rate cases use forward test years but some formula rate plans use historical test years
Florida	
Georgia	
Hawaii	
Maine	
Michigan	
Minnesota	
New York	
Oregon	
Rhode Island	
Tennessee	
Wisconsin	

Fully-Forecasted Test Years Occasionally Used (9)

Jurisdiction	Notes
Illinois	Utilities use various test years including forward test years ("FTYs")
Kentucky	Utilities use various test years including FTYs
Louisiana	Utilities use various test years including FTYs
Mississippi	Both electric utilities operate under forward-looking formula rate plans. Gas formula rate plans rely on historical test years ("HTYs").
New Mexico	A recently passed law allows for use of FTYs, and at least one rate increase based on FTY evidence has been approved
North Dakota	Utilities use various test years including FTYs
Pennsylvania	Partially-forecasted test years have traditionally been the norm. However, a law allowing fully-forecasted test years passed in 2012 and several electric utility rate increases based on FTY evidence have been approved.
Utah	Test year selection is part of the rate case and can be contested. Several recent rate cases have used FTYs.
Wyoming	Rocky Mountain Power has recently used FTYs

Partially-Forecasted Test Years Commonly or Occasionally Used (8)

Jurisdiction	Notes
Arkansas	Utilities have typically used partially forecasted test years in rate cases. However, a recent bill authorized the use of formula rates with either historical or forecasted test periods.
Delaware	Before restructuring FTY filings were common, but companies have used a mix of HTYs and partially-forecasted test years in recent filings
District of Columbia	PEPCO has filed rate cases using both hybrid and historical test years recently
Idaho	
Maryland	Utilities use various test years excluding FTYs
Missouri	Utilities have the option to file partially-forecasted test years
New Jersey	
Ohio	

Historical Test Years Commonly Used (20)

Jurisdiction	Notes
Alaska	
Arizona	
Colorado	Utilities have filed FTY evidence. However, no FTY rates have yet been approved but a recent case made extraordinary HTY adjustments.
Indiana	A recently passed law allows for use of FTYs, but no rate increase based on FTY evidence has been approved for an energy utility to date
Iowa	
Kansas	
Massachusetts	
Montana	
Nebraska	Nebraska has no electric IOUs. Gas companies are legally authorized to use FTYs but commonly use HTYs.
Nevada	
New Hampshire	
North Carolina	
Oklahoma	
South Carolina	
South Dakota	
Texas	
Vermont	
Virginia	
Washington	
West Virginia	

V. Multiyear Rate Plans

Multiyear rate plans ("MRPs") are designed to reduce regulatory cost, while increasing the utility incentive for efficient operation. Rate cases are held infrequently, most often at three to five year intervals. Between rate cases, rate escalations are based on a combination of automatic attrition relief mechanisms ("ARMs") and cost trackers. The rate adjustments provided by ARMs are largely "external" in the sense that they give a utility an *allowance* for cost growth rather than reimbursement for its *actual* growth.

The "externalization" of ratemaking that ARMs and rate case moratoria achieve gives utilities more opportunity to profit from improved performance. Benefits of better performance can be shared between the utility and its customers. Performance incentives are strengthened despite streamlined regulation. Lower regulatory cost has special appeal in jurisdictions where numerous utilities must be regulated.

ARMs can cap growth in rates (e.g., customer charges and cents per kWh) or allowed revenue. Rate caps are favored when and where utilities are encouraged to bolster customer use of the grid. Revenue caps are usually combined with revenue decoupling mechanisms, and are often favored where utilities must cope with declining average use and/or policymakers strongly encourage DSM.

Several approaches to ARM design are well-established. These include multiyear cost forecasts, indexing, and hybrids. Indexing escalates rates (or revenue) automatically for inflation and sometimes also for growth in other cost drivers like the number of customers served. A hybrid approach to ARM design was developed in the US that involves indexing of revenue for O&M expenses and forecasts for capital cost revenue.

The indexing approach to ARM design has been more common for UDCs because their cost growth is relatively gradual and predictable. Hybrid and forecasted ARMs have historically been more common for vertically integrated electric utilities because occasional major plant additions have given their cost trajectories more of a "stairstep" pattern. However, this pattern is becoming less common in an era when demand growth is slower and fewer large power plants are under construction. Some VIEUs operating under MRPs have separate ARMs for generation and distribution.

Cost trackers are often used in MRPs to address changes in business conditions that are difficult to address using ARMs. A tracker that recovers a large portion of a utility's capex cost can sometimes permit the company to operate under a multiyear freeze on rates for other non-energy costs. MRPs with "tracker/freeze" provisions for vertically integrated utilities often accord tracker treatment to costs of new or refurbished generating plants.[8] Trackers also address *force majeure* events like severe storms and changes in tax rates that affect costs.

Many MRPs feature earnings sharing mechanisms ("ESMs") that automatically share earnings surpluses and/or deficits that result when the rate of return on equity ("ROE") deviates from its regulated target. Some MRPs feature "off-ramps" that permit plan suspension when earnings are unusually high or low.

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[8] A good example is the Generation Base Rate Adjustment in the current MRP of Florida Power & Light.

Plans often feature performance incentive mechanisms that are linked to the utility's service quality. With stronger cost containment incentives, there is a greater need for a link between revenue and service quality. Many MRPs combine revenue decoupling, the tracking of DSM expenses, and performance incentives for DSM. The stronger incentive to contain cost that MRPs provide then becomes a "fourth leg" for the DSM stool.

MRPs have long been used to regulate utilities where market-responsive rates and services are a priority. Infrequent rate cases reduce the regulatory cost of allocating the revenue requirement between a complex and changing mix of market offerings and lessen concerns about cross-subsidization. These benefits of MRPs can be enhanced by designing other plan provisions in ways that insulate core customers from potentially adverse consequences of marketing flexibility.

For example, in the early 1990s, Maine's electric utilities were still vertically integrated and needed flexibility in marketing power to paper and pulp customers, some of whom had cogeneration options. The commission, under the chairmanship of Thomas Welch (a former telecom industry lawyer) approved a succession of price cap plans for Central Maine Power which facilitated marketing flexibility. As a result, the company had more freedom to enter into special contracts. The stronger incentives the company had to offer the right discounts to customers at risk of bypass was acknowledged by the commission when costs were allocated in later rate cases.

MRPs were first widely used in the United States to regulate railroad, oil pipeline, and telecommunications companies. A major attraction was the ability of MRPs to afford utilities flexibility in serving markets with diverse competitive pressures and complex, changing customer needs. US and Canadian precedents for MRPs in the electricity and gas utility industries are indicated in Table 7 and Figures 8a and 8b.[9] In the US, MRPs have traditionally been most common in California and the Northeast. MRPs have been adopted by well-known VIEUs in Florida, North Dakota, and Virginia since our 2012 survey. A number of states have, additionally, experimented with "mini-MRPs" with terms of only two years. The forecast and tracker/freeze approaches to ARM design are most common currently in the US. The Federal Energy Regulatory Commission ("FERC") uses MRPs with index-based ARMs to regulate oil pipelines.

Canada is moving towards MRPs with index-based ARMs for gas and electric power distribution in all four populous provinces. In advanced economies overseas, MRPs are more the rule than the exception for utility regulation. Australia, Britain, and New Zealand are long time practitioners.

[9] Rate freezes without extensive supplemental funding from capital cost trackers are excluded from Table 7 and Figures 8a and 8b.

Figure 8a: Recent US Multiyear Rate Plan Precedents by State

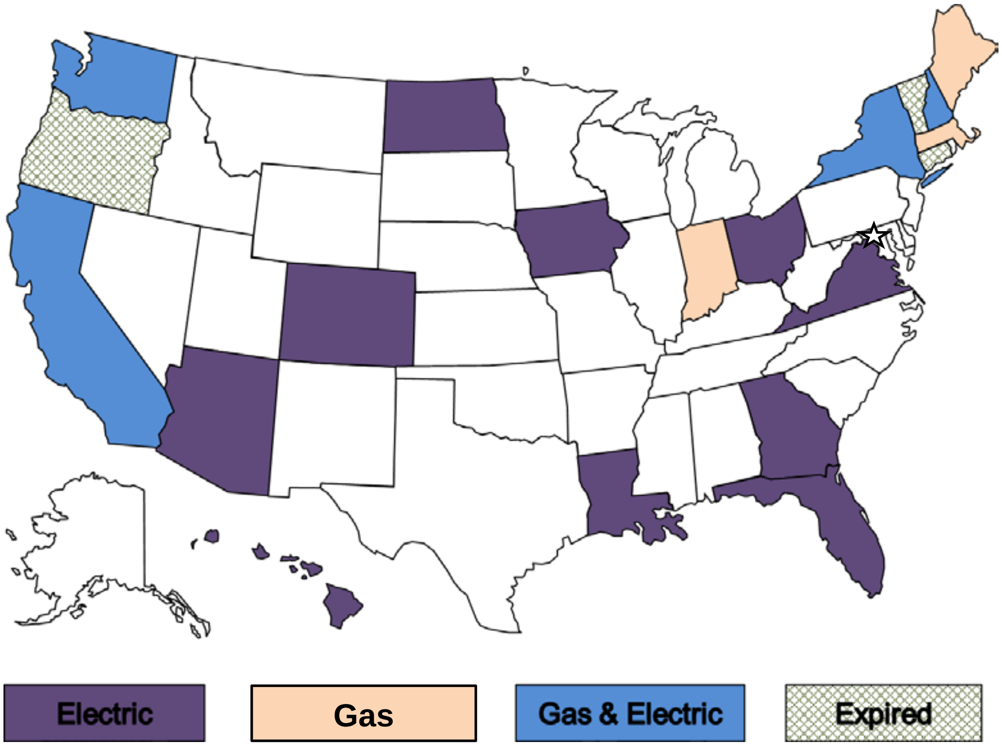


Figure 8b: Recent Canadian Multiyear Rate Plan Precedents by Province

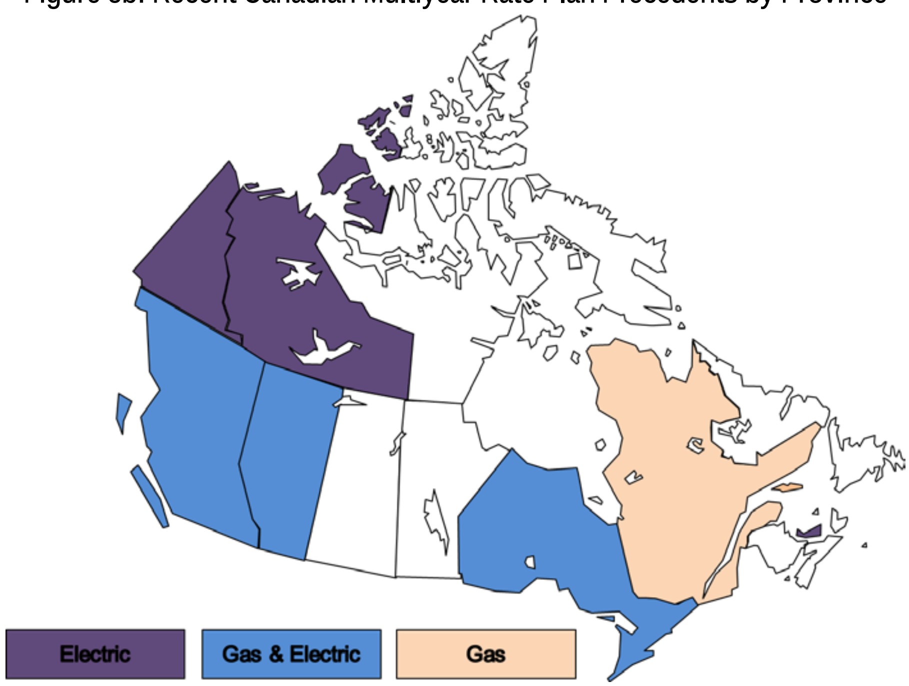


Table 7

Multiyear Rate Plan Precedents [1]

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Current						
United States						
AZ	Arizona Public Service	2012-2016	Bundled power service	Rate Freeze with an adjustment to account for purchase of SCE's share of Four Corners generating facility, additional capital and other cost trackers, LRAM	None	Decision 73183; May 2012
CA	Bear Valley Electric Service	2013-2016	Power distribution	Revenue Cap Stairstep	None	Decision 14-11-002; November 2014
CA	California Pacific Electric	2013-2015	Power distribution	Revenue Cap Index	None	Decision 12-11-030; November 2012
CA	Pacific Gas & Electric	2014-2016	Gas & bundled power service	Revenue Cap Stairstep	None	Decision 14-08-032; August 2014
CA	PacifiCorp	2011-2013, extended through 2016	Bundled power service	Price Cap Index: Rates escalated by Global Insight forecast of CPI, less 0.5% productivity factor; supplemental funding for major plant additions can be requested in annual filings	None	Decision 10-09-010; September 2010
CA	San Diego Gas & Electric	2012-2015	Gas & bundled power service	Revenue Cap Stairstep	None	Decision 13-05-010; May 2013
CA	Southern California Gas	2012-2015	Gas	Revenue Cap Stairstep	None	Decision 13-05-010; May 2013
CA	Southwest Gas	2014-2018	Gas	Revenue Cap Stairstep	None	Decision 14-06-028; June 2014
CO	Public Service of Colorado	2015-2017	Bundled power service	Rate Freeze with multiple capital cost trackers	Sharing of overearnings only up to earnings cap	Decision C15-0292; March 2014
FL	Florida Power & Light	2013-2016	Bundled power service	Rate Freeze with multiple capital and other cost trackers	None	Docket 120015-EI; December 2012
FL	Gulf Power	2014-June 2017	Bundled power service	Price Cap Stairstep through 2015, Rate Freeze beyond	None	Docket 130140-EI; December 2013
FL	Duke Energy Florida (formerly Progress Energy Florida)	2012-2016, extended through 2018	Bundled power service	Rate Freeze with one step plus capital and other cost trackers	None	Dockets 120022-EI and 130208-EI; 2012 and November 2013
FL	Tampa Electric	2013-2017	Bundled power service	Revenue Cap Stairstep	None	Docket 130040-EI
GA	Georgia Power	2014-2016	Bundled power service	Revenue Cap Stairstep	Sharing of overearnings only with deadband	Docket 36989; December 2013
HI	Hawaiian Electric Company	2012-open	Bundled power service	Revenue Cap Hybrid	Sharing of overearnings only without deadband, multiple sharing levels	Dockets 2008-0274 & 2008-0083
HI	Hawaiian Electric Light Company	2013-open	Bundled power service	Revenue Cap Hybrid	Sharing of overearnings only without deadband, multiple sharing levels	Dockets 2008-0274 & 2009-0164
HI	Maui Electric	2013-open	Bundled power service	Revenue Cap Hybrid	Sharing of overearnings only without deadband, multiple sharing levels	Dockets 2008-0274 & 2009-0163
IA	MidAmerican Energy	2014-2017	Bundled power service	Revenue Cap Stairstep for 2014-2016, Rate Freeze for 2017	Sharing of overearnings only with deadband up to earnings cap	RPU-2013-0004
IN	Northern Indiana Public Service Company	2015-2020	Gas	Rate Freeze with capital and other cost trackers, possible reopening in 2017	Earnings cap implemented if company overearns since last rate case or prior 59 months, whichever is less	Cause 43894 and 44403 TDSIC 1 (August 2013 and January 2015)
LA	Cleco Power	2014-2017	Bundled power service	Rate Freeze with capital and other cost trackers	Sharing of overearnings only with deadband up to earnings cap	Docket U-32779; June 2014
MA	Bay State Gas	2015-2018	Gas	Revenue Cap Stairstep for 2015, 2016, Revenue Freeze through October 2018	None	DPU 15-150; October 2015
ME	Summit Natural Gas of Maine	2013-2022	Gas	Price Cap Indexing: 75% of change in GDPPI	None until company has 1,000 or more customers, then sharing of under/overearnings evenly with deadband	Docket 2012-258; January 2013
NH	Northern Utilities	May 2014 - April 2017	Gas	Revenue Cap Stairstep for 2014-2015, Rate Freeze in 2016	Sharing of overearnings only with deadband up to earning cap	DG 13-086; April 2014
NH	Public Service Company of New Hampshire	2010-2015	Power distribution (generation regulated separately)	Revenue Cap Stairstep: Rate increases allowed to account for distribution capital additions in 2010-2013	Sharing of overearnings only with deadband	DE 09-035
NH	Unitil Energy Systems	2011-2016	Power distribution	Revenue Cap Stairstep: Rate increases allowed to account for distribution capital additions in 2011-2013	Sharing of overearnings only with deadband	DE 10-055

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Current (cont'd)						
United States (cont'd)						
NY	Central Hudson Gas & Electric	2015-2018	Gas & power distribution	Revenue Cap Stairstep	Sharing of overearnings with deadband and multiple sharing bands	Cases 14-E-0318, 14-G-0319
NY	Consolidated Edison	2014-2016	Gas	Revenue Cap Stairstep	Sharing of overearnings only with deadband and multiple bands	Case 13-G-0031
NY	Corning Natural Gas	2012-2015	Gas	Revenue Cap Stairstep	Sharing of overearnings only with deadband and multiple bands	Case 11-G-0280
NY	Orange & Rockland Utilities	November 2015-October 2018	Gas	Revenue Cap Stairstep	Sharing of overearnings only with deadband and multiple sharing bands	Case 14-G-0494
ND	Northern States Power - Minnesota	2013-2016	Bundled power service	Revenue Cap Stairstep for 2013-2015, Rate Freeze in 2016	Sharing of overearnings only without deadband, earnings adjusted for effects of weather	Case PU-12-813
OH	First Energy Ohio	2011-2014, later extended to 2016	Power distribution	Rate Freeze supplemented by capital and other cost trackers	Company subject to Significantly Excessive Earnings Test conducted annually	Cases 11-388-EL-SSO, 12-1230-EL-SSO
US	All	2011-2016	Oil pipelines	Price Cap Index: PPI-Finished Goods + 2.65%	None	Docket RM10-25-000; December 2010
VA	Appalachian Power	2014-2017	Bundled power service	Rate Freeze supplemented by capital and other cost trackers	None	Senate Bill 1349
VA	Virginia Electric Power	2015-2019	Bundled power service	Rate Freeze supplemented by capital and other cost trackers	None	Senate Bill 1349
WA	Puget Sound Energy	2013-2016	Gas & bundled power service	Revenue Cap Stairstep	Sharing of overearnings only without deadband, equal sharing between company and customers	Dockets UE-121697 and UG-121705
Canada						
Alberta	Altagas Utilities and ATCO Gas	2013-2017	Gas	Revenue per Customer Indexing: Input price index - 1.16%, + capital cost trackers	None	Decision 2012-237
Alberta	ATCO Electric, EPCOR, Fortis Alberta	2013-2017	Power distribution	Price Cap Index: Input Price Index - 1.16%, + capital cost trackers	None	Decision 2012-237
British Columbia	FortisBC	2014-2018	Bundled power service	Revenue Cap Index: I-Factor - 1.03%, + capital cost tracker for CPCN projects	Symmetric without deadband	Project #3698719, Decision; September 2014
British Columbia	FortisBC Energy	2014-2018	Gas	Revenue Cap Index: I-Factor - 1.1%, + capital cost tracker for CPCN projects	Symmetric without deadband	Project #3698715, Decision; September 2014
Ontario	All unless company opts out	2014-2018	Power distribution	Price Cap Index: Input price index - (0%+stretch); stretch factor reassigned annually, + capital cost tracker option available	None	EB-2010-0379 Report of the Board; November 2013
Ontario	Horizon Utilities	2015-2019	Power distribution	Revenue Cap Stairstep	Sharing of overearnings only without deadband	EB-2014-0002; December 2014
Ontario	Hydro One Networks	2015-2017	Power distribution	Revenue Cap Stairstep	None	EB-2014-0247; March 2015
Ontario	Enbridge Gas Distribution	2014-2018	Gas	Revenue Cap Stairstep	Sharing of overearnings only without deadband	EB-2012-0459, Decision with Reasons; July 2014
Ontario	Union Gas Limited	2014-2018	Gas	Revenue Cap Index: 40% of growth in GDP-IPI	Sharing of overearnings only with deadband, multiple sharing ranges	EB 2013-0202 Decision; October 2013
Prince Edward Island	Maritime Electric	2013-2016	Bundled power service	Price Cap Stairstep: Bill defines rates for each year.	Earnings cap set at allowed ROE, no floor	Bill 26 (2012) Electric Power (Energy Accord Continuation) Amendment Act
Quebec	Gazifere	2011-2015	Gas distribution	Price Cap Index	Sharing of overearnings only without deadband and multiple sharing bands up to earnings cap	D-2010-112; August 2010
Yukon Territory	Yukon Electrical Company, Limited	2013-2015	Bundled power service	Revenue Cap Stairstep	None	Board Order 2014-06; April 2014

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Current (cont'd)						
Great Britain						
Great Britain	All	2013-2021	Gas and power transmission	British-Style Hybrid	Not reviewed	RIIO-T1 Final Proposals, April and December 2012
Great Britain	All	2013-2021	Gas distribution	British-Style Hybrid	Not reviewed	RIIO-GD1 Final Proposals, December 2013
Great Britain	All	2015-2023	Power distribution	British-Style Hybrid	Variances of cost from budgets shared though Information Quality Incentive Mechanism	RIIO-ED1 Final Proposals, December 2014
Australia/New Zealand						
Australia	ActewAGL	2015-2019	Power transmission & distribution	Australian-Style Hybrid	Not reviewed	Final Decision ActewAGL distribution determination 2015-16 to 2018-19; April 2015
Australia	Ausgrid	2015-2019	Power distribution	Australian-Style Hybrid	Not reviewed	Final Decision Ausgrid distribution determination 2015-16 to 2018-19; April 2015
Australia	Directlink	2015-2020	Power transmission	Australian-Style Hybrid	Not reviewed	Final Decision Directlink transmission determination 2015-16 to 2019-20; April 2015
Australia	Endeavour Energy	2015-2019	Power distribution	Australian-Style Hybrid	Not reviewed	Final Decision Endeavour Energy distribution determination 2015-16 to 2018-19; April 2015
Australia	Energex	2015-2020	Power distribution	Australian-Style Hybrid	Not reviewed	Final Decision Energex determination 2015-16 to 2019-20
Australia	Ergon Energy	2015-2020	Power distribution	Australian-Style Hybrid	Not reviewed	Final Decision Ergon Energy determination 2015-16 to 2019-20
Australia	Essential Energy	2015-2019	Power distribution	Australian-Style Hybrid	Not reviewed	Final Decision Essential Energy distribution determination 2015-16 to 2018-19; April 2015
Australia	Jemena Gas Networks	2015-2020	Gas distribution	Australian-Style Hybrid	Not reviewed	Final Decision Jemena Gas Networks (NSW) Ltd Access Arrangement 2015−20; June 2015
Australia	SA Power Networks	2015-2020	Power distribution	Australian-Style Hybrid	Not reviewed	Final Decision SA Power Networks determination 2015-16 to 2019-20
Australia	TasNetworks	2015-2019	Power transmission	Australian-Style Hybrid	Not reviewed	Final Decision TasNetworks transmission determination 2015-16 to 2018-19; April 2015
Australia	TransGrid	2015-2018	Power transmission	Australian-Style Hybrid	Not reviewed	Final Decision TransGrid transmission determination 2015-16 to 2017-18; July 2015
Australia	Power & Water	2014-2019	Power transmission & distribution	Australian-Style Hybrid	Not reviewed	2014 Networks Price Determination Final Determination Part-A Statement of Reasons; April 2014
Australia	All Queensland Distributors	2011-2016	Gas distribution	Australian-Style Hybrid	Not reviewed	Access Arrangement Proposal for Qld Gas Network, Final Decision; June 2011
Australia	Energex and Ergon Energy	2010-2015	Power distribution	Australian-Style Hybrid	Not reviewed	Queensland Distribution Determination 2011-11 to 2014-15 (Final Decision)
Australia	Envestra	2011-2016	Gas distribution	Australian-Style Hybrid	Not reviewed	Access Arrangement Proposal for the SA Gas Network, Final Decision; June 2011
Australia	All Victorian Distributors	2013-2017	Gas distribution	Australian-Style Hybrid	Not reviewed	Access Arrangement Final Decision; March 2013

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Current (cont'd)						
Australia/New Zealand (cont'd)						
Australia	CitiPower	2011-2015	Power distribution	Australian-Style Hybrid	Not reviewed	CitiPower Pty Distribution Determination 2011-2015; September 2012
Australia	Powercor	2011-2015	Power distribution	Australian-Style Hybrid	Not reviewed	Powercor Australia Ltd Distribution Determination 2011-2015; October 2012
Australia	Jemena Electricity Networks	2011-2015	Power distribution	Australian-Style Hybrid	Not reviewed	Jemena Electricity Networks (Victoria) Ltd Distribution Determination 2011-2015; September 2012
Australia	SP AusNet	2011-2015	Power distribution	Australian-Style Hybrid	Not reviewed	SPI Electricity Pty Ltd Distribution Determination 2011-2015; August 2013
Australia	United Energy Distribution	2011-2015	Power distribution	Australian-Style Hybrid	Not reviewed	United Energy Distribution Distribution Determination 2011-2015; September 2012
New Zealand	All but Orion Electric	2015-2020	Power distribution	Revenue Cap Index: CPI-0% for most companies	None	Project no. 14.07/14118; November 2014
New Zealand	All	2013-2017	Gas distribution	New Zealand-Style Hybrid	Not reviewed	Project no. 15.01/13199
New Zealand	All	2013-2017	Gas transmission	New Zealand-Style Hybrid	Not reviewed	Project no. 15.01/13199
Historic						
United States						
CA	Bear Valley Electric Service	2009-2012	Power distribution	Revenue Cap Stairstep	None	Decision 09-10-028; October 2009
CA	Pacific Gas & Electric	2011-2013	Gas & bundled power service	Revenue Cap Stairstep	None	Decision 11-05-018; May 2011
CA	Pacific Gas & Electric	2007-2010	Gas & bundled power service	Revenue Cap Stairstep	None	Decision 07-03-044; March 2007
CA	Pacific Gas & Electric	2004-2006	Gas & bundled power service	Revenue Cap Index	None	Decision 04-05-055; May 2004
CA	Pacific Gas & Electric	1993-1995	Gas & bundled power service	Revenue Cap Hybrid	None	Decision 92-12-057; December 1992
CA	Pacific Gas & Electric	1990-1992	Gas & bundled power service	Revenue Cap Hybrid	None	Decision 89-12-057; December 1989
CA	Pacific Gas & Electric	1987-1989	Gas & bundled power service	Revenue Cap Hybrid	None	Decision 86-12-092; December 1986
CA	Pacific Gas & Electric	1984-1986	Gas & bundled power service	Revenue Cap Hybrid	None	Decisions 83-12-068; December 1983 and 85-12-076; December 1985
CA	PacifiCorp	2007-2009, extended to 2010	Bundled power service	Price Cap Index	None	Decisions 06-12-011; December 2006 and 09-04-017; April 2009
CA	PacifiCorp	1994-1996	Bundled power service	Price Cap Index	None	Decision 93-12-106; December 1993
CA	PacifiCorp	1984-1987	Bundled power service	Revenue Cap Hybrid	None	Decisions 84-07-150; July 1984 and 85-12-076; December 1985
CA	San Diego Gas & Electric	2008-2011	Gas & bundled power service	Revenue Cap Stairstep	None	Decision 08-07-046; July 2008
CA	San Diego Gas & Electric	2005-2007	Gas & bundled power service	Revenue Cap Index	Sharing of overearnings only with deadband and multiple sharing bands	Decision 05-03-025; March 2005
CA	San Diego Gas and Electric	1999-2002	Gas & power distribution	Price Cap Index	Sharing of overearnings only above deadband with multiple sharing bands	Decision 99-05-030; May 1999

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Historic (cont'd)						
United States (cont'd)						
CA	San Diego Gas & Electric	1994-1999	Gas & bundled power service	Revenue Cap Hybrid	Sharing of overearnings only with deadband and multiple sharing bands up to an earnings cap	Decision 94-08-023; August 1984
CA	San Diego Gas & Electric	1989-1993	Gas & bundled power service	Revenue Cap Hybrid	None	Decision 88-12-085; December 1988
CA	San Diego Gas & Electric	1986-1988	Gas & bundled power service	Revenue Cap Hybrid	None	Decision 85-12-108; December 1985
CA	Sierra Pacific Power	2009-2011, extended to 2012	Bundled power service	Price Cap Index	None	Decision 09-10-041; October 2009
CA	Sierra Pacific Power	1990-1992	Bundled power service	Revenue Cap Hybrid	None	Decision 90-07-060; July 1990
CA	Southern California Edison	2012-2014	Bundled power service	Revenue Cap Hybrid	None	Decision 12-11-051; November 2012
CA	Southern California Edison	2009-2011	Bundled power service	Revenue Cap Stairstep	None	Decision 09-03-025; March 2009
CA	Southern California Edison	2006-2008	Bundled power service	Revenue Cap Hybrid	None	Decision 06-05-016; May 2006
CA	Southern California Edison	2004-2006	Bundled power service	Revenue Cap Hybrid	None	Decision 04-07-022; July 2004
CA	Southern California Edison	1997-2001	Power distribution	Price Cap Index	Sharing of over/underearnings outside deadband with multiple sharing bands	Decision 96-09-092; September 1996
CA	Southern California Edison	1986-1991	Bundled power service	Revenue Cap Hybrid	None	Decision 85-12-076; December 1985
CA	Southern California Gas	2008-2011	Gas	Revenue Cap Stairstep	None	Decision 08-07-046; July 2008
CA	Southern California Gas	2005-2007	Gas	Revenue Cap Index	Sharing of overearnings only with deadband and multiple sharing bands	Decision 05-03-025; March 2005
CA	Southern California Gas	1998-2003	Gas	Revenue Cap Index	Sharing of over/underearnings outside deadband with multiple sharing bands	Decision 97-07-054; July 1997
CA	Southern California Gas	1990-1993	Gas	Revenue Cap Hybrid	None	Decision 90-01-016; January 1990
CA	Southern California Gas	1985-1989	Gas	Revenue Cap Hybrid	None	1984, 85-12-076; December 1985, and 87-05-027; May 1987
CA	Southwest Gas	2009-2013	Gas	Revenue Cap Stairstep	None	Decision 08-11-048; November 2008
CO	Public Service Company of Colorado	2012-2014	Bundled power service	Revenue Cap Stairstep	Sharing of overearnings only without deadband, multiple sharing bands up to earnings cap	Decision C12-0494
CT	Connecticut Light & Power	2004-2007	Power distribution	Revenue Cap Stairstep	Even sharing of overearning without deadband	Docket 03-07-02
CT	United Illuminating	2006-2008	Power distribution	Revenue Cap Stairstep	Even sharing of overearning without deadband	Docket 05-06-04
FL	Florida Power & Light	2006-2009	Bundled power service	Rate Freeze with exception for new generating facilities after they are in service and multiple capital and other cost trackers	None	Docket 050045-EI
FL	Progress Energy Florida	2006-2009	Bundled power service	Rate Freeze with 1 step to reflect generation brought in-service and multiple capital and other cost trackers	None	Docket 050078-EI
GA	Georgia Power	2011-2013	Bundled power service	Revenue Cap Stairstep: Rate increases permitted for DSM and major generation plant additions	Sharing of overearnings only with deadband	Docket 31958
IA	MidAmerican Energy	2001-2005, extended to 2013	Bundled power service	Rate Freeze with nuclear capital and other cost trackers	Sharing of overearnings only in multiple sharing bands, deadband not applicable due to no allowed ROE	Dockets RPU-01-3 and RPU-2012-0001
LA	Cleco Power	2009-2014	Bundled power service	Rate Freeze with capital cost tracker	Sharing of overearnings only with deadband up to earnings cap	Order U-30689
MA	Bay State Gas	2006-2015, terminated in 2009	Gas distribution	Price Cap Index	75-25 shareholders-ratepayers sharing around deadband	Docket DTE 05-27
MA	Berkshire Gas	February 2002-January 2012	Gas distribution	No adjustment until September 2004, then Price Cap Index	None	Docket D.T.E. 01-56

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Attrition Relief Mechanism	Earnings Sharing Provisions	Case Reference
Historic (cont'd)						
United States (cont'd)						
MA	Boston Gas (I)	1997-2001	Gas distribution	Price Cap Index	75-25 shareholders-ratepayers sharing around deadband	Docket D.P.U. 96-50-C (Phase I); May 1997
MA	Boston Gas (II)	2004-2013, Terminated in 2010	Gas distribution	Price Cap Index	75-25 shareholders-ratepayers sharing around deadband	Docket DTE 03-40
MA	Blackstone Gas	November 1, 2004 - October 31, 2009	Gas distribution	Price Cap Index	Even sharing of earnings above/below deadband	Docket D.T.E. 04-79
MA	Nstar	2006-2012	Power distribution	Price Cap Index	Deadband with 50-50 sharing of over and underearnings	Docket D.T.E. 05-85
ME	Bangor Gas	2000-2009, extended to 2012	Gas distribution	Price Cap Index	Even sharing of overearnings only. No allowed ROE established for company and no determination of a deadband.	Docket 970795; June 1998
ME	Bangor Hydro Electric (I)	1998-2000	Power distribution	Price Cap Index	50/50 sharing around deadband	Docket 97-116; March 1998
ME	Central Maine Power (I)	1995-1999	Bundled power service	Price Cap Index	Even sharing of earnings above/below deadband	Docket 92-345 Phase II; January 1995
ME	Central Maine Power (II)	2001-2007	Power distribution	Price Cap Index	50-50 sharing below deadband	Docket 99-666; November 2000
ME	Central Maine Power (III)	2009-2013	Power distribution	Price Cap Index: GDPPI - 1%, separate capital cost tracker for AMI	50-50 sharing above 11% ROE	Docket 2007-215
ME	Maine Natural Gas	2010-2012	Gas	Revenue Cap Stairstep with steps conditioned on company earnings	None	Docket 2009-67
NY	Brooklyn Union Gas	October 1, 1991 - September 30, 1994	Gas	Revenue Cap Stairstep	Sharing of overearnings only without deadband	Case 90-G-0981, Opinion 91-21; October 1991
NY	Brooklyn Union Gas	October 1, 1994 - September 30, 1997	Gas	Revenue Cap Stairstep	Sharing of overearnings only without deadband and multiple sharing bands	Case 93-G-0941, Opinion 94-22; October 1994
NY	Central Hudson Gas & Electric	2010-2013	Gas & power distribution	Revenue Cap Stairstep	Sharing of overearnings with deadband and multiple sharing bands	Case 09-E-0588
NY	Central Hudson Gas & Electric	July 1, 2006 - June 30, 2009	Gas & power distribution	Price Cap Stairstep	Sharing of overearnings only with deadband, multiple sharing bands up to earnings cap	Case 05-E-0934 & Case 05-G-0935; July 2006
NY	Consolidated Edison	2010-2013	Gas	Revenue Cap Stairstep	Sharing of overearnings only with deadband that varies annually and multiple sharing bands	Case 09-G-0795
NY	Consolidated Edison	2007-2010	Gas	Revenue Cap Stairstep	Even sharing of overearnings only above deadband, sharing threshold adjustable depending on work with DSM program administrator for first year only	Case 06-G-1332
NY	Consolidated Edison	October 1, 1994 - September 30, 1997	Gas	Revenue Cap Stairstep	Even sharing of overeearnings only above deadband	Case 93-G-0996, Opinion 94-2; October 1994
NY	Consolidated Edison	2010-2013	Power distribution	Revenue Cap Stairstep	Sharing of overearnings only above deadband with multiple sharing bands	Case 09-E-0428
NY	Consolidated Edison	April 1, 2005 - March 31, 2008	Power distribution	Price Cap Stairstep	Sharing of overearnings only with multiple bands. No allowed ROE approved.	Case 04-E-0572; March 2005
NY	Consolidated Edison	1992-1995	Bundled power service	Revenue Cap Stairstep	Even sharing of overearnings with varying allowed ROE and no deadband	Opinion 92-8
NY	Keyspan Energy Delivery - Long Island	2010-2012	Gas	Revenue Cap Stairstep	Sharing of overearnings only above deadband with multiple sharing bands, sharing threshold adjustable for good DSM performance	Case 06-G-1185
NY	Keyspan Energy Delivery - New York	2010-2012	Gas	Revenue Cap Stairstep	Sharing of overearnings only above deadband with multiple sharing bands, sharing threshold adjustable for good DSM performance	Case 06-G-1186
NY	Long Island Lighting Company	December 1, 1993- November 30, 1996	Gas	Revenue Cap Stairstep	Even sharing of overearnings only with deadband	Case 93-G-002, Opinion 93-23; December 1993
NY	Long Island Lighting Company	1992-1994	Bundled power service	Revenue Cap Stairstep	Even sharing of overearnings only without deadband	Opinion 92-8

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Attrition Relief Mechanism	Earnings Sharing Provisions	Case Reference
Historic (cont'd)						
United States (cont'd)						
NY	New York State Electric & Gas	2010-2013	Gas & power distribution	Revenue Cap Stairstep	Sharing of overearnings only with deadband that varies annually and multiple sharing bands	Case 09-E-0715
NY	New York State Electric & Gas	August 1, 1995 - July 31, 1998, Years 2 and 3 not implemented due to restructuring	Bundled power service	Revenue Cap Stairstep	Sharing of overearnings only with annually varying deadbands	Case 94-M-0349, Opinion 95-27; September 1995
NY	New York State Electric & Gas	December 1, 1993 - August 31, 1995	Gas & bundled power service	Revenue Cap Stairstep	Even sharing of overearnings only above deadband	Case 92-G-1086, Opinion 93-22; November 1993
NY	Niagara Mohawk	July 1, 1990 - December 31, 1992	Gas & bundled power service	Revenue Cap Stairstep	Sharing of overearnings only without deadband up to earnings cap	Case 29327, Opinion 89-37; June 1991
NY	Orange & Rockland Utilities	2009-2012	Gas	Revenue Cap Stairstep	Sharing of overearnings only beyond deadband and multiple sharing bands	Case 08-G-1398
NY	Orange & Rockland Utilities	November 1, 2006 - October 31, 2009	Gas	Price Cap Stairstep	Sharing of overearnings only beyond deadband and multiple sharing bands	Case 05-G-1494; October 2006
NY	Orange & Rockland Utilities	November 1, 2003- October 31, 2006	Gas	Price Cap Stairstep	Even sharing of overearnings only without deadband	Case 02-G-1553; October 2003
NY	Orange & Rockland Utilities	2012-2015	Power distribution	Revenue Cap Stairstep	Sharing of overearnings only with deadband and multiple bands	Case 11-E-0408
NY	Orange & Rockland Utilities	2008-2011	Power distribution	Revenue Cap Stairstep	Sharing of overearnings only above deadband with multiple sharing bands	Case 07-E-0949
NY	Orange & Rockland Utilities	1991-1993	Bundled power service	Revenue Cap Stairstep	Even sharing of overearnings above deadband	Case 89-E-175
NY	Rochester Gas & Electric	2010-2013	Gas & power distribution	Revenue Cap Stairstep	Sharing of overearnings only with deadband that varies annually and multiple sharing bands	Case 09-E-0717
NY	Rochester Gas & Electric	July 1, 1993 - June 30, 1996	Gas & bundled power service	Revenue Cap Stairstep	Earnings cap only	Case 92-G-0741, Opinion No. 93-19; August 1993
OH	AEP-Ohio	2012-2015	Power distribution	Rate Freeze supplemented by capital and other cost trackers	Company subject to Significantly Excessive Earnings Test conducted annually	Case No. 11-346-EL-SSO; August 2012
OH	Cincinnati Gas & Electric	2009-2011	Power generation	Price Cap Stairstep	Company subject to Significantly Excessive Earnings Test conducted annually	Case 08-920-EL-SSO
OR	PacifiCorp	1998-2001	Power distribution	Revenue Cap Index	Sharing of over/underearning outside deadband in multiple sharing bands	Order No. 98-191
US	All	2006-2011	Oil pipelines	Price Cap Index: PPI-Finished Goods + 1.3%	None	RM05-22-000
US	All	2001-2006	Oil pipelines	Price Cap Index: PPI-Finished Goods + 0%	None	RM00-11-000
US	All	1995-2001	Oil pipelines	Price Cap Index: PPI-Finished Goods - 1%	None	RM93-11-000
VT	Green Mountain Power	2007-2010	Bundled power service	Revenue Cap Stairstep	Earnings cap for overearnings above deadband; Multiple sharing bands for earnings apply if actual ROE below deadband (earnings floor of the deadband also applies)	Docket No. 7176
WA	Puget Sound Energy	1997-2001	Bundled power service	Price Cap Stairstep	None	Docket UE-960195
Australia/New Zealand						
Australia	Jemena Gas Networks	2010-2015	Gas distribution	Australia-Style Hybrid	Not reviewed	Access Arrangement Proposal for NSW Gas Networks, Final Decision; June 2010
Australia	All New South Wales distributors	2009-2014	Power distribution	Australia-Style Hybrid	Not reviewed	New South Wales Distribution Determination 2009-10 to 2013-14 Final Decision
Australia	ElectraNet	2008-2013	Power transmission	Australia-Style Hybrid	Not reviewed	Final Decision; April 2008
Australia	ElectraNet	2003-2008	Power transmission	Australia-Style Hybrid	Not reviewed	File No: C2001/1094
Australia	Powerlink	2007-2012	Power transmission	Australia-Style Hybrid	Not reviewed	Final Decision; June 2007

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Historic (cont'd)						
Australia/New Zealand (cont'd)						
Australia	Powerlink	2002-2007	Power transmission	Australia-Style Hybrid	Not reviewed	File No: 2000/659
Australia	Snowy Mountains	1999-2004 (terminated in 2002 due to merger with Transgrid)	Electric transmission	Australia-Style Hybrid	Not reviewed	File No: C1999/62
Australia	SPI PowerNet	2003-2008	Power transmission	Australia-Style Hybrid	Not reviewed	File No: C2001/1093
Australia	Transend	2009-2014	Power transmission	Australia-Style Hybrid	Not reviewed	Transend Transmission Determination 2009/10-2013/14 (Final Decision)
Australia	Transend	2004-2009	Power transmission	Australia-Style Hybrid	Not reviewed	File No: C2001/1100
Australia	Transgrid	2009-2014	Electric transmission	Australia-Style Hybrid	Not reviewed	Transgrid Transmission Determination 2009/10-2013/14 (Final Decision)
Australia	Transgrid	2004-2009	Power transmission	Australia-Style Hybrid	Not reviewed	File No. M2003/287
Australia	Transgrid	1999-2004	Power transmission	Australia-Style Hybrid	Not reviewed	File No: CG98/118
Australia- New South Wales	Country Energy Gas	2006-2010	Gas distribution	Australia-Style Hybrid	Not reviewed	Revised Access Arrangement for Country Energy Gas Network, Final Decision; November 2005
Australia- New South Wales	AGL Gas Networks	1999-2004	Gas transmission & distribution	Australia-Style Hybrid	Not reviewed	Access Arrangement for AGL Gas Networks Limited, Final Decision; July 2000
Australia - New South Wales	All	2004-2009	Power distribution	Australia-Style Hybrid	Not reviewed	File No: S2004/138
Australia - New South Wales	All	1999-2004	Power distribution	Australia-Style Hybrid	Not reviewed	NEC Determination 99-1
Australia - Northern Territory	Power & Water	2000-2003	Power transmission & distribution	Australia-Style Hybrid	Not reviewed	Revenue Determinations document; June 2000
Australia - Northern Territory	Power & Water	2009-2014	Power transmission & distribution	Price Cap Index: CPI + 0.85%	Not reviewed	Final Determination Networks Pricing: 2009 Regulatory Reset; March 2009
Australia - Northern Territory	Power & Water	2004-2009	Power transmission & distribution	Price Cap Index: CPI - 2%	Not reviewed	Final Determination Networks Pricing: 2004 Regulatory Reset; February 2004
Australia -Victoria	All	2008-2012	Gas distribution	Australia-Style Hybrid	Not reviewed	Gas Access Arragement Review 2008-2012, Final Decision; March 2008
Australia -Victoria	All	2003-2007	Gas distribution	Australia-Style Hybrid	Not reviewed	Review of Gas Access Arrangements, Final Decision; October 2002
Australia -Victoria	All	2006-2010	Power distribution	Australia-Style Hybrid	Not reviewed	Electricity Distribution Price Review 2006-2010 (Final Decision Volume 1)
Australia -Victoria	All	2001-2005	Power distribution	Australia-Style Hybrid	Not reviewed	Electricity Distribution Price Determination 2001-2005 (Final Decision Volume 1)
New Zealand	All	2010-2015	Power distribution	Revenue Cap Index: CPI - 0%	None	Commerce Commission Initial Reset of the Default Price-Quality Path for Electricity Distribution Businesses Decisions Paper; November 2009

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Historic (cont'd)						
Australia/New Zealand (cont'd)						
New Zealand	All	2004-2009	Power distribution	Revenue Cap Index: CPI - 0.86% (Average across firms)	None	Commerce Commission Regulation of Electricity Lines Businesses, Targeted Control Regime, Threshold Decisions; December 2003
Canada						
Alberta	Enmax	2007-2013	Power distribution	Price Cap Index: Input Price Index -1.2%	50-50 for excess earnings above deadband	Decision 2009-035
Alberta	Northwestern Utilities	1999-2002, reopened for 2001-2002	Gas distribution	Revenue Cap Stairstep; at reopener replaced with rate freeze	Sharing of earnings above/below deadband with multiple bands for overearnings; at reopener simplified to 50/50 sharing of overearnings with deadband	Decision U98060; March 1998 and Decision 2000-85; December 2000
Alberta	EPCOR	2002-2005, Terminated 12/31/2003	Power distribution	Price Cap Index	None	City of Edmonton Distribution Tariff Bylaw 12367; August 2000
Northwest Territory	Northland Utilities	2011-2013	Bundled power service	Revenue Cap Stairstep	None	Decision 17-2011; November 2011
Northwest Territory	Northland Utilities (Yellowknife)	2011-2013	Bundled power service	Revenue Cap Stairstep	None	Decision 13-2011; August 2011
Ontario	All Ontario Distributors	2010-2013	Power distribution	Price Cap Index: GDP IPI for Final Domestic Demand - (0.92% to 1.32% depending on company's annual performance in benchmarking studies)	None	EB-2007-0673; July 2008, September 2008, and January 2009
Ontario	All Ontario Distributors	2006-2009	Power distribution	Price Cap Index	None	EB-2006-0089; December 2006
Ontario	All Ontario Distributors	2000-2003	Power distribution	Price Cap Index	50-50 sharing of excess earnings without deadband	RP-1999-0034; January 2000
Ontario	Enbridge Gas Distribution	2008-2012	Gas distribution	Revenue Cap Index: GDP-IPI * 53%	50-50 sharing of excess earnings above deadband	EB-2007-0615; February 2008
Ontario	Union Gas	2008-2012	Gas distribution	Revenue Cap Index: GDP-IPI -1.82%	Sharing of overearnings only with deadband and multiple sharing bands	EB-2007-0606; January 2008
Ontario	Union Gas	2001-2003	Gas distribution	Price Cap Index	50-50 sharing around deadband	RP-1999-0017; July 2001
Great Britain						
Great Britain	All	2008-2013	Gas distribution	British-Style Hybrid	Not reviewed	Review- Final Proposals; Published December 2007
Great Britain	All	2002-2007, extended to 2008	Gas distribution	British-Style Hybrid	Not reviewed	"RPI - X @ 20." Ofgem Publication
Great Britain	All	2007-2012	Gas transmission	British-Style Hybrid	Not reviewed	Transmission Price Control Review; Published December 2006
Great Britain	All	2002-2007	Gas transmission	British-Style Hybrid	Not reviewed	"RPI - X @ 20." Ofgem Publication
Great Britain	All	1998-2002	Gas transmission & distribution	British-Style Hybrid	Not reviewed	Energy Law Journal Volume 23 No. 2 p.444
Great Britain	All	1994-1997	Gas transmission & distribution	British-Style Hybrid	Not reviewed	Energy Law Journal Volume 23 No. 2 p.444
Great Britain	All	1992-1994	Gas transmission & distribution	British-Style Hybrid	Not reviewed	Energy Law Journal Volume 23 No. 2 p.444
England & Wales	All	1995-2000	Power distribution	British-Style Hybrid	Not reviewed	"RPI - X @ 20." Ofgem Publication
Great Britain	All	2010-2015	Power distribution	British-Style Hybrid	Variances of cost from budgets shared though Information Quality Incentive Mechanism	Ofgem Distribution Price Control Review 5
Great Britain	All	2005-2010	Power distribution	British-Style Hybrid	Not reviewed	Ofgem Distribution Price Control Review 4

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Historic (cont'd)						
Great Britain (cont'd)						
Great Britain	All	2000-2005	Power distribution	British-Style Hybrid	Not reviewed	"RPI - X @ 20." Ofgem Publication
England & Wales	National Grid	2001-2006, extended to 2007	Power transmission	British-Style Hybrid	Not reviewed	OECD Reviews of Regulatory Reform
England & Wales	National Grid	1997-2001	Power transmission	British-Style Hybrid	Not reviewed	"RPI - X @ 20." Ofgem Publication
England & Wales	National Grid	1993-1997	Power transmission	British-Style Hybrid	Not reviewed	Energy Law Journal Volume 23 No. 2 p.452
Great Britain	All	2007-2012	Power transmission	British-Style Hybrid	Not reviewed	Transmission Price Control Review; Published December 2006
Scotland	All	2000-2005, extended to 2007	Power transmission	British-Style Hybrid	Not reviewed	"RPI - X @ 20." Ofgem Publication
Scotland	All	1995-2000	Power transmission	British-Style Hybrid	Not reviewed	1995 Report by Monopolies and Mergers Commission

[1] Rate freezes without extensive supplemental funding from capital cost trackers are excluded from this table.

VI. Formula Rates

A cost of service formula rate plan ("FRP") is essentially a wide-scope cost tracker designed to help a utility's revenue track its cost of service. Earnings surpluses or deficits occur when revenue and cost are not balanced. FRPs have earnings true up mechanisms that adjust rates so that earnings variances are reduced or eliminated. Regulatory cost is contained by limiting review of costs and revenues.

The earnings true up mechanism plays a key role in an FRP. Some mechanisms compare the earned ROE to the target ROE and then calculate the rate adjustment needed to reduce the ROE variance. Others adjust rates for the difference between revenue and a pro forma cost of service calculated using a rate of return target. Both approaches can keep the utility whole for the time value of money.

Earning true up mechanisms often include a deadband in which variances don't trigger a rate adjustment. Once the variance exceeds the deadband, however, earnings true up mechanisms in FRPs commonly move the ROE all, or almost all, of the way to its regulated target without sharing earnings variances. This is an important distinction between the earnings true up mechanism of an FRP and the earnings *sharing* mechanisms found in some multiyear rate plans.

Formula rates do not always address major plant additions. In state-regulated FRPs for retail electric services, for instance, major investment programs are generally approved separately through such means as hearings on certificates of public convenience and necessity. The resultant cost is often recovered through a separate tracker.

Mechanisms are sometimes added to an FRP to encourage better operating performance. For example, escalation of revenue that compensates the utility for its O&M expenses may be limited by a formula tied to an inflation index. FRPs in several states that include Illinois and Mississippi contain a number of targeted performance incentive mechanisms.

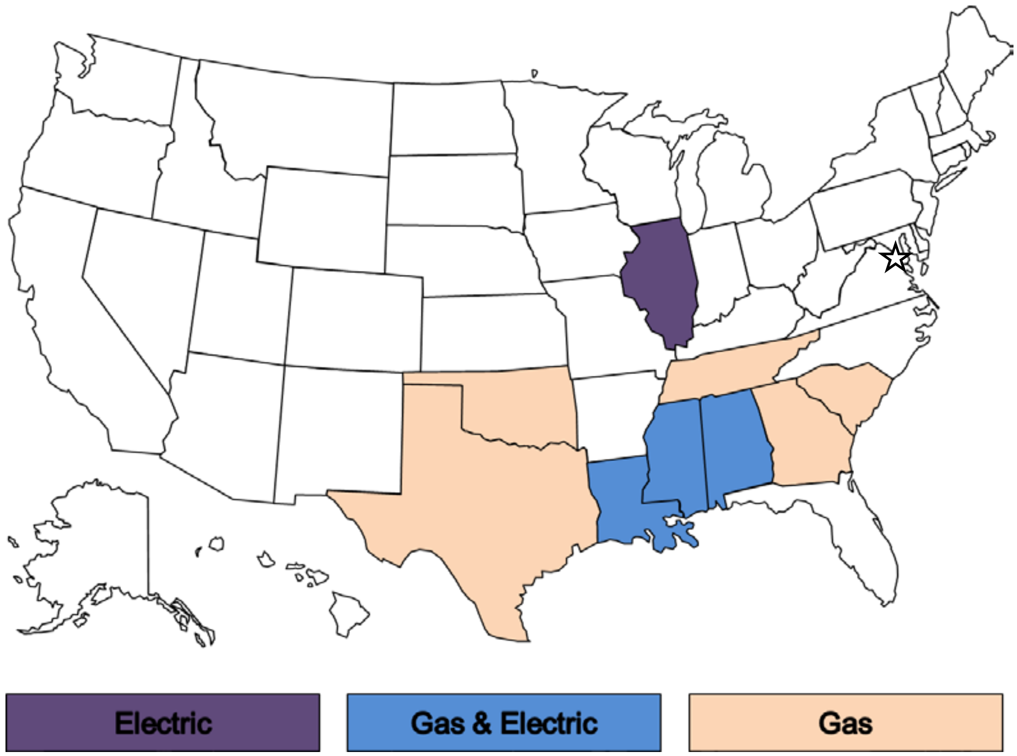
Formula rates have been used at the FERC and its predecessor agency to regulate interstate services of energy utilities for decades. Use of FRPs by the FERC was encouraged in the 1970s and early 1980s by rapid price inflation. Despite slower inflation in recent years, the FERC has made extensive use of formula rates for power transmission in an effort to simplify its daunting regulatory task and facilitate urgently needed investments.

Precedents for retail formula rates, which recover costs of generation and/or distribution, are listed in Table 8 and Figure 9.[10] It can be seen that FRPs for retail utility services are most common in the Southeast and South Central states. Alabama was an early innovator, approving "Rate Stabilization and Equalization"

[10] Some plans labeled as formula rates do not qualify for inclusion in this table and figure based on our definition. These usually take the form of ESMs that may or may not protect the utility from underearning.

plans for Alabama Power and Alabama Gas in the early 1980s.[11] Formula rates are now used to regulate electric utilities in Illinois, some gas and electric utilities in Louisiana and Mississippi, and some gas utilities in Georgia, Oklahoma, South Carolina, Tennessee, and Texas. Most of the recent approvals of formula rates have been for gas distribution, as this is one means to avoid the frequent rate cases that declining average use can trigger. However, formula rates were recently authorized legislatively for electric utilities in Arkansas.

Figure 9: Current Retail Formula Rate Precedents by State



[11] For further discussion of the Alabama FRP experience see Edison Electric Institute, *Case Study of Alabama Rate Stabilization and Equalization Mechanism*, June 2011.

Table 8

Retail Formula Rate Plan Precedents[1]

Jurisdiction	Company Name	Services	Plan Name	Plan Term	Case Reference
Current					
AL	Alabama Power	Bundled Power Service	Rate Stabilization & Equalization Factor (Rate RSE)	2013-open	Dockets 18117 and 18416 (August 2013)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	2014-2018	Dockets 18406 and 18328 (December 2013)
AL	Mobile Gas Service	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	2013-2017	Docket 28101 (August 2013)
GA	Atmos Energy	Gas	Georgia Rate Adjustment Mechanism (GRAM)	2012-open	Docket 34764 (December 2011)
IL	Ameren Illinois	Power Distribution	Rate Modernization Action Plan - Pricing (Rate MAP-P)	2011-2017, extended through 2019	Case 12-0001 (September 2012) and Public Act 098-1175
IL	Commonwealth Edison	Power Distribution	Rate Delivery Service Pricing and Performance (Rate DSPP)	2011-2017, extended through 2019	Case 11-0721 (May 2012) and Public Act 098-1175
LA	Atmos Energy - Louisiana Gas Service	Gas	Rate Stabilization Clause	2014-open	Docket U-32987 (June 2014)
LA	Atmos Energy - Trans Louisiana Gas	Gas	Rate Stabilization Clause	2014-open	Docket U-32987 (June 2014)
LA	Southwestern Electric Power	Electric	Formula Rate Plan	2013-2016	Docket U-32220 (July 2014)
MS	Atmos Energy Corp	Gas	Stable/Rate Rider	2011-present	Docket 05-UN-0503 (April 2011)
MS	Centerpoint Energy	Gas	Rate Regulation Adjustment Rider	2014-open	Docket 2014-UN-060 (May 2014)
MS	Entergy Mississippi	Bundled Power Service	Formula Rate Plan 6 (FRP-6)	2015-open	Docket 2014-UN-132 (December 2014)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan - 5 (PEP-5)	2010-open	Docket 2003-UN-0898 (November 2009)
OK	Centerpoint Energy Arkla	Gas	Performance Based Rate of Change Plan	2010-open	Cause PUD 201000030 (July 2010)
OK	Arkansas Oklahoma Gas	Gas	Performance Based Rate of Change Plan	2013-open	Cause PUD 201200236 (July 2013)
SC	Piedmont Gas	Gas	NA	2005-open	Docket 2005-125-G (September 2005)
SC	South Carolina Electric and Gas	Gas	NA	2005-open	Docket 2005-113-G (October 2005)
TN	Atmos Energy	Gas	Annual Review Mechanism	2015-open	Docket 14-00146 (May 2015)
TX	Centerpoint Energy-Texas Coast Division	Gas	Cost of Service Adjustment Clause	2008-open	Gas Utility Docket 9791 (October 2008)
TX	Atmos Energy-Mid Texas Division	Gas	Rate Review Mechanism	2013-2017	Various Resolutions/Ordinances across cities in service territory, including City of Fort Worth Ordinance 17989-02-2007
TX	Atmos Energy West Texas Division	Gas	Rate Review Mechanism	2014-open	Various Resolutions/Ordinances across cities in service territory including City of Tulia Ordinance 2014-03
TX	Texas Gas Service - Rio Grande Service Area	Gas	Cost of Service Adjustment	2012-open	Various Resolutions/Ordinances across cities in service territory
TX	Texas Gas Service - North Service Area	Gas	Cost of Service Adjustment Tariff	2009-open	Various Resolutions/Ordinances in service territory and Gas Utility Docket 9839 (April 2009)

Table 8 (cont'd)

Jurisdiction	Company Name	Services	Plan Name	Plan Term	Case Reference
Historic					
AL	Alabama Power	Bundled Power Service	Rate Stabilization & Equalization Factor (Rate RSE)	2006-2013	Dockets 18117 and 18416 (October 2005)
AL	Alabama Power	Bundled Power Service	Rate Stabilization & Equalization Factor (Rate RSE)	2002-2006	Dockets 18117 and 18416 (March 2002)
AL	Alabama Power	Bundled Power Service	Rate Stabilization & Equalization Factor (Rate RSE)	1998-2002	Dockets 18117 and 18416 (March 1998)
AL	Alabama Power	Bundled Power Service	Rate Stabilization & Equalization Factor (Rate RSE)	1990-1998	Dockets 18117 and 18416 (March 1990)
AL	Alabama Power	Bundled Power Service	Rate Stabilization & Equalization Factor (Rate RSE)	1985-1990	Dockets 18117 and 18416 (June 1985)
AL	Alabama Power	Bundled Power Service	Rate Stabilization & Equalization Factor (Rate RSE)	1982-1985	Dockets 18117 and 18416 (November 1982)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	2008-2014, later changed to 2013	Dockets 18406 and 18328 (December 2007)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	2002-2007	Dockets 18046 and 18328 (June 2002)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	1996-2001	Dockets 18046 and 18328 (October 1996)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	1991-1995	Dockets 18046 and 18328 (December 1990)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	1987-1990	Dockets 18046 and 18328 (September 1987)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	1985-1987	Dockets 18046 and 18328 (May 1985)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	1983-1985	Dockets 18046 and 18328 (January 1983)
AL	Mobile Gas Service	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	2009-2013	Docket 28101 (December 2009)
AL	Mobile Gas Service	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	2005-2009	Docket 28101 (June 2005)
AL	Mobile Gas Service	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	2001-2005	Docket 28101 (June 2002)
LA	Atmos Energy - Louisiana Gas Service	Gas	Rate Stabilization Plan	2006-2014	Docket U-21484 (May 2006)
LA	Atmos Energy - Louisiana Gas Service	Gas	Rate Stabilization Plan	2001-2003	Docket U-21484 (January 2001)
LA	Atmos Energy - Trans Louisiana Gas	Gas	Rate Stabilization Plan	2006-2014	Dockets U-28814 and U-28588 and U-28587(May 2006)
LA	Entergy New Orleans	Electric and Gas	Formula Rate Plan	2010-2012	Docket UD-08-03 (April 2009)
LA	Entergy New Orleans	Electric only	Formula Rate Plan	2004-2006	Docket UD-01-04 (May 2003)
MS	Atmos Energy Corp	Gas	Stable/Rate Rider	2009-2011	Docket 05-UN-0503 (December 2009)
MS	Atmos Energy Corp	Gas	Stable/Rate Rider	2006-2009	Docket 05-UN-0503 (October 2005)
MS	Atmos Energy Corp	Gas	Stable/Rate Rider	1992-2006	Docket 92-UA-0230 (September 1992)
MS	Centerpoint Energy	Gas	Rate Regulation Adjustment Rider	2012-2014	Docket 12-UN-139 (May 2012)

Table 8 (cont'd)

Jurisdiction	Company Name	Services	Plan Name	Plan Term	Case Reference
Historic (cont'd)					
MS	Centerpoint Energy Entex	Gas	Rate Regulation Adjustment Rider	2008-2012	Docket 07-UN-548 (December 2007)
MS	Centerpoint Energy Entex	Gas	Rate Regulation Adjustment Rider	1996-2007	Docket 96-UN-0202 (September 1996)
MS	Entergy Mississippi	Bundled Power Service	Formula Rate Plan 5 (FRP-5)	2010-2014	Docket 2009-UN-388 (March 2010)
MS	Entergy Mississippi	Bundled Power Service	Formula Rate Plan 1 (FRP-1)	1995	Docket 93-UA-0301 (March 1994)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan - 4A (PEP- 4A)	2009	Docket 06-UN-0511 (January 2009)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan - 4 (PEP-4)	2004-2009	Docket 03-UN-0898 (May 2004)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan - 3 (PEP-3)	2002-2004	Docket 01-UN-0826 (October 2002)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan - 2A (PEP-2A)	2001-2002	Docket 01-UN-0548 (December 2001)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan - 1A (PEP-1A)	1992-1993	Docket 92-UN-0059 (July 1992)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan - 1 (PEP-1)	1991-1992	Docket 90-UN-0287 (December 1990)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan	1986-1990	Cause PUD U-4761 (August 1986)
OK	Centerpoint Energy Arkla	Gas	Performance Based Rate of Change Plan	2008-2010	Cause PUD 200800062 (July 2008)
OK	Centerpoint Energy Arkla	Gas	Performance Based Rate of Change Plan	2004-2008	Cause PUD 200400187 (November 2004)
OK	Oklahoma Natural Gas	Gas	Performance Based Rate of Change Plan	2010-2014	Docket 200800348 (April 2009)
TX	Atmos Energy-Mid Texas Division	Gas	Rate Review Mechanism	2008 - varying end dates	Various Resolutions/Ordinances across cities in service territory, including City of Fort Worth Ordinance 17989-02-2008
TX	Atmos Energy West Texas Division	Gas	Rate Review Mechanism	2009 - conclusion of rate case to be filed on or before June 1, 2013	Various Resolutions/Ordinances across cities in service territory
TX	Centerpoint Energy - Beaumont East Texas Gas Division	Gas	Cost of Service Adjustment	2009-2011	Various Resolutions/Ordinances across cities in service territory
TX	Texas Gas Service - Rio Grande Service Area	Gas	Cost of Service Adjustment	2009-2011	Various Resolutions/Ordinances across cities in service territory

[1] Table excludes some mechanisms that do not conform to our FRP definition. Some of these are called formula rate plans.

VII. Marketing Flexibility

This is a new section, added since the last survey. We've added it because we (and EEI) believe that marketing flexibility is a growing, strategic issue for EEI members. Several trends in business conditions are driving the need for more flexibility. The growth of distributed energy resources, for example, is a competitive challenge but also brings new service opportunities related to the development of distributed energy assets (e.g., designing, financing, procuring, building, fueling, and maintaining). Grid modernization is providing new functional capabilities to the grid which also create new service opportunities.[12] Examples include new reliability, network management, and transaction management services. Residential and commercial customers also have a growing interest in plug-in electric vehicles, and all retail customers have shown an interest in green power packages that can be supplied from grid-accessed resources.

New services will tend to be optional services that all customers will not want. Customers must be able to decline them; and if they do, not to incur associated costs. Competitive alternatives will be available for many of these services, and customers may have special needs that are difficult to address with standard tariffs. Thus, utilities will need to be able to respond quickly to the market. They will often be price "takers," as opposed to price "makers."

To date, regulatory precedent allowing investor-owned electric utilities to offer many of these services has been limited. This chapter is, in effect, a place holder for expected future electricity precedent.

Why Electric Utilities Need Marketing Flexibility

Of course, electric utilities have always needed flexibility in some of the markets they serve:

- Utility assets have uses in markets other than those for retail electric services. Most notably, surplus generating capacity of VIEUs can be used for sales in bulk power markets. These markets are competitive and price-volatile. Land in transmission corridors can be well-suited for nurseries. Prices utilities charge in competitive markets like these are largely decontrolled. Margins earned in these markets are shared with customers of retail electric services.
- The demand of large-load retail customers is often sensitive to the rates and other terms of service utilities offer because these customers have power-intensive technologies and/or options to cost-competitively cogenerate or operate at alternative locations, or are economically marginal. Customers of this kind are especially important to vertically integrated utilities. Discounts or special contracts for such customers are traditionally allowed but often require specific approval. Commission reviews of special contracts can take months.

[12] For an overview of modernization, see: EPRI, *The Integrated Grid: Realizing the Full Value of Central and Distributed Energy Resources*, 2014.

Marketing Flexibility Remedies

Marketing flexibility runs the gamut from greater commission effort to approve new rates and services by traditional means to "light handed" regulation and outright decontrol. Light handed regulation typically takes the form of expedited approval of market offerings. These offerings may be subject to further scrutiny at a later date (e.g., in the next rate case).

Flexibility is most commonly granted for rates and services with certain characteristics. Light handed regulation of optional rates and services, for example, is based on the grounds that customers are protected by their freedom not to take the service, their continued access to service under standard tariffs, and the availability of alternatives in unregulated markets. Optional offerings include tariffs open to all qualifying customers, special contracts, and discretionary value-added services. Decontrol is typically permitted only for offerings to markets where vigorous competition reigns.

Marketing Flexibility Examples: Electric Utilities

Marketing flexibility is not extensive in the electric utility industry today but there are nonetheless notable examples such as the following.

- Four Florida electric utilities have "Commercial/Industrial Service Rider" ("CISR") tariffs that allow them to negotiate contract service agreements ("CSAs") that outline discounts on the base energy and/or demand charges for large load customers who can show that they have viable alternatives to utility-provided electric service.[13] The discounted rate must cover the incremental cost of service provision and provide a contribution to fixed costs. CSAs do not need commission approval but the commission has the option to conduct a prudence review of any signed contract.

- Duke Energy offers large North Carolina customers an optional Green Source Rider service. The program allows customers that have added at least 1 MW of new load since June 2012 to apply for an annual amount of renewable energy (and the associated renewable energy certificates) over a specific term (between 3-15 years). Customers may request a particular renewable resource in their application. Duke would then negotiate a purchased power agreement on behalf of the customer or attempt to source the energy from its own assets.

[13] Florida Public Service Commission (2014), Order Approving Commercial/Industrial Service Rider Tariff, Order No. PSC-14-0110-TRF-EI.

Marketing Flexibility in Other Regulated Industries

Regulators and electric utilities considering new forms of marketing flexibility can learn from other utility industries that have experienced technological change, increased competition, and/or complex and changing customer needs. We provide here brief overviews of experience in the telecommunications, gas distribution, gas transmission, and railroad industries.

Telecommunications

Local telephone companies (aka incumbent local exchange carriers or "ILECs") control the traditional distribution networks connecting residences and businesses. The "last mile" services they provide include the interconnection needed for long-distance, data, security, paging, and mobile telephone services as well as local telephone calling. ILECs have in the last 30 years confronted extensive competition, rapid technological change, and new marketing opportunities. Challenges they have faced have many parallels to those emerging for electric utilities.

The Federal Communications Commission ("FCC") regulates interstate access services of ILECs. Other ILEC services are regulated by state commissions. In the 1980s, ILECs were still regulated using cost-of-service regulation with complex reporting and compensation schemes. This was succeeded by multiyear rate plans, often called "price cap" plans since they capped rate escalation but permitted some discounts to encourage greater system use. Price caps were often escalated using inflation – X formulas where the X factor reflected an estimate of the telecommunication industry productivity trend. Prices were separately capped for several baskets of services. This insulated customers in each service basket from discounts offered to other baskets. Insulation was heightened by the infrequency (or elimination) of rate cases and the common lack of earnings sharing. The FCC instituted price caps for interstate access services of ILECs in the early 1990s. Price caps also became commonplace in state ILEC regulation.

Marketing flexibility for ILECs has been most relevant in the following two areas.

Competition in Traditional Service Markets Some services ILECs offered became subject to mounting competitive pressure that varied with the location where service was offered. For example, by the late 1990s, competitive access providers like MFS were constructing high-speed fiber optic networks connecting office buildings in metropolitan areas. These networks allowed businesses and long-distance carriers to connect to customers while bypassing ILEC data facilities. They could also be used to transmit voice traffic, avoiding ILEC voice access charges. High regulated prices were uncompetitive in high-traffic locations where facilities-based competitors entered the market. For services subject to competitive challenges, price cap plans in many states permitted discounts to standard tariffs within certain bands (e.g., rates could rise by 5% less than the price cap index) and/or subject to pricing floors that discouraged predation and cross-subsidization. In markets where pronounced competition could be demonstrated, ILEC rates were sometimes effectively decontrolled.

Innovative Services Technological change gave rise to innovative new services [e.g., Voicemail, Centrex and high-speed data (e.g., digital subscriber loop or "DSL")] which utilize essential network assets of ILECs and cannot not practically be performed by affiliates.[14] Many of these services were deemed “information” services and were regulated by the FCC. Regulators ultimately permitted ILECs to provide a host of these services and allowed considerable pricing flexibility.

Gas Distribution

Natural gas distributors also need flexibility to address some markets that they serve. Like VIEUs, many large-load customers of gas distributors have price sensitive demands and special needs. Distributors have frequently obtained light handed regulation to respond to these challenges. Nicor Gas, for example, offers a contract service for customers taking delivery near interstate gas pipelines. Contracts are submitted to state regulators for informational purposes and are treated on a proprietary basis. Nicor has similar flexibility to enter into custom contracts with electric power generators. The Company must document to the regulator that revenues from such service exceed the incremental cost of service, thereby ensuring a positive contribution to fixed cost recovery.

Interstate Gas Transmission

Interstate pipeline companies need marketing flexibility for many reasons. Demand for a pipeline’s services can be sensitive to the terms it offers due to competition from other pipelines, dual-fuel capabilities of large volume customers, the extreme variability of need for service, and other special needs. It is difficult to design standard tariffs that meet the needs of all customers. Pipelines also have their own needs, such as an interest in signing anchor shippers to long-term contracts before constructing new facilities. Since 1996, the FERC has engaged in light handed regulation of negotiated pipeline rates to individual customers who have recourse to service under a standard tariff. The FERC gives a quick turnaround to most requests for negotiated contracts. A sizable share of pipeline service is conducted under negotiated rates. A remarkable variety of rate designs have been employed.[15]

Railroads

In the railroad industry, MRPs were permitted under the terms of the Staggers Railroad Act of 1980. Railroads were given a freer hand to respond to competition from truckers, waterborne carriers, and other railroads. The railroads also used marketing flexibility to offer discounts to customers that reduced their cost by assembling their own unit trains and not requesting pickups or deliveries in remote locations.

MRPs are less common today in the railroad and telecom industries. However, marketing flexibility continues under new regulatory systems that share with MRPs the attribute of protecting core customers without linking a carrier’s rates closely to its own cost. Railroads have recently used this flexibility to compete for traffic from new oil field developments.

[14] Centrex service, which provided businesses features like call-waiting, auto attendant, voicemail, 4-digit extension dialing and conference calling, could also be sourced by purchasing or leasing a private branch exchange ("PBX"), a private network platform that enabled these features.
[15] See, for example, Comments of the Interstate Natural Gas Association of America in FERC Docket PLO2-6-000, September 2002.

VIII. Conclusions

Regulation of North American energy utilities is evolving to better meet the needs of utilities and their customers in a rapidly changing world. Innovation continues, while some older forms of Altreg such as multiyear rate plans are having a renaissance.

The variety of Altreg approaches that have been established reflects the varied circumstances of utilities. Some are vertically integrated, while others are more specialized wire companies. Capex needs and trends in average use vary greatly. Regulatory traditions also vary across the US and other advanced industrial countries.

No single Altreg approach is right for every situation. The availability of multiple remedies for the underlying challenges increases the chance that an approach has already been tried that would work well, with some adjustments, in new situations. Numerous precedents for an approach should raise confidence that it makes good sense under fairly common circumstances.

Taken together, the many innovations described in this survey can encourage utilities to achieve compensatory rates of return while making needed investments, improving efficiency, and developing more market-responsive rates and services. Regulation can be streamlined, and utilities can be encouraged to embrace cost-effective DERs. Regulators and stakeholders to regulation across the US should give priority attention to these options and consider which kinds of Altreg might work best in their situation.

THE COST OF CAPITAL TO A PUBLIC UTILITY

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1974
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so that the current value can be widely off the mark as a measure of the expected future value.

5.4 *Other Measures of Growth*

The measure of expected growth in the dividend established in the previous two sections, the intrinsic growth rate, is not the only possible measure of the variable. Another plausible measure is some average of the past rates of growth in the dividend. Under our model of security valuation, dividend, earnings, and price per share all are expected to grow at the same rate. Hence, the rates of growth in the dividend, earnings, and price also are candidates for estimates of the expected rate of growth in the dividend.

Let us consider first the rate of growth in earnings per share. The earnings per share during T adjusted for stock splits and stock dividends to make interperiod comparisons valid is

$$\mathrm{AYPS}(T) = \mathrm{AFC}(T)/.5\,[\mathrm{ANS}(T) + \mathrm{ANS}(T-1)], \qquad (5.4.1)$$

where $\mathrm{ANS}(T)$ is the number of shares outstanding at the end of T adjusted for stock splits and dividends. The rate of growth in earnings per share during T is

$$\mathrm{YGR}(T) = [\mathrm{AYPS}(T) - \mathrm{AYPS}(T-1)]/\mathrm{AYPS}(T-1). \qquad (5.4.2)$$

For reasons to be given shortly, the smoothed rate of growth in earnings is superior to the current rate as a forecast of the expected rate. The smoothed rate of earnings growth is obtained from

$$Ln[1 + \mathrm{YGRS}(T)] = \lambda Ln[1 + \mathrm{YGR}(T)] + (1-\lambda) Ln[1 + \mathrm{YGRS}(T-1)], \qquad (5.4.3)$$

with $\lambda = .15$ and $\mathrm{YGRS}(1953) = .04$.

The primary reason for a difference between YGR and GRTH is a change in the rate of return on the common equity. To illustrate, assume a firm that has been earning a return on common of .10 and retaining one-half of its income to finance its investment. The rate of growth under both measures will be .05. If the firm's rate

of return on common rises from .10 to .11, the retention growth rate will rise from .05 to (.5)(.11) = .055. However, the earnings growth rate will rise from .05 to .155.[5] Furthermore, the earnings growth rate in subsequent periods will be .055 if the return on common remains .11. This example suggests that the intrinsic growth rate is superior to the earnings growth rate as a measure of expected growth. Investors nonetheless may look to past data on earnings growth for information on expected future growth, and it is the growth investors expect that should be used to measure share yield.

A number of considerations suggest that investors may, in fact, use earnings growth as a measure of expected future growth. First, the intrinsic growth rate includes stock financing growth as well as retention growth. The former is difficult for us to measure and may be even more difficult for investors. Consequently, investors may use past earnings growth to forecast the future since it incorporates in one statistic growth from all sources. Second, we saw that inflation will result in a rise in the allowed rate of return on equity for a regulated company. If this response to inflation takes place with a lag, that is, the regulatory agency raises RRC over time, earnings growth will reflect the forecast rate of growth better than intrinsic growth. Finally, it appears that security analysts use past growth in earnings more than any other variable to forecast future growth.

Given that earnings growth is used by investors to forecast future growth, the smoothed value of the variable YGRS is superior to the current value. The previous illustration revealed that YGR overreacts to changes in the allowed rate of return and therefore is subject to large random fluctuations. The data on YGR confirm this conclusion.

The use of dividend growth as a forecast of future growth is subject to the same limitations as earnings if the firm pays a constant fraction of its earnings in dividends. That is, under this assumption the dividend growth rate in any period is the same as the earnings growth rate. Firms tend to change their dividend rate from one

[5] Let the book value per share at the start of T be $\mathrm{BVS}(T-1) = \$50.00$. With $\mathrm{RRC}(T) = .10$, $\mathrm{AYP}(T) = \$5.00$, and with $\mathrm{RETR}(T) = .5$, $\mathrm{BVS}(T) =$ [illegible]. If $\mathrm{RRC}(T+1) = .10$, $\mathrm{AYP}(T+1) = \$5.25$, and $\mathrm{YGR}(T+1) = \mathrm{RTGR}($[illegible] $.05$. However, if $\mathrm{RRC}(T+1) = .11$, $\mathrm{RTGR}(T+1) = (.11)(.5) = .055$, while A[illegible]$(T+1) = \$5.775$, and $\mathrm{YGR}(T+1) = (\$5.775 - \$5.00)/\$5.00 = .155$.

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NEW REGULATORY FINANCE

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The average growth rate estimate from all the analysts that follow the company measures the consensus expectation of the investment community for that company. In most cases, it is necessary to use earnings forecasts rather than dividend forecasts due to the extreme scarcity of dividend forecasts compared to the widespread availability of earnings forecasts. Given the paucity and variability of dividend forecasts, using the latter would produce unreliable DCF results. In any event, the use of the DCF model prospectively assumes constant growth in both earnings and dividends. Moreover, as discussed below, there is an abundance of empirical research that shows the validity and superiority of earnings forecasts relative to historical estimates when estimating the cost of capital.

The uniformity of growth projections is a test of whether they are typical of the market as a whole. If, for example, 10 out of 15 analysts forecast growth in the 7%–9% range, the probability is high that their analysis reflects a degree of consensus in the market as a whole. As a side note, the lack of uniformity in growth projections is a reasonable indicator of higher risk. Chapter 3 alluded to divergence of opinion amongst analysts as a valid risk indicator.

Because of the dominance of institutional investors and their influence on individual investors, analysts' forecasts of long-run growth rates provide a sound basis for estimating required returns. Financial analysts exert a strong influence on the expectations of many investors who do not possess the resources to make their own forecasts, that is, they are a cause of g. The accuracy of these forecasts in the sense of whether they turn out to be correct is not at issue here, as long as they reflect widely held expectations. As long as the forecasts are typical and/or influential in that they are consistent with current stock price levels, they are relevant. The use of analysts' forecasts in the DCF model is sometimes denounced on the grounds that it is difficult to forecast earnings and dividends for only one year, let alone for longer time periods. This objection is unfounded, however, because it is present investor expectations that are being priced; it is the consensus forecast that is embedded in price and therefore in required return, and not the future as it will turn out to be.

Empirical Literature on Earnings Forecasts

Published studies in the academic literature demonstrate that growth forecasts made by security analysts represent an appropriate source of DCF growth rates, are reasonable indicators of investor expectations and are more accurate than forecasts based on historical growth. These studies show that investors rely on analysts' forecasts to a greater extent than on historic data only.

Academic research confirms the superiority of analysts' earnings forecasts over univariate time-series forecasts that rely on history. This latter category

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mendation that is different than the expected ROE that the method assumes the utility will earn forever. For example, using an expected return on equity of 11% to determine the growth rate and using the growth rate to recommend a return on equity of 9% is inconsistent. It is not reasonable to assume that this regulated utility company is expected to earn 11% forever, but recommend a 9% return on equity. The only way this utility can earn 11% is that rates be set by the regulator so that the utility will in fact earn 11%. One is assuming, in effect, that the company will earn a return rate exceeding the recommended cost of equity forever, but then one is recommending that a different rate be granted by the regulator. In essence, using an ROE in the sustainable growth formula that differs from the final estimated cost of equity is asking the regulator to adopt two different returns.

The circularity problem is somewhat dampened by the self-correcting nature of the DCF model. If a high equity return is granted, the stock price will increase in response to the unanticipated favorable return allowance, lowering the dividend yield component of market return in compensation for the high g induced by the high allowed return. At the next regulatory hearing, more conservative forecasts of r would prevail. The impact on the dual components of the DCF formula, yield and growth, are at least partially offsetting.

Third, the empirical finance literature discussed earlier demonstrates that the sustainable growth method of determining growth is not as significantly correlated to measures of value, such as stock price and price/earnings ratios, as other historical growth measures or analysts' growth forecasts. Other proxies for growth, such as historical growth rates and analysts' growth forecasts, outperform retention growth estimates. See for example Timme and Eiseman (1989).

In summary, there are three proxies for the expected growth component of the DCF model: historical growth rates, analysts' forecasts, and the sustainable growth method. Criteria in choosing among the three proxies should include ease of use, ease of understanding, theoretical and mathematical correctness, and empirical validation. The latter two are crucial. The method should be logically valid and consistent, and should possess an adequate track record in predicting and explaining security value. The retention growth method is the weakest of the three proxies on both conceptual and empirical grounds. The research in this area has shown that the first two growth proxies do a better job of explaining variations in market valuation (M/B and P/E ratios) and are more highly correlated to measures of value than is the retention growth proxy.

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Chapter 7

Company Size and Return

One of the most remarkable discoveries of modern finance is the finding of a relationship between company size and return.[1] Historically on average, small companies have higher returns than those of large ones. Earlier chapters of this book document this phenomenon for the smallest stocks on the New York Stock Exchange, or NYSE. The relationship between company size and return cuts across the entire size spectrum; it is not restricted to the smallest stocks. This chapter examines returns across the entire range of company size.

Construction of the Size Decile Portfolios

The portfolios used in this chapter are those created by the Center for Research in Security Prices, or CRSP, at the University of Chicago's Booth School of Business. CRSP has refined the methodology of creating size-based portfolios and has applied this methodology to the entire universe of NYSE/AMEX/NASDAQ-listed securities going back to 1926.

The NYSE universe excludes closed-end mutual funds, preferred stocks, real estate investment trusts, foreign stocks, American Depository Receipts, unit investment trusts, and Americus Trusts. All companies on the NYSE are ranked by the combined market capitalization of all their eligible equity securities. The companies are then split into 10 equally populated groups or deciles. Eligible companies traded on the NYSE, the NYSE MKT LLC (formerly known as the American Stock Exchange, or AMEX), and the NASDAQ Stock Market (formerly the NASDAQ National Market) are then assigned to the appropriate deciles according to their capitalization in relation to the NYSE breakpoints. The portfolios are rebalanced using closing prices for the last trading day of March, June, September, and December. Securities added during the quarter are assigned to the appropriate portfolio when two consecutive month-end prices are available. If the final NYSE price for a security that becomes delisted is a month-end price, then that month's return is included in the quarterly return of the portfolio. When a month-end NYSE price is missing, the month-end value is derived from merger terms, quotations on regional exchanges, and other sources. If a month-end value is not available, the last available daily price is used.

In October 2008, NYSE Euronext acquired the American Stock Exchange and rebranded the index as NYSE Amex. Later, in May 2012, it was renamed NYSE MKT LLC. For the sake of continuity, we refer to this index as AMEX, its historical name.

Base security returns are monthly holding period returns. All distributions are added to the month-end prices. Appropriate adjustments are made to prices to account for stock splits and dividends. The return on a portfolio for one month is calculated as the value weighted average of the returns for the individual stocks in the portfolio. Annual portfolio returns are calculated by compounding the monthly portfolio returns.

Aspects of the Company Size Effect

The company size phenomenon is remarkable in several ways. First, the greater risk of small-cap does not, in the context of the capital asset pricing model, fully account for their higher returns over the long term. In the CAPM only systematic, or beta risk, is rewarded; small-cap stock returns have exceeded those implied by their betas.

Second, the calendar annual return differences between small- and large-cap companies are serially correlated. This suggests that past annual returns may be of some value in predicting future annual returns. Such serial correlation, or autocorrelation, is practically unknown in the market for large-cap stocks and in most other equity markets but is evident in the size premium series.

Table 7-5: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ Number of Companies, Historical and Recent Market Capitalization

Decile	Historical Average Percentage of Total Capitalization	Recent Number of Companies	Recent Decile Market Capitalization (in Thousands)	Recent Percentage of Total Capitalization
1-Largest	64.03%	185	14,808,784,274	64.25%
2	14.04	199	3,247,447,914	14.09
3	6.88	194	1,579,432,904	6.85
4	4.56	221	1,042,428,212	4.52
5	3.03	215	694,147,086	3.01
6	2.56	265	585,657,120	2.54
7	1.99	317	449,325,255	1.95
8	1.51	417	333,731,801	1.45
9	0.80	395	173,673,205	0.75
10-Smallest	0.61	948	135,401,288	0.59
Mid-Cap 3-5	14.47	630	3,316,008,202	14.39
Low-Cap 6-8	6.05	999	1,368,714,176	5.94
Micro-Cap 9-10	1.41	1,343	309,074,493	1.34

Data from 1926–2014. Source: Morningstar and CRSP. Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2015 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

Historical average percentage of total capitalization shows the average, over the last 89 years, of the decile market values as a percentage of the total NYSE/AMEX/NASDAQ calculated each month. Number of companies in deciles, recent market capitalization of deciles, and recent percentage of total capitalization are as of Sept. 30, 2014.

Decile	Recent Market Capitalization (in Thousands)	Company Name
1-Largest	$591,015,721	Apple Inc
2	24,272,837	Cummins Inc
3	10,105,622	Murphy Oil Corp
4	5,844,592	Alaska Airgroup Inc
5	3,724,186	Great Plains Energy Inc
6	2,542,913	Wolverine World Wide Inc
7	1,686,860	Wesco Aircraft Holdings Inc
8	1,010,634	First Bancorp P R
9	548,839	G P Strategies Corp
10-Smallest	300,725	M V Oil Trust

Source: Morningstar and CRSP. Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2015 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission. Market capitalization and name of largest company in each decile are as of Sept. 30, 2014.

Long-Term Returns in Excess of Systematic Risk

The capital asset pricing model, or CAPM, does not fully account for the higher returns of small-cap stocks. Table 7-6 shows the returns in excess of the riskless rate over the past 89 years for each decile of the NYSE/AMEX/NASDAQ.

The CAPM can be expressed as follows:

$$k_s = r_f + (\beta_s \times ERP)$$

where,

k_s = the expected return for company **s**;
r_f = the expected return of the riskless asset;
β_s = the beta of the stock of company **s**; and,
ERP = the expected equity risk premium, or the amount by which investors expect the future return on equities to exceed that on the riskless asset.

Table 7-6 uses the CAPM to estimate the return in excess of the riskless rate and compares this estimate to historical performance. According to the CAPM, the expected return on a security should consist of the riskless rate plus an additional return to compensate for the systematic risk of the security. The return in excess of the riskless rate is estimated in the context of the CAPM by multiplying the equity risk premium by β (beta). The equity risk premium is the return that compensates investors for taking on risk equal to the risk of the market as a whole (systematic risk). Beta measures the extent to which a security or portfolio is exposed to systematic risk. The beta of each decile indicates the degree to which the decile's return moves with that of the overall market.

A beta greater than one indicates that the security or portfolio has greater systematic risk than the market; according to the CAPM equation, investors are compensated for taking on this additional risk. Yet, Table 7-6 illustrates that the smaller deciles have had returns that are not fully explained by their higher betas. This return in excess of that predicted by CAPM increases as one moves from the largest companies in decile 1 to the smallest in decile 10. The excess return is especially pronounced for micro-cap stocks (deciles 9-10). This size-related phenomenon has prompted a revision to the CAPM, which includes a size premium.

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The model is analogous to the standard CAPM, but with the return on a minimum risk portfolio that is unrelated to market returns, R_Z, replacing the risk-free rate, R_F. The model has been empirically tested by Black, Jensen, and Scholes (1972), who find a flatter than predicted SML, consistent with the model and other researchers' findings. An updated version of the Black-Jensen-Scholes study is available in Brealey, Myers, and Allen (2006) and reaches similar conclusions.

The zero-beta CAPM cannot be literally employed to estimate the cost of capital, since the zero-beta portfolio is a statistical construct difficult to replicate. Attempts to estimate the model are formally equivalent to estimating the constants, a and b, in Equation 6-2. A practical alternative is to employ the Empirical CAPM, to which we now turn.

6.3 Empirical CAPM

As discussed in the previous section, several finance scholars have developed refined and expanded versions of the standard CAPM by relaxing the constraints imposed on the CAPM, such as dividend yield, size, and skewness effects. These enhanced CAPMs typically produce a risk-return relationship that is flatter than the CAPM prediction in keeping with the actual observed risk-return relationship. The ECAPM makes use of these empirical findings. The ECAPM estimates the cost of capital with the equation:

$$K = R_F + \acute{\alpha} + \beta \times (MRP - \acute{\alpha}) \qquad (6\text{-}5)$$

where $\acute{\alpha}$ is the "alpha" of the risk-return line, a constant, and the other symbols are defined as before. All the potential vagaries of the CAPM are telescoped into the constant $\acute{\alpha}$, which must be estimated econometrically from market data. Table 6-2 summarizes[10] the empirical evidence on the magnitude of alpha.[11]

[10] The technique is formally applied by Litzenberger, Ramaswamy, and Sosin (1980) to public utilities in order to rectify the CAPM's basic shortcomings. Not only do they summarize the criticisms of the CAPM insofar as they affect public utilities, but they also describe the econometric intricacies involved and the methods of circumventing the statistical problems. Essentially, the average monthly returns over a lengthy time period on a large cross-section of securities grouped into portfolios are related to their corresponding betas by statistical regression techniques; that is, Equation 6-5 is estimated from market data. The utility's beta value is substituted into the equation to produce the cost of equity figure. Their own results demonstrate how the standard CAPM underestimates the cost of equity capital of public utilities because of utilities' high dividend yield and return skewness.

[11] Adapted from Vilbert (2004).

TABLE 6-2
EMPIRICAL EVIDENCE ON THE ALPHA FACTOR

Author	Range of alpha
Fischer (1993)	−3.6% to 3.6%
Fischer, Jensen and Scholes (1972)	−9.61% to 12.24%
Fama and McBeth (1972)	4.08% to 9.36%
Fama and French (1992)	10.08% to 13.56%
Litzenberger and Ramaswamy (1979)	5.32% to 8.17%
Litzenberger, Ramaswamy and Sosin (1980)	1.63% to 5.04%
Pettengill, Sundaram and Mathur (1995)	4.6%
Morin (1989)	2.0%

For an alpha in the range of 1%–2% and for reasonable values of the market risk premium and the risk-free rate, Equation 6-5 reduces to the following more pragmatic form:

$$K = R_F + 0.25\,(R_M - R_F) + 0.75\,\beta(R_M - R_F) \qquad (6\text{-}6)$$

Over reasonable values of the risk-free rate and the market risk premium, Equation 6-6 produces results that are indistinguishable from the ECAPM of Equation 6-5.[12]

An alpha range of 1%–2% is somewhat lower than that estimated empirically. The use of a lower value for alpha leads to a lower estimate of the cost of capital for low-beta stocks such as regulated utilities. This is because the use of a long-term risk-free rate rather than a short-term risk-free rate already incorporates some of the desired effect of using the ECAPM. That is, the

[12] Typical of the empirical evidence on the validity of the CAPM is a study by Morin (1989) who found that the relationship between the expected return on a security and beta over the period 1926–1984 was given by:

$$\text{Return} = 0.0829 + 0.0520\,\beta$$

Given that the risk-free rate over the estimation period was approximately 6% and that the market risk premium was 8% during the period of study, the intercept of the observed relationship between return and beta exceeds the risk-free rate by about 2%, or 1/4 of 8%, and that the slope of the relationship is close to 3/4 of 8%. Therefore, the empirical evidence suggests that the expected return on a security is related to its risk by the following approximation:

$$K = R_F + x(R_M - R_F) + (1 - x)\beta(R_M - R_F)$$

where x is a fraction to be determined empirically. The value of x that best explains the observed relationship Return $= 0.0829 + 0.0520\,\beta$ is between 0.25 and 0.30. If x = 0.25, the equation becomes:

$$K = R_F + 0.25(R_M - R_F) + 0.75\beta(R_M - R_F)$$

long-term risk-free rate version of the CAPM has a higher intercept and a flatter slope than the short-term risk-free version which has been tested. Thus, it is reasonable to apply a conservative alpha adjustment. Moreover, the lowering of the tax burden on capital gains and dividend income enacted in 2002 may have decreased the required return for taxable investors, steepening the slope of the ECAPM risk-return trade-off and bring it closer to the CAPM predicted returns.[13]

To illustrate the application of the ECAPM, assume a risk-free rate of 5%, a market risk premium of 7%, and a beta of 0.80. The Empirical CAPM equation (6-6) above yields a cost of equity estimate of 11.0% as follows:

$$\begin{aligned} K &= 5\% + 0.25\,(12\% - 5\%) + 0.75 \times 0.80\,(12\% - 5\%) \\ &= 5.0\% + 1.8\% + 4.2\% \\ &= 11.0\% \end{aligned}$$

As an alternative to specifying alpha, see Example 6-1.

Some have argued that the use of the ECAPM is inconsistent with the use of adjusted betas, such as those supplied by Value Line and Bloomberg. This is because the reason for using the ECAPM is to allow for the tendency of betas to regress toward the mean value of 1.00 over time, and, since Value Line betas are already adjusted for such trend, an ECAPM analysis results in double-counting. This argument is erroneous. Fundamentally, the ECAPM is not an adjustment, increase or decrease, in beta. This is obvious from the fact that the expected return on high beta securities is actually lower than that produced by the CAPM estimate. The ECAPM is a formal recognition that the observed risk-return tradeoff is flatter than predicted by the CAPM based on myriad empirical evidence. The ECAPM and the use of adjusted betas comprised two separate features of asset pricing. Even if a company's beta is estimated accurately, the CAPM still understates the return for low-beta stocks. Even if the ECAPM is used, the return for low-beta securities is understated if the betas are understated. Referring back to Figure 6-1, the ECAPM is a return (vertical axis) adjustment and not a beta (horizontal axis) adjustment. Both adjustments are necessary. Moreover, recall from Chapter 3 that the use of adjusted betas compensates for interest rate sensitivity of utility stocks not captured by unadjusted betas.

[13] The lowering of the tax burden on capital gains and dividend income has no impact as far as non-taxable institutional investors (pension funds, 401K, and mutual funds) are concerned, and such investors engage in very large amounts of trading on security markets. It is quite plausible that taxable retail investors are relatively inactive traders and that large non-taxable investors have a substantial influence on capital markets.

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Chapter 7
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BETAS AND THEIR REGRESSION TENDENCIES

MARSHALL E. BLUME*

I. INTRODUCTION

A PREVIOUS STUDY [3] showed that estimated beta coefficients, at least in the context of a portfolio of a large number of securities, were relatively stationary over time. Nonetheless, there was a consistent tendency for a portfolio with either an extremely low or high estimated beta in one period to have a less extreme beta as estimated in the next period. In other words, estimated betas exhibited in that article a tendency to regress towards the grand mean of all betas, namely one. This study will examine in further detail this regression tendency.[1]

The next section presents evidence showing the existence of this regression tendency and reviews the conventional reasons given in explanation [1], [4], [5]. The following section develops a formal model of this regression tendency and finds that the conventional analysis of this tendency is, if not incorrect, certainly misleading. Accompanying this theoretical analysis are some new empirical results which show that a major reason for the observed regression is real non-stationarities in the underlying values of beta and that the so-called "order bias" is not of dominant importance.

II. THE CONVENTIONAL WISDOM

If an investor were to use estimated betas to group securities into portfolios spanning a wide range of risk, he would more than likely find that the betas estimated for the very same portfolios in a subsequent period would be less extreme or closer to the market beta of one than his prior estimates. To illustrate, assume that the investor on July 1, 1933, had at his disposal an estimate of beta for each common stock which had been listed on the NYSE (New York Stock Exchange) for the prior seven years, July 1926-June 1933. Assume further that each estimate was derived by regressing the eighty-four monthly relatives covering this seven-year period upon the corresponding values for the market portfolio.[2]

If this investor, say, desired equally weighted portfolios of 100 securities, he might group those 100 securities with the smallest estimates of beta together to form a portfolio. Such a portfolio would of all equally

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1. Quite apart from this regression tendency, it is reasonable to suppose that betas do change over time in systematic ways in response to certain changes in the structure of companies.

2. Such regressions were calculated only for securities with complete data. The relative for the market portfolio was measured by Fisher's Combination Link Relative [6].

weighted portfolios have the smallest possible estimated portfolio beta since an estimate of such a portfolio beta can be shown to be an average of the estimates for the individual securities [2, p. 169]. To cover a wide range of portfolio betas, this investor might then form a second portfolio consisting of the 100 securities with the next smallest estimates of beta, and so on.

Using the securities available as of June 1933, this investor could thus obtain four portfolios of 100 securities apiece with no security in common. Estimated over the same seven-year period, July 1926-June 1933, the betas for these portfolios[3] would have ranged from 0.50 to 1.53. Similar portfolios can be constructed for each of the next seven-year periods through 1954 and their portfolio betas calculated. Table 1 contains these estimates under the heading "Grouping Period."

The betas for these same portfolios, but reestimated using the monthly portfolio relatives adjusted for delistings from the seven years following the grouping period, illustrate the magnitude of the regression tendency.[4] Whereas the portfolio betas as estimated, for instance, in the grouping period 1926-33 ranged from 0.50 to 1.53, the betas as estimated for these same portfolios in the subsequent seven-year period 1933-40 ranged only from 0.61 to 1.42. The results for the other periods display a similar regression tendency.

An obvious explanation of this regression tendency is that for some unstated economic or behavioral reasons, the underlying betas do tend to regress towards the mean over time.[5] Yet, even if the true betas were constant over time, it has been argued that the portfolio betas as estimated in the grouping period would as a statistical artifact tend to be more extreme than those estimated in a subsequent period. This bias has sometimes been termed an order or selection bias.

The frequently given intuitive explanation of this order bias [1], [4], [5], parallels the following: Consider the portfolio formed of the 100 securities with the lowest estimates of beta. The estimated portfolio beta might be expected to understate the true beta or equivalently be expected to be measured with negative error. The reason the measurement error might

3. These portfolio betas were derived by averaging the 100 estimates for the individual securities. Alternatively, as [2] shows, the same number would be obtained by regressing the monthly portfolio relatives upon the market index where the portfolio relatives are calculated assuming an equal amount invested in each security at the beginning of each month.

4. These portfolio betas were calculated by regressing portfolio relatives upon the market relatives. The portfolio relatives were taken to be the average of the monthly relatives of the individual securities for which relatives were available. These relatives represent those which would have been realized from an equally-weighted, monthly rebalancing strategy in which a delisted security is sold at the last available price and the proceeds reinvested equally in the remaining securities. This rather complicated procedure takes into account delisted securities and therefore avoids any survivorship bias. In [3], the securities analyzed were required to be listed on the NYSE throughout both the grouping period and the subsequent period, so that there was a potential survivorship bias. Nonetheless, the results reported there are in substantive agreement with the results in Table 1.

5. If the betas are continually changing over time, an estimate of beta as provided by a simple regression must be interpreted with considerable caution. For example, if the true beta followed a linear time trend, it is easily shown that the estimated beta can be interpreted as an unbiased estimate of the beta in the middle of the sample period. A similar interpretation would not in general hold if, for instance, the true beta followed a quadratic time trend.

TABLE 1
BETA COEFFICIENTS FOR PORTFOLIOS OF 100 SECURITIES

Portfolio	Grouping Period	First Subsequent Period
	7/26-6/33	7/33-6/40
1	0.50	0.61
2	0.85	0.96
3	1.15	1.24
4	1.53	1.42
	7/33-6/40	7/40-6/47
1	0.38	0.56
2	0.69	0.77
3	0.90	0.91
4	1.13	1.12
5	1.35	1.31
6	1.68	1.69
	7/40-6/47	7/47-6/54
1	0.43	0.60
2	0.61	0.76
3	0.73	0.88
4	0.86	0.99
5	1.00	1.10
6	1.21	1.21
7	1.61	1.36
	7/47-6/54	7/54-6/61
1	0.36	0.57
2	0.61	0.71
3	0.78	0.88
4	0.91	0.96
5	1.01	1.03
6	1.13	1.13
7	1.26	1.24
8	1.47	1.32
	7/54-6/61	7/61-6/68
1	0.37	0.62
2	0.56	0.68
3	0.72	0.85
4	0.86	0.85
5	0.99	0.95
6	1.11	0.98
7	1.23	1.07
8	1.43	1.25

be expected to be negative may best be explored by analyzing how a security might happen to have one of the 100 lowest estimates of beta. First, if the true beta were in the lowest hundred, the estimated beta would fall in the lowest 100 estimates only if the error in measuring the beta were not too large which roughly translates into more negative than positive errors. Second, if the true beta were not in the lowest 100, the estimated beta might still be in the lowest 100 estimates if it were measured with a sufficiently large negative error.[6]

Thus, the negative errors in the 100 smallest estimates of beta might be expected to outweigh the positive errors. The same argument except in reverse would apply to the 100 largest estimates. Indeed, it would seem that any portfolio of securities stratified by estimates of beta for which the average of these estimates is not the grand mean of all betas, namely 1.0, would be subject to some order bias. It would also seem that the absolute magnitude of this order bias should be greater, the further the average estimate is from the grand mean. The next section formalizes this intuitive argument and suggests that, if it is not incorrect, it is certainly misleading as to the source of the bias.

III. A Formal Model

The intuitive explanation of the order bias just given would seem to suggest that the way in which the portfolios are formed caused the bias. This section will argue that the bias is present in the estimated betas for the individual securities and is not induced by the way in which the portfolios are selected. Following this argument will be an analysis of the extent to which this order bias accounts for the observed regression tendency in portfolio betas over time.

A numerical example will serve to illustrate the logic of the subsequent argument and to introduce some required notation.[7] Assume for the moment that the possible values of beta for an individual security i in period t, β_{it}, are 0.8, 1.0 and 1.2 and that each of these values is equally likely. Assume further that in estimating a beta for an individual security, there is a 0.6 probability that the estimate $\hat{\beta}_{it}$ contains no measurement error, a 0.2 probability that it understates the true β_{it} by 0.2, and a 0.2 probability that it overstates the true value by 0.2. Now in a sample of ten securities whose true betas were all say 0.8, one would expect two estimates of beta to be 0.6, six to be 0.8, and two to be 1.0. These numbers have been transcribed to the first row of Table 2. The second and third rows are similarly constructed by first assuming that the ten securities all had a true value of 1.0 and then of 1.2.

The rows of Table 2 thus correspond to the distribution of the estimated beta, $\hat{\beta}_{it}$, conditional on the true value, β_{it}. It might be noted that the expectation of $\hat{\beta}_{it}$ conditional on β_{it}, $E(\hat{\beta}_{it} \mid \beta_{it})$, is β_{it}. However, in a sampling situation, an investigator would be faced with an estimate of beta and would want to assess the distribution of the true β_{it} conditional on the estimated $\hat{\beta}_{it}$. Such conditional distributions correspond to the columns of Table 2. It is easily verified that the expectation of β_{it} conditional on $\hat{\beta}_{it}$, $E(\beta_{it} \mid \hat{\beta}_{it})$ is generally not $\hat{\beta}_{it}$. For example, if $\hat{\beta}_{it}$ were

6. It is theoretically possible that the estimated beta for a security whose true beta does not fall into the lowest 100 to be in the lowest 100 estimates with a positive measurement error if the betas for some of the improperly classified securities are measured with sufficiently large positive errors.

7. The author is indebted to Harry Markowitz for suggesting this numerical example as a way of clarifying the subsequent formal development.

TABLE 2
NUMBER OF SECURITIES CROSS
CLASSIFIED BY β_{it} AND $\hat{\beta}_{it}$

		$\hat{\beta}_{it}$ .6	.8	1.0	1.2	1.4
	.8	2	6	2		
β_{it}	1.0		2	6	2	
	1.2			2	6	2

0.8, $E(\beta_{it} \mid \hat{\beta}_{it} = 0.8)$ would be 0.85 since with this estimate the true beta would be 0.8 with probability 0.75 or 1.0 with probability 0.25.[8]

The estimate $\hat{\beta}_{it}$, therefore, would typically be biased, and it is biased whether or not portfolios are formed. The effect of forming large portfolios is to reduce the random component in the estimate, so that the difference between the estimated portfolio beta and the true portfolio beta can be ascribed almost completely to the magnitude of the bias.

In the spirit of this example, the paper will now develop explicit formulae for the order bias and real non-stationarities over time. Let it be assumed that the betas for individual securities in period t, β_{it}, can be thought of as drawings from a normal distribution with a mean of 1.0 and variance $\sigma^2(\beta_{it})$. The corresponding assumption for the numerical example just discussed would be a trinomial distribution with equal probabilities for each possible value of β_{it}.

Let it additionally be assumed that the estimate, $\hat{\beta}_{it}$, measures β_{it} with error η_{it}, a mean-zero independent normal variate, so that $\hat{\beta}_{it}$ is given by the sum of β_{it} and η_{it}. It immediately follows that β_{it} and $\hat{\beta}_{it}$ are distributed by a bivariate normal distribution. It might be noted that, as formulated, $\sigma^2(\eta_{it})$ need not equal $\sigma^2(\eta_{jt})$, $i \neq j$. Since the empirical work will assume equality, the subsequent theoretical work will also make this assumption even though for the most part it is not necessary. The final assumption is that β_{it} and β_{it+1} are distributed as bivariate normal variates. Because η_{it} is independently distributed, $\hat{\beta}_{it}$ and β_{it+1} will be distributed by a bivariate normal distribution.

That $\hat{\beta}_{it}$ and β_{it+1} are bivariate normal random variables, each with a mean of 1.0, implies the following regression

$$E(\beta_{it+1} \mid \hat{\beta}_{it}) - 1 = \frac{\text{Cov}\,(\beta_{it+1}, \hat{\beta}_{it})}{\sigma^2(\hat{\beta}_{it})}\,(\hat{\beta}_{it} - 1). \quad (1)$$

This regression is similar to the procedure proposed in Blume [3] to adjust the estimated betas for the regression tendency. That procedure was to regress estimates of beta for individual securities from a later period on estimates from an earlier period and to use the coefficients from this regression to adjust future estimates.[9] The empirical evidence

8. For further and more detailed discussion of the distinction between $E(\beta_{it} \mid \hat{\beta}_{it})$ and $E(\hat{\beta}_{it} \mid \beta_{it})$, the reader is referred to Vasicek [7].

9. That the regression of estimated betas from a later period on estimates from an earlier period is similar to (1) follows from noting that $E(\hat{\beta}_{it+1} \mid \hat{\beta}_{it})$ equals $E(\beta_{it+1} \mid \hat{\beta}_{it})$ and that $\text{Cov}(\hat{\beta}_{it+1}, \hat{\beta}_{it})$ equals $\text{Cov}(\beta_{it+1}, \hat{\beta}_{it})$. In [3], the grand mean of all betas was estimated in each period and was not assumed equal to 1.0.

presented there indicated that this procedure did improve the accuracy of estimates of future betas, though no claim was made that there might not be better ways to adjust for the regression tendency.

The coefficient of $(\hat{\beta}_{it} - 1)$ in (1) can be broken down into two components: one of which would correspond to the so-called order bias and the other to a true regression tendency. To achieve this result, note that the covariance of β_{it+1} and $\hat{\beta}_{it}$ is given by $\mathrm{Cov}(\beta_{it+1}, \beta_{it} + \eta_{it})$, which because of the assumed independence of the errors, reduces to the covariance of β_{it+1} and β_{it}. Making this substitution and replacing $\mathrm{Cov}(\beta_{it+1}, \beta_{it})$ by $\rho(\beta_{it+1}, \beta_{it})\sigma(\beta_{it+1})\sigma(\beta_{it})$, (1) becomes

$$E(\beta_{it+1} \mid \hat{\beta}_{it}) - 1 = \frac{\rho(\beta_{it+1}, \beta_{it})\sigma(\beta_{it+1})\sigma(\beta_{it})}{\sigma^2(\hat{\beta}_{it})} (\hat{\beta}_{it} - 1). \tag{2}$$

The ratio of $\sigma(\beta_{it})\sigma(\beta_{it+1})$ to $\sigma^2(\hat{\beta}_{it})$ might be identified with the order bias and the correlation of β_{it} and β_{it+1} with a true regression.

If the underlying values of beta are stationary over time, the correlation of successive values will be 1.0 and the standard deviations of β_{it} and β_{it+1} will be the same. Assuming such stationarity and noting then that β_{it+1} equals β_{it}, equation (2) can be rewritten as[10]

$$\begin{aligned} E(\beta_{it+1} \mid \hat{\beta}_{it}) - 1 &= E(\beta_{it} \mid \hat{\beta}_{it}) - 1 \\ &= \frac{\sigma^2(\beta_{it})}{\sigma^2(\hat{\beta}_{it})} (\hat{\beta}_{it} - 1). \end{aligned} \tag{3}$$

Since $\sigma^2(\beta_{it})$ would be less than $\sigma^2(\hat{\beta}_{it})$ if beta is measured with any error, the coefficient of $(\hat{\beta}_{it} - 1)$ would be less than 1.0. This means that the true beta for a security would be expected to be closer to one than the estimated value. In other words, an estimate of beta for an individual security except for an estimate of 1.0 is biased.[11]

10. Equation (3) can be derived alternatively from the assumption that β_{it} and $\hat{\beta}_{it}$ are bivariate normal variables and under the assumption of stationarity β_{it} will equal β_{it+1}. Vasicek [7] has developed using Bayes' Theorem, an expression for $E(\beta_{it}|\hat{\beta}_{it})$ which can be shown to be mathematically identical to the right hand side of (3): He observed that the procedure used by Merrill Lynch, Pierce, Fenner and Smith, Inc. in their Security Risk Evaluation Service is similar to his expression if $\sigma^2(\eta_{it})$ is assumed to be the same for all securities. Merrill Lynch's procedure, as he presented it, is to use the coefficient of the cross-sectional regression of $(\hat{\beta}_{it+1} - 1)$ on $(\hat{\beta}_{it} - 1)$ to adjust future estimates. This adjustment mechanism is in fact the same as (1) or (2) which shows that such a cross sectional regression takes into account real changes in the underlying betas. Only if betas were stationary over time would his formula be similar to Merrill Lynch's.

11. The formula for order bias given by (3) is similar to that which measures the bias in the estimated slope coefficient in a regression on one independent variable measured with error. Explicitly, consider the regression, $y = bx + \epsilon$, where ϵ is an independent mean-zero normal disturbance and both y and x are measured in deviate form. Now if x is measured with independent mean-zero error η and y is regressed on $x + \eta$, it is well known that the estimated coefficient, $\hat{b}$, will be biased toward zero and the probability limit of $\hat{b}$ is $\dfrac{b}{1 + \dfrac{\sigma^2(\eta)}{\sigma^2(x)}}$. This expression can be rewritten as $\dfrac{\sigma^2(x)}{\sigma^2(x + \eta)}$ b. Interpreting x as the true beta less 1.0, the correspondence to (3) is obvious. In this type of regression, one could either adjust the independent variables themselves for bias and thus obtain an unbiased estimate of the regression coefficient or run the regression on the unadjusted variables and then adjust the regression coefficient. The final coefficient will be the same in either case.

In light of this discussion, the paper now reexamines the empirical results of the previous section. The initial task will be to adjust the portfolio betas in the grouping periods for the order bias. After making this adjustment, it will be apparent that much of the regression tendency observed in Table 1 remains. Thus, if (2) is valid, the value of the correlation coefficient is probably not 1.0. The statistical properties of estimates of the portfolio betas in both the grouping and subsequent periods will be examined. The section ends with an additional test that gives further confirmation that much of the regression tendency stems from true non-stationarities in the underlying betas.

To adjust the estimates of beta in the grouping periods for the order bias using (3) would require estimates of the ratio of $\sigma^2(\beta_{it})$ to $\sigma^2(\hat{\beta}_{it})$. The sample variance calculated from the estimated betas for all securities in a particular cross-section provides an estimate of $\sigma^2(\hat{\beta}_{it})$. An estimate of $\sigma^2(\beta_{it})$ can be derived as the difference between estimates of $\sigma^2(\hat{\beta}_{it})$ and $\sigma^2(\eta_{it})$. If the variance of the error in measuring an individual beta is the same for every security, $\sigma^2(\eta_{it})$ can be estimated as the average over all securities of the squares of the standard error associated with each estimated beta.

In conformity with these procedures, estimates of the ratio of $\sigma^2(\beta_{it})$ to $\sigma^2(\hat{\beta}_{it})$ for the five seven-year periods from 1926 through 1961 were respectively 0.92, 0.92, 0.89, 0.82, and 0.75. In other words, an unbiased estimate of the underlying beta for an individual security should be some eight to twenty-five per cent closer to 1.0 than the original estimate. For instance, if $\sigma^2(\beta_{it})/\sigma^2(\hat{\beta}_{it})$ were 0.9 and if $\hat{\beta}_{it}$ were 1.3, an unbiased estimate would be 1.27.

To determine whether the order bias accounted for all of the regression, the estimated betas for the individual securities were adjusted for the order bias using (3) and the appropriate value of the ratio. For the same portfolios of 100 securities examined in the previous section, portfolio betas for the grouping period were recalculated as the average of these adjusted betas. It might be noted that these adjusted portfolio betas could alternatively be obtained by adjusting the unadjusted portfolio betas directly. These adjusted portfolio betas are given in Table 3. For the reader's convenience, the unadjusted portfolio betas and those estimated in the subsequent seven years are reproduced from Table 1.

Before comparing these estimates, let us for the moment consider the statistical properties of the portfolio betas, first in the grouping period and then in the subsequent period. Though unadjusted estimates of the portfolio betas in the grouping period may be biased, they would be expected to be highly "reliable" as that term is used in psychometrics. Thus, regardless of what these estimates measure, they measure it accurately or more precisely their values approximate those which would be expected conditional on the underlying population and how they are calculated. For equally-weighted portfolios, the larger the number of securities, the more reliable would be the estimate.

Specifically, for an equally-weighted portfolio of 100 securities, the standard deviation of the error in the portfolio beta would be one-tenth

TABLE 3
BETA COEFFICIENTS FOR PORTFOLIOS OF 100 SECURITIES

Portfolio	Grouping Period: Unadjusted for Order Bias	Grouping Period: Adjusted for Order Bias	First Subsequent Period	Second Subsequent Period
	7/26-6/33		7/33-6/40	7/40-6/47
1	0.50	.54	0.61	0.73
2	0.85	.86	0.96	0.92
3	1.15	1.14	1.24	1.21
4	1.53	1.49	1.42	1.47
	7/33-6/40		7/40-6/47	7/47-6/54
1	0.38	.43	0.56	0.53
2	0.69	.72	0.77	0.86
3	0.90	.91	0.91	0.96
4	1.13	1.12	1.12	1.11
5	1.35	1.32	1.31	1.29
6	1.68	1.63	1.69	1.40
	7/40-6/47		7/47-6/54	7/54-6/61
1	0.43	.50	0.60	0.73
2	0.61	.65	0.76	0.88
3	0.73	.76	0.88	0.93
4	0.86	.88	0.99	1.04
5	1.00	1.00	1.10	1.12
6	1.21	1.19	1.21	1.14
7	1.61	1.54	1.36	1.20
	7/47-6/54		7/54-6/61	7/61-6/68
1	0.36	.48	0.57	0.72
2	0.61	.68	0.71	0.79
3	0.78	.82	0.88	0.88
4	0.91	.93	0.96	0.92
5	1.01	1.01	1.03	1.04
6	1.13	1.10	1.13	1.02
7	1.26	1.21	1.24	1.08
8	1.47	1.39	1.32	1.15
	7/54-6/61		7/61-6/68	
1	0.37	.53	0.62	
2	0.56	.67	0.68	
3	0.72	.79	0.85	
4	0.86	.89	0.85	
5	0.99	.99	0.95	
6	1.11	1.08	0.98	
7	1.23	1.17	1.07	
8	1.43	1.32	1.25	

the standard error of the estimated betas for individual securities providing the errors in measuring these individual betas were independent of each other. During the 1926-33 period, the average standard error of betas for individual securities was 0.12 so that the standard error of the portfolio beta would be roughly 0.012. The average standard error for individual securities increased gradually to 0.20 in the period July 1954-June 1961. For the next seven-year period ending June 1968, the average declined to 0.17.

As pointed out, standard errors for portfolio betas calculated from those for individual securities assume independence of the errors in estimates. The standard error for a portfolio beta can however be calculated directly without making this assumption of independence by regressing the portfolio returns on the market index. The standard error for the portfolio of the 100 securities with the lowest estimates of beta in the July 1926-June 1933 period was for instance, 0.018, which compares to 0.012 calculated assuming independence. The average standard error of the estimated betas for the four portfolios in this period was also 0.018. The average standard errors of the betas for the portfolios of 100 securities in the four subsequent seven-year periods ending June 1961 were respectively 0.025, 0.027, 0.024, and 0.027. Although these standard errors, not assuming independence, are about 50 per cent larger than before, they are still extremely small compared to the range of possible values for portfolio betas.

For the moment, let us therefore assume that the portfolio betas as estimated in the grouping period before adjustment for order bias are extremely reliable numbers in that whatever they measure, they measure it accurately. In this case, adjusting these portfolio betas for the order bias will give extremely reliable and unbiased estimates of the underlying portfolio beta and therefore these adjusted betas can be taken as very good approximations to the underlying, but unknown, values. The greater the number of securities in the portfolio, the better the approximation will be.

The numerical example in Table 2 gives an intuitive feel for what is happening. Consider a portfolio of a large number of securities whose estimated betas were all 0.8 in a particular sample. It will be recalled that such an estimate requires that the true beta be either 0.8 or 1.0. As the number of securities with estimates of 0.8 increases, one can be more and more confident that 75 per cent of the securities have true betas of 0.8 and 25 per cent have true betas of 1.0 or equivalently that an equally-weighted portfolio of these securities has a beta of 0.85.

The heuristic argument in the prior section might lead some to believe that, contrary to the estimates in the grouping period, there are no order biases associated with the portfolio betas estimated in the subsequent seven years. This belief, however, is not correct. Formally, the portfolios formed in the grouping period are being treated as if they were securities in the subsequent period. To estimate these portfolio betas, portfolio returns were calculated and regressed upon some measure of the market. In this paper so far, these portfolio returns were calculated under an equally-weighted monthly revision strategy in which delisted securities were sold at the last available price and the proceeds reinvested equally in the remaining. Other strategies are, of course, possible.

Since these portfolios are being treated as securities, formula (3) applies, so that there is still some "order bias" present. However, in determining the rate of regression, the appropriate measure of the variance of the errors in the estimates is the variance for the portfolio betas and not for the betas of individual stocks. This fact has the important effect of making the ratio of $\sigma^2(\beta_{it})$ to $\sigma^2(\hat{\beta}_{it})$ much closer to one than for individual securities. Estimating $\sigma^2(\hat{\beta}_{it})$ and $\sigma^2(\eta_{it})$ for the portfolios formed on the immediately prior period, the value of this ratio for each of the four seven-year periods from 1933 to 1961 was in excess of 0.99 and for the last seven-year period in excess of 0.98. Thus, for most purposes, little error is introduced by assuming that these estimated portfolio betas contain no "order bias" or equivalently that these estimates measure accurately the true portfolio beta.

A comparison of the portfolio betas in the grouping period, even after adjusting for the order bias, to the corresponding betas in the immediately subsequent period discloses a definite regression tendency. This regression tendency is statistically significant at the five per cent level for each of the last three grouping periods, 1940-47, 1947-54, 1954-61.[12] Thus, this evidence strongly suggests that there is a substantial tendency for the underlying values of beta to regress towards the mean over time. Yet, it could be argued that this test is suspect because the formula used in adjusting for the order bias was developed under the assumption that the distributions of beta were normal. This assumption is certainly not strictly correct and it is not clear how sensitive the adjustment is to violations of this assumption.

A more robust way to demonstrate the existence of a true regression tendency is based upon the observation that the portfolio betas estimated in the period immediately subsequent to the grouping period are measured with negligible error and bias. These estimated portfolio betas can be compared to betas for the same portfolios estimated in the second seven years subsequent to the grouping period. These betas, which have been estimated in the second subsequent period and are given in Table 3, disclose again an obvious regression tendency. This tendency is significant at the five per cent level for the last three of the four possible comparisons.[13]

IV. Summary

Beginning with a review of the conventional wisdom, the paper showed that estimated beta coefficients tend to regress towards the grand mean of all betas over time. The next section presented two kinds of empirical analyses which showed that part of this observed regression tendency represented real nonstationarities in the betas of individual securities and that the so-called order bias was not of overwhelming importance.

In other words, companies of extreme risk—either high or low—tend to have less extreme risk characteristics over time. There are two logical

12. This test of significance was based upon the regression $(\hat{\beta}_{it+1} - 1) = b(\hat{\beta}_{it} - 1) + \epsilon_{it}$ where $\hat{\beta}_{it}$ has been adjusted for order bias. The estimated coefficients with the t-value measured from 1.0 in parentheses were for the five seven-years chronologically 0.86 (−1.14), 0.94 (−0.88), 0.71 (−3.84), 0.86 (−3.23), and 0.81 (−2.57). Note that even if β_{it} were measured with substantial independent error contrary to fact, the estimated b would not be biased towards zero because, as footnote 10 shows, the adjustment for the order bias has already corrected for this bias.

13. Using the same regression as in the previous footnote, the estimated coefficient b with the t-value measured from 1.0 in parentheses were for the four possible comparisons in chronological order 0.92 (−0.69), 0.74 (−2.67), 0.62 (−6.86), and 0.58 (−5.51).

explanations. First, the risk of existing projects may tend to become less extreme over time. This explanation may be plausible for high risk firms, but it would not seem applicable to low risk firms. Second, new projects taken on by firms may tend to have less extreme risk characteristics than existing projects. If this second explanation is correct, it is interesting to speculate on the reasons. For instance, is it a management decision or do limitations on the availability of profitable projects of extreme risk tend to cause the riskiness of firms to regress towards the grand mean over time? Though one could continue to speculate on the forces underlying this tendency of risk—as measured by beta coefficients—to regress towards the grand mean over time, it remains for future research to determine the explicit reasons.

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NEW REGULATORY FINANCE

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Any forward-looking cost of capital calculation already embodies tax effects since investors price securities on the basis of after-tax returns. Besides, a very large proportion of trading is conducted by tax-exempt financial institutions (pension funds, mutual funds, 401K, etc.) for whom tax issues are largely immaterial.

The existence of a negative risk premium is highly unlikely, as it is at serious odds with the basic tenets of finance, economics, and law. Using proper definitions for expected rates of return of equity and debt, the preponderance of the evidence indicates that the negative risk premium does not exist. Several risk premium studies cited in this chapter have found positive risk premiums well in excess of 5% over the last decade. Risk premiums do narrow during unusually turbulent and volatile interest rate environments, but then return to normal levels. They are most unlikely to ever become negative.

4.7 Risk Premium Determinants

Fundamentally, the primary determinant of expected returns is risk. To wit, the various paradigms of financial theory, including the Capital Asset Pricing Model and the Arbitrage Pricing Model covered in subsequent chapters, posit fundamental relationships between return and risk. There are also secondary influences on the relative magnitude of the risk premium, however, including the level of interest rates, default risk, and taxes.

Interest Rates

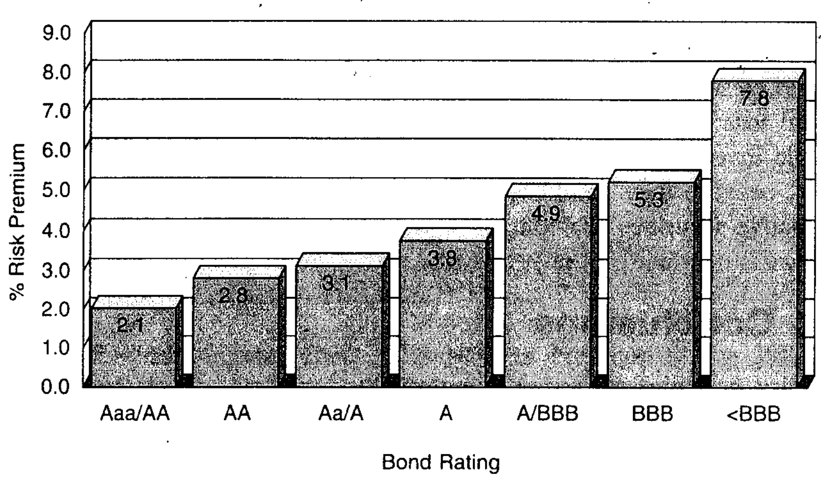
Published studies by Brigham, Shome, and Vinson (1985), Harris (1986), Harris and Marston (1992, 1993), Carleton, Chambers, and Lakonishok (1983), Morin, (2005), and McShane (2005), and others demonstrate that, beginning in 1980, risk premiums varied inversely with the level of interest rates—rising when rates fell and declining when interest rates rose. The reason for this relationship is that when interest rates rise, bondholders suffer a capital loss. This is referred to as interest rate risk. Stockholders, on the other hand, are more concerned with the firm's earning power. So, if bondholders' fear of interest rate risk exceeds shareholders' fear of loss of earning power, the risk differential will narrow and hence the risk premium will shrink. This is particularly true in high inflation environments. Interest rates rise as a result of accelerating inflation, and the interest rate risk of bonds intensifies more than the earnings risk of common stocks, which are partially hedged from the ravages of inflation. This phenomenon has been termed as a "lock-in" premium. Conversely in low interest rate environments, when bondholders' interest rate fears subside and shareholders' fears of loss of earning power dominate, the risk differential will widen and hence the risk premium will increase.

Harris (1986) showed that for every 100 basis point change in government bond yields, the equity risk premium for utilities changes 51 basis points in the opposite direction, for a net change in the cost of equity of 49 basis points. For example, a 100 basis point decline in government bond yields would lead to a 51 basis point increase in the equity risk premium and therefore an overall decrease in the cost of equity of 49 basis points, a result almost identical to the estimate reported in Morin (2005). As discussed earlier, similar results were uncovered by McShane (2005), who examined the statistical relationship between DCF-derived risk premiums and interest rates using a sample of natural gas distribution utilities.

The gist of the empirical research on this subject is that the cost of equity has changed only half as much as interest rates have changed in the past. The knowledge that risk premiums vary inversely to the level of interest rates can be used to adjust historical risk premiums to better reflect current market conditions. Thus, when interest rates are unusually high (low), the appropriate current risk premium is somewhat below (above) that long-run average. The empirical research cited above provides guidance as to the magnitude of the adjustment.

Risk premiums also tend to fluctuate with changes in investor risk aversion. Such changes can be tracked by observing the yield spreads between different bond rating categories over time. Brigham, Shome, and Vinson (1985) examined the relationship between risk premium and bond rating and found, unsurprisingly, that the risk premiums are higher for lower rated firms than for higher rated firms. Figure 4-5 shows the results graphically.

FIGURE 4-5
RISK PREMIUMS VS BOND RATINGS
ELECTRIC UTILITIES



Source: Brigham, Shome, and Vinson (1985).

to the DCF method, which may be sluggish in detecting changes in return requirements, especially when based on historical data.

One advantage of risk premium over DCF is that the former is a period-by-period (time-series) study of the cost of equity over the cost of debt, in contrast to the latter which is a point-in-time cross-sectional estimate. In other words, the risk premium approach takes a broader time-series perspective rather than a snapshot point-in-time viewpoint, and is therefore less vulnerable to the vagaries of any one particular capital market environment. A prospective risk premium test relies on a succession of DCF observations over long periods, and is not as vulnerable to a given capital market environment as a spot DCF test.

Of course, the estimation of the appropriate risk premium for either the equity market as a whole or for a specific utility company, is not an exact science. Therefore, it is necessary to evaluate a broad spectrum of data and apply alternative risk premium estimation approaches in order to derive a fair and reasonable estimate of the required equity risk premium. Equal emphasis should be accorded to risk premium results based on history and those based on prospective data. Each proxy for expected risk premium brings information to the judgment process from a different light. Neither proxy is without blemish, each has advantages and shortcomings. Historical risk premiums over long periods are available and verifiable, but may no longer be applicable if structural shifts have occurred. Prospective risk premiums may be more relevant since they encompass both history and current changes, but are nevertheless imperfect proxies and are subject to measurement error and to the vagaries of the DCF input proxies.

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Common Equity Flotation Costs and Rate Making

By EUGENE F. BRIGHAM, DANA ABERWALD, and LOUIS C. GAPENSKI

The proper treatment of common stock flotation costs is an issue in almost every utility rate case, and becomes increasingly important – for reasons shown in this article – as new stock offerings decline. The article provides clarification of the issue and offers a reasonable solution.

Incorrect statements have been made about the proper treatment of common equity flotation costs in the financial literature, and this has contributed to incorrect rate case testimony and to several improper decisions. The problem seems to have arisen for two reasons: (1) During the 1970s, when most utilities were raising large amounts of equity, the case for an equity cost adjustment was generally based on the need to sell common stock at prices greater than book value so as to avoid dilution when new stock was sold, but the proper rationale for the adjustment, and the argument that should have been made, is that an adjustment is necessary to recover actual incurred costs. (2) A number of academic writers [1, 2, 3, 6, 7, 8, 11][1] have attempted to deal with the problem algebraically, and while a mathematical approach has merit, the different authors based their models on different and somewhat obscure assumptions, with the result that the academic research has actually done more to confuse than to clarify the issue.

As we see it, there are two questions which need answers:

1) Is an adjustment needed even if a company has no plans to sell new common stock in the foreseeable future?
2) If an adjustment is required, should it be applied to common stock only or to total common equity (common stock plus retained earnings)?

The answers are "yes" to the first question and "total common equity" to the second. Specifically, the market-determined cost of equity should be adjusted (increased) to reflect issuance costs associated with past issues regardless of whether a company plans to issue stock in the future or not, and the adjustment should be applied to the total common equity, including retained earnings. The reasons for these conclusions are set forth in the balance of this article.

[1]Numbers in brackets correspond to numbers in the list of references at the end of the article.

Background and Approach

The flotation cost adjustment – whether for bonds, preferred stocks, or common equity – is designed to convert a market rate of return into a fair rate of return on accounting book values. Prior to the 1970s, most utilities were regulated on the basis of the comparable earnings approach. With that method no market return was involved, and hence there was no need for a common equity flotation adjustment. However, as use of market-oriented equity cost approaches, especially the discounted cash flow (DCF) method, became prevalent during the 1970s, a specific flotation adjustment became necessary. The first use of DCF, to the authors' knowledge, was by Professor Myron J. Gordon as a staff witness in an American Telephone and Telegraph Company rate case before the Federal Communications Commission in the mid-1960s. Professors Alexander A. Robichek and Ezra Solomon of Stanford University, testifying for AT&T, proved that if a commission correctly identifies and then allows a *company* to earn its DCF cost of equity, k, on book equity, then *investors* will never be able to earn k on their investment, because the capital that investors have put up will exceed the company's book equity as a result of issuance (or flotation) costs. Thus, in the very first

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case where DCF methodology was used, Robichek and Solomon proved, and Gordon accepted, the idea that the allowed return on equity should exceed the DCF cost. Unfortunately, only the need for an adjustment, not the proper adjustment mechanism itself, was identified in that rate case.

The DCF method's great increase in popularity occurred during the 1970s, just when the companies were raising unprecedented amounts of new equity capital. Witnesses who used the DCF method recognized the need for an adjustment, and they had to provide a rationale to commissioners. Most witnesses gave this explanation:

1) If a company were allowed to earn only its DCF cost of equity, then its stock would normally sell at book value.
2) When new stock was issued, flotation expenses plus market pressure would drive the price of the stock below book value.
3) The issuance of stock at below book value would dilute the book value of the existing shares, and since future earnings and dividends are dependent upon book value, the market value of existing stock would also be diluted.
4) This dilution would obviously harm current stockholders; indeed, it would amount to economic confiscation.
5) Therefore, fair regulation requires commissioners to set authorized returns high enough to cause utility stocks to sell at prices that exceed book value by an amount sufficient to prevent below-book sales.

This argument was correct, although incomplete, and it was generally accepted during the 1970s, when most utilities were selling new stock every year or two. There were, of course, arguments about the level of flotation costs and the extent of market pressure, and hence about the proper market-to-book ratio, but the logic of some type of adjustment was rarely questioned.

However, as many utilities' construction programs neared completion in the early 1980s, and, accordingly, as new stock offerings slowed, the issue of the need for a flotation adjustment resurfaced. Patterson [6, 7] applied standard corporate finance techniques and concluded that a flotation adjustment is needed irrespective of current equity sales. Richter [11] supported Patterson's position. Arzac and Marcus [1, 2] also concluded that a flotation adjustment is always needed, but their formula produces an almost trivial adjustment factor unless the company is selling very large amounts of stock every year. Patterson and Arzac-Marcus debated in the finance journals, but they reached no reconciliation. Finally, in the latest article, Professors Bierman and Hass [3] derived yet another formula, one which produces an adjustment factor between those recommended by Patterson and Arzac-Marcus.

The issue is important, so it is necessary that we resolve the conflict. Further, since utility executives and regulators, not financial economists, must make decisions in this area, the resolution must be understandable to these decision makers. After studying the problem, we concluded that the best way to approach a clear resolution is to set up some hypothetical, but reasonable, situations and then to test the alternative theories, asking the following question: What results do the several methods produce, and are those results fair to both consumers and investors?

Bonds and Preferred Stocks

Because the proper treatment of flotation costs on bonds and preferred stocks is well known and not controversial, it helps to begin by examining that treatment as a lead-in to the analysis of common stock. First, note that debt flotation costs can be recovered in either of two ways: (1) They can be expensed and recovered from customers during the year the securities are sold, or (2) They can be capitalized and recovered over the life of the securities. The second method, which is consistent with the theory that those customers who benefit from a cost should pay for it, is generally used. Under this theory, bond flotation expenses are reflected in the embedded cost of the bond and are recovered over the life of the bond. For example, if flotation costs of 5 per cent were incurred on a \$100 million, ten-year, 15 per cent coupon bond issue, they would be handled in the following manner by most federal and state regulators:

$$\text{Cost to company} = \frac{\text{Interest expense} + \text{Amortization of flotation costs}}{\text{Principal value} - \text{Unamortized flotation costs}} \quad (1)$$

$$= \frac{\$15{,}000{,}000 + (\$5{,}000{,}000/10)}{\$100{,}000{,}000 - \$5{,}000{,}000}$$

$$= \frac{\$15{,}500{,}000}{\$95{,}000{,}000} = 16.3158\% \text{ for the first year}$$

Return requirements would be calculated as follows:

$$\text{Return requirements} = \text{Cost rate}(\text{Principal value} - \text{Unamortized flotation costs}) \quad (2)$$

$$= 0.163158(\$100{,}000{,}000 - \$5{,}000{,}000)$$

$$= \$15{,}500{,}000.$$

In this example, the company received \$95 million of cash, which it used to purchase \$95 million of operating assets. To meet its interest expense and flotation amortization requirements, the company must have \$15.5 million in return dollars. This return will only be generated if the company earns 16.3158 per cent on its \$95 million of operating assets. Under this procedure, the percentage cost as calculated in Equation 1 declines each year, but the return dollar amount remains constant.[2]

[2]An alternative procedure that produces exactly the same result is to divide interest charges plus flotation amortization by the principal value of the issue, and then to multiply this cost rate by the principal value of the issue:

$$\text{Embedded cost rate} = \frac{\$15{,}500{,}000}{\$100{,}000{,}000} = 0.155 = 15.5\%.$$

$$\text{Return requirements} = 0.155(\$100{,}000{,}000) = \$15{,}500{,}000.$$

This procedure in effect includes both flotation costs and operating assets in the rate base.

Preferred stocks are handled similarly. Actually, utilities issue two types of preferred stocks, those with sinking funds and those that are perpetual. The adjustment formula for sinking fund preferred is exactly like that for bonds, but a difference arises in the case of perpetual preferreds. Perpetual preferred stock represents permanent capital; hence its flotation costs are not amortized.[3] Assuming again a $100 million issue and a 5 per cent flotation cost, this formula applies:

$$\text{Cost to company} = \frac{\text{Dividend requirements}}{\text{Net proceeds}} = \frac{\$15{,}000{,}000}{\$95{,}000{,}000} \quad (3)$$

$$= 15.7895\%$$

Alternatively, we could write the formula as follows:

$$\text{Cost to company} = \frac{\text{Dividend rate}}{1.0 - \text{Flotation}} = \frac{15\%}{0.95} = 15.7895\% \quad (3a)$$

The return dollars can then be calculated as follows:[4]

$$\text{Dollars of return} = 0.157895(\$95{,}000{,}000) = \$15{,}000{,}000.$$

In this example, the preferred stockholders expect and require a return of 15 per cent on *their investment* ($100 million), but the company must earn 15.7895 per cent on *its operating assets* ($95 million) to provide this required return.[5] If the company earned only 15 per cent on the $95 million, then the company would have after-tax revenues of only $14,250,000 to meet investors' preferred dividend requirements of $15 million. Obviously, then, the 15 per cent market value cost of preferred must be adjusted upward to a 15.7895 per cent return on the company's operating assets if investors are to receive the reasonable rate of return they contracted for.

Common Stock

From a conceptual standpoint, it has long been recognized that the situation with common stock is similar to that for bonds and preferred stocks: Issuance costs are incurred; they should not be and are not expensed at the time the stock is sold; and therefore recovery must occur in subsequent years. Further, just as with bonds and preferred stock, the authorized rate of return on rate base equity must be above the rate of return to the investor; that is, the cost to the utility is above the return to the investor. The standard textbook fo[illegible]ows:[6]

$$r = \frac{\text{Expected dividend yield}}{1.0 - F} + g \quad (5)$$

Here:

r = authorized rate of return on book equity, if stockholders are to earn their required rate of return, k,

F = percentage flotation cost associated with common stock offerings, and

g = the expected growth rate in earnings and dividends.

The percentage flotation factor, F, consists of two elements: (1) underwriting costs and (2) "market pressure," which is the decline in the stock price that results when the supply of shares is suddenly increased. Historically, utility underwriting expenses have averaged from 3 to 4 per cent of gross proceeds [9]. Market pressure varies over time, depending on the size of the issue, the condition of the market, and the degree to which investors were surprised by the announcement of the stock sale. Moreover, stock prices change for reasons other than new offerings, so it is difficult to obtain an exact measure of market pressure. However, several careful studies have been reported, and they indicate that market pressure is in the range of one to 3 per cent [10]. Thus, for most utilities, flotation expenses plus pressure have totaled about 5.5 per cent.

To illustrate the flotation cost adjustment process, and following Bierman and Hass for consistency, we assume that a new, start-up utility has the following characteristics:

1) Our hypothetical company can sell stock in the market at $10 per share, and investors expect it to pay a dividend of one dollar and to grow at a rate of 5 per cent. Thus, its DCF cost of equity is $k = D/P + g = 10\% + 5\% = 15\%$, investors' required rate of return.
2) To raise initial capital, the company plans to sell an issue of stock, incurring flotation costs of $F =$ 5 per cent.
3) Applying Equation 5, we obtain a flotation-adjusted cost of equity (r) of 15.5263 per cent:

$$r = \frac{\text{Expected dividend yield}}{1 - F} + g$$

$$= \frac{10.0\%}{0.95} + 5\%$$

$$= 10.5263\% + 5\% = 15.5263\%$$

Thus, the illustrative utility's fair rate of return on book equity according to Equation 5 is approximately 53 basis points above its 15 per cent unadjusted "bare bones DCF cost of equity."

4) The company will sell one share of stock and obtain net proceeds of $9.50. This $9.50 is also the initial book value, B, and rate base. (Obvi-

[3]In effect, the flotation costs of the preferred are amortized over an infinite period, which is to say the amortization per year is zero. Investors have made a *permanent* investment, so the original investors or those who purchase the stock in the secondary market must receive a return on that investment in perpetuity.

[4]Of course, preferred stock dividends are not deductible, so the total revenues required to produce the return dollars is higher for preferred stock than for debt.

[5]Note that the return dollars for the bond exceed those for the perpetual preferred stock – $15.5 million versus $15 million. However, these are first-year costs only. The bond's cost rate declines over time due to the amortization of its flotation costs, whereas the cost rate associated with the preferred stock remains constant, and the rates of return to the bondholders and the preferred stockholders are identical.

[6]This formula is developed in reference citation 5, Chapter 7, as well as in most other corporate finance textbooks.

ously, this amount, which we use for simplicity, could be scaled up without altering the conclusions.)

5) After its inception and initial stock offering, all of the company's equity is expected to come from retained earnings. In a later case, we will examine the situation when more stock is sold.
6) The company operates in a reasonable and prudent manner, such that by any fairness criteria, investors should be allowed to earn their 15 per cent cost of capital return, no more and no less. For simplicity, we also assume that regulation operates properly, without lags.
7) Initially, we assume that the market cost of capital remains constant at 15 per cent, and that the company maintains a constant payout ratio so as to keep the dividend yield and growth components at 10 per cent and 5 per cent, respectively. These assumptions are consistent with the DCF model, but later in the article we expand the analysis by relaxing both of them.

Now these questions may be asked:

Should the flotation adjustment be applied to all common equity or, once retained earnings appear on the balance sheet, only to common stock?
For how many years should an adjustment be applied: One, two, ten, twenty, or forever?

When we applied Equation 5, the textbook formula which Patterson recommended, we found that it produces results that satisfy the fairness criterion; namely, it permits investors to earn exactly their 15 per cent cost of capital, no more and no less. This result for our initial case is demonstrated in Table 1, which was produced by a simple computer model, and it is analyzed below:

Table 1

Case 1: Company Earns Flotation-adjusted Cost of Equity (r) on All Common Equity

Beginning of Year

Year	Common Stock (1)	Retained Earnings (2)	Total Equity (3)	Stock Price (4)	Market-Book Ratio (5)	EPS (6)	DPS (7)	Payout (8)
1	$9.50	$0.0000	$ 9.5000	$10.0000	1.0526x	$1.4750	$1.0000	67.7966%
2	9.50	0.4750	9.9750	10.5000	1.0526	1.5488	1.0500	67.7966
3	9.50	0.9738	10.4738	11.0250	1.0526	1.6262	1.1025	67.7966
4	9.50	1.4974	10.9974	11.5763	1.0526	1.7075	1.1576	67.7966
5	9.50	2.0473	11.5473	12.1551	1.0526	1.7929	1.2155	67.7966
6	9.50	2.6247	12.1247	12.7628	1.0526	1.8825	1.2763	67.7966
7	9.50	3.2309	12.7309	13.4010	1.0526	1.9766	1.3401	67.7966
8	9.50	3.8675	13.3675	14.0710	1.0526	2.0755	1.4071	67.7966
9	9.50	4.5358	14.0358	14.7746	1.0526	2.1792	1.4775	67.7966
10	9.50	5.2376	14.7376	15.5133	1.0526	2.2882	1.5513	67.7966

NOTES:
1) Assumptions made in this case are as follows:
 a) Issue price = $10
 b) Flotation cost = 5%
 c) k = D/P + g = 10% + 5% = 15%
 d) r = 15.5263%
2) The data in this case, and also the more complex cases, were developed with a Lotus 1-2-3 computer program.

1) The company's balance sheet item common stock is shown in Column 1.
2) Retained earnings are shown in Column 2. Initially, they are zero, but they build up over time.
3) Total equity as shown in Column 3 is the sum of common stock and retained earnings. Total equity grows as retained earnings build up.
4) Column 4 shows the stock price as determined by the basic DCF formula. It starts at $10 and grows at a rate of 5 per cent per year, which is necessary to produce the 5 per cent capital gains yield that investors expect and should receive.[7]
5) Column 5 shows the market-to-book (M/B) ratio. Notice that the M/B always exceeds one. The only way the M/B ratio could go to one would be for the stock price to fall below the value shown in Column 4, but if that were to happen, then investors would not receive the capital gains to which they are entitled. Thus, the M/B will exceed one if investors are being treated fairly.
6) Earnings per share (EPS) as shown in Column 6 is the product of total equity times 0.155263, the fair rate of return as determined by Equation 5.
7) Dividends per share (DPS) as shown in Column 7 begin at one dollar and grow at a rate of 5 per cent per year. This growth rate is a requirement if investors are to earn their DCF cost of capital.
8) The payout ratio is shown in Column 8. Under

[7]The DCF valuation equation is

$$P_0 = \frac{D_1}{k - g}$$

This equation, solved for k, produces the standard DCF cost of capital equation, $k = D_1/P_0 + g$. See reference citation 5, Chapter 5, for a derivation and discussion.

the assumptions of the standard DCF constant growth model, the payout must be constant, and it is if r as determined by Equation 5 is used as the allowed return on equity.

9) Note also that book value per share as shown in Column 3 is growing at a constant rate, 5 per cent. The retention growth rate, g = br, where r is the return on book equity and b is the fraction of earnings, is

$$g = br = (1.0 - 0.677966)(15.5263) = 0.322(15.5263) = 5.0\%, \text{ just as it should be.}$$

Case 1 proves that Equation 5 produces the desired results; namely, returns that exactly cover the cost of equity, no more and no less. Any return on book equity different from that established by Equation 5 would produce inconsistent results. For example, suppose the authorized rate of return were cut from 15.5263 to the DCF return, 15 per cent, in Year 2. This would cause the stock price to drop from $10.50 to the $9.9750 book value. Thus, stockholders would suffer a loss, and they would not obtain the capital gains yield to which they are entitled. Any other type of experimentation will show exactly the same thing: If the company is not allowed to earn the cost of equity as determined by Equation 5 on total common equity, stockholders will not receive a 15 per cent return on their invested capital.

Sale of Additional Equity

While the only-one-equity-sale conditions used to develop Case 1 are consistent with Bierman and Hass's example, and also with some actual companies such as Comsat and the Yankee Atomic Power companies, most utilities sell additional common stock from time to time. Therefore, we modified the computer model to analyze stock sales subsequent to the initial offering, and we report the results in Table 2 as Case 2, in which the company raises an additional share of new common equity for $12.1247 at the beginning of Year 6. (Note that the $12.1247 is calculated as the price of the stock at the beginning of Year 6 less flotation costs.) Earnings, dividends, and common equity all increase in Year 6 as a result of the sale, but investors continue to earn exactly 15 per cent on their investment so long as the company is allowed to earn 15.5263 per cent on its total book equity.

In Case 3, reported in Table 3, we present the results for a company that issues new equity at a flotation cost different from the cost of its original stock issue. Case 3 is similar to Case 2. Just as in Case 2, the company issues new equity at the beginning of Year 6. However, in Case 3, the equity sold at the beginning of Year 6 has a different flotation cost (3 per cent) from that of the original issue (5 per cent). With lower flotation costs, the company nets more common equity in Case 3 than in Case 2. (The dollar amount of new equity raised is calculated as the price of the share of stock at the beginning of Year 6 less the 3 per cent flotation costs incurred.)

In this example, because the new equity is sold at a different flotation cost than the old equity, a new value of r must be calculated and used to determine net income. The new r is a weighted average of r as determined by Equation 5 for each equity issue, with the weights being the fraction of total equity attributable to the new and old stock at the time the new stock is issued. Because of the lower flotation costs on the new equity, there is a corresponding drop in the market-to-book ratio in Year 6. Note, however, that after the transitional Year 6, earnings and dividends continue to grow at the required 5 per cent rate, which is neces-

Table 2

Case 2: Company Sells Additional Stock at the Beginning of Year 6

Beginning of Year

Year	Common Stock (1)	New Issue (1a)	Retained Earnings (2)	Total Equity (3)	Stock Price (4)	Market-Book Ratio (5)	EPS (6)	DPS (7)	Payout Ratio (8)
1	$ 9.50		$0.0000	$ 9.5000	$10.0000	1.0526x	$1.4750	$1.0000	67.7966%
2	9.50		0.4750	9.9750	10.5000	1.0526	1.5488	1.0500	67.7966
3	9.50		0.9738	10.4738	11.0250	1.0526	1.6262	1.1025	67.7966
4	9.50		1.4974	10.9974	11.5763	1.0526	1.7075	1.1576	67.7966
5	9.50		2.0473	11.5473	12.1551	1.0526	1.7929	1.2155	67.7966
6	9.50	$12.1247	2.6247	24.2493	12.7628	1.0526	1.8825	1.2763	67.7966
7	21.6247		3.8371	25.4618	13.4010	1.0526	1.9766	1.3401	67.7966
8	21.6247		5.1102	26.7349	14.0710	1.0526	2.0755	1.4071	67.7966
9	21.6247		6.4470	28.0717	14.7746	1.0526	2.1792	1.4775	67.7966
10	21.6247		7.8506	29.4752	15.5133	1.0526	2.2882	1.5513	67.7966

NOTES:
Assumptions made in this case are as follows:
a) Original issue price = $10
b) Flotation cost = 5%
c) k = D/P + g = 10% + 5% = 15%
d) r = 15.5263%
e) Year 6 issue price = $12.7628
f) Year 6 new common stock = $12.7628(1 − F)
= $12.7628(0.95)
= $12.1247

Table 3

Case 3: Company Sells Additional Stock at the Beginning of Year 6 Incurring Different Flotation Costs

Beginning of Year

Year	Common Stock (1)	New Issue (1a)	Retained Earnings (2)	Total Equity (3)	Stock Price (4)	Market-Book Ratio (5)	EPS (6)	DPS (7)	Payout Ratio (8)
1	$ 9.5000		$0.0000	$ 9.5000	$10.0000	1.0526x	$1.4750	$1.0000	67.7966%
2	9.5000		0.4750	9.9750	10.5000	1.0526	1.5488	1.0500	67.7966
3	9.5000		0.9738	10.4738	11.0250	1.0526	1.6262	1.1025	67.7966
4	9.5000		1.4974	10.9974	11.5763	1.0526	1.7075	1.1576	67.7966
5	9.5000		2.0473	11.5473	12.1551	1.0526	1.7929	1.2155	67.7966
6	9.5000	$12.3799	2.6247	24.5046	12.7628	1.0526	1.8889	1.2763	67.7566
7	21.8799		3.8499	25.7298	13.4010	1.0526	1.9833	1.3401	67.5676
8	21.8799		5.1364	27.0163	14.0710	1.0526	2.0825	1.4071	67.5676
9	21.8799		6.4872	28.3671	14.7746	1.0526	2.1866	1.4775	67.5676
10	21.8799		7.9056	29.7855	15.5133	1.0526	2.2960	1.5513	67.5676

NOTES:
Assumptions made in this case are as follows:
a) Original issue price = $10
b) Year 1 Flotation cost = 5%
c) k = D/P + g = 10% + 5% = 15%
d) r_1 = 15.5263%
e) Year 6 issue price = $12.7628
f) Year 6 flotation cost = 3%
g) Year 6 new common stock = $12.7628(1 − F)
= $12.7628(0.97)
= $12.3799
h) Additional issue r = 15.3093%

sary if investors are to receive the 15 per cent DCF return on their investment. The stock price grows at 5 per cent throughout the ten-year period.

The fact that the company must continue to earn the flotation-adjusted cost of equity, even as retained earnings build up to a larger and larger proportion of total common equity, is counterintuitive, and so it deserves further discussion. Here are two comments:

1) *Demonstration that a weighted average cost rate is inappropriate.* It has been suggested that the authorized return on equity should be a weighted average of the flotation-adjusted cost rate, r = 15.5263 per cent, and the DCF cost rate, k = 15 per cent, with the weights being based on common equity and accumulated retained earnings, respectively. When we programmed our model to reflect these conditions, we obtained the results shown in Table 4. A problem obviously exists – if dividends are to grow at the 5 per cent rate that investors expect, and if earnings are based on a weighted average of k and r, then a higher and higher percentage of earnings will have to paid out. Thus, the payout ratio will rise. In Year 34 the payout ratio will exceed 100 per cent, so retained earnings will start to decline. Retained earnings actually go negative in Year 45, and Total Common Equity goes negative in Year 46, which means the company is officially bankrupt. This example demonstrates, in yet another way, that the flotation-adjusted cost of equity must be earned on all common equity if investors are to receive the DCF return to which they are entitled under prudent management. The example also demonstrates that, if investors were informed that the regulatory treatment implied in Table 4 were going to be employed, they would not invest in the company in the first place.

2) *Logical explanation.* To understand *why* the Equation 5 value must be applied to all common equity, retained earnings as well as equity raised by selling stock, one must trace through the valuation process. Notice that, in Year 1, investors require a return of 15 per cent on their $10 investment, or $1.50. However, the company earns only $1.4750, of which it pays out one dollar as a dividend and retains 47.5 cents. To give the investor the fifty-cent increase in market value (or capital gain) needed to add to the one dollar dividend to produce the $1.50, or 15 per cent, total DCF return, the 47.5 cents must earn more than 15 per cent. Specifically, it must earn the flotation adjusted cost of equity, r = 15.5263 per cent. This same thought process can be continued in other years, ad infinitum, and the ultimate conclusion is that both the original common equity and all retained earnings must earn r = 15.5263 per cent.

If the preceding paragraph is not clear, we can put it another way. The investor expects and is entitled to earn, under prudent management, a return of 15 per cent on his or her investment. Thus, dividends plus capital gains must total 15 per cent, or $1.50 in the first year. Ten per cent, or one dollar, will come from dividends, so 5 per cent, or 50 cents, must come from capital gains. To obtain a capital gain yield of 50 cents from 47.5 cents of retained earnings, the retained earnings must earn a return greater than k = 15 per cent; specifically, the retained earnings must be allowed to earn r = 15.5263 per cent. (If the 47.5 cents earned 15 per cent, then it would be worth exactly 47.5 cents, not 50 cents.) In Year 2, retained earnings will rise by

5 per cent from 47.5 cents to 49.875 cents; the capital gains then must rise from 50 cents to .50(1.05) = 52.5 cents; the only way this can happen is for the second-year retained earnings to be allowed to earn r = 15.5263 per cent; and so on.

The Effect of the Payout Ratio on the Flotation Cost Adjustment

Even though fair regulation requires that retained earnings be allowed to earn the flotation adjusted cost of equity, the level of retained earnings as affected by the payout ratio does have a material effect on the size of the adjustment.

To illustrate this point, assume (1) that two utilities both have a 15 per cent market cost of equity, that is, k = 15 per cent; (2) that both companies sell at a price of \$20; but (3) that one company has a policy of paying out 25 per cent of its earnings and retaining 75 per cent, while the other has the reverse dividend policy. Assume further that both companies earn 15 per cent on their \$20 market value, so earnings per share are .15(\$20) = \$3. The high payout company has a dividend of .75(\$3) = \$2.25, while the low payout company has a dividend of .25(\$3) = 75 cents. At the same time, the low payout company, which plows most of its earnings back into the business, will have a growth rate of g = .75(15 per cent) = 11.25 per cent, while the high payout company will have g = .25(15 per cent) = 3.75 per cent.

Under these conditions, the following situation would exist for the two illustrative companies:

Low payout Company: $$k = \frac{D_1}{P_0} + g = \frac{\$0.75}{\$20} + 11.25\%$$

$$= 3.75\% + 11.25\% = 15\%$$

High payout Company: $$k = \frac{D_1}{P_0} + g = \frac{\$\ 2.25}{\$20} + 3.75\%$$

$$= 11.25\% + 3.75\% = 15\%$$

Applying the adjustment formula,

$$r = \frac{\text{Expected dividend yield}}{1 - F} + g,$$

we find this situation, assuming that issuance costs are 5 per cent:

High payout Company: $$r = \frac{11.25\%}{0.95} + 3.75\%$$

$$= 11.842\% + 3.75\% = 15.592\%$$

Low payout Company: $$r = \frac{3.75\%}{0.95} + 11.25\%$$

$$= 3.947 + 11.25\% = 15.197\%$$

Difference = 0.395%

Thus, we see that the company which retains most of its earnings, and which consequently has more retained

Table 4

Case 4: Company Earns Weighted Average k

Year	Common Stock (1)	Retained Earnings (2)	Total Equity (3)	EPS (4)	DPS (5)	Payout Rate (6)	Weighted k (7)
1	\$9.5000	\$ 0.0000	\$ 9.5000	\$1.4750	\$1 0000	67.7966%	0.1553
2	9.5000	0.4750	9.9750	1.5463	1.0500	67.9062	0.1550
3	9.5000	0.9713	10.4713	1.6207	1.1025	68.0267	0.1548
4	9.5000	1.4894	10.9894	1.6984	1.1576	68.1591	0.1545
5	9.5000	2.0302	11.5302	1.7795	1.2155	68.3047	0.1543
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
33	9.5000	23.2219	32.7219	4.9583	4.7649	96.1006	0.1515
34	9.5000	23.4152	32.9152	4.9873	5.0032	100.3188	0.1515
35	9.5000	23.3993	32.8993	4.9849	5.2533	105.3852	0.1515
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
45	9.5000	−2.3443	7.1557	1.1234	8.2791	736.9935	0.1570
46	The company goes bankrupt.						

NOTES:

1) Assumptions made in this case are as follows:
   a) Issue price = \$10
   b) Flotation cost = 5%
   c) k = D/P + g = 10% + 5% = 15%
   d) r = 15.5263%
2) The dividend in Year 45 cannot grow by the 5 per cent growth rate, because if it did total equity would become negative. Therefore, the Year 45 dividend is calculated as the remaining portion of total equity + earnings in Year 45: \$7.1557 + \$1.1234 = \$8.2791.

Table 5

Case 5: Company Sells Additional Stock and k Changes

Beginning of Year

Year	Common Stock (1)	New Issue (1a)	Retained Earnings (2)	Total Equity (3)	Stock Price (4)	Market-Book Ratio (5)	EPS (6)	DPS (7)	Payout Ratio (8)
1	$ 9.5000		$0.0000	$ 9.5000	$10.0000	1.0526x	$1.4750	$1.0000	67.7966%
2	9.5000		0.4750	9.9750	10.5000	1.0526	1.5488	1.0500	67.7966
3	9.5000		0.9738	10.4738	11.0250	1.0526	1.6262	1.1025	67.7966
4	9.5000		1.4974	10.9974	11.5763	1.0526	1.7075	1.1576	67.7966
5	9.5000		2.0473	11.5473	12.1551	1.0526	1.7929	1.2155	67.7966
6	9.5000	$12.3799	2.6247	24.5046	12.7628	1.0526	1.8889	1.2763	67.5676
7	21.8799		3.8499	25.7298	13.4010	1.0526	1.9833	1.3401	67.5676
8	21.8799		5.1364	27.0163	14.0710	1.0526	1.8123	1.4071	77.6398
9	21.8799		5.9469	27.8268	14.4931	1.0526	1.8667	1.4493	77.6398
10	21.8799		6.7817	28.6616	14.9279	1.0526	1.9227	1.4928	77.6398

NOTES:
Assumptions made in this case are as follows:
a) Original issue price = $10
b) Year 1 flotation cost = 5%
c) Issue 1 r = 15.5263%
d) Year 6 issue price = $12.7628
e) Year 6 flotation cost = 3%
f) Year 6 new common stock = $12.7628(1 − F)
= $12.7628(0.97)
= $12.3799
g) Additional issue r = 15.3093%
h) Years 1-7, k = D/P + g = 10% + 5% = 15%
i) Years 8-10, k = D/P + g = 10% + 3% = 13%

Table 6

Case 6: Company Sells Additional Stock and k Changes

Beginning of Year

Year	Common Stock (1)	New Issue (1a)	Retained Earnings (2)	Total Equity (3)	Stock Price (4)	Market-Book Ratio (5)	EPS (6)	DPS (7)	Payout Ratio (8)
1	$ 9.5000		$0.0000	$ 9.5000	$10.0000	1.0526x	$1.4750	$1.0000	67.7966%
2	9.5000		0.4750	9.9750	10.5000	1.0526	1.5488	1.0500	67.7966
3	9.5000		0.9738	10.4738	11.0250	1.0526	1.6262	1.1025	67.7966
4	9.5000		1.4974	10.9974	11.5763	1.0526	1.7075	1.1576	67.7966
5	9.5000		2.0473	11.5473	12.1551	1.0526	1.7929	1.2155	67.7966
6	9.5000	$12.3799	2.6247	24.5046	12.7628	1.0526	1.8889	1.2763	67.5676
7	21.8799		3.8499	25.7298	13.4010	1.0526	1.9833	1.3401	67.5676
8	21.8799		5.1364	27.0163	14.0710	1.0526	1.8011	1.1257	62.5000
9	21.8799		5.9469	27.3671	14.7746	1.0526	1.8911	1.1820	62.5000
10	21.8799		6.7817	29.7855	15.5133	1.0526	1.9857	1.2411	62.5000

NOTES:
Assumptions made in this case are as follows:
a) Original issue price = $10
b) Year 1 flotation cost = 5%
c) Issue 1 r = 15.5263%
d) Year 6 issue price = $12.7628
e) Year 6 flotation cost = 3%
f) Year 6 new common stock = $12.7628(1 − F)
= $12.7628(0.97)
= $12.3799
g) Additional issue r = 15.3093%
h) Years 1-7, k = D/P + g = 10% + 5% = 15%
i) Years 8-10, k = D/P + g = 10% + 3% = 13%

earnings and a smaller dollar amount of flotation costs, also has the lower flotation-adjusted cost of equity. This demonstrates that the issuance cost adjustment formula is itself adjusted to reflect the extent to which a company finances by retaining earnings rather than by selling new common stock.

Changes in the DCF Cost of Equity

We also analyzed the effects of changes in the DCF cost of equity over time. While a change in the DCF k causes a change in earnings, dividends, and the growth rate, the flotation adjustment *process* is not affected – Equation 5 still produces a fair rate of return on book value. This is demonstrated in Tables 5 and 6. It should be noted that the effects of the adjustment as derived by Equation 5 do vary with the level of the DCF cost and with the split between dividend yield and growth. In Case 5, we analyze the effects of a change in the growth rate with the dividend yield held constant, while in Case 6, reversing them, we analyze the effects of a change in the dividend yield with the growth rate held constant. Both cases use Case 3 as their base case. In each instance, a new value for r, based on Equation 5, can be established, and this return on book value permits investors to earn their new DCF cost of equity.

Capitalizing Flotation Costs

Bierman and Hass, almost as an afterthought toward the end of their article, suggested that utilities should be allowed to record the *gross amount* of equity sales and to earn a DCF return on gross equity capital. This would amount to capitalizing flotation costs. These capitalized costs could then be amortized over some prescribed period or else be kept on the books indefinitely.

To show this, we set up computer models using our various cases but capitalizing flotation costs. One can see that earnings, dividends, and stock prices are all exactly like those shown in our tables. Thus, capitalizing flotation costs produces exactly the same results as Equation 5.

Capitalizing flotation costs has much to recommend it, for it would eliminate the confusion that has existed. However, a fundamental problem exists for any company that has incurred flotation costs in the past, that is, for virtually the entire utility industry: How would the fact that past flotation costs were not capitalized be dealt with? In other words, capitalizing flotation costs would be an excellent procedure for a new, start-up, company, but such a plan would not be feasible for an existing company without somehow adjusting for past costs. Such an adjustment could be made, but a discussion of it goes beyond the scope of this article.

Conclusion

The proper treatment of equity flotation costs has caused much confusion. Had such costs been either capitalized in the past or else expensed on an as-incurred basis, there would be no problem, but since neither of these practices has generally been followed, the DCF return must be adjusted to produce a fair rate of return on book equity.

Further, the adjustment is always required, irrespective of whether or not a company has plans to sell new stock in the future, and the adjusted return must be earned on total equity, including retained earnings. Otherwise, it would be impossible for investors to earn the cost of equity, even under prudent and efficient management.

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NEW REGULATORY FINANCE

Roger A. Morin, PhD

2006
PUBLIC UTILITIES REPORTS, INC.
Vienna, Virginia

Alternative Sources of Equity

A second controversy is whether a flotation cost allowance should be allowed because a company can always obtain equity from sources other than a public issue of common stock, such as a rights issue for example. There are several sources of equity capital available to a firm, including: public common stock issues, conversions of convertible preferred stock, dividend reinvestment plans, employees' savings plans, warrants, and stock dividend programs. Each carries its own set of administrative costs and flotation cost components, including discounts, commissions, corporate expenses, offering spread, and market pressure.

Equity capital raised through a public issue is typically more expensive than alternate sources of equity. Rights issues, when available, are less expensive, but direct costs still would be incurred. Of course, a rights issue assumes that a willing underwriter and a willing market could be found for such offerings in the first place, an unlikely event in public capital markets for small unproven companies. Internal sources of equity, including dividend reinvestment and/or employee stock option plans, are also typically less expensive, unless a discount on the purchase price is inherent in the plan, in which case they are often equivalent to a public issue. Direct costs are also incurred in an employee stock savings plan and/or a shareholder dividend reinvestment plan.

The flotation cost allowance is still warranted, however, because it is a composite factor that reflects the historical mix of all these sources of equity. The flotation cost allowance applicable to all the company's book equity is actually a weighted average of the current allowances required for each past financing, that is, the flotation cost allowance factor is a build-up of historical flotation cost adjustments associated and traceable to each component of equity source. However, it is impractical and prohibitive to start from the inception of a company and source all present equity from various equity vintages and types of equity capital raised by the company. One way of circumventing the problem of vintaging each form of equity is to source book equity by broad categories of equity, such as dividend reinvestment plan equity, stock option equity, and public issue equity, and calculate a weighted average flotation factor. That is also onerous and cumbersome. A practical solution is to rely on the results of the empirical studies discussed earlier that quantify the average flotation cost factor of a large sample of utility stock offerings.

Efficient Markets

A third controversy centers around the argument that the omission of flotation cost is justified on the grounds that, in an efficient market, the stock price already reflects any accretion or dilution resulting from new issuances of securities and that a flotation cost adjustment results in a double counting effect. The simple fact of the matter is that whatever stock price is set by the market, the company issuing stock will always net an amount less than the stock price due to the presence of intermediation and flotation costs. As a result, the company must earn slightly more on its reduced rate base in order to produce a return equal to that required by shareholders.

Existing shareholders are made worse off when a company issues new stock below the market price, irrespective of how ''efficient'' that stock price may be. As seen in an earlier example, the new issue results in a transfer of wealth from existing to new shareholders. This is true regardless of the degree of efficiency of the market.

It has also been argued that a flotation cost allowance is inequitable since it results in a windfall gain to shareholders. This argument is erroneous. As stated previously, the company's common equity account is credited by an amount less than the market value of the issue, so that the company must earn slightly more on its reduced rate base in order to produce a return equal to that required by shareholders. Moreover, existing shareholders are made worse off when a company issues new stock below the market price.

The suggestion that the flotation cost allowance is unwarranted because investors factor this shortcoming in the stock price implies that it is appropriate to use a deficient model because such a deficiency is reflected in stock prices. In other words, it is appropriate to use a deficient model because investors are aware of this. Such circular reasoning could be used to justify any regulatory policy. For example, under this reasoning, it would be appropriate to authorize a return on equity of 1% because investors reflect this fact in the stock price. This is clearly illogical and erroneous. Any regulatory policy, as irrational as it may be, can be justified using this argument.

Absence of Imminent Stock Issues

Another controversy is whether the flotation cost allowance should still be applied when the utility is not contemplating an imminent common stock issue. Some argue that flotation costs are real and should be recognized in calculating the fair return on equity, but only at the time when the expenses are incurred. In other words, the flotation cost allowance should not continue indefinitely, but should be made in the year in which the sale of securities occurs, with no need for continuing compensation in future years. This argument implies that the company has already been compensated for these costs and/or the initial contributed capital was obtained freely, devoid of any flotation costs, which is an unlikely assumption, and certainly not applicable to most utilities. If the flotation costs of past stock issues have been fully recovered, the argument has merit. If that assumption is not met, the argument is without merit. The flotation cost adjustment cannot be strictly forward-looking unless all past flotation costs associated with past issues have been recovered.

THE VALUE LINE Investment Survey®

Part 1
Summary & Index

File at the front of the *Ratings & Reports* binder. Last week's *Summary & Index* should be removed.

October 9, 2020

TABLE OF SUMMARY & INDEX CONTENTS

Summary & Index Page Number

SCREENS

The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

20.9

26 Weeks Ago	Market Low 3-23-20	Market High 9-2-20
13.2	11.0	21.4

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks

2.3%

26 Weeks Ago	Market Low 3-23-20	Market High 9-2-20
3.1%	3.7%	2.2%

The Median Estimated **THREE-TO-FIVE YEAR PRICE APPRECIATION POTENTIAL** of all 1700 stocks in the VL Universe

55%

26 Weeks Ago	Market Low 3-23-20	Market High 9-2-20
105	145	50%

The Median Estimated **18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE** of all 1700 stocks in the VL Universe

18%

26 Weeks Ago	Market Low 3-23-20	Market High 9-2-20
42%	72%	14%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

*Reviewed in this week's issue.

In three parts: This is Part 1, the Summary & Index. Part 2 is Selection & Opinion. Part 3 is Ratings & Reports. Volume LXXVI, No. 9.

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Index to Stocks

Prices quoted are as of September 28, 2020.
All shares are traded on the New York Stock Exchange except where noted.

PAGE NUMBERS
Bold type refers to full report. The number on the left signifies a Supplement (if available).

Supplement	Page	NAME OF STOCK	Ticker Symbol	Recent Price	RANKS Timeliness	RANKS Safety	RANKS Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	LATEST RESULTS Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	1702	**AAON, Inc.** (NDQ)	AAON	**58.40**	2	3	2	.90	40- 65	(N- 10%)	**40.8**	**0.7**	1.43	.38	**49**	6/30	**.34**	.26	9/30	▲.19	.16	YES
	702	AAR Corp.	AIR	**19.86**	5	4	4	1.70	25- 40	(25-100%)	**NMF**	**NIL**	d.63	NIL	**69**	8/31	◆**d.42**	.49	9/30	▼NIL	.075	YES
	1966	AB InBev ADR	BUD	**54.38**	3	2	3	.95	90- 120	(65-120%)	**17.7**	**1.8**	3.08	.99	**26**	6/30	**.18**	1.25	9/30	.567	NIL	YES
	1745	ABB Ltd. ADR	ABB	**25.39**	3	2	1	1.05	20- 25	(N- N%)	**33.9**	**3.3**	.75	.83	**60**	6/30	**.19**	.12	9/30	NIL	NIL	YES
	375	ABM Industries Inc.	ABM	**37.46**	3	3	3	1.10	50- 75	(35-100%)	**20.1**	**2.0**	1.86	.74	**39**	7/31	**.75**	.60	12/31	.185	.18	YES
	1412	ACCO Brands	ACCO	**6.09**	–	3	–	1.45	18- 25	(195-310%)	**8.8**	**4.3**	.69	.26	**85**	6/30	**.12**	.36	9/30	.065	.06	YES
	2615	ACI Worldwide (NDQ)	ACIW	**25.70**	2	3	3	1.00	30- 45	(15- 75%)	**25.7**	**NIL**	1.00	NIL	**15**	6/30	**.12**	.05	9/30	NIL	NIL	YES
239	1320	ADT Inc.	ADT	**8.42**	3	3	1	1.20	13- 19	(55-125%)	**NMF**	**1.7**	d.65	.14	**59**	6/30	**d.14**	d.14	12/31	.035	.035	YES
	1210	AES Corp.	AES	**17.87**	3	3	3	1.10	16- 25	(N- 40%)	**24.5**	**3.2**	.73	.57	**27**	6/30	**d.12**	.02	9/30	.143	.137	YES
	149	AGCO Corp.	AGCO	**72.90**	3	3	3	1.20	95- 145	(30-100%)	**24.0**	**0.9**	3.04	.64	**64**	6/30	**.93**	1.82	9/30	.16	.16	YES
	2302	AMC Entertainment Hldgs.	AMC					SEE FINAL REPORT														
	2328	AMC Networks (NDQ)	AMCX	**24.72**	4	3	4	.95	80- 120	(225-385%)	**4.1**	**NIL**	6.03	NIL	**57**	6/30	**2.39**	2.60	9/30	NIL	NIL	YES
	1637	AMN Healthcare	AMN	**58.28**	4	3	5	.55	65- 100	(10- 70%)	**26.1**	**NIL**	2.23	NIL	**68**	6/30	**.47**	.61	9/30	NIL	NIL	YES
	2637	ANGI Homeservices (NDQ)	ANGI	**10.55**	2	3	1	.90	10- 15	(N- 40%)	**NMF**	**NIL**	.05	NIL	**23**	6/30	**.02**	.01	9/30	NIL	NIL	YES
	1567	ASA Gold & Precious	ASA	**21.05**	–	3	–	.75	20- 30	(N- 45%)	**NMF**	**0.1**	NMF	.02-NIL	**5**	8/31	**27.09(q)**	16.08(q)	9/30	NIL	NIL	YES
	1638	ASGN Inc.	ASGN	**65.27**	3	3	1	1.15	90- 130	(40-100%)	**18.2**	**NIL**	3.58	NIL	**68**	6/30	**.92**	.81	9/30	NIL	NIL	YES
	917	AT&T Inc.	T	**28.38**	3	1	3	.85	55- 65	(95-130%)	**8.4**	**7.4**	3.36	2.11	**17**	6/30	**.83**	.89	12/31	◆.52	.51	YES
	940	A10 Networks	ATEN	**6.69**	3	3	1	1.20	12- 18	(80-170%)	**26.8**	**NIL**	.25	NIL	**32**	6/30	**.05**	d.08	9/30	NIL	NIL	YES
	918	ATN International (NDQ)	ATNI	**50.79**	2	3	2	.75	55- 85	(10- 65%)	**66.8**	**1.3**	.76	.68	**17**	6/30	**.30**	d.05	12/31	.17	.17	YES
	1302	AZZ Inc.	AZZ	**34.33**	4	3	3	1.10	60- 90	(75-160%)	**16.7**	**2.0**	2.05	.68	**61**	5/31	**.21**	.81	9/30	.17	.17	YES
	2135	Aaron's Inc.	AAN	**57.84**	3	3	3	1.60	70- 105	(20- 80%)	**16.3**	**0.3**	3.55	.16	**19**	6/30	**1.18**	.93	12/31	.04	.035	YES
1029	203	Abbott Labs.	ABT	**104.44**	2	1	3	1.00	110- 135	(5- 30%)	**30.6**	**1.4**	3.41	1.44	**24**	6/30	**.57**	.82	12/31	.36	.32	YES
	1607	AbbVie Inc.	ABBV	**87.28**	1	3	2	1.00	130- 200	(50-130%)	**8.0**	**5.4**	10.93	4.72	**14**	6/30	**2.34**	2.26	12/31	1.18	1.07	YES
1028	2192	Abercrombie & Fitch	ANF	**14.76**	4	4	5	1.20	20- 35	(35-135%)	**19.7**	**NIL**	.75	NIL	**54**	7/31	**.09**	d.48	9/30	NIL	.20	YES
	416	Aberdeen Australia Fd. (ASE)	IAF	**4.54**	–	3	–	1.10	7- 11	(55-140%)	**NMF**	**3.5**	NMF	.16	–	7/31	**5.31(q)**	5.94(q)	9/30	.023	.039	
	1199	Aberdeen Asia-Pac. Fd. (ASE)	FAX	**3.91**	–	4	–	.75	4- 7	(N- 80%)	**NMF**	**9.0**	NMF	.35	–	4/30	**4.30(q)**	4.80(q)	9/30	.083	.083	
	417	Aberdeen Japan Equity	JEQ	**8.30**	–	3	–	.90	9- 14	(10- 70%)	**NMF**	**0.6**	NMF	.05	–	4/30	**8.17(q)**	8.30(q)	9/30	NIL	NIL	
	171	ABIOMED Inc. (NDQ)	ABMD	**273.55**	3	3	1	1.00	270- 405	(N- 50%)	**78.2**	**NIL**	3.50	NIL	**50**	6/30	**.98**	1.93	9/30	NIL	NIL	YES
	941	Acacia Communications (NDQ)	ACIA	**67.55**	–	4	–	.70	50- 85	(N- 25%)	**50.4**	**NIL**	1.34	NIL	**32**	6/30	**.37**	d.05	9/30	NIL	NIL	YES
	2616	Accenture Plc	ACN	**222.78**	2	1	2	.95	240- 290	(10- 30%)	**29.3**	**1.6**	7.60	3.52	**15**	8/31	◆**1.70**	1.74	12/31	▲.88	.80	YES
	2008	Activision Blizzard (NDQ)	ATVI	**81.95**	1	3	2	.70	55- 85	(N- 5%)	**32.8**	**0.5**	2.50	.45	**4**	6/30	**.75**	.43	9/30	NIL	NIL	YES
	1303	Acuity Brands	AYI	**101.55**	4	3	3	1.25	200- 300	(95-195%)	**12.3**	**0.5**	8.28	.52	**61**	5/31	**1.94**	2.53	9/30	.13	.13	YES
	1200	Adams Divers. Equity Fd	ADX	**16.09**	–	2	–	1.00	16- 20	(N- 25%)	**NMF**	**1.2**	NMF	.20	–	6/30	**17.46(q)**	17.73(q)	9/30	.05	.05	
	204	Adaptive Biotech. (NDQ)	ADPT	**48.37**	–	3	–	NMF	40- 60	(N- 25%)	**NMF**	**NIL**	d1.06	NIL	**24**	6/30	**d.26**	d.13	9/30	NIL	NIL	YES
	972	Adient plc	ADNT	**17.16**	4	4	3	1.50	25- 40	(45-135%)	**NMF**	**NIL**	d1.43	NIL	**70**	6/30	**d2.78**	.38	9/30	NIL	NIL	YES
	2584	Adobe Inc. (NDQ)	ADBE	**488.51**	1	2	3	.80	510- 690	(5- 40%)	**58.2**	**NIL**	8.39	NIL	**2**	8/31	**1.97**	1.61	9/30	NIL	NIL	YES
	1998	Adtalem Global Educ.	ATGE	**25.23**	3	3	3	.95	50- 70	(100-175%)	**9.8**	**NIL**	2.58	NIL	**48**	6/30	**.58**	.97	9/30	NIL	NIL	YES
	942	ADTRAN, Inc. (NDQ)	ADTN	**10.21**	3	3	2	1.10	10- 16	(N- 55%)	**56.7**	**3.5**	.18	.36	**32**	6/30	**.02**	.08	9/30	.09	.09	YES
	2118	Advance Auto Parts	AAP	**153.39**	2	3	2	1.15	165- 250	(10- 65%)	**19.1**	**0.7**	8.04	1.00	**44**	6/30	**2.92**	2.00	12/31	.25	.06	YES
	405	Advanced Disposal	ADSW	**30.21**	–	3	–	.55	25- 35	(N- 15%)	**88.9**	**NIL**	.34	NIL	**40**	6/30	**.07**	d.01	9/30	NIL	NIL	YES
	1350	Advanced Energy (NDQ)	AEIS	**61.98**	2	3	2	1.30	95- 140	(55-125%)	**13.6**	**NIL**	4.56	NIL	**11**	6/30	**1.18**	.45	9/30	NIL	NIL	YES
	1351	Advanced Micro Dev. (NDQ)	AMD	**79.48**	1	4	3	1.20	30- 55	(N- N%)	**77.9**	**NIL**	1.02	NIL	**11**	6/30	**.18**	.08	9/30	NIL	NIL	YES
	558	AdvanSix Inc.	ASIX	**12.63**	4	3	3	.75	20- 30	(60-140%)	**11.1**	**NIL**	1.14	NIL	**58**	6/30	**.41**	.53	9/30	NIL	NIL	YES
	1228	AECOM	ACM	**40.91**	–	3	–	1.35	45- 65	(10- 60%)	**18.4**	**NIL**	2.22	NIL	**52**	6/30	**.55**	.72	9/30	NIL	NIL	YES
	1102	Aegion Corp. (NDQ)	AEGN	**14.26**	4	3	3	1.00	25- 40	(75-180%)	**14.7**	**NIL**	.97	NIL	**38**	6/30	**.25**	.36	9/30	NIL	NIL	YES
	2535	AerCap Hldgs. NV	AER	**25.51**	3	4	3	1.90	60- 95	(135-270%)	**3.9**	**NIL**	6.56	NIL	**55**	6/30	**1.92**	2.42	9/30	NIL	NIL	YES
2663	1746	Aerojet Rocketdyne	AJRD	**41.15**	3	3	4	.90	50- 70	(20- 70%)	**21.3**	**NIL**	1.93	NIL	**60**	6/30	**.46**	.50	9/30	NIL	NIL	YES
	703	AeroVironment (NDQ)	AVAV	**61.52**	3	3	1	.85	80- 110	(30- 80%)	**34.2**	**NIL**	1.80	NIL	**69**	7/31	**.42**	.71	9/30	NIL	NIL	YES
	2536	Affiliated Managers	AMG	**68.05**	3	3	3	1.40	135- 205	(100-200%)	**46.0**	**0.1**	1.48	.04	**55**	6/30	**.65**	2.11	9/30	.01	.32	YES
	1556	Aflac Inc.	AFL	**36.33**	3	2	4	1.25	50- 65	(40- 80%)	**7.4**	**3.2**	4.91	1.15	**51**	6/30	**1.28**	1.13	9/30	.28	.27	YES
	113	Agilent Technologies	A	**99.51**	2	2	3	.90	100- 135	(N- 35%)	**30.7**	**0.7**	3.24	.72	**31**	7/31	**.78**	.76	9/30	.18	.164	YES
	1568	Agnico Eagle Mines	AEM	**78.28**	2	3	3	.55	115- 175	(45-125%)	**32.5**	**1.0**	2.41	.80	**5**	6/30	**.24**	.12	9/30	.20	.125	YES
	2432	Air Products & Chem.	APD	**292.67**	2	1	3	.90	280- 345	(N- 20%)	**33.6**	**1.8**	8.71	5.36	**56**	6/30	**2.01**	2.17	12/31	1.34	1.16	YES
	1818	Akamai Technologies (NDQ)	AKAM	**110.97**	1	3	3	.75	125- 185	(15- 65%)	**30.4**	**NIL**	▲3.65	NIL	**22**	6/30	**.98**	.69	9/30	NIL	NIL	YES
	1703	Alamo Group	ALG	**105.15**	3	3	2	1.00	135- 200	(30- 90%)	**22.9**	**0.5**	4.59	.52	**49**	6/30	**1.10**	1.75	9/30	.13	.12	YES

★★ Supplementary Report in this week's issue.
▲ Arrow indicates the direction of a change. When it appears with the Latest Dividend, the arrow signals that a change in the regular payment rate has occurred in the latest quarter.

For Timeliness, 3-5 year Target Price Range, or Estimated Earnings 12 months to 3-31-21, the arrow indicates a change since the preceding week. When a diamond ◆ (indicating a new figure) appears alongside the latest quarterly earnings results, the rank change probably was primarily caused by the earnings report. In other cases, the change is due to the dynamics of the ranking system and could simply be the result of the improvement or weakening of other stocks.

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PAGE NUMBERS
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Supp.	Page	NAME OF STOCK		Ticker Symbol	Recent Price	Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	302	Alaska Air Group		ALK	37.54	4	3	4	1.40	50- 75	(35-100%)	NMF	NIL	d7.68	NIL	89	6/30	d3.54	2.17	9/30	NIL	.35	YES
	1704	Albany Int'l 'A'		AIN	50.83	4	3	4	1.20	70- 105	(40-105%)	16.8	1.5	▲3.02	.76	49	6/30	1.09	1.09	12/31	.19	.18	YES
	2433	Albemarle Corp.		ALB	84.84	3	3	2	1.25	90- 135	(5- 60%)	29.4	1.8	2.89	1.54	56	6/30	.80	1.45	12/31	.385	.368	YES
	1581	Alcoa Corp.		AA	12.24	4	4	3	1.50	25- 40	(105-225%)	NMF	NIL	d1.02	NIL	76	6/30	d.02	d.01	9/30	NIL	NIL	YES
	1511	Alexandria Real Estate		ARE	161.35	1	3	2	.95	170- 250	(5- 55%)	44.1	2.6	3.66	4.24	65	6/30	1.82	.68	12/31	1.06	1.00	YES
	1608	Alexion Pharmac.	(NDQ)	ALXN	113.30	3	3	5	.90	105- 155	(N- 35%)	38.4	NIL	2.95	NIL	14	6/30	d4.84	2.01	9/30	NIL	NIL	YES
	2638	Alibaba Group ADS		BABA	276.01	2	3	3	.90	235- 355	(N- 30%)	33.1	NIL	8.35	NIL	23	6/30	2.10	1.83	9/30	NIL	NIL	YES
	205	Align Techn.	(NDQ)	ALGN	322.86	3	3	2	1.30	285- 425	(N- 30%)	92.2	NIL	3.50	NIL	24	6/30	d.52	1.26	9/30	NIL	NIL	YES
	1946	Ali. Couche-Tard	(TSE)	ATDB.TO	46.58b	▼3	3	3	.75	65- 95	(40-105%)	19.0	0.6	2.45	.30	21	7/31	.95(b)	.67(b)	9/30	.14(b)	.125(b)	YES
	828	Alkermes plc	(NDQ)	ALKS	16.89	3	3	3	1.05	70- 100	(315-490%)	NMF	NIL	.07	NIL	12	6/30	.06	.09	9/30	NIL	NIL	YES
	753	Alleghany Corp.		Y	517.86	2	1	4	1.05	825-1010	(60- 95%)	12.0	NIL	43.02	NIL	34	6/30	12.39	20.46	9/30	NIL	NIL	YES
	1582	Allegheny Techn.		ATI	9.29	5	5	5	2.10	13- 25	(40-170%)	NMF	NIL	d1.11	NIL	76	6/30	d.02	.54	9/30	NIL	NIL	YES
	303	Allegiant Travel	(NDQ)	ALGT	127.11	4	3	4	1.20	130- 195	(N- 55%)	NMF	NIL	d10.30	NIL	89	6/30	d5.96	4.33	9/30	NIL	.70	YES
	1321	Allegion plc		ALLE	99.21	3	3	4	1.15	120- 180	(20- 80%)	23.0	1.3	4.31	1.28	59	6/30	.92	1.26	9/30	.32	.27	YES
	902	ALLETE		ALE	52.00	3	2	4	.85	65- 90	(25- 75%)	17.2	4.9	3.02	2.55	43	6/30	.39	.64	9/30	.618	.588	YES
	429	Alliance Data Sys.		ADS	43.26	5	4	4	1.50	115- 195	(165-350%)	5.4	1.9	8.05	.84	9	6/30	1.86	3.83	9/30	.21	.63	YES
	635	Alliance Resource		ARLP					SEE FINAL SUPPLEMENT														
	2537	AllianceBernstein Hldg.		AB	27.45	3	3	3	1.30	35- 50	(30- 80%)	12.1	8.4	2.26	2.30	55	6/30	.61	.54	9/30	.61	.56	YES
	903	Alliant Energy	(NDQ)	LNT	51.49	3	2	2	.85	40- 55	(N- 5%)	22.1	3.0	2.33	1.52	43	6/30	.54	.40	9/30	.38	.355	YES
	973	Allison Transmission		ALSN	34.95	3	3	4	1.10	40- 60	(15- 70%)	14.3	1.9	2.45	.68	70	6/30	.20	1.46	9/30	.17	.15	YES
240	818	Allscripts Healthcare	(NDQ)	MDRX	8.21	3	3	3	1.10	11- 17	(35-105%)	10.9	NIL	.75	NIL	30	6/30	.18	.17	9/30	NIL	NIL	YES
	754	Allstate Corp.		ALL	93.22	1	1	4	1.00	160- 200	(70-115%)	7.8	2.3	11.96	2.16	34	6/30	2.46	2.18	12/31	.54	.50	YES
	2502	Ally Financial		ALLY	24.94	4	3	5	1.45	60- 85	(140-240%)	8.2	3.0	3.03	.76	73	6/30	.61	.97	9/30	.19	.17	YES
	829	Alnylam Pharmac.	(NDQ)	ALNY	139.81	2	4	3	1.05	135- 225	(N- 60%)	NMF	NIL	d6.63	NIL	12	6/30	d1.56	d2.02	9/30	NIL	NIL	YES
236	2639	Alphabet Inc.	(NDQ)	GOOG	1464.52	1	1	2	.90	2295-2805	(55- 90%)	26.9	NIL	54.48	NIL	23	6/30	10.13	14.21	9/30	NIL	NIL	YES
447	2585	Alteryx, Inc.		AYX	113.69	2	3	2	.90	170- 250	(50-120%)	NMF	NIL	.65	NIL	2	6/30	.02	d.05	9/30	NIL	NIL	YES
	1011	Altice USA		ATUS	26.54	2	3	2	1.05	30- 50	(15- 90%)	35.4	NIL	.75	NIL	8	6/30	.19	.13	9/30	NIL	NIL	YES
	1705	Altra Industrial Motion	(NDQ)	AIMC	37.53	3	3	2	1.35	50- 80	(35-115%)	15.6	0.4	2.40	.16	49	6/30	.60	.71	12/31	.04	.17	YES
	1991	Altria Group		MO	38.95	3	3	3	.85	70- 105	(80-170%)	8.9	8.8	4.38	3.44	25	6/30	1.09	1.10	12/31	▲.86	.84	YES
239	2640	Amazon.com	(NDQ)	AMZN	3174.05	1	2	2	.80	3080-4170	(N- 30%)	83.9	NIL	37.84	NIL	23	6/30	10.30	5.22	9/30	NIL	NIL	YES
	1352	Ambarella, Inc.	(NDQ)	AMBA	51.97	3	3	5	1.10	35- 55	(N- 5%)	NMF	NIL	.18	NIL	11	7/31	.06	.21	9/30	NIL	NIL	YES
	1171	Amcor plc		AMCR	10.91	–	3	–	NMF	13- 19	(20- 75%)	19.1	5.0	.57	.55	42	6/30	.11	.06	9/30	.115	NIL	YES
	2617	Amdocs Ltd.	(NDQ)	DOX	58.14	3	1	4	.90	85- 100	(45- 70%)	15.3	2.3	3.81	1.31	15	6/30	.90	.96	12/31	.328	.285	YES
	790	Amedisys, Inc.	(NDQ)	AMED	232.91	3	3	3	.80	145- 220	(N- N%)	45.2	NIL	5.15	NIL	33	6/30	1.34	1.21	9/30	NIL	NIL	YES
	318	AMERCO	(NDQ)	UHAL	356.98	3	2	3	.90	255- 345	(N- N%)	44.6	NIL	8.00	NIL	29	6/30	4.47	6.76	9/30	NIL	NIL	
	904	Ameren Corp.		AEE	78.42	1	2	2	.80	60- 85	(N- 10%)	22.0	2.7	3.56	2.08	43	6/30	.98	.72	9/30	.495	.475	YES
	919	America Movil		AMX	12.26	3	3	4	.90	19- 30	(55-145%)	11.1	3.0	1.10	.37	17	6/30	.26	.22	9/30	.168	.19	YES
	304	Amer. Airlines	(NDQ)	AAL	12.76	5	5	4	1.55	17- 30	(35-135%)	NMF	NIL	d18.35	NIL	89	6/30	d7.82	1.82	9/30	NIL	.10	YES
	974	Amer. Axle		AXL	5.60	4	4	3	1.70	15- 25	(170-345%)	NMF	NIL	d1.60	NIL	70	6/30	d1.79	.55	9/30	NIL	NIL	YES
	2193	Amer. Eagle Outfitters		AEO	14.84	4	3	5	1.05	18- 25	(20- 70%)	23.2	NIL	.64	NIL	54	7/31	d.03	.39	9/30	NIL	.137	YES
	905	Amer. Elec. Power		AEP	80.65	3	1	5	.75	85- 105	(5- 30%)	18.3	3.7	4.40	2.96	43	6/30	1.05	.93	9/30	.70	.67	YES
	2538	Amer. Express		AXP	98.82	3	1	5	1.20	115- 145	(15- 45%)	25.7	1.7	3.84	1.72	55	6/30	.29	2.07	12/31	◆.43	.43	YES
	755	Amer. Financial Group		AFG	66.76	4	3	5	1.35	105- 160	(55-140%)	9.7	2.7	6.87	1.80	34	6/30	1.05	2.12	9/30	.45	.40	YES
	1512	Amer. Homes 4 Rent		AMH	28.68	3	3	3	1.00	25- 40	(N- 40%)	NMF	0.7	.19	.20	65	6/30	.05	.08	9/30	.05	.05	YES
	2539	Amer. Int'l Group		AIG	27.63	4	3	4	1.45	65- 100	(135-260%)	6.7	4.6	4.11	1.28	55	6/30	.66	1.24	9/30	.32	.32	YES
	1789	Amer. States Water		AWR	74.33	2	2	4	.65	60- 80	(N- 10%)	31.6	1.8	2.35	1.36	10	6/30	.69	.72	9/30	▲.335	.305	YES
	592	Amer. Tower 'A'		AMT	240.00	1	2	3	.90	230- 315	(N- 30%)	57.6	2.0	4.17	4.81	36	6/30	1.00	.96	12/31	▲1.14	1.01	YES
	559	Amer. Vanguard Corp.		AVD	13.35	4	3	3	1.15	25- 35	(85-160%)	27.2	NIL	.49	NIL	58	6/30	.13	.11	9/30	▼NIL	.02	YES
	1790	Amer. Water Works		AWK	144.55	1	3	3	.85	90- 140	(N- N%)	37.2	1.6	3.89	2.30	10	6/30	.97	.94	9/30	.55	.50	YES
	1103	Amer. Woodmark	(NDQ)	AMWD	78.30	4	3	3	1.50	110- 165	(40-110%)	13.9	NIL	5.65	NIL	38	7/31	1.66	2.13	9/30	NIL	NIL	YES
	2540	Ameriprise Fin'l		AMP	151.48	3	3	2	1.40	190- 280	(25- 85%)	9.4	2.7	16.14	4.16	55	6/30	d4.31	3.57	9/30	1.04	.97	YES
	206	AmerisourceBergen		ABC	97.58	1	2	2	.90	125- 190	(30- 95%)	12.2	1.7	7.99	1.68	24	6/30	1.85	1.76	9/30	.42	.40	YES
	1747	AMETEK, Inc.		AME	99.49	3	2	2	1.15	100- 135	(N- 35%)	28.6	0.7	3.48	.72	60	6/30	.72	.94	9/30	.18	.14	YES
	830	Amgen	(NDQ)	AMGN	247.03	1	1	3	.85	295- 360	(20- 45%)	15.7	2.8	15.73	6.85	12	6/30	4.25	3.97	9/30	1.60	1.45	YES
	1385	Amkor Technology	(NDQ)	AMKR	11.28	2	4	2	1.20	14- 25	(25-120%)	12.4	NIL	.91	NIL	3	6/30	.23	d.04	9/30	NIL	NIL	YES
	1322	Amphenol Corp.		APH	108.18	3	1	2	1.00	115- 145	(5- 35%)	30.8	0.9	3.51	1.00	59	6/30	.85	.93	12/31	.25	.25	YES
2227	1353	Analog Devices	(NDQ)	ADI	117.06	1	2	2	.95	120- 165	(5- 40%)	22.2	2.1	5.27	2.48	11	7/31	1.36	1.26	9/30	.62	.54	YES
★★	172	AngioDynamics	(NDQ)	ANGO	10.67	4	3	5	.95	13- 20	(20- 85%)	NMF	NIL	d4.22	NIL	50	8/31	◆d.11	d.03	9/30	NIL	NIL	YES
	1569	AngloGold Ashanti ADS		AU	25.82	2	4	3	.55	35- 60	(35-130%)	10.8	0.5	2.38	.14	5	6/30	.97(p)	.29(p)	9/30	NIL	NIL	YES
	1513	Annaly Capital Mgmt.		NLY	7.44	4	4	4	1.10	6- 10	(N- 35%)	7.2	11.8	1.04	.88-.60	65	6/30	.27	.25	12/31	.22	.25	YES
	2586	ANSYS, Inc.	(NDQ)	ANSS	318.80	3	2	3	.90	225- 300	(N- N%)	51.3	NIL	6.22	NIL	2	6/30	1.55	1.61	9/30	NIL	NIL	YES
	607	Antero Midstream Corp.		AM	5.50	–	4	–	NMF	11- 19	(100-245%)	7.7	22.4	.71	1.23-.40	83	6/30	.18	.14	9/30	.308	.308	YES
	524	Antero Resources		AR	2.96	3	5	3	1.30	4- 8	(35-170%)	NMF	NIL	d.57	NIL	86	6/30	d.37	d.21	9/30	NIL	NIL	YES
	791	Anthem, Inc.		ANTM	257.06	▼2	3	3	1.15	400- 600	(55-135%)	10.9	1.6	23.57	4.10	33	6/30	9.20	4.64	9/30	.95	.80	YES
	2541	Aon plc		AON	203.43	3	1	3	.95	205- 250	(N- 25%)	20.4	0.9	9.97	1.80	55	6/30	1.96	1.87	9/30	.44	.44	YES
	2399	Apache Corp.		APA	10.27	5	5	3	1.95	10- 19	(N- 85%)	NMF	1.0	d2.72	.10	91	6/30	d.74	.11	12/31	.025	.25	YES
	1514	Apartment Investment		AIV	34.54	–	3	–	1.25	60- 90	(75-160%)	NMF	4.7	.28	1.64	65	6/30	.26	.40	9/30	.41	.39	YES
	1420	Aphria Inc.		APHA	4.31	–	4	–	1.05	10- 17	(130-295%)	NMF	NIL	d.31	NIL	80	5/31	d.28	.04	12/31	NIL	NIL	YES
	1104	Apogee Enterprises	(NDQ)	APOG	21.51	4	3	3	1.45	35- 55	(65-155%)	12.3	3.5	1.75	.75	38	8/31	.73	.72	9/30	.188	.175	YES
	2443	Apollo Global Mgmt		APO	46.30	–	3	–	1.35	35- 50	(N- 10%)	21.3	4.2	2.17	1.96	–	6/30	1.84	.75	9/30	.49	.50	YES
	2444	Apollo Investment	(NDQ)	AINV	8.55	4	3	4	1.35	16- 25	(85-190%)	8.6	14.5	1.00	1.24	–	6/30	.05	.35	12/31	▼.31	.45	YES
238	1398	Apple Inc.	(NDQ)	AAPL	114.96	3	1	2	.90	115- 145	(N- 25%)	32.8	0.7	3.51	.85	20	6/30	.65	.55	9/30	.205	.193	YES
	1706	Applied Ind'l Techn.		AIT	54.90	3	3	1	1.15	90- 130	(65-135%)	19.5	2.3	2.82	1.28	49	6/30	.77	1.03	9/30	.32	.31	YES
635	1386	Applied Materials	(NDQ)	AMAT	59.36	1	3	3	1.20	65- 100	(10- 70%)	13.4	1.5	4.43	.89	3	7/31	1.06	.74	12/31	.22	.21	YES
	1172	AptarGroup		ATR	112.36	3	2	1	.85	110- 145	(N- 30%)	35.6	1.3	3.16	1.44	42	6/30	.63	1.15	9/30	.36	.36	YES
	975	Aptiv PLC		APTV	90.03	4	3	3	1.25	100- 150	(10- 65%)	86.6	NIL	1.04	NIL	70	6/30	d1.43	1.07	9/30	NIL	.22	YES
	1748	ARAMARK Holdings		ARMK	27.14	▼5	3	4	1.40	40- 60	(45-120%)	NMF	1.6	▼d1.76	.44	60	6/30	d1.01	.33	9/30	.11	.11	YES
	319	ArcBest Corp.	(NDQ)	ARCB	31.39	3	3	1	1.05	65- 95	(105-205%)	15.4	1.0	2.04	.32	29	6/30	.67	.93	9/30	.08	.08	YES
★★	738	ArcelorMittal		MT	13.37	4	4	4	1.55	17- 30	(25-125%)	NMF	NIL	d.69	NIL	67	6/30	d.50	d.44	9/30	NIL	NIL	YES
	756	Arch Capital Group	(NDQ)	ACGL	29.26	4	3	3	1.20	40- 60	(35-105%)	24.0	NIL	1.22	NIL	34	6/30	.04	.77	9/30	NIL	NIL	YES
	1902	Archer Daniels Midl'd		ADM	46.50	3	2	3	1.00	50- 65	(10- 40%)	16.8	3.1	2.76	1.44	18	6/30	.84	.42	9/30	.36	.35	YES
	1583	Arconic Corp.		ARNC	20.06	–	3	–	NMF	35- 50	(75-150%)	57.3	NIL	.35	NIL	76	6/30	d.84	NA	9/30	NIL	NIL	YES

(●) All data adjusted for announced stock split or stock dividend. See back page of Ratings & Reports.
◆ New figure this week.
(b) Canadian Dollars.
(d) Deficit.
(f) The estimate may reflect a probable increase or decrease. If a dividend boost or cut is possible but not probable, two figures are shown, the first is the more likely.
(g) Dividends subject to foreign withholding tax for U.S. residents.
(h) Est'd Earnings & Est'd Dividends after conversion to U.S. dollars at Value Line estimated translation rate.
(j) All Index data expressed in hundreds.
(p) 6 months (q) Asset Value
N=Negative figure NA=Not available NMF=No meaningful figure

PAGE NUMBERS
Bold type refers to full report. The number on the left signifies a Supplement (if available).

Supp.	Page	NAME OF STOCK	Ticker Symbol	Recent Price	Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	% appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	2019	Argo Group Int'l	ARGO	35.03	4	3	4	.90	50- 70	(45-100%)	16.3	3.5	2.15	1.24	66	6/30	d.18	.83	9/30	.31	.31	
	1819	Arista Networks	ANET	205.05	3	3	3	1.10	310- 460	(50-125%)	24.5	NIL	8.37	NIL	22	6/30	1.83	2.33	9/30	NIL	NIL	YES
2673	**1105**	Armstrong World Inds.	AWI	70.00	3	3	3	1.15	85- 130	(20- 85%)	15.9	1.1	4.40	.80	38	6/30	1.03	1.28	9/30	.20	.175	YES
	1323	Arrow Electronics	ARW	79.60	3	3	3	1.20	95- 140	(20- 75%)	11.6	NIL	6.88	NIL	59	6/30	1.59	1.60	9/30	NIL	NIL	YES
	2119	Asbury Automotive	ABG	98.66	3	3	2	1.30	80- 120	(N- 20%)	16.3	NIL	6.05	NIL	44	6/30	2.52	2.38	9/30	NIL	NIL	YES
	560	Ashland Global Hldgs.	ASH	71.85	3	3	1	1.30	90- 140	(25- 95%)	25.2	1.5	2.85	1.10	58	6/30	.84	.37	9/30	.275	.275	YES
	774	Assoc. Banc-Corp	ASB	12.76	4	3	3	1.15	20- 30	(55-135%)	11.3	5.6	1.13	.72	84	6/30	.26	.49	9/30	.18	.17	YES
	2542	Assurant Inc.	AIZ	120.10	1	2	3	.90	105- 140	(N- 15%)	13.5	2.1	8.88	2.52	55	6/30	2.81	2.21	9/30	.63	.60	YES
	2020	Assured Guaranty	AGO	21.02	3	3	4	1.45	45- 65	(115-210%)	8.7	3.8	2.41	.80	66	6/30	2.10	1.39	9/30	.20	.18	YES
	150	Astec Inds. (NDQ)	ASTE	53.28	3	3	2	1.10	45- 70	(N- 30%)	37.8	0.8	1.41	.44	64	6/30	.67	.36	9/30	.11	.11	YES
	1609	AstraZeneca PLC (ADS)(NDQ)	AZN	54.75	2	2	3	.80	65- 85	(20- 55%)	46.0	2.6	1.19	1.40	14	6/30	.29	.05	9/30	.45	.45	YES
	704	Astronics Corp. (NDQ)	ATRO	7.99	5	5	3	1.70	50- 70	(525-775%)	NMF	NIL	d1.27	NIL	69	6/30	d.77	.19	9/30	NIL	NIL	
	2164	At Home Group	HOME	14.23	–	4	–	1.35	12- 20	(N- 40%)	NMF	NIL	d.15	NIL	72	7/31	1.41	.16	9/30	NIL	NIL	YES
	2021	Athene Holding Ltd.	ATH	34.87	3	3	3	1.85	70- 95	(100-170%)	4.8	NIL	7.25	NIL	66	6/30	2.49	1.95	9/30	NIL	NIL	YES
	305	Atlas Air Worldwide (NDQ)	AAWW	62.36	2	3	2	.95	85- 125	(35-100%)	5.2	NIL	12.10	NIL	89	6/30	4.71	.17	9/30	NIL	NIL	YES
	547	Atmos Energy	ATO	95.04	1	1	3	.80	130- 160	(35- 70%)	19.6	2.6	4.86	2.46	41	6/30	.79	.68	9/30	.575	.525	YES
2663	**943**	AudioCodes Ltd. (NDQ)	AUDC	31.62	2	3	3	.95	40- 60	(25- 90%)	25.7	0.9	1.23	.28	32	6/30	.32	.22	9/30	.14	.12	YES
	1421	Aurora Cannabis	ACB	4.78	–	4	–	1.30	18- 30	(275-530%)	NMF	NIL	d6.70	NIL	80	6/30	◆d13.98	NIL	9/30	NIL	NIL	YES
	2587	Autodesk, Inc. (NDQ)	ADSK	232.15	1	3	2	1.00	160- 240	(N- 5%)	98.8	NIL	2.35	NIL	2	7/31	.44	.18	9/30	NIL	NIL	YES
	976	Autoliv, Inc.	ALV	72.06	3	3	4	NMF	90- 135	(25- 85%)	39.2	NIL	1.84	NIL	70	6/30	d2.00	1.25	9/30	NIL	.62	YES
	2618	Automatic Data Proc. (NDQ)	ADP	137.31	3	1	4	1.10	175- 215	(25- 55%)	23.0	2.7	5.96	3.70	15	6/30	.96	1.09	9/30	.91	.79	YES
	2120	AutoNation, Inc.	AN	53.77	3	3	1	1.10	60- 90	(10- 65%)	11.2	NIL	4.81	NIL	44	6/30	1.36	1.12	9/30	NIL	NIL	YES
	2121	AutoZone Inc.	AZO	1155.56	2	3	2	.95	1410-2110	(20- 85%)	18.0	NIL	64.21	NIL	44	8/31	30.93	22.59	9/30	NIL	NIL	YES
	1820	Avalara, Inc.	AVLR	132.45	2	3	5	.75	80- 120	(N- N%)	NMF	NIL	▼d.40	NIL	22	6/30	d.13	d.20	9/30	NIL	NIL	YES
	1515	AvalonBay Communities	AVB	151.45	3	3	4	1.05	175- 260	(15- 70%)	31.2	4.3	4.86	6.51	65	6/30	1.21	1.21	9/30	1.59	1.52	YES
	137	AVANGRID, Inc.	AGR	49.35	3	2	3	.80	35- 50	(N- N%)	24.8	3.6	1.99	1.76	46	6/30	.28	.36	12/31	.44	.44	YES
	207	Avanos Medical	AVNS	33.97	3	3	4	1.25	45- 70	(30-105%)	45.9	NIL	.74	NIL	24	6/30	.13	.28	9/30	NIL	NIL	YES
240	**561**	Avantor, Inc.	AVTR	22.30	–	3	–	NMF	20- 30	(N- 35%)	34.3	NIL	.65	NIL	58	6/30	.08	d.98	9/30	NIL	NIL	YES
447	**944**	Avaya Holdings	AVYA	14.12	3	4	2	.75	17- 30	(20-110%)	54.3	NIL	.26	NIL	32	6/30	.08	.23	9/30	NIL	NIL	YES
	562	Avery Dennison	AVY	123.01	3	2	3	1.20	130- 180	(5- 45%)	22.3	1.9	5.52	2.38	58	6/30	.95	1.69	9/30	.58	.58	YES
	563	Avient Corp.	AVNT	27.34	–	3	–	1.35	35- 55	(30-100%)	20.0	3.0	1.37	.82	58	6/30	.25	.74	12/31	.203	.195	YES
2027	**2165**	Avis Budget Group (NDQ)	CAR	27.52	4	4	2	1.60	25- 40	(N- 45%)	NMF	NIL	d6.60	NIL	72	6/30	d5.60	.79	9/30	NIL	NIL	YES
	2213	Avista Corp.	AVA	34.12	3	2	4	.90	45- 60	(30- 75%)	17.7	4.8	1.93	1.64	16	6/30	.26	.38	9/30	.405	.388	YES
	1324	Avnet, Inc. (NDQ)	AVT	26.29	4	2	4	1.05	45- 60	(70-130%)	16.5	3.2	1.59	.84	59	6/30	.64	.95	9/30	.21	.20	YES
	564	Axalta Coating	AXTA	22.54	3	3	3	1.30	35- 50	(55-120%)	80.5	NIL	.28	NIL	58	6/30	d.35	.42	9/30	NIL	NIL	YES
	1387	Axcelis Technologies (NDQ)	ACLS	22.28	2	3	3	1.25	25- 35	(10- 55%)	20.8	NIL	1.07	NIL	3	6/30	.39	.02	9/30	NIL	NIL	YES
	2022	AXIS Capital Hldgs.	AXS	44.22	3	2	4	.90	65- 90	(45-105%)	9.7	3.7	4.56	1.64	66	6/30	.84	1.62	9/30	.41	.40	YES
	705	Axon Enterprise (NDQ)	AAXN	87.91	3	4	3	.95	55- 90	(N- N%)	NMF	NIL	.75	NIL	69	6/30	d.01	.14	9/30	NIL	NIL	YES
	1610	Axsome Therapeutics (NDQ)	AXSM	76.46	4	4	2	1.10	95- 155	(25-105%)	NMF	NIL	d2.62	NIL	14	6/30	d.49	d.41	9/30	NIL	NIL	YES
	1903	**B&G Foods**	BGS	28.44	2	3	2	.50	40- 60	(40-110%)	14.6	6.7	1.95	1.90	18	6/30	.71	.38	12/31	.475	.475	YES
	1022	BCE Inc.	BCE	41.89	3	2	3	.90	45- 60	(5- 45%)	18.0	5.9	2.33	2.46	35	6/30	.47	.72	12/31	.612	.602	YES
	1798	BGC Partners (NDQ)	BGCP	2.40	–	4	–	NMF	6- 10	(150-315%)	3.9	1.7	.61	.04	6	6/30	.15	.17	9/30	.01	.14	YES
	1584	BHP Group Ltd. ADR	BHP	52.74	3	3	2	1.10	65- 95	(25- 80%)	17.5	5.4	3.02	2.86(h)	76	6/30	1.22(p)	1.80(p)	9/30	1.10	1.56	YES
	349	BJ's Restaurants (NDQ)	BJRI	30.96	▲4	4	5	1.60	40- 65	(30-110%)	NMF	NIL	d2.03	NIL	75	6/30	d1.38	.68	9/30	NIL	.12	YES
	2136	BJ's Wholesale Club	BJ	40.02	–	3	–	NMF	40- 60	(N- 50%)	21.0	NIL	1.91	NIL	19	7/31	.76	.39	9/30	NIL	NIL	YES
	775	BOK Financial (NDQ)	BOKF	51.60	4	3	3	1.30	80- 115	(55-125%)	10.4	4.0	4.97	2.04	84	6/30	.92	1.93	9/30	.51	.50	YES
242	**502**	BP PLC ADR	BP	18.18	4	3	3	1.30	50- 70	(175-285%)	NMF	6.9	d7.45	1.26	92	6/30	d4.98	.54	9/30	▼.315	.615	YES
	1211	BWX Technologies	BWXT	57.86	2	3	3	.90	70- 100	(20- 75%)	20.2	1.3	2.86	.76	27	6/30	.67	.62	9/30	.19	.17	YES
	114	Badger Meter	BMI	66.25	3	3	3	1.05	50- 75	(N- 15%)	40.6	1.1	1.63	.72	31	6/30	.33	.39	9/30	▲.18	.17	YES
635	**2641**	Baidu, Inc. (NDQ)	BIDU	126.04	3	3	4	1.05	220- 330	(75-160%)	18.3	NIL	6.90	NIL	23	6/30	1.46	.96	9/30	NIL	NIL	YES
	2414	Baker Hughes	BKR	13.47	–	4	–	NMF	19- 30	(40-125%)	84.2	5.3	.16	.72	94	6/30	d.05	d.02	9/30	.18	.18	YES
	565	Balchem Corp. (NDQ)	BCPC	96.70	2	3	2	.75	120- 180	(25- 85%)	35.3	0.5	2.74	.52	58	6/30	.65	.61	9/30	NIL	NIL	YES
	1173	Ball Corp.	BLL	82.24	3	2	3	1.05	85- 115	(5- 40%)	43.7	0.7	1.88	.60	42	6/30	.28	.58	9/30	.15	.15	YES
	2503	BancorpSouth Bank	BXS	19.31	2	3	3	1.05	30- 50	(55-160%)	10.2	3.8	1.90	.74	73	6/30	.57	.53	12/31	.185	.185	YES
	920	Bandwidth Inc. (NDQ)	BAND	171.08	2	3	3	.70	145- 220	(N- 30%)	NMF	NIL	.11	NIL	17	6/30	.13	d.04	9/30	NIL	NIL	YES
	2504	Bank of America	BAC	24.09	3	3	4	1.25	35- 50	(45-110%)	13.8	3.0	1.75	.72	73	6/30	.37	.74	9/30	.18	.18	YES
	2505	Bank of Hawaii	BOH	50.94	4	2	3	1.05	80- 105	(55-105%)	13.3	5.3	3.83	2.68	73	6/30	.98	1.40	9/30	.67	.65	YES
	2506	Bank of Montreal (TSE)	BMO.TO	79.59b	3	2	4	1.00	115- 160	(45-100%)	17.7	5.4	4.50	4.26	73	7/31	1.81(b)	2.34(b)	12/31	1.06(b)	1.03(b)	YES
	2507	Bank of New York Mellon	BK	34.29	3	2	4	1.10	75- 100	(120-190%)	8.8	3.6	3.90	1.24	73	6/30	1.01	1.01	9/30	.31	.31	YES
	2508	Bank of Nova Scotia (TSE)	BNS.TO	55.97b	3	2	4	.90	85- 110	(50- 95%)	10.7	6.4	5.23	3.60	73	7/31	1.04(b)	1.88(b)	12/31	.90(b)	.90(b)	YES
	1749	Barnes Group	B	35.98	4	3	3	1.25	55- 80	(55-120%)	27.3	1.8	▼1.32	.64	60	6/30	.27	.73	9/30	.16	.16	YES
	1639	Barrett Business Serv. (NDQ)	BBSI	50.62	4	3	3	1.30	80- 115	(60-125%)	13.0	2.4	3.90	1.20	68	6/30	1.51	1.81	9/30	.30	.30	YES
636	**1570**	Barrick Gold	GOLD	27.76	2	3	2	.60	30- 40	(10- 45%)	23.3	1.2	1.19	.32	5	6/30	.23	.09	9/30	▲.08	.04	YES
447	**1611**	Bausch Health	BHC	15.27	4	5	3	1.35	25- 45	(65-195%)	4.2	NIL	3.66	NIL	14	6/30	.46	1.04	9/30	NIL	NIL	YES
	173	Baxter Int'l Inc.	BAX	79.54	3	1	2	.80	100- 120	(25- 50%)	25.2	1.2	3.16	.98	50	6/30	.64	.84	12/31	.245	.22	YES
	1106	Beacon Roofing (NDQ)	BECN	30.74	3	3	4	1.55	30- 40	(N- 30%)	NMF	NIL	d1.30	NIL	38	6/30	d.18	.32	9/30	NIL	NIL	YES
	1126	Beazer Homes USA	BZH	13.51	–	5	–	1.65	13- 25	(N- 85%)	12.7	NIL	1.06	NIL	13	6/30	.51	.24	9/30	NIL	NIL	YES
	174	Becton, Dickinson	BDX	225.00	3	1	2	.80	320- 390	(40- 75%)	19.8	1.4	11.35	3.22	50	6/30	2.20	3.08	9/30	.79	.77	YES
	2166	Bed Bath & Beyond (NDQ)	BBBY	14.88	4	4	5	1.35	7- 11	(N- N%)	NMF	NIL	d3.35	NIL	72	5/31	d2.44	d2.91	9/30	▼NIL	.17	YES
	1304	Belden Inc.	BDC	31.30	4	3	3	1.30	60- 85	(90-170%)	36.0	0.6	.87	.20	61	6/30	.07	.82	12/31	.05	.05	YES
	1325	Benchmark Electronics	BHE	20.55	4	3	4	1.10	40- 60	(95-190%)	21.0	3.1	.98	.64	59	6/30	.07	.36	12/31	.16	.15	YES
	757	Berkley (W.R.)	WRB	61.62	3	1	4	1.05	60- 75	(N- 20%)	26.7	0.8	2.31	.48	34	6/30	.06	.82	9/30	.12	.11	YES
	758	Berkshire Hathaway 'B'	BRKB	213.54	3	1	3	.90	215- 265	(N- 25%)	23.5	NIL	9.09	NIL	34	6/30	2.27	2.50	9/30	NIL	NIL	YES
	1174	Berry Global Group	BERY	48.32	2	3	1	1.00	70- 105	(45-115%)	10.2	NIL	4.75	NIL	42	6/30	1.52	.90	9/30	NIL	NIL	YES
	2167	Best Buy Co.	BBY	108.44	▲1	3	2	1.10	100- 150	(N- 40%)	16.6	2.0	6.55	2.20	72	7/31	1.71	1.08	12/31	.55	.50	YES
★★	**1904**	Beyond Meat (NDQ)	BYND	151.30	–	4	–	NMF	120- 200	(N- 30%)	NMF	NIL	.32	NIL	18	6/30	d.02	d.15	9/30	NIL	NIL	YES
	2137	Big Lots Inc.	BIG	47.76	2	3	2	1.15	50- 80	(5- 70%)	7.7	2.6	6.24	1.24	19	7/31	2.75	.16	9/30	.30	.30	YES
	208	Bio-Rad Labs. 'A'	BIO	513.92	2	2	3	.80	210- 285	(N- N%)	61.6	NIL	8.34	NIL	24	6/30	1.61	1.49	9/30	NIL	NIL	YES
	831	Bio-Techne Corp. (NDQ)	TECH	243.74	2	2	2	.80	200- 270	(N- 10%)	58.3	0.5	4.18	1.31	12	6/30	1.48	.42	9/30	.32	.32	YES
448	**1612**	Biogen (NDQ)	BIIB	282.04	1	3	4	.90	365- 545	(30- 95%)	8.4	NIL	33.72	NIL	14	6/30	9.59	7.85	9/30	NIL	NIL	YES
	832	BioMarin Pharmac. (NDQ)	BMRN	77.99	2	3	3	1.00	105- 155	(35-100%)	NMF	NIL	.26	NIL	12	6/30	d.16	d.21	9/30	NIL	NIL	YES
	2214	Black Hills	BKH	53.92	3	2	4	.95	65- 90	(20- 65%)	15.1	4.1	3.57	2.23	16	6/30	.33	.24	9/30	.535	.505	YES

★★ Supplementary Report in this week's issue.
▲ Arrow indicates the direction of a change. When it appears with the Latest Dividend, the arrow signals that a change in the regular payment rate has occurred in the latest quarter. For Timeliness, 3-5 year Target Price Range, or Estimated Earnings 12 months to 3-31-21, the arrow indicates a change since the preceding week. When a diamond ◆ (indicating a new figure) appears alongside the latest quarterly earnings results, the rank change probably was primarily caused by the earnings report. In other cases, the change is due to the dynamics of the ranking system and could simply be the result of the improvement or weakening of other stocks.

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PAGE NUMBERS
Bold type refers to full report.
The number on the left signifies a Supplement (if available).

Suppl.	Page	NAME OF STOCK	Exch.	Ticker Symbol	Recent Price	Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	% appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	1821	Black Knight, Inc.		BKI	85.80	2	3	3	.85	80- 115	(N- 35%)	41.3	NIL	2.08	NIL	22	6/30	.52	.49	9/30	NIL	NIL	YES
2673	2400	Black Stone Minerals		BSM	6.19	4	3	3	1.10	7- 12	(15- 95%)	NMF	9.7	d.54	.60	91	6/30	d.07	.45	9/30	▲.15	.37	YES
	593	BlackBerry		BB	4.61	4	4	3	1.30	11- 18	(140-290%)	30.7	NIL	.15	NIL	36	8/31	◆.11	NIL	9/30	NIL	NIL	YES
	2543	BlackRock, Inc.		BLK	558.65	2	2	3	1.25	635- 860	(15- 55%)	19.6	2.6	28.50	14.52	55	6/30	7.85	6.41	9/30	3.63	3.30	YES
	2445	Blackstone Group		BX	52.66	–	3	–	1.25	50- 75	(N- 40%)	22.0	2.8	2.39	1.48	–	6/30	.81	.45	9/30	.37	.48	YES
	2544	Block (H&R)		HRB	15.81	3	3	4	1.00	25- 35	(60-120%)	42.7	6.6	.37	1.05	55	7/31	.48	d.72	12/31	.26	.26	YES
	350	Bloomin' Brands	(NDQ)	BLMN	15.66	5	4	5	1.60	20- 35	(30-125%)	NMF	NIL	d1.05	NIL	75	6/30	d.74	.36	9/30	NIL	.10	YES
	151	Blue Bird Corp.	(NDQ)	BLBD	11.41	4	3	4	1.00	30- 50	(165-340%)	8.9	NIL	1.28	NIL	64	6/30	.16	.55	9/30	NIL	NIL	
	706	Boeing		BA	166.08	5	3	4	1.65	120- 175	(N- 5%)	NMF	NIL	d10.49	NIL	69	6/30	d4.20	d5.21	9/30	NIL	2.055	YES
	594	Boingo Wireless	(NDQ)	WIFI	9.78	–	4	–	1.20	15- 25	(55-155%)	NMF	NIL	d.45	NIL	36	6/30	d.13	NIL	9/30	NIL	NIL	YES
	1107	Boise Cascade		BCC	40.11	2	3	1	1.15	40- 60	(N- 50%)	14.1	1.0	2.84	.40	38	6/30	.85	.71	9/30	.10	.09	YES
	707	Bombardier Inc. 'B'	(TSE)	BBDB.TO	0.35b	–	5	–	1.30	2- 3	(470-755%)	NMF	NIL	d.34	NIL	69	6/30	d.14(b)	d.05(b)	9/30	NIL	NIL	YES
	2642	Booking Holdings	(NDQ)	BKNG	1700.40	3	3	3	1.10	2160-3240	(25- 90%)	64.8	NIL	26.23	NIL	23	6/30	d10.81	23.59	9/30	NIL	NIL	YES
	2154	Boot Barn Holdings		BOOT	27.48	5	4	5	1.45	30- 50	(10- 80%)	26.2	NIL	1.05	NIL	82	6/30	d.02	.33	9/30	NIL	NIL	YES
	376	Booz Allen Hamilton		BAH	84.95	2	3	3	.90	80- 120	(N- 40%)	23.6	1.5	3.60	1.27	39	6/30	.93	.83	9/30	.31	.23	YES
	977	BorgWarner		BWA	38.01	3	3	2	1.25	55- 80	(45-110%)	16.3	1.8	2.33	.68	70	6/30	d.14	1.00	9/30	.17	.17	YES
2669	1967	Boston Beer 'A'		SAM	899.91	2	3	3	.70	505- 760	(N- N%)	85.6	NIL	10.51	NIL	26	6/30	4.88	2.36	9/30	NIL	NIL	YES
	2387	Boston Omaha	(NDQ)	BOMN	15.53	2	3	3	.80	20- 35	(30-125%)	28.2	NIL	.55	NIL	74	6/30	.14	d.09	9/30	NIL	NIL	
	1516	Boston Properties		BXP	82.73	4	3	4	1.15	150- 230	(80-180%)	18.9	4.7	4.38	3.92	65	6/30	1.71	1.06	12/31	.98	.98	YES
	175	Boston Scientific		BSX	38.00	3	3	3	1.05	50- 70	(30- 85%)	54.3	NIL	.70	NIL	50	6/30	d.04	.29	9/30	NIL	NIL	YES
	2350	Boyd Gaming		BYD	30.92	4	3	4	1.60	30- 50	(N- 60%)	NMF	NIL	d2.33	NIL	87	6/30	d.98	.47	9/30	NIL	.07	YES
	1750	Brady Corp.		BRC	39.59	3	3	3	.95	55- 80	(40-100%)	16.6	2.2	2.38	.88	60	7/31	.53	.68	12/31	▲.22	.218	YES
	525	Brigham Minerals		MNRL	8.96	–	4	–	NMF	20- 35	(125-290%)	99.6	6.3	.09	.56	86	6/30	d.11	d.12	9/30	▼.14	.33	
447	1999	Bright Horizons Family		BFAM	148.53	4	2	5	1.10	135- 180	(N- 20%)	NMF	NIL	.66	NIL	48	6/30	.01	.99	9/30	NIL	NIL	YES
	351	Brinker Int'l		EAT	45.43	4	3	4	1.40	40- 60	(N- 30%)	NMF	NIL	d.65	NIL	75	6/30	d.88	1.36	9/30	NIL	.38	YES
	377	Brink's (The) Co.		BCO	40.71	4	3	4	1.30	75- 115	(85-180%)	15.4	1.5	2.64	.60	39	6/30	.67	.86	9/30	.15	.15	YES
	1613	Bristol-Myers Squibb		BMY	59.71	3	1	2	.85	70- 90	(15- 50%)	21.0	3.0	2.84	1.80	14	6/30	d.04	.87	12/31	.45	.41	YES
	1992	Brit. Am. Tobacco ADR		BTI	36.44	3	3	4	.95	90- 135	(145-270%)	8.2	7.8	4.45	2.86	25	6/30	1.78(p)	1.90(p)	9/30	.689	.675	YES
	1354	Broadcom Inc.	(NDQ)	AVGO	367.30	3	3	3	1.10	265- 395	(N- 10%)	64.4	3.5	5.70	13.00	11	7/31	1.45	1.71	9/30	3.25	2.65	YES
	430	Broadridge Fin'l		BR	132.00	1	2	2	.85	145- 195	(10- 50%)	24.4	1.7	5.40	2.30	9	6/30	2.15	1.72	12/31	▲.575	.54	YES
	2663	Brookdale Senior Living		BKD	SEE FINAL SUPPLEMENT																		
	378	Brookfield Asset Mgmt.		BAM	33.46	3	3	3	1.30	40- 60	(20- 80%)	25.7	1.4	1.30	.48	39	6/30	d.43	.24	9/30	.12	.107	YES
	1751	Brookfield Infrastruc.		BIP	47.77	3	3	4	1.25	35- 50	(N- 5%)	NMF	4.1	.22	1.94	60	6/30	d.25	.12	9/30	.485	.503	YES
	1707	Brooks Automation	(NDQ)	BRKS	46.26	2	3	2	1.25	50- 70	(10- 50%)	37.9	0.9	▲1.22	.40	49	6/30	.32	.20	9/30	.10	.10	YES
	2545	Brown & Brown		BRO	44.87	2	1	3	.95	40- 50	(N- 10%)	30.3	0.8	1.48	.34	55	6/30	.34	.33	9/30	.085	.08	YES
	1968	Brown-Forman 'B'		BFB	75.63	3	1	3	.85	75- 90	(N- 20%)	42.0	1.0	1.80	.72	26	7/31	.40	.39	12/31	.174	.166	YES
	115	Bruker Corp.	(NDQ)	BRKR	39.49	3	3	3	1.10	65- 100	(65-155%)	28.6	0.4	1.38	.16	31	6/30	.16	.23	9/30	.04	.04	YES
	2303	Brunswick Corp.		BC	59.35	3	3	2	1.50	110- 160	(85-170%)	19.8	1.6	2.99	.96	81	6/30	.99	1.45	9/30	.24	.21	YES
848	2194	Buckle (The), Inc.		BKE	20.79	▲2	3	5	.90	25- 35	(20- 70%)	11.3	5.8	1.84	1.20	54	7/31	.71	.34	12/31	▲.30	.30	YES
1028	1108	Builders FirstSource	(NDQ)	BLDR	32.30	2	4	3	1.45	30- 45	(N- 40%)	14.6	NIL	2.21	NIL	38	6/30	.67	.63	9/30	NIL	NIL	YES
	1905	Bunge Ltd.		BG	46.50	3	3	4	1.00	65- 95	(40-105%)	NMF	4.3	d.27	2.00	18	6/30	3.47	1.43	12/31	.50	.50	YES
	2138	Burlington Stores		BURL	206.95	3	3	3	1.10	190- 290	(N- 40%)	NMF	NIL	d.28	NIL	19	7/31	d.56	1.36	9/30	NIL	NIL	YES
	2619	**CACI Int'l**		CACI	217.68	2	3	2	.95	275- 410	(25- 90%)	15.9	NIL	13.67	NIL	15	6/30	3.68	1.96	9/30	NIL	NIL	YES
	708	CAE Inc.	(TSE)	CAE.TO	19.66b	4	3	4	1.30	30- 45	(55-130%)	98.3	NIL	.20	NIL	69	6/30	d.11(b)	.24(b)	9/30	NIL(b)	.11(b)	
	1799	Cboe Global Markets	(CBOE)	CBOE	89.00	1	2	5	.90	140- 190	(55-115%)	20.3	1.9	4.38	1.68	6	6/30	1.03	.78	9/30	▲.42	.36	YES
	379	CBRE Group		CBRE	47.34	4	3	4	1.50	70- 100	(50-110%)	18.9	NIL	2.50	NIL	39	6/30	.35	.81	9/30	NIL	NIL	YES
	2388	CDK Global Inc.	(NDQ)	CDK	43.78	3	3	3	1.10	75- 115	(70-165%)	22.2	1.4	1.97	.60	74	6/30	.49	.01	9/30	.15	.15	YES
	2620	CDW Corp.	(NDQ)	CDW	116.50	3	3	3	1.00	105- 160	(N- 35%)	20.8	1.3	5.59	1.52	15	6/30	1.31	1.33	9/30	.38	.295	YES
	1355	CEVA, Inc.	(NDQ)	CEVA	39.07	2	3	2	1.05	55- 85	(40-120%)	NMF	NIL	.07	NIL	11	6/30	d.05	d.07	9/30	NIL	NIL	YES
	1597	CF Industries		CF	30.95	4	3	3	1.30	30- 50	(N- 60%)	18.9	4.1	1.64	1.27	77	6/30	.89	1.28	9/30	.30	.30	YES
	380	C.H. Robinson	(NDQ)	CHRW	103.25	1	2	3	.70	125- 170	(20- 65%)	27.7	2.0	3.73	2.04	39	6/30	1.06	1.22	9/30	.51	.50	YES
	2546	CIT Group		CIT	17.78	5	3	3	1.70	35- 50	(95-180%)	71.1	7.9	.25	1.40	55	6/30	d.99	1.33	9/30	.35	.35	YES
	1800	CME Group	(NDQ)	CME	168.93	3	2	4	.95	155- 205	(N- 20%)	24.8	2.0	6.81	3.40	6	6/30	1.40	1.43	9/30	.85	.75	YES
	906	CMS Energy Corp.		CMS	61.40	3	2	3	.80	55- 75	(N- 20%)	23.6	2.8	2.60	1.71	43	6/30	.48	.33	9/30	.408	.383	YES
	759	CNA Fin'l		CNA	30.47	3	2	3	1.10	75- 105	(145-245%)	10.5	4.9	2.90	1.48	34	6/30	.36	1.08	9/30	.37	.35	YES
	152	CNH Industrial N.V.		CNHI	7.77	4	3	4	1.35	13- 19	(65-145%)	25.1	NIL	.31	NIL	64	6/30	d.07	.31	9/30	NIL	NIL	YES
	526	CNX Resources		CNX	10.22	3	4	2	1.00	20- 35	(95-240%)	NMF	NIL	d1.24	NIL	86	6/30	d.78	.84	9/30	NIL	NIL	YES
	2621	CSG Systems Int'l	(NDQ)	CSGS	41.15	2	3	3	.75	45- 70	(10- 70%)	16.5	2.3	2.49	.94	15	6/30	.32	.60	9/30	.235	.223	YES
	2401	CSW Industrials	(NDQ)	CSWI	77.50	3	2	3	.85	95- 125	(25- 60%)	44.3	0.7	1.75	.54	91	6/30	.81	1.00	9/30	.135	.135	
	338	CSX Corp.	(NDQ)	CSX	79.33	3	3	3	1.10	85- 130	(5- 65%)	22.7	1.3	3.50	1.04	28	6/30	.65	1.08	9/30	.26	.24	YES
	1326	CTS Corp.		CTS	22.11	4	3	4	1.10	35- 50	(60-125%)	25.1	0.7	.88	.16	59	6/30	.16	.40	12/31	.04	.04	YES
	503	CVR Energy		CVI	12.76	5	3	3	1.10	50- 75	(290-490%)	NMF	NIL	.02	NIL	92	6/30	d.05	1.16	9/30	▼NIL	.75	YES
	967	CVS Health		CVS	57.94	1	2	3	.90	95- 115	(65-100%)	8.1	3.5	7.14	2.00	19	6/30	2.64	1.89	9/30	.50	.50	YES
	1012	Cable One		CABO	1762.68	2	2	1	.90	1680-2270	(N- 30%)	39.0	0.6	45.25	10.00	8	6/30	10.63	6.35	9/30	▲2.50	2.25	
	2434	Cabot Corp.		CBT	36.40	3	3	3	1.30	60- 90	(65-145%)	21.5	3.8	1.69	1.40	56	6/30	d.07	1.00	9/30	.35	.35	YES
	566	Cabot Microelectr's	(NDQ)	CCMP	142.44	2	3	2	1.20	180- 270	(25- 90%)	28.0	1.3	5.09	1.80	58	6/30	1.17	.64	9/30	.44	.42	YES
	527	Cabot Oil & Gas 'A'		COG	18.07	3	3	3	1.00	35- 50	(95-175%)	19.6	2.5	.92	.45	86	6/30	.08	.43	9/30	.10	.09	YES
	2415	Cactus, Inc.		WHD	18.99	–	4	–	NMF	11- 18	(N- N%)	NMF	1.9	d.30	.36-NIL	94	6/30	.11	.45	9/30	.09	NIL	YES
	2588	Cadence Design Sys.	(NDQ)	CDNS	105.25	1	2	3	.95	70- 105	(N- N%)	41.1	NIL	2.56	NIL	2	6/30	.66	.57	9/30	NIL	NIL	YES
	1906	Cal-Maine Foods	(NDQ)	CALM	39.23	2	3	2	.60	45- 70	(15- 80%)	20.8	NIL	1.89	NIL	18	8/31	◆d.40	d.94	9/30	NIL	NIL	YES
	595	CalAmp Corp.	(NDQ)	CAMP	7.62	–	4	–	1.25	14- 25	(85-230%)	NMF	NIL	d1.05	NIL	36	8/31	◆d.28	d.22	9/30	NIL	NIL	YES
	1907	Calavo Growers	(NDQ)	CVGW	67.04	4	3	3	.70	80- 120	(20- 80%)	23.3	1.6	2.88	1.10	18	7/31	.73	.91	9/30	NIL	NIL	YES
	2155	Caleres Inc.		CAL	9.66	–	4	–	1.60	25- 40	(160-315%)	NMF	2.9	d.55	.28	82	7/31	d.57	.62	12/31	.07	.07	YES
	1791	California Water		CWT	43.55	3	3	3	.65	35- 55	(N- 25%)	33.0	2.0	▼1.32	.85	10	6/30	.11	.35	9/30	.213	.198	YES
	945	Calix, Inc.		CALX	18.03	2	4	2	1.10	30- 50	(65-175%)	30.6	NIL	.59	NIL	32	6/30	.14	d.01	9/30	NIL	NIL	YES
	2304	Callaway Golf		ELY	18.78	3	3	3	1.50	19- 30	(N- 60%)	32.4	NIL	.58	NIL	81	6/30	.06	.37	9/30	▼NIL	.01	YES
	528	Callon Petroleum		CPE	SEE FINAL REPORT																		
	1517	Camden Property Trust		CPT	90.97	3	2	5	1.00	100- 135	(10- 50%)	74.6	3.7	1.22	3.41	65	6/30	.17	.43	12/31	.83	.80	YES
	1585	Cameco Corp.	(TSE)	CCO.TO	13.53b	3	3	2	.90	15- 25	(10- 85%)	NMF	0.6	d.22	.08	76	6/30	d.16(b)	d.04(b)	9/30	NIL(b)	NIL(b)	YES
	1908	Campbell Soup		CPB	47.98	1	2	2	.60	45- 60	(N- 25%)	16.4	2.9	2.92	1.40	18	7/31	.63	.41	12/31	◆.35	.35	YES
848	2122	Camping World Holdings		CWH	28.46	3	4	2	1.70	25- 40	(N- 40%)	45.2	1.3	.63	.36	44	6/30	1.62	.54	9/30	▲.09	.08	YES
	2102	Canada Goose Hldgs.	(TSE)	GOOS.TO	39.86	4	3	5	1.25	65- 100	(65-150%)	53.1	NIL	.75	NIL	90	6/30	d.35	d.21	9/30	NIL	NIL	

(•) All data adjusted for announced stock split or stock dividend. See back page of Ratings & Reports.
◆ New figure this week.
(b) Canadian Dollars.
(d) Deficit.
(f) The estimate may reflect a probable increase or decrease. If a dividend boost or cut is possible but not probable, two figures are shown, the first is the more likely.
(g) Dividends subject to foreign withholding tax for U.S. residents.
(h) Est'd Earnings & Est'd Dividends after conversion to U.S. dollars at Value Line estimated translation rate.
(j) All Index data expressed in hundreds.
(p) 6 months (q) Asset Value
N=Negative figure NA=Not available NMF=No meaningful figure

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PAGE NUMBERS
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The number on the left signifies a Supplement (if available).

Supp.	Page	NAME OF STOCK	Ticker Symbol	Recent Price	Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	2509	Can. Imperial Bank (TSE)	CM.TO	101.20b	3	2	3	.90	115- 155	(15- 55%)	18.3	5.8	5.54	5.84	73	7/31	2.55(b)	3.06(b)	12/31	1.46(b)	1.44(b)	YES
	339	Can. National Railway	CNI	106.58	2	1	2	.90	130- 160	(20- 50%)	27.0	1.6	3.95	1.75	28	6/30	.95	1.44	9/30	.437	.413	YES
	2402	Can. Natural Res. (TSE)	CNQ.TO	22.38b	4	3	3	1.55	30- 45	(35-100%)	NMF	7.6	d2.00	1.70	91	6/30	d.65(b)	.87(b)	12/31	.425(b)	.375(b)	YES
	340	Can. Pacific Railway	CP	301.70	2	2	2	1.05	320- 480	(5- 60%)	22.9	1.0	13.19	2.88	28	6/30	3.09	3.97	12/31	▲.72	.63	YES
	2139	Canadian Tire 'A' (TSE)	CTCA.TO	137.61b	3	2	3	1.05	140- 190	(N- 40%)	16.2	3.3	8.52	4.55	19	6/30	d.33(b)	2.87(b)	12/31	1.138(b)	1.038(b)	YES
	1983	Canon Inc. ADR(g)	CAJ	17.03	3	2	3	.80	45- 55	(165-225%)	12.1	8.1	1.41	1.38	37	6/30	d.08	.30	9/30	.377	.736	YES
448	1422	Canopy Growth Corp.	CGC	14.21	2	4	3	1.05	25- 40	(75-180%)	NMF	NIL	d.85	NIL	80	6/30	d.22	d.38	9/30	NIL	NIL	YES
	209	Cantel Medical Corp.	CMD	45.06	4	3	3	1.65	85- 125	(90-175%)	30.2	NIL	1.49	NIL	24	7/31	d.05	.21	9/30	▼NIL	.10	YES
	2547	Capital One Fin'l	COF	71.33	4	3	5	1.40	65- 100	(N- 40%)	NMF	0.6	.45	.40	55	6/30	d2.21	3.22	9/30	▼.10	.40	YES
	1502	Capitol Fed. Fin'l (NDQ)	CFFN	9.29	3	3	4	.80	10- 16	(10- 70%)	17.9	3.7	.52	.34	63	6/30	.13	.17	9/30	.085	.085	YES
	2103	Capri Holdings Ltd.	CPRI	18.92	5	4	4	1.65	35- 60	(85-215%)	27.0	NIL	.70	NIL	90	6/30	d1.21	.30	9/30	NIL	NIL	YES
	210	Cardinal Health	CAH	47.55	3	3	2	1.05	80- 120	(70-150%)	8.9	4.1	5.32	1.94	24	6/30	1.04	.65	12/31	.486	.481	YES
	1752	Carlisle Cos.	CSL	121.22	3	2	4	1.10	165- 225	(35- 85%)	22.2	1.7	5.46	2.10	60	6/30	1.36	2.65	9/30	▲.525	.50	YES
	2446	Carlyle Group (NDQ)	CG	24.74	–	3	–	1.20	40- 60	(60-145%)	7.4	4.0	3.36	1.00	–	6/30	.41	1.23	9/30	.25	.43	YES
★★	2123	CarMax, Inc.	KMX	95.05	▲2	3	2	1.25	95- 145	(N- 55%)	31.2	NIL	3.05	NIL	44	8/31	◆1.79	1.40	9/30	NIL	NIL	YES
1426	2305	Carnival Corp.	CCL	15.31	5	5	4	1.50	35- 60	(130-290%)	NMF	NIL	d5.41	NIL	81	5/31	d3.30	.65	9/30	NIL	.50	YES
	739	Carpenter Technology	CRS	18.65	5	3	4	1.50	40- 60	(115-220%)	NMF	4.3	d1.21	.80	67	6/30	d.31	1.00	9/30	.20	.20	YES
	1845	Carriage Services	CSV					SEE FINAL REPORT														
	1708	Carrier Global	CARR	30.74	–	3	–	NMF	▲ 30- 50	(N- 65%)	19.8	1.0	▲1.55	.32	49	6/30	.33	NA	9/30	.08	NIL	YES
	2104	Carter's Inc.	CRI	88.69	3	3	5	.90	130- 195	(45-120%)	16.3	NIL	5.44	NIL	90	6/30	.54	.97	9/30	NIL	.50	YES
1650	2124	Carvana Co.	CVNA	218.02	3	5	3	1.70	90- 165	(N- N%)	NMF	NIL	d2.71	NIL	44	6/30	d.62	d.44	9/30	NIL	NIL	YES
	946	Casa Systems	CASA					SEE FINAL REPORT														
	406	Casella Waste Sys. (NDQ)	CWST	55.55	2	3	2	.95	55- 85	(N- 55%)	81.7	NIL	.68	NIL	40	6/30	.25	.25	9/30	NIL	NIL	YES
	1947	Casey's Gen'l Stores (NDQ)	CASY	175.82	3	3	2	.80	115- 175	(N- N%)	28.8	0.7	6.10	1.28	21	7/31	3.24	2.31	12/31	.32	.32	YES
	176	Catalent, Inc.	CTLT	84.11	2	3	3	1.00	80- 120	(N- 45%)	94.5	NIL	.89	NIL	50	6/30	.85	.44	9/30	NIL	NIL	YES
	153	Caterpillar Inc.	CAT	147.68	3	2	3	1.15	175- 240	(20- 65%)	25.9	2.8	5.70	4.12	64	6/30	1.03	2.83	9/30	1.03	1.03	YES
	2195	Cato Corp.	CATO	8.08	4	3	4	.75	25- 35	(210-335%)	NMF	NIL	d.18	NIL	54	7/31	d.30	.48	9/30	NIL	.33	YES
	2306	Cedar Fair L.P.	FUN	28.66	3	3	4	1.15	60- 85	(110-195%)	NMF	NIL	d4.57	NIL	81	6/30	d2.35	1.11	9/30	NIL	.925	YES
	2435	Celanese Corp.	CE	108.60	3	3	4	1.20	115- 170	(5- 55%)	16.2	2.3	6.71	2.48	56	6/30	1.30	2.38	9/30	.62	.62	YES
	1327	Celestica Inc.	CLS	6.99	2	3	1	1.35	10- 14	(45-100%)	7.9	NIL	.89	NIL	59	6/30	.25	.12	9/30	NIL	NIL	YES
	1109	CEMEX ADS	CX	3.72	3	4	3	1.45	6- 10	(60-170%)	62.0	NIL	.06	NIL	38	6/30	.01	.10	9/30	NIL	NIL	YES
	504	Cenovus Energy (TSE)	CVE.TO	5.55b	5	5	3	1.50	8- 15	(45-170%)	NMF	NIL	d.73	NIL	92	6/30	d.34(b)	.22(b)	9/30	NIL(b)	.05(b)	YES
	792	Centene Corp.	CNC	55.52	1	3	2	1.05	85- 130	(55-135%)	10.2	NIL	5.44	NIL	33	6/30	2.40	1.34	9/30	NIL	NIL	YES
	529	Centennial Resource Dev.	CDEV					SEE FINAL REPORT														
	907	CenterPoint Energy	CNP	19.02	4	3	3	1.10	18- 25	(N- 30%)	15.3	3.3	1.24	.63	43	6/30	.17	.33	9/30	.15	.288	YES
	418	Central & East. Europe	CEE	19.81	–	4	–	1.05	25- 40	(25-100%)	NMF	2.5	NMF	.50	–	4/30	23.05(q)	28.43(q)	9/30	NIL	NIL	
	1187	Central Garden & Pet (NDQ)	CENT	38.54	2	3	1	.75	60- 85	(55-120%)	18.8	NIL	2.05	NIL	1	6/30	1.27	.80	9/30	NIL	NIL	YES
	1586	Century Aluminum (NDQ)	CENX	7.35	–	5	–	1.70	10- 18	(35-145%)	NMF	NIL	d1.00	NIL	76	6/30	d.19	d.18	9/30	NIL	NIL	YES
	1023	CenturyLink, Inc.	LUMN	10.28	3	3	3	1.00	14- 20	(35- 95%)	7.4	9.7	1.38	1.00	35	6/30	.42	.34	9/30	.25	.25	YES
	819	Cerner Corp. (NDQ)	CERN	71.60	3	2	3	.95	90- 120	(25- 70%)	24.8	1.0	2.89	.72	30	6/30	.63	.66	12/31	.18	.18	YES
	211	Charles River	CRL	223.42	2	3	3	1.20	135- 205	(N- N%)	43.1	NIL	5.18	NIL	24	6/30	1.34	.88	9/30	NIL	NIL	YES
2671	728	Chart Industries (NDQ)	GTLS	69.67	3	3	2	1.90	85- 125	(20- 80%)	21.6	NIL	3.23	NIL	79	6/30	.63	.66	9/30	NIL	NIL	YES
	1013	Charter Communic. (NDQ)	CHTR	628.23	1	3	2	.95	435- 650	(N- 5%)	41.8	NIL	15.04	NIL	8	6/30	3.63	1.39	9/30	NIL	NIL	YES
	1822	Check Point Software (NDQ)	CHKP	121.60	2	1	2	.75	130- 160	(5- 30%)	19.9	NIL	6.12	NIL	22	6/30	1.38	1.21	9/30	NIL	NIL	YES
	352	Cheesecake Factory (NDQ)	CAKE	28.11	4	3	5	1.20	50- 75	(80-165%)	NMF	NIL	d1.06	NIL	75	6/30	d.87	.82	9/30	NIL	.36	YES
	1948	Chefs' Warehouse (NDQ)	CHEF	14.36	5	4	4	1.90	20- 35	(40-145%)	NMF	NIL	d1.17	NIL	21	6/30	d.57	.26	9/30	NIL	NIL	YES
	2000	Chegg, Inc.	CHGG	70.79	2	3	3	.90	70- 105	(N- 50%)	60.0	NIL	1.18	NIL	48	6/30	.37	d.02	9/30	NIL	NIL	YES
	1753	Chemed Corp.	CHE	480.36	2	2	2	.85	445- 605	(N- 25%)	28.8	0.3	16.67	1.38	60	6/30	4.41	3.36	9/30	▲.34	.32	YES
	567	Chemours Co. (The)	CC	20.43	3	4	4	1.70	20- 35	(N- 70%)	17.0	4.9	1.20	1.00	58	6/30	.15	.57	9/30	.25	.25	YES
	608	Cheniere Energy Inc. (ASE)	LNG	49.33	2	3	3	1.10	120- 180	(145-265%)	17.2	NIL	2.87	NIL	83	6/30	.78	d.44	9/30	NIL	NIL	YES
	619	Cheniere Energy Part.	CQP	33.52	3	3	3	.95	50- 75	(50-125%)	11.5	7.9	2.91	2.64	93	6/30	.78	.44	9/30	▲.645	.61	YES
	548	Chesapeake Utilities	CPK	86.56	2	2	3	.75	110- 150	(25- 75%)	21.9	2.1	3.96	1.80	41	6/30	.64	.54	12/31	.44	.405	YES
236	505	Chevron Corp.	CVX	73.93	4	3	2	1.30	95- 145	(30- 95%)	NMF	7.0	d4.08	5.16	92	6/30	d4.44	2.27	9/30	1.29	1.19	YES
	2643	Chewy, Inc.	CHWY	56.37	–	4	–	NMF	40- 65	(N- 15%)	NMF	NIL	d.46	NIL	23	7/31	d.08	d.21	9/30	NIL	NIL	YES
	2196	Chico's FAS	CHS					SEE FINAL REPORT														
	2197	Children's Place (NDQ)	PLCE	28.78	5	3	5	1.45	50- 80	(75-180%)	9.3	NIL	3.11	NIL	54	7/31	d1.48	.19	9/30	NIL	.56	YES
	419	China Fund (The)	CHN	25.04	–	3	–	.90	30- 40	(20- 60%)	NMF	0.8	NMF	.20	–	4/30	23.43(q)	23.63(q)	9/30	NIL	NIL	
	921	China Mobile (ADR)	CHL	32.54	3	2	3	.70	55- 75	(70-130%)	8.0	6.5	4.05	2.10	17	6/30	1.97(p)	1.95(p)	9/30	.99	.89	YES
	353	Chipotle Mex. Grill	CMG	1263.35	3	3	3	.90	765-1150	(N- N%)	NMF	NIL	10.02	NIL	75	6/30	.40	3.92	9/30	NIL	NIL	YES
	2351	Choice Hotels Int'l	CHH	88.32	3	3	2	1.15	95- 140	(10- 60%)	38.2	NIL	2.31	NIL	87	6/30	d.04	1.33	9/30	▼NIL	.215	YES
	760	Chubb Ltd.	CB	116.97	3	1	4	1.05	185- 230	(60- 95%)	15.6	2.7	7.52	3.12	34	6/30	d.56	2.60	12/31	.78	.75	YES
	1188	Church & Dwight	CHD	93.46	1	1	2	.65	70- 85	(N- N%)	31.9	1.0	2.93	.96	1	6/30	.75	.55	9/30	.24	.228	YES
	2352	Churchill Downs (NDQ)	CHDN	174.25	3	3	2	1.30	105- 155	(N- N%)	NMF	0.3	1.40	.60	87	6/30	d.59	2.66	9/30	NIL	NIL	YES
1241	947	Ciena Corp.	CIEN	39.78	2	3	1	1.00	70- 100	(75-150%)	13.6	NIL	2.92	NIL	32	7/31	1.06	.71	9/30	NIL	NIL	YES
	793	Cigna Corp.	CI	164.29	2	3	3	1.20	280- 420	(70-155%)	8.7	NIL	18.96	.05	33	6/30	5.81	4.30	9/30	NIL	NIL	YES
	530	Cimarex Energy	XEC	25.01	5	3	4	1.40	45- 65	(80-160%)	NMF	3.5	.17	.88	86	6/30	d.51	.82	12/31	.22	.20	YES
241	2375	Cimpress plc (NDQ)	CMPR	75.13	4	3	2	1.30	70- 110	(N- 45%)	NMF	NIL	.07	NIL	88	6/30	d1.62	1.09	9/30	NIL	NIL	YES
	1024	Cincinnati Bell	CBB	15.04	–	4	–	1.00	9- 16	(N- 5%)	NMF	NIL	d.95	NIL	35	6/30	d.27	d.13	9/30	NIL	NIL	YES
	761	Cincinnati Financial (NDQ)	CINF	79.02	4	3	4	1.05	90- 135	(15- 70%)	23.9	3.0	3.31	2.40	34	6/30	.44	.85	12/31	.60	.56	YES
	2307	Cinemark Hldgs.	CNK	10.31	5	4	3	1.15	30- 40	(190-290%)	NMF	NIL	d2.79	NIL	81	6/30	d1.45	.87	9/30	NIL	.34	YES
	381	Cintas Corp. (NDQ)	CTAS	336.00	3	2	3	1.15	250- 335	(N- N%)	43.1	0.9	7.80	2.90	39	8/31	◆2.78	2.32	9/30	NIL	NIL	YES
	1356	Cirrus Logic (NDQ)	CRUS	64.95	2	3	3	.90	70- 105	(10- 60%)	20.3	NIL	3.20	NIL	11	6/30	.53	.35	9/30	NIL	NIL	YES
635	948	Cisco Systems (NDQ)	CSCO	39.13	3	1	3	.95	60- 70	(55- 80%)	12.6	3.7	3.10	1.46	32	7/31	.80	.83	12/31	.36	.35	YES
	2198	Citi Trends (NDQ)	CTRN	24.96	3	4	4	1.10	25- 40	(N- 60%)	22.7	NIL	1.10	NIL	54	7/31	1.90	.03	9/30	NIL	.08	YES
	2510	Citigroup Inc.	C	43.34	4	3	3	1.40	80- 120	(85-175%)	12.5	4.7	3.48	2.04	73	6/30	.50	1.95	9/30	.51	.51	YES
	2511	Citizens Fin'l Group	CFG	25.34	4	3	5	1.40	35- 50	(40- 95%)	11.8	6.2	2.14	1.56	73	6/30	.53	.95	9/30	.39	.36	YES
	2589	Citrix Sys. (NDQ)	CTXS	138.32	1	3	2	.75	180- 270	(30- 95%)	25.5	1.0	5.42	1.40	2	6/30	1.53	1.21	9/30	.35	.35	YES
	431	Clarivate Analytics plc	CCC	29.70	–	4	–	NMF	25- 45	(N- 50%)	NMF	NIL	d.53	NIL	9	6/30	NIL	d.29	9/30	NIL	NIL	YES
	609	Clean Energy Fuels (NDQ)	CLNE	2.46	–	5	–	1.35	7- 13	(185-430%)	27.3	NIL	.09	NIL	83	6/30	d.03	d.03	9/30	NIL	NIL	YES
	407	Clean Harbors	CLH	56.13	4	3	3	1.30	75- 115	(35-105%)	59.7	NIL	.94	NIL	40	6/30	.52	.65	9/30	NIL	NIL	YES
	2389	Clear Channel Outdoor	CCO					SEE FINAL REPORT														
★★	740	Cleveland-Cliffs Inc.	CLF	6.56	4	5	4	1.70	10- 18	(50-175%)	NMF	NIL	d.32	NIL	67	6/30	d.31	.57	9/30	▼NIL	.06	YES

★★ Supplementary Report in this week's issue.
▲ Arrow indicates the direction of a change. When it appears with the Latest Dividend, the arrow signals that a change in the regular payment rate has occurred in the latest quarter. For Timeliness, 3-5 year Target Price Range, or Estimated Earnings 12 months to 3-31-21, the arrow indicates a change since the preceding week. When a diamond ◆ (indicating a new figure) appears alongside the latest quarterly earnings results, the rank change probably was primarily caused by the earnings report. In other cases, the change is due to the dynamics of the ranking system and could simply be the result of the improvement or weakening of other stocks.

PAGE NUMBERS
Bold type refers to full report.
The number on the left signifies a Supplement (if available).

Suppl.	Page	NAME OF STOCK	Ticker Symbol	Recent Price	Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	1189	Clorox Co.	CLX	211.97	1	1	3	.50	155- 190	(N- N%)	28.0	2.1	7.56	4.44	1	6/30	2.41	1.88	12/31	◆1.11	1.06	YES
	2590	Cloudflare, Inc.	NET	40.88	–	3	–	NMF	30- 45	(N- 10%)	NMF	NIL	d.34	NIL	2	6/30	d.03	d.06	9/30	NIL	NIL	YES
2452	1969	Coca-Cola	KO	49.28	3	1	5	.90	55- 70	(10- 40%)	29.0	3.4	1.70	1.68	26	6/30	.42	.63	9/30	.41	.40	YES
	1970	Coca-Cola Consol. (NDQ)	COKE	241.11	3	3	3	.70	280- 420	(15- 75%)	24.9	0.4	9.70	1.00	26	6/30	5.22	4.51	9/30	.25	.25	
	1971	Coca-Cola Euro. Part.	CCEP	39.76	3	3	4	1.10	60- 85	(50-115%)	15.9	NIL	2.50	NIL	26	6/30	.64(p)	1.28(p)	9/30	NIL	NIL	YES
	1014	Cogeco Communic. (TSE)	CCA.TO	110.74b	–	2	–	.60	90- 120	(N- 10%)	15.5	2.1	7.15	2.32	8	5/31	1.87(b)	1.94(b)	9/30	.58(b)	.525(b)	YES
	116	Cognex Corp. (NDQ)	CGNX	63.47	3	3	2	1.05	50- 70	(N- 10%)	64.8	0.3	.98	.22	31	6/30	.19	.28	9/30	.055	.05	YES
	2622	Cognizant Technology (NDQ)	CTSH	69.32	3	2	3	1.05	80- 110	(15- 60%)	18.5	1.3	3.75	.88	15	6/30	.82	.94	9/30	.22	.20	YES
	117	Coherent, Inc. (NDQ)	COHR	109.82	▼4	3	3	1.15	195- 295	(80-170%)	NMF	NIL	.67	NIL	31	6/30	d.36	d.13	9/30	NIL	NIL	YES
	1754	Colfax Corp.	CFX	31.39	3	3	2	1.55	35- 55	(10- 75%)	21.8	NIL	▲1.44	NIL	60	6/30	.09	.54	9/30	NIL	NIL	YES
	1190	Colgate-Palmolive	CL	76.61	1	1	3	.70	65- 80	(N- 5%)	25.8	2.3	2.97	1.76	1	6/30	.74	.68	12/31	.44	.43	YES
	2105	Columbia Sportswear (NDQ)	COLM	89.19	3	3	4	1.15	105- 155	(20- 75%)	24.8	NIL	3.60	NIL	90	6/30	d.77	.34	9/30	NIL	.24	YES
	1709	Columbus McKinnon (NDQ)	CMCO	33.52	3	3	3	1.30	35- 55	(5- 65%)	26.8	0.7	1.25	.24	49	6/30	.07	.81	9/30	.06	.06	YES
	1015	Comcast Corp. (NDQ)	CMCSA	46.76	1	1	3	.80	70- 85	(50- 80%)	20.0	2.0	2.34	.92	8	6/30	.69	.78	12/31	.23	.21	YES
	776	Comerica Inc.	CMA	38.55	4	3	4	1.30	60- 90	(55-135%)	11.3	7.1	3.41	2.72	84	6/30	.80	1.94	12/31	.68	.67	YES
	777	Commerce Bancshs. (NDQ)	CBSH	55.61	3	1	4	.90	65- 80	(15- 45%)	21.3	1.9	2.61	1.08	84	6/30	.34	.91	9/30	.27	.248	YES
	741	Commercial Metals	CMC	20.62	3	3	2	1.15	40- 60	(95-190%)	9.8	2.3	2.11	.48	67	5/31	.59	.66	9/30	.12	.12	YES
448	949	CommScope Holding (NDQ)	COMM	8.67	4	3	3	1.35	20- 30	(130-245%)	6.3	NIL	1.38	NIL	32	6/30	.32	.66	9/30	NIL	NIL	YES
	2663	Community Health	CYH	SEE FINAL SUPPLEMENT																		
	2447	Compass Diversified	CODI	18.00	3	3	4	1.00	25- 40	(40-120%)	NMF	8.0	d1.04	1.44	–	6/30	d.30	d.32	9/30	.36	.36	YES
	1598	Compass Minerals Int'l	CMP	58.96	2	3	3	.95	70- 110	(20- 85%)	21.1	4.9	2.80	2.88-1.44	77	6/30	.04	d.36	9/30	.72	.72	YES
	820	Computer Prog. & Sys. (NDQ)	CPSI	27.61	3	3	1	.90	40- 55	(45-100%)	12.6	1.4	2.19	.40	30	6/30	.39	.50	9/30	.10	.10	YES
	950	Comtech Telecom. (NDQ)	CMTL	14.03	5	4	3	1.30	25- 45	(80-220%)	34.2	2.9	.41	.40	32	7/31	◆.21	.25	12/31	◆.10	.10	YES
	1909	Conagra Brands	CAG	35.46	1	3	2	.75	35- 55	(N- 55%)	14.2	2.5	2.50	.87	18	5/31	.75	.36	9/30	.213	.213	YES
	531	Concho Resources	CXO	44.94	4	3	4	1.40	90- 140	(100-210%)	15.3	1.8	2.93	.80	86	6/30	1.13	.69	9/30	.20	.125	YES
	177	CONMED Corp. (NDQ)	CNMD	78.12	4	3	3	1.40	90- 135	(15- 75%)	NMF	1.0	.23	.80	50	6/30	d.44	.27	12/31	.20	.20	YES
	2168	Conn's, Inc. (NDQ)	CONN	10.78	–	4	–	1.55	9- 16	(N- 50%)	30.8	NIL	.35	NIL	72	7/31	.70	.62	9/30	NIL	NIL	YES
240	2403	ConocoPhillips	COP	33.71	4	3	3	1.35	70- 110	(110-225%)	NMF	5.0	d2.55	1.68	91	6/30	.24	1.40	9/30	.42	.305	YES
	1025	Consol. Communic. (NDQ)	CNSL	5.84	3	4	1	1.00	13- 20	(125-240%)	7.0	NIL	.83	NIL	35	6/30	.19	d.10	9/30	NIL	NIL	YES
	138	Consol. Edison	ED	76.32	3	1	5	.75	85- 100	(10- 30%)	17.9	4.1	4.27	3.11	46	6/30	.57	.46	9/30	.765	.74	YES
	1792	Consolidated Water (NDQ)	CWCO	10.74	4	3	3	.90	25- 35	(135-225%)	34.6	3.2	▼.31	.34	10	6/30	d.07	.16	12/31	.085	.085	YES
	1972	Constellation Brands	STZ	185.45	3	2	5	1.15	255- 345	(40- 85%)	20.9	1.7	8.87	3.10	26	5/31	2.30	2.21	9/30	.75	.75	YES
	2404	Continental Resources	CLR	12.82	5	4	3	1.40	30- 50	(135-290%)	NMF	NIL	d1.62	NIL	91	6/30	d.71	.63	9/30	NIL	NIL	YES
	212	Cooper Cos.	COO	334.12	3	2	4	.95	305- 415	(N- 25%)	34.6	NIL	9.65	.06	24	7/31	1.12	2.40	9/30	.03	.03	YES
	978	Cooper Tire & Rubber	CTB	31.26	3	3	1	1.05	50- 70	(60-125%)	16.6	1.3	1.88	.42	70	6/30	d.12	.18	9/30	.105	.105	YES
	979	Cooper-Standard	CPS	13.63	5	4	4	1.25	40- 65	(195-375%)	NMF	NIL	d9.32	NIL	70	6/30	d7.93	d.36	9/30	NIL	NIL	YES
	306	Copa Holdings, S.A.	CPA	53.72	5	4	5	1.50	85- 145	(60-170%)	NMF	NIL	d14.25	NIL	89	6/30	d9.08	1.20	9/30	NIL	.65	YES
	2125	Copart, Inc. (NDQ)	CPRT	106.16	3	2	3	1.05	80- 110	(N- 5%)	45.8	NIL	2.32	NIL	44	7/31	.69	.60	9/30	NIL	NIL	YES
	1949	Core-Mark Holding (NDQ)	CORE	29.12	3	3	1	.65	30- 50	(5- 70%)	26.2	1.6	1.11	.48	21	6/30	.38	.38	9/30	.12	.11	YES
	1518	CoreCivic, Inc.	CXW	8.25	–	4	–	1.25	18- 30	(120-265%)	7.2	NIL	1.15	NIL	65	6/30	.33	.47	9/30	▼NIL	.44	YES
	432	CoreLogic	CLGX	67.74	–	3	–	1.15	80- 115	(20- 70%)	18.4	1.9	3.69	1.32	9	6/30	1.02	.82	9/30	▲.33	NIL	YES
	2416	Core Laboratories	CLB	16.00	5	4	3	1.50	30- 50	(90-215%)	30.2	0.3	.53	.04	94	6/30	.14	.43	9/30	.01	.55	YES
	1110	Cornerstone Building	CNR	7.89	–	5	–	1.65	15- 25	(90-215%)	12.1	NIL	.65	NIL	38	6/30	.21	.14	9/30	NIL	NIL	YES
	1823	Cornerstone OnDemand (NDQ)	CSOD	35.20	2	3	4	1.30	50- 75	(40-115%)	28.9	NIL	1.22	NIL	22	6/30	.40	.21	9/30	NIL	NIL	YES
	1305	Corning Inc.	GLW	32.03	3	3	2	1.10	30- 50	(N- 55%)	35.2	2.7	.91	.88	61	6/30	d.13	.09	9/30	.22	.20	YES
	1599	Corteva, Inc.	CTVA	28.97	–	3	–	NMF	30- 50	(5- 75%)	23.9	2.0	1.21	.57	77	6/30	1.26	1.42	9/30	.13	.13	YES
	433	CoStar Group (NDQ)	CSGP	857.13	2	2	3	.95	805-1085	(N- 25%)	88.3	NIL	9.71	NIL	9	6/30	2.34	2.23	9/30	NIL	NIL	YES
	2140	Costco Wholesale (NDQ)	COST	349.62	1	1	3	.65	380- 460	(10- 30%)	39.6	0.8	8.82	2.80	19	8/31	◆3.51	2.69	9/30	.70	.65	YES
	1001	Coty Inc.	COTY	2.75	–	5	–	1.25	14- 25	(410-810%)	NMF	NIL	d.08	NIL	47	6/30	d.51	.16	9/30	NIL	.125	YES
	1824	Coupa Software (NDQ)	COUP	276.66	3	3	3	.65	▲ 145- 215	(N- N%)	NMF	NIL	▼d1.87	NIL	22	7/31	d.64	d.32	9/30	NIL	NIL	YES
	1212	Covanta Holding Corp.	CVA	8.02	4	3	3	1.15	12- 18	(50-125%)	NMF	4.0	d.36	.32	27	6/30	d.10	d.15	12/31	.08	.25	YES
	354	Cracker Barrel (NDQ)	CBRL	119.60	4	3	4	.95	165- 245	(40-105%)	52.7	NIL	2.27	NIL	75	7/31	d.85	2.70	12/31	NIL	1.30	YES
★★	1973	Craft Brew Alliance	BREW	SEE FINAL SUPPLEMENT																		
	1755	Crane Co.	CR	51.08	4	3	3	1.35	80- 120	(55-135%)	16.0	3.4	▼3.20	1.72	60	6/30	.25	1.50	9/30	.43	.39	YES
1028	2548	Credit Acceptance (NDQ)	CACC	321.00	3	3	1	1.25	620- 930	(95-190%)	12.5	NIL	25.61	NIL	55	6/30	5.40	8.68	9/30	NIL	NIL	YES
	1357	Cree, Inc. (NDQ)	CREE	62.46	3	3	2	1.00	45- 65	(N- 5%)	NMF	NIL	d1.06	NIL	11	6/30	d.36	d.33	9/30	NIL	NIL	YES
	2405	Crescent Point Energy (TSE)	CPG.TO	1.71b	5	5	1	1.75	4- 7	(135-310%)	NMF	0.6	d.39	.01	91	6/30	d.27(b)	.36(b)	12/31	.003(b)	.01(b)	YES
	2156	Crocs, Inc. (NDQ)	CROX	41.99	3	3	3	1.45	30- 45	(N- 5%)	42.4	NIL	.99	NIL	82	6/30	.83	.55	9/30	NIL	NIL	YES
	1423	Cronos Group (NDQ)	CRON	4.96	4	4	3	1.15	12- 20	(140-305%)	NMF	NIL	d.43	NIL	80	6/30	d.31	.16	9/30	NIL	NIL	YES
	1640	Cross Country Health. (NDQ)	CCRN	6.34	2	4	4	.65	7- 11	(10- 75%)	NMF	NIL	d.59	NIL	68	6/30	d.39	d1.44	9/30	NIL	NIL	YES
	2591	CrowdStrike Hldgs. (NDQ)	CRWD	137.43	–	4	–	NMF	95- 160	(N- 15%)	NMF	NIL	d.15	NIL	2	7/31	d.14	d.40	9/30	NIL	NIL	YES
	596	Crown Castle Int'l	CCI	163.59	3	3	3	.90	145- 215	(N- 30%)	74.7	3.0	2.19	4.96	36	6/30	.41	.45	9/30	1.20	1.125	YES
	1175	Crown Holdings	CCK	76.36	3	3	3	1.20	85- 125	(10- 65%)	14.5	NIL	5.27	NIL	42	6/30	1.33	1.46	9/30	NIL	NIL	YES
	178	CryoLife Inc.	CRY	18.46	4	4	3	1.10	13- 20	(N- 10%)	NMF	NIL	.03	NIL	50	6/30	d.10	.08	9/30	NIL	NIL	YES
1650	1328	Cubic Corp.	CUB	60.98	4	3	5	1.25	55- 85	(N- 40%)	58.6	0.4	1.04	.27	59	6/30	d.04	.77	9/30	.135	.135	YES
240	2512	Cullen/Frost Bankers	CFR	64.79	4	3	3	1.15	85- 125	(30- 95%)	12.2	4.4	5.30	2.84	73	6/30	1.47	1.72	9/30	.71	.71	YES
2027	1147	Culp Inc.	CULP	12.57	3	3	4	.75	15- 25	(20-100%)	41.9	3.3	.30	.42	78	7/31	.08	.11	12/31	.105	.10	YES
	154	Cummins Inc.	CMI	212.79	3	2	2	1.15	205- 280	(N- 30%)	23.2	2.5	9.19	5.24	64	6/30	1.95	4.27	9/30	1.311	1.311	YES
	1710	Curtiss-Wright	CW	95.20	4	3	3	1.20	140- 210	(45-120%)	18.2	0.7	▼5.24	.68	49	6/30	.74	1.86	12/31	.17	.34	YES
	213	Cutera, Inc. (NDQ)	CUTR	18.34	5	4	4	1.25	17- 30	(N- 65%)	NMF	NIL	d.20	NIL	24	6/30	d.23	.31	9/30	NIL	NIL	YES
	1519	CyrusOne Inc. (NDQ)	CONE	72.23	2	3	1	.95	75- 110	(5- 50%)	NMF	2.8	.47	2.04	65	6/30	.39	d.08	12/31	▲.51	.50	YES
448	620	**DCP Midstream LP**	DCP	11.03	5	5	3	1.65	25- 45	(125-310%)	11.5	14.1	.96	1.56-.78	93	6/30	.15	.43	9/30	.39	.78	YES
	729	DMC Global (NDQ)	BOOM	32.14	4	4	4	1.00	40- 70	(25-120%)	NMF	NIL	d.68	NIL	79	6/30	d.38	1.17	9/30	▼NIL	.125	YES
	1201	DNP Select Inc. Fund	DNP	10.14	–	2	–	.90	11- 15	(10- 50%)	NMF	2.6	NMF	.26	–	4/30	8.68(q)	9.97(q)	12/31	NIL	NIL	
	597	DSP Group (NDQ)	DSPG	12.95	3	3	2	.80	19- 30	(45-130%)	NMF	NIL	d.29	NIL	36	6/30	d.05	d.02	9/30	NIL	NIL	YES
	908	DTE Energy	DTE	114.81	3	2	4	.90	120- 160	(5- 40%)	16.5	3.8	6.94	4.34	43	6/30	1.44	.99	12/31	1.013	.945	YES
	2623	DXC Technology	DXC	17.09	5	3	3	1.50	75- 115	(340-575%)	2.6	NIL	6.50	NIL	15	6/30	.21	1.74	9/30	▼NIL	.21	YES
	102	Daimler AG (PNK)	DDAIF	53.30	3	3	4	1.25	65- 100	(20- 90%)	48.5	2.0	1.10	1.05	45	6/30	d2.09	d1.39	9/30	NIL	NIL	
848	2009	Daktronics Inc.	DAKT	SEE FINAL SUPPLEMENT																		
	980	Dana Inc.	DAN	12.38	4	4	3	1.70	18- 30	(45-140%)	68.8	NIL	.18	NIL	70	6/30	d.69	.87	9/30	NIL	.10	YES
	1756	Danaher Corp.	DHR	209.79	–	1	–	.85	▲ 185- 225	(N- 5%)	39.3	0.3	5.34	.72	60	6/30	1.24	.90	12/31	.18	.17	YES
	355	Darden Restaurants	DRI	100.58	4	3	5	1.35	100- 150	(N- 50%)	NMF	1.2	.01	1.20	75	8/31	◆.56	1.38	12/31	▲.30	.88	YES

(•) All data adjusted for announced stock split or stock dividend. See back page of Ratings & Reports.
◆ New figure this week.
(b) Canadian Dollars.
(d) Deficit.
(f) The estimate may reflect a probable increase or decrease. If a dividend boost or cut is possible but not probable, two figures are shown, the first is the more likely.
(g) Dividends subject to foreign withholding tax for U.S. residents.
(h) Est'd Earnings & Est'd Dividends after conversion to U.S. dollars at Value Line estimated translation rate.
(j) All Index data expressed in hundreds.
(p) 6 months (q) Asset Value
N=Negative figure NA=Not available NMF=No meaningful figure

PAGE NUMBERS
Bold type refers to full report. The number on the left signifies a Supplement (if available).

Supplement	Page	NAME OF STOCK	Ticker Symbol	Recent Price	Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	% appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	408	Darling Ingredients	DAR	33.87	2	3	3	1.15	30- 45	(N- 35%)	20.7	NIL	1.64	NIL	40	6/30	.39	.16	9/30	NIL	NIL	YES
1651	356	Dave & Buster's Ent. (NDQ)	PLAY	16.37	5	5	5	1.75	35- 60	(115-265%)	NMF	NIL	d1.13	NIL	75	7/31	d1.24	.90	9/30	NIL	.15	YES
	794	DaVita Inc.	DVA	84.50	1	3	2	1.00	100- 150	(20- 80%)	12.4	NIL	6.79	NIL	33	6/30	1.62	1.16	9/30	NIL	NIL	YES
	2157	Deckers Outdoor	DECK	219.27	2	3	3	1.10	170- 255	(N- 15%)	26.9	NIL	8.15	NIL	82	6/30	d.28	d.67	9/30	NIL	NIL	YES
	155	Deere & Co.	DE	221.90	3	1	3	1.15	155- 190	(N- N%)	34.1	1.4	6.51	3.04	64	7/31	2.57	2.71	12/31	.76	.76	YES
	506	Delek US Holdings	DK	11.44	–	3	–	1.35	45- 65	(295-470%)	NMF	10.8	d2.41	1.24	92	6/30	d1.50	1.17	9/30	.31	.29	YES
2450	1399	Dell Technologies	DELL	67.31	–	3	–	NMF	70- 105	(5- 55%)	10.6	NIL	6.36	NIL	20	7/31	1.92	2.15	9/30	NIL	NIL	YES
	307	Delta Air Lines	DAL	31.34	5	3	5	1.45	50- 75	(60-140%)	NMF	NIL	d9.59	NIL	89	6/30	d4.43	2.35	9/30	NIL	.403	YES
	2376	Deluxe Corp.	DLX	25.97	4	3	3	1.20	70- 100	(170-285%)	NMF	4.6	d.30	1.20	88	6/30	.35	.75	9/30	.30	.30	YES
	357	Denny's Corp. (NDQ)	DENN	10.72	3	4	4	1.45	18- 30	(70-180%)	NMF	NIL	d.37	NIL	75	6/30	d.25	.23	9/30	NIL	NIL	YES
	179	Dentsply Sirona (NDQ)	XRAY	43.31	3	3	5	1.05	65- 100	(50-130%)	30.5	0.9	1.42	.40	50	6/30	d.18	.66	12/31	.10	.10	YES
	2199	Designer Brands	DBI	5.49	–	4	–	1.55	12- 20	(120-265%)	NMF	NIL	d.32	NIL	54	7/31	d1.28	.48	9/30	▼NIL	.25	YES
	1026	Deutsche Telekom ADR (PNK)	DTEGY	16.75	2	3	1	.80	25- 35	(50-110%)	17.8	4.4	.94	.73	35	6/30	.18	.22	9/30	NIL	NIL	
★★	532	Devon Energy	DVN	9.80	–	3	–	1.65	19- 30	(95-205%)	NMF	4.5	d.53	.44	86	6/30	d.18	.43	9/30	.11	.09	YES
	214	DexCom Inc. (NDQ)	DXCM	400.19	2	4	3	.95	265- 445	(N- 10%)	NMF	NIL	2.44	NIL	24	6/30	.48	d.12	9/30	NIL	NIL	YES
	1974	Diageo plc	DEO	137.55	3	1	4	.95	135- 165	(N- 20%)	22.2	2.5	6.19	3.50	26	6/30	d3.97(p)	2.37(p)	12/31	.80	2.089	YES
	2406	Diamondback Energy (NDQ)	FANG	31.49	5	3	3	1.50	65- 95	(105-200%)	NMF	4.8	d2.48	1.50	91	6/30	d15.17	2.11	9/30	.375	.188	YES
	2225	Diana Shipping	DSX					SEE FINAL SUPPLEMENT														
	2169	Dick's Sporting Goods	DKS	57.81	2	4	3	1.40	40- 70	(N- 20%)	21.0	2.2	2.75	1.25	72	7/31	3.21	1.26	9/30	.313	.275	YES
	1413	Diebold Nixdorf	DBD	7.44	–	5	–	1.50	13- 25	(75-235%)	7.2	NIL	1.04	NIL	85	6/30	.38	.06	9/30	NIL	NIL	YES
	1520	Digital Realty Trust	DLR	145.94	2	3	2	.85	125- 185	(N- 25%)	NMF	3.2	.80	4.63	65	6/30	.20	.15	9/30	1.12	1.08	YES
636	2141	Dillard's, Inc.	DDS	31.29	3	4	5	1.15	45- 65	(45-110%)	NMF	1.9	d3.51	.60	19	7/31	d.37	d1.75	12/31	.15	.15	YES
	358	Dine Brands Global	DIN	56.97	5	4	4	1.80	55- 95	(N- 65%)	47.9	NIL	1.19	NIL	75	6/30	d.87	1.18	9/30	▼NIL	.69	YES
	1358	Diodes Inc.	DIOD	53.16	3	3	3	1.05	45- 70	(N- 30%)	22.5	NIL	2.36	NIL	11	6/30	.54	.77	9/30	NIL	NIL	YES
	2549	Discover Fin'l Svcs.	DFS	56.46	4	3	5	1.55	110- 160	(95-185%)	18.2	3.1	3.10	1.76	55	6/30	d1.20	2.32	9/30	.44	.44	YES
	2329	Discovery, Inc. (NDQ)	DISCA	21.95	3	3	4	1.10	65- 100	(195-355%)	10.2	NIL	2.15	NIL	57	6/30	.40	1.33	9/30	NIL	NIL	YES
	1016	Dish Network 'A' (NDQ)	DISH	29.88	3	3	3	1.30	45- 70	(50-135%)	13.9	NIL	2.15	NIL	8	6/30	.78	.60	9/30	NIL	NIL	YES
	2330	Disney (Walt)	DIS	125.99	3	3	3	.95	135- 205	(5- 65%)	43.1	NIL	2.92	NIL	57	6/30	d2.61	.79	9/30	▼NIL	.88	YES
	2010	Dolby Labs.	DLB	65.99	3	2	2	.90	75- 100	(15- 50%)	43.4	1.3	1.52	.88	4	6/30	.66	.38	9/30	.22	.19	YES
	2142	Dollar General	DG	209.80	1	3	3	.70	180- 270	(N- 30%)	26.8	0.7	7.84	1.44	19	7/31	3.12	1.65	12/31	.36	.32	YES
	2143	Dollar Tree, Inc. (NDQ)	DLTR	90.94	2	3	3	.75	125- 185	(35-105%)	17.7	NIL	5.15	NIL	19	7/31	1.10	.76	9/30	NIL	NIL	YES
2027	139	Dominion Energy	D	77.23	3	2	3	.80	65- 90	(N- 15%)	21.2	3.7	3.65	2.82	46	6/30	1.25	.13	9/30	.94	.918	YES
	359	Domino's Pizza	DPZ	421.54	1	2	2	.60	435- 590	(5- 40%)	33.9	0.7	12.43	3.12	75	6/30	2.99	2.19	9/30	.78	.65	YES
455	1162	Domtar Corp.	UFS	27.55	4	3	4	1.20	40- 60	(45-120%)	NMF	NIL	.16	NIL	62	6/30	.36	.57	9/30	▼NIL	.455	YES
	1711	Donaldson Co.	DCI	46.68	3	2	3	1.10	70- 100	(50-115%)	23.3	1.8	2.00	.84	49	7/31	.50	.45	9/30	.21	.21	YES
	2390	Donnelley (R.R) & Sons	RRD					SEE FINAL REPORT														
	981	Dorman Products (NDQ)	DORM	89.17	3	3	3	.85	80- 115	(N- 30%)	30.3	NIL	2.94	NIL	70	6/30	.47	.68	9/30	NIL	NIL	YES
	156	Douglas Dynamics	PLOW	35.09	4	3	3	1.10	45- 65	(30- 85%)	27.2	3.2	1.29	1.12	64	6/30	.33	1.14	9/30	.28	.274	YES
	1712	Dover Corp.	DOV	108.78	3	2	2	1.30	110- 145	(N- 35%)	21.3	1.8	5.11	1.98	49	6/30	1.13	1.56	9/30	▲.495	.49	YES
2663	1600	Dow Inc.	DOW	47.48	–	2	–	NMF	55- 75	(15- 60%)	47.0	6.2	1.01	2.95	77	6/30	d.26	.86	9/30	.70	.70	YES
	2353	DraftKings Inc. (NDQ)	DKNG	56.89	–	4	–	NMF	40- 65	(N- 15%)	NMF	NIL	d.65	NIL	87	6/30	d.55	.02	9/30	NIL	NIL	YES
	2417	Dril-Quip, Inc.	DRQ	24.38	4	3	3	1.05	45- 65	(85-165%)	NMF	NIL	d.31	NIL	94	6/30	d.26	.05	9/30	NIL	NIL	YES
	2644	Dropbox, Inc. (NDQ)	DBX	19.28	–	3	–	NMF	30- 45	(55-135%)	24.7	NIL	.78	NIL	23	6/30	.22	.10	9/30	NIL	NIL	YES
★★	140	Duke Energy	DUK	82.87	–	2	–	.85	80- 110	(N- 35%)	15.9	4.7	5.21	3.88	46	6/30	1.08	1.12	9/30	▲.965	.945	YES
	1521	Duke Realty Corp.	DRE	36.93	3	3	2	.90	30- 45	(N- 20%)	65.9	2.5	.56	.94	65	6/30	.11	.20	9/30	.235	.215	YES
	360	Dunkin' Brands Group (NDQ)	DNKN	81.35	3	3	5	1.10	95- 145	(15- 80%)	31.3	2.0	2.60	1.61	75	6/30	.49	.86	9/30	▲.403	.375	YES
	1601	DuPont de Nemours	DD	56.55	–	2	–	NMF	70- 90	(25- 60%)	18.8	2.2	3.01	1.26	77	6/30	.70	.97	9/30	.30	.30	YES
	922	Dycom Inds.	DY	55.84	3	3	3	1.45	60- 90	(5- 60%)	18.7	NIL	2.99	NIL	17	7/31	1.18	1.09	9/30	NIL	NIL	YES
	1002	**e.l.f. Beauty**	ELF	18.75	2	4	2	1.30	16- 25	(N- 35%)	28.8	NIL	.65	NIL	47	6/30	.17	.14	9/30	NIL	NIL	YES
	1801	E*Trade Fin'l (NDQ)	ETFC	50.10	–	3	–	1.25	60- 85	(20- 70%)	15.8	1.1	3.18	.56	6	6/30	.88	.90	9/30	.14	.14	YES
449	533	EOG Resources	EOG	37.44	4	3	3	1.25	95- 145	(155-285%)	83.2	4.1	.45	1.52	86	6/30	d.23	1.31	12/31	◆.375	.288	YES
	2624	EPAM Systems	EPAM	328.96	2	3	3	1.00	335- 505	(N- 55%)	65.4	NIL	5.03	NIL	15	6/30	1.14	1.02	9/30	NIL	NIL	YES
	534	EQT Corp.	EQT	13.99	–	4	–	NMF	20- 35	(45-150%)	NMF	NIL	d.34	NIL	86	6/30	d.18	.09	9/30	NIL	.03	YES
	1111	Eagle Materials	EXP	84.82	2	3	4	1.35	100- 150	(20- 75%)	14.4	0.2	5.90	.20	38	6/30	1.57	1.13	9/30	▼NIL	.10	YES
	2513	East West Bancorp (NDQ)	EWBC	32.64	3	3	3	1.15	60- 90	(85-175%)	8.7	3.4	3.75	1.10	73	6/30	.70	1.03	9/30	.275	.275	YES
	2436	Eastman Chemical	EMN	78.51	3	3	3	1.25	90- 130	(15- 65%)	16.7	3.4	4.71	2.64	56	6/30	.20	1.85	12/31	.66	.62	YES
	982	Eaton Corp. plc	ETN	102.34	3	3	2	1.30	95- 145	(N- 40%)	24.9	2.9	4.11	2.92	70	6/30	.70	1.50	9/30	.73	.71	YES
	2550	Eaton Vance Corp.	EV	38.42	3	3	3	1.40	60- 90	(55-135%)	12.8	3.9	2.99	1.50	55	7/31	d.01	.90	9/30	.375	.35	YES
	2645	eBay Inc. (NDQ)	EBAY	54.04	1	3	2	1.00	75- 115	(40-115%)	14.6	1.2	3.71	.66	23	6/30	1.04	.46	9/30	.16	.14	YES
	1017	EchoStar Corp. (NDQ)	SATS	25.50	3	3	3	.90	20- 30	(N- 20%)	NMF	NIL	d.53	NIL	8	6/30	d.12	d.32	9/30	NIL	NIL	YES
	568	Ecolab Inc.	ECL	198.27	3	1	2	1.15	220- 270	(10- 35%)	NMF	0.9	d4.47	1.88	58	6/30	d6.98	1.42	12/31	.47	.46	YES
	1191	Edgewell Personal Care	EPC	27.77	3	3	3	1.05	65- 95	(135-240%)	10.0	NIL	2.78	NIL	1	6/30	.66	1.11	9/30	NIL	NIL	YES
	2215	Edison Int'l	EIX	51.89	3	3	4	.90	65- 95	(25- 85%)	12.1	5.0	4.30	2.60	16	6/30	.85	1.57	12/31	.638	.613	YES
	180	Edwards Lifesciences	EW	77.71	3	2	3	1.00	85- 115	(10- 50%)	43.2	NIL	1.80	NIL	50	6/30	.34	.46	9/30	NIL	NIL	YES
235	2216	El Paso Electric	EE					SEE FINAL SUPPLEMENT														
	1614	Elanco Animal Health	ELAN	27.06	–	3	–	1.25	35- 55	(30-105%)	62.9	NIL	.43	NIL	14	6/30	d.13	.09	9/30	NIL	NIL	YES
	2625	Elastic N.V.	ESTC	108.76	–	4	–	NMF	75- 110	(N- N%)	NMF	NIL	d1.75	NIL	15	7/31	d.23	d.56	9/30	NIL	NIL	YES
	709	Elbit Systems (NDQ)	ESLT	121.19	2	2	3	.85	120- 165	(N- 35%)	17.4	1.5	6.97	1.76	69	6/30	1.56	1.46	9/30	▲.44	.44	
	2354	Eldorado Resorts	ERI					SEE FINAL REPORT														
	2011	Electronic Arts (NDQ)	EA	132.28	1	3	2	.65	135- 200	(N- 50%)	30.1	NIL	4.40	NIL	4	6/30	1.25	1.14	9/30	NIL	NIL	YES
	569	Element Solutions	ESI	10.42	3	4	2	1.50	12- 19	(15- 80%)	41.7	NIL	.25	NIL	58	6/30	.01	.06	9/30	NIL	NIL	YES
	710	Embraer SA	ERJ	4.44	–	4	–	1.40	10- 15	(125-240%)	NMF	NIL	d2.86	NIL	69	6/30	d1.71	NA	9/30	NIL	NIL	YES
	382	EMCOR Group	EME	68.27	3	3	3	1.10	90- 140	(30-105%)	12.3	0.5	5.55	.32	39	6/30	1.44	1.49	9/30	.08	.08	YES
	1213	Emera Inc. (TSE)	EMA.TO	55.25b	3	2	3	.75	60- 85	(10- 55%)	23.4	4.4	2.36	2.45	27	6/30	.23(b)	.43(b)	9/30	.613(b)	.588(b)	YES
	1615	Emergent BioSolutions	EBS	103.64	2	4	3	.85	110- 180	(5- 75%)	17.2	NIL	6.04	NIL	14	6/30	1.73	d.18	9/30	NIL	NIL	YES
	1306	Emerson Electric	EMR	65.52	3	1	3	1.20	80- 100	(20- 55%)	21.6	3.1	3.03	2.01	61	6/30	.67	.94	9/30	.50	.49	YES
	1950	Empire Company Ltd. (TSE)	EMPA.TO	38.67b	2	3	2	.55	30- 50	(N- 30%)	17.2	1.3	2.25	.52	21	7/31	.71(b)	.49(b)	12/31	.13(b)	.12(b)	YES
	621	Enable Midstream Part.	ENBL	3.98	5	4	1	1.80	14- 20	(250-405%)	9.0	16.6	.44	.66-.33	93	6/30	.08	.26	9/30	.165	.33	YES
	610	Enbridge Inc. (TSE)	ENB.TO	40.25b	3	3	3	.95	60- 90	(50-125%)	14.9	8.0	2.71	3.24	83	6/30	.56(b)	.67(b)	9/30	.81(b)	.738(b)	
	795	Encompass Health	EHC	63.06	3	3	4	1.05	80- 120	(25- 90%)	20.8	1.8	3.03	1.12	33	6/30	.34	.92	12/31	.28	.28	YES
	1329	Encore Wire (NDQ)	WIRE	47.13	3	3	3	1.00	60- 90	(25- 90%)	16.8	0.2	2.81	.08	59	6/30	.60	.85	12/31	.02	.02	YES
	1616	Endo Int'l plc (NDQ)	ENDP	3.20	3	5	4	1.25	5- 10	(55-215%)	8.2	NIL	.39	NIL	14	6/30	.05	d.47	9/30	NIL	NIL	YES

★★ Supplementary Report in this week's issue.
▲ Arrow indicates the direction of a change. When it appears with the Latest Dividend, the arrow signals that a change in the regular payment rate has occurred in the latest quarter.

For Timeliness, 3-5 year Target Price Range, or Estimated Earnings 12 months to 3-31-21, the arrow indicates a change since the preceding week. When a diamond ◆ (indicating a new figure) appears alongside the latest quarterly earnings results, the rank change probably was primarily caused by the earnings report. In other cases, the change is due to the dynamics of the ranking system and could simply be the result of the improvement or weakening of other stocks.

PAGE NUMBERS
Bold type refers to full report.
The number on the left signifies a Supplement (if available).

Supplement	Page	NAME OF STOCK		Ticker Symbol	Recent Price	Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	1192	Energizer Holdings		ENR	39.64	2	3	1	1.05	70- 105	(75-165%)	14.8	3.0	2.68	1.20	1	6/30	.50	.37	9/30	.30	.30	YES
2028	622	Energy Transfer LP		ET	5.55	▼5	4	3	1.50	11- 19	(100-240%)	7.2	22.0	.77	1.22-.61	93	6/30	.13	.33	9/30	.305	.305	YES
	157	Enerpac Tool Group		EPAC	19.55	3	3	3	1.20	20- 30	(N- 55%)	81.5	0.2	.24	.04	64	5/31	d.08	.43	12/31	.04	.04	YES
	535	Enerplus Corp.	(TSE)	ERF.TO	2.54b	5	4	1	1.60	8- 13	(215-410%)	NMF	4.7	d3.66	.12	86	6/30	d2.74(b)	.36(b)	9/30	.03(b)	.03(b)	
	1214	EnerSys		ENS	66.43	3	3	1	1.20	90- 130	(35- 95%)	18.2	1.1	3.65	.70	27	6/30	.82	1.13	9/30	.175	.175	YES
	611	EnLink Midstream LLC		ENLC	2.28	5	5	2	1.70	3- 6	(30-165%)	NMF	16.7	d.32	.38-.23	83	6/30	d.04	d.03	9/30	.094	.283	YES
	1414	Ennis, Inc.		EBF	17.61	3	3	3	.80	17- 25	(N- 40%)	16.8	5.1	1.05	.90	85	8/31	.25	.37	12/31	.225	.225	YES
	1215	Enphase Energy	(NDQ)	ENPH	78.14	3	3	3	1.00	50- 75	(N- N%)	NMF	NIL	.20	NIL	27	6/30	d.38	.08	9/30	NIL	NIL	YES
	1758	EnPro Industries		NPO	57.87	▲3	3	3	1.35	80- 120	(40-105%)	45.9	1.8	▼1.26	1.04	60	6/30	d.16	.81	9/30	.26	.25	YES
	1388	Entegris, Inc.	(NDQ)	ENTG	71.40	2	3	2	1.10	60- 90	(N- 25%)	29.1	0.5	2.45	.34	3	6/30	.60	.39	9/30	.08	.08	YES
	2331	Entercom Communic.		ETM	SEE FINAL REPORT																		
	909	Entergy Corp.		ETR	96.68	3	2	4	.95	105- 140	(10- 45%)	17.4	3.9	5.56	3.80	43	6/30	1.79	1.22	9/30	.93	.91	YES
	623	Enterprise Products		EPD	16.02	4	3	3	1.15	35- 55	(120-245%)	8.5	11.1	1.89	1.78	93	6/30	.47	.55	9/30	.445	.44	YES
	181	Envista Holdings		NVST	24.45	–	3	–	NMF	35- 50	(45-105%)	NMF	NIL	d.04	NIL	50	6/30	d.59	.48	9/30	NIL	NIL	YES
	434	Equifax, Inc.		EFX	158.11	1	3	3	1.05	175- 260	(10- 65%)	27.0	1.0	5.85	1.56	9	6/30	1.60	1.40	9/30	.39	.39	YES
	1522	Equinix, Inc.	(NDQ)	EQIX	764.81	2	3	2	.90	600- 905	(N- 20%)	NMF	1.5	6.87	11.18	65	6/30	1.52	1.69	9/30	2.66	2.46	YES
	2551	Equitable Holdings		EQH	18.61	–	3	–	NMF	30- 45	(60-140%)	4.1	3.7	4.52	.68	55	6/30	1.00	1.14	9/30	.17	.15	YES
	1523	Equity Residential		EQR	52.54	3	3	4	1.00	75- 110	(45-110%)	35.5	4.6	1.48	2.41	65	6/30	.70	.83	12/31	.603	.568	YES
	951	Ericsson ADR(g)	(NDQ)	ERIC	10.71	2	3	2	.90	11- 16	(5- 50%)	20.2	1.5	.53	.16	32	6/30	.09	.06	9/30	NIL	NIL	YES
	762	Erie Indemnity	(NDQ)	ERIE	208.49	3	2	2	.65	180- 245	(N- 20%)	36.8	1.9	5.67	3.86	34	6/30	1.57	1.68	9/30	.965	.90	YES
	1757	ESCO Technologies		ESE	80.67	3	3	2	.95	▲ 90- 130	(10- 60%)	28.9	0.4	2.79	.32	60	6/30	.76	.81	12/31	.08	.08	YES
	1793	Essential Utilities		WTRG	39.93	2	2	2	.90	40- 55	(N- 40%)	39.1	2.6	1.02	1.02	10	6/30	.29	.25	9/30	▲.251	.234	YES
	1524	Essex Property Trust		ESS	207.52	2	3	4	1.05	280- 415	(35-100%)	38.5	4.1	5.39	8.48	65	6/30	1.29	1.40	12/31	2.078	1.95	YES
	1148	Ethan Allen Interiors		ETH	13.76	▲3	3	3	.90	18- 25	(30- 80%)	45.9	6.1	.30	.84	78	6/30	d.15	.46	12/31	▲.21	.19	YES
	2646	Etsy, Inc.	(NDQ)	ETSY	123.69	2	3	2	1.20	80- 120	(N- N%)	NMF	NIL	.45	NIL	23	6/30	.75	.14	9/30	NIL	NIL	YES
	331	Euronav NV		EURN	8.68	2	4	3	1.05	10- 17	(15- 95%)	4.3	12.7	2.00	1.10	71	6/30	1.21	d.18	9/30	.47	NIL	YES
	420	European Equity Fund		EEA	9.20	–	3	–	.95	10- 14	(10- 50%)	NMF	0.5	NMF	.05	–	6/30	9.93(q)	10.19(q)	9/30	NIL	NIL	
	2023	Everest Re Group Ltd.		RE	201.60	3	1	3	.95	205- 250	(N- 25%)	15.4	3.1	13.09	6.20	66	6/30	4.77	8.15	9/30	1.55	1.40	YES
	910	Evergy, Inc.		EVRG	50.34	3	2	3	1.00	60- 80	(20- 60%)	17.4	4.3	2.89	2.14	43	6/30	.59	.57	12/31	.505	.505	YES
	141	Eversource Energy		ES	82.65	2	1	2	.90	75- 90	(N- 10%)	22.7	2.8	3.64	2.34	46	6/30	.75	.74	9/30	.568	.535	YES
★★	796	Exact Sciences	(NDQ)	EXAS	99.70	3	4	4	1.15	115- 190	(15- 90%)	NMF	NIL	d1.99	NIL	33	6/30	d.58	d.30	9/30	NIL	NIL	YES
	833	Exelixis, Inc.	(NDQ)	EXEL	23.73	3	4	3	1.05	35- 55	(45-130%)	29.7	NIL	.80	NIL	12	6/30	.21	.25	9/30	NIL	NIL	YES
	142	Exelon Corp.	(NDQ)	EXC	35.74	3	3	4	.95	40- 60	(10- 70%)	12.3	4.4	2.91	1.57	46	6/30	.73	.50	9/30	.383	.363	YES
	2647	Expedia Group	(NDQ)	EXPE	94.29	4	4	3	1.25	100- 165	(5- 75%)	NMF	NIL	d6.46	NIL	23	6/30	d5.34	1.21	9/30	NIL	.34	YES
	383	Expeditors Int'l	(NDQ)	EXPD	91.37	3	1	3	.95	95- 115	(5- 25%)	25.5	1.1	3.59	1.04	39	6/30	1.09	.88	9/30	NIL	NIL	YES
	435	Exponent, Inc.	(NDQ)	EXPO	73.08	3	3	1	.85	65- 100	(N- 35%)	50.1	1.0	1.46	.76	9	6/30	.31	.39	9/30	.19	.16	YES
	2355	Extended Stay America		STAY	12.31	3	3	4	1.10	25- 40	(105-225%)	94.7	0.3	.13	.04	87	6/30	d.07	.28	9/30	.01	.23	YES
	1525	Extra Space Storage		EXR	108.12	2	3	4	.95	95- 145	(N- 35%)	32.0	3.3	3.38	3.60	65	6/30	.80	.81	9/30	.90	.90	YES
	848	Extreme Networks		EXTR	SEE FINAL SUPPLEMENT																		
237	507	Exxon Mobil Corp.		XOM	35.31	▼4	3	2	1.15	60- 90	(70-155%)	NMF	9.9	d.11	3.48	92	6/30	d.26	.73	9/30	.87	.87	YES
	952	F5 Networks	(NDQ)	FFIV	123.37	3	3	3	.90	195- 290	(60-135%)	23.4	NIL	5.28	NIL	32	6/30	1.14	1.43	9/30	NIL	NIL	YES
	118	FARO Technologies	(NDQ)	FARO	59.23	3	3	3	1.15	35- 50	(N- N%)	NMF	NIL	d.91	NIL	31	6/30	d.50	d.37	9/30	NIL	NIL	YES
	1307	FLIR Systems	(NDQ)	FLIR	35.98	4	3	5	.95	55- 80	(55-120%)	15.8	1.9	2.28	.68	61	6/30	.64	.56	9/30	.17	.17	YES
	1602	FMC Corp.		FMC	106.32	▼3	3	2	1.25	115- 170	(10- 60%)	16.1	1.8	6.61	1.88	77	6/30	1.72	1.66	12/31	.44	.40	YES
	384	FTI Consulting		FCN	108.92	3	3	2	.75	105- 160	(N- 45%)	19.4	NIL	5.62	NIL	39	6/30	1.32	1.73	9/30	NIL	NIL	YES
236	2648	Facebook Inc.	(NDQ)	FB	256.82	3	2	1	.90	380- 515	(50-100%)	30.2	NIL	8.49	NIL	23	6/30	1.80	1.99	9/30	NIL	NIL	YES
	436	FactSet Research		FDS	333.29	2	2	2	1.05	245- 330	(N- N%)	32.3	0.9	10.32	3.13	9	8/31	◆2.29	2.34	9/30	.77	.72	YES
	2626	Fair Isaac		FICO	427.52	3	3	3	1.15	345- 515	(N- 20%)	59.1	NIL	7.23	NIL	15	6/30	2.15	2.12	9/30	NIL	NIL	YES
1426	1910	Farmer Bros. Co.		FARM	SEE FINAL SUPPLEMENT																		
	1138	Fastenal Co.	(NDQ)	FAST	45.77	1	2	3	.95	40- 50	(N- 10%)	33.9	2.2	1.35	1.00	7	6/30	.42	.36	9/30	.25	.215	YES
	1526	Federal Rlty. Inv. Trust		FRT	74.94	4	1	3	1.05	145- 175	(95-135%)	49.3	5.7	1.52	4.24	65	6/30	.11	1.05	12/31	▲1.06	1.05	YES
	158	Federal Signal		FSS	29.68	3	3	1	1.00	40- 60	(35-100%)	17.9	1.1	1.66	.32	64	6/30	.42	.54	9/30	.08	.08	YES
	2552	Federated Hermes		FHI	21.81	3	3	3	1.40	40- 60	(85-175%)	9.2	5.0	2.38	1.08	55	6/30	.80	.62	9/30	.27	.27	YES
	308	FedEx Corp.		FDX	254.44	2	2	3	1.10	220- 300	(N- 20%)	28.0	1.0	9.08	2.60	89	8/31	4.87	3.05	12/31	.65	.65	YES
	103	Ferrari N.V.		RACE	183.28	2	3	2	.90	170- 255	(N- 40%)	56.6	0.7	3.24	1.30	45	6/30	.04	1.08	9/30	NIL	NIL	YES
	570	Ferro Corp.		FOE	12.36	–	3	–	1.30	19- 30	(55-145%)	15.3	NIL	.81	NIL	58	6/30	.12	.35	9/30	NIL	NIL	YES
1426	104	Fiat Chrysler		FCAU	12.37	–	3	–	1.40	19- 30	(55-145%)	NMF	NIL	d.06	NIL	45	6/30	d.74	.56	9/30	NIL	NIL	YES
	2553	Fidelity Nat'l Fin'l		FNF	31.59	2	3	4	1.30	55- 80	(75-155%)	10.6	4.2	2.97	1.32	55	6/30	1.11	.96	9/30	.33	.31	YES
	2554	Fidelity Nat'l Info.		FIS	147.93	–	2	–	.95	150- 200	(N- 35%)	NMF	0.9	.68	1.40	55	6/30	.03	.47	9/30	.35	.35	YES
	361	Fiesta Restaurant	(NDQ)	FRGI	9.95	–	4	–	.85	17- 30	(70-200%)	NMF	NIL	d.58	NIL	75	6/30	d.33	.21	9/30	NIL	NIL	YES
	778	Fifth Third Bancorp	(NDQ)	FITB	21.34	4	3	5	1.40	30- 40	(40- 85%)	12.8	5.1	1.67	1.08	84	6/30	.30	.71	12/31	◆.27	.24	YES
	159	Finning Int'l	(TSE)	FTT.TO	20.23b	3	3	3	1.00	35- 55	(75-170%)	17.3	4.1	1.17	.82	64	6/30	.06(b)	.54(b)	9/30	.205(b)	.205(b)	
	2592	FireEye Inc.	(NDQ)	FEYE	12.86	2	4	3	1.20	17- 30	(30-135%)	NMF	NIL	d1.18	NIL	2	6/30	d.24	d.33	9/30	NIL	NIL	YES
	763	First American Fin'l		FAF	51.17	3	3	4	1.15	85- 125	(65-145%)	11.6	3.4	4.40	1.76	34	6/30	1.52	1.64	12/31	.44	.42	YES
	2514	First Commonwealth		FCF	7.74	4	3	3	1.00	18- 25	(135-225%)	8.1	5.7	.96	.44	73	6/30	.24	.28	9/30	.11	.10	YES
	779	First Horizon National		FHN	9.15	4	3	4	1.35	18- 25	(95-175%)	8.7	6.6	1.05	.60	84	6/30	.20	.35	12/31	.15	.14	YES
	780	First Midwest Bancorp	(NDQ)	FMBI	11.07	4	3	3	1.15	25- 35	(125-215%)	13.5	5.1	.82	.56	84	6/30	.16	.43	12/31	.14	.14	YES
	2515	First Republic Bank		FRC	108.17	1	3	2	1.00	115- 175	(5- 60%)	21.0	0.7	5.16	.80	73	6/30	1.40	1.24	9/30	.20	.19	YES
1650	1216	First Solar, Inc.	(NDQ)	FSLR	65.37	2	3	2	1.10	90- 140	(40-115%)	26.1	NIL	2.50	NIL	27	6/30	.35	d.18	9/30	NIL	NIL	YES
	2555	FirstCash, Inc.	(NDQ)	FCFS	56.99	3	3	3	.80	75- 115	(30-100%)	17.3	1.9	3.29	1.10	55	6/30	.62	.76	9/30	.27	.25	YES
2454	143	FirstEnergy Corp.		FE	28.45	4	3	5	.85	40- 60	(40-110%)	10.9	5.6	2.60	1.59	46	6/30	.57	.63	12/31	.39	.38	YES
	2627	Fiserv Inc.	(NDQ)	FISV	104.07	1	2	4	1.00	105- 145	(N- 40%)	21.0	NIL	4.95	NIL	15	6/30	.93	.82	9/30	NIL	NIL	YES
	1330	Fitbit Inc.		FIT	6.58	–	4	–	.90	8- 13	(20-100%)	NMF	NIL	d.51	NIL	59	6/30	d.12	d.14	9/30	NIL	NIL	YES
	2144	Five Below, Inc.	(NDQ)	FIVE	128.33	2	3	3	1.20	135- 200	(5- 55%)	48.2	NIL	2.66	NIL	19	7/31	.53	.51	9/30	NIL	NIL	YES
	1825	Five9, Inc.	(NDQ)	FIVN	126.82	3	4	4	.70	115- 190	(N- 50%)	NMF	NIL	d.68	NIL	22	6/30	d.25	d.03	9/30	NIL	NIL	YES
449	2556	FleetCor Technologies		FLT	241.71	3	3	4	1.10	320- 480	(30-100%)	19.7	NIL	12.25	NIL	55	6/30	2.28	2.90	9/30	NIL	NIL	YES
	1331	Flex Ltd.	(NDQ)	FLEX	10.93	3	3	4	1.35	16- 25	(45-130%)	9.1	NIL	1.20	NIL	59	6/30	.23	.27	9/30	NIL	NIL	YES
	1139	Floor & Decor Hldgs.		FND	73.78	3	3	3	1.25	80- 115	(10- 55%)	59.5	NIL	1.24	NIL	7	6/30	.13	.34	9/30	NIL	NIL	YES
	1911	Flowers Foods		FLO	24.02	2	3	2	.60	25- 35	(5- 45%)	23.1	3.4	1.04	.81	18	6/30	.33	.25	9/30	.20	.19	YES
	1713	Flowserve Corp.		FLS	27.43	4	3	3	1.40	40- 60	(45-120%)	15.8	2.9	▲1.74	.80	49	6/30	.53	.54	12/31	.20	.19	YES
	1229	Fluor Corp.		FLR	9.15	–	4	–	1.45	16- 25	(75-175%)	NMF	NIL	d9.06	NIL	52	9/30	d5.57	.55	9/30	▼NIL	.21	YES
	1503	Flushing Financial	(NDQ)	FFIC	10.71	2	3	3	1.10	18- 25	(70-135%)	6.4	7.8	1.68	.84	63	6/30	.63	.37	9/30	.21	.21	YES

(●) All data adjusted for announced stock split or stock dividend. See back page of Ratings & Reports.
◆ New figure this week.
(b) Canadian Dollars.
(d) Deficit.
(f) The estimate may reflect a probable increase or decrease. If a dividend boost or cut is possible but not probable, two figures are shown, the first is the more likely.
(g) Dividends subject to foreign withholding tax for U.S. residents.
(h) Est'd Earnings & Est'd Dividends after conversion to U.S. dollars at Value Line estimated translation rate.
(j) All Index data expressed in hundreds.
(p) 6 months (q) Asset Value
N=Negative figure NA=Not available NMF=No meaningful figure

PAGE NUMBERS
Bold type refers to full report.
The number on the left signifies a Supplement (if available).

Suppl.	Page	NAME OF STOCK		Ticker Symbol	Recent Price	RANKS Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	LATEST RESULTS Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	2200	Foot Locker		FL	32.39	3	3	5	1.25	45- 70	(40-115%)	13.1	1.9	2.47	.60	54	7/31	.71	.66	12/31	▲.15	.38	YES
	105	Ford Motor		F	6.69	3	4	4	1.30	11- 18	(65-170%)	NMF	NIL	d.10	NIL	45	6/30	.28	.04	9/30	NIL	.15	YES
	1389	FormFactor, Inc.	(NDQ)	FORM	24.75	2	3	3	1.20	40- 60	(60-140%)	19.8	NIL	1.25	NIL	3	6/30	.26	.09	9/30	NIL	NIL	YES
	437	Forrester Research	(NDQ)	FORR	34.33	4	3	3	.95	60- 90	(75-160%)	28.4	NIL	1.21	NIL	9	6/30	.65	.65	9/30	NIL	NIL	YES
	2593	Fortinet Inc.	(NDQ)	FTNT	117.31	1	3	2	.90	155- 235	(30-100%)	50.8	NIL	2.31	NIL	2	6/30	.68	.42	9/30	NIL	NIL	YES
	911	Fortis Inc.	(TSE)	FTS.TO	54.51b	2	2	3	.80	55- 80	(N- 45%)	21.4	3.7	2.55	2.02	43	6/30	.59(b)	.54(b)	12/31	▲.505(b)	.478(b)	YES
1650	119	Fortive Corp.		FTV	75.73	–	3	–	1.20	75- 115	(N- 50%)	35.2	0.4	2.15	.28	31	6/30	.33	.46	9/30	.07	.07	YES
	1149	Fortune Brands Home		FBHS	85.82	3	3	2	1.30	80- 120	(N- 40%)	22.6	1.1	3.79	.96	78	6/30	.94	1.03	12/31	.24	.22	YES
	320	Forward Air	(NDQ)	FWRD	56.47	3	3	3	.95	65- 100	(15- 75%)	34.2	1.3	1.65	.72	29	6/30	.11	.78	9/30	.18	.18	YES
	2170	Fossil Group		FOSL					SEE FINAL REPORT														
	2332	Fox Corp. 'A'	(NDQ)	FOXA	27.84	–	3	–	NMF	40- 65	(45-135%)	11.2	1.7	2.49	.46	57	6/30	.62	.73	12/31	.23	.23	YES
	2308	Fox Factory Holding	(NDQ)	FOXF	75.80	3	3	1	.90	80- 120	(5- 60%)	36.3	NIL	2.09	NIL	81	6/30	.32	.59	9/30	NIL	NIL	YES
	1571	Franco-Nevada Corp.		FNV	138.76	2	3	1	.45	110- 170	(N- 25%)	50.8	0.7	2.73	1.04	5	6/30	.50	.34	9/30	.26	.25	YES
	1308	Franklin Electric	(NDQ)	FELE	58.43	3	3	3	.95	50- 75	(N- 30%)	31.1	1.1	1.88	.63	61	6/30	.54	.70	9/30	.155	.145	YES
	2557	Franklin Resources		BEN	20.47	3	2	3	1.15	35- 50	(70-145%)	14.4	5.4	1.42	1.11	55	6/30	.58	.65	12/31	.27	.26	YES
	1587	Freep't-McMoRan Inc.		FCX	15.90	3	5	3	1.70	19- 35	(20-120%)	20.4	NIL	.78	NIL	76	6/30	.03	d.04	9/30	NIL	.05	YES
	797	Fresenius Medical ADR		FMS	42.18	2	2	1	.90	60- 85	(40-100%)	15.7	1.7	2.68	.72	33	6/30	.66	.50	9/30	.717	NIL	YES
	1912	Fresh Del Monte Prod.		FDP	22.56	4	3	3	.55	40- 60	(75-165%)	12.3	0.9	1.83	.20	18	6/30	.38	.78	9/30	.05	.06	YES
	1913	Freshpet, Inc.	(NDQ)	FRPT	107.48	2	4	3	1.00	45- 75	(N- N%)	NMF	NIL	.20	NIL	18	6/30	NIL	d.16	9/30	NIL	NIL	YES
	385	frontdoor, inc.	(NDQ)	FTDR	39.62	–	3	–	.80	50- 75	(25- 90%)	23.3	NIL	1.70	NIL	39	6/30	.57	.71	9/30	NIL	NIL	YES
	332	Frontline Ltd.		FRO	6.37	3	5	3	1.30	7- 11	(10- 75%)	3.2	31.4	2.01	2.00-NIL	71	6/30	1.01	.01	9/30	▼.50	NIL	YES
	1984	FUJIFILM Hldgs. ADR(g)	(PNK)	FUJIY	49.57	3	2	4	.75	55- 75	(10- 50%)	49.6	1.6	1.00	.81	37	6/30	.64	.33	9/30	.443	.371	
	571	Fuller (H.B.)		FUL	46.74	3	3	2	1.15	50- 80	(5- 70%)	22.2	1.4	2.11	.65	58	8/31	◆.79	.97	9/30	.163	.16	YES
	2106	**G-III Apparel Group**	(NDQ)	GIII	14.15	5	5	5	2.00	30- 60	(110-325%)	13.9	NIL	1.02	NIL	90	7/31	d.31	.23	9/30	NIL	NIL	YES
	341	GATX Corp.		GATX	64.14	3	3	4	1.00	60- 90	(N- 40%)	19.8	3.0	3.24	1.92	28	6/30	1.05	1.78	9/30	.48	.46	YES
	572	GCP Applied Tech.		GCP	21.00	3	3	1	1.05	25- 40	(20- 90%)	40.4	NIL	.52	NIL	58	6/30	.09	.19	9/30	NIL	NIL	YES
	1527	GEO Group (The)		GEO	11.52	4	3	4	1.15	25- 40	(115-245%)	11.1	11.8	1.04	1.36	65	6/30	.31	.35	9/30	.48	.48	YES
	598	GTT Communications		GTT	5.28	–	5	–	1.15	12- 25	(125-375%)	NMF	NIL	d3.80	NIL	36	3/31	d1.45	d.49	9/30	NIL	NIL	YES
	1424	GW Pharmac. ADS	(NDQ)	GWPH	99.50	3	4	4	1.05	100- 165	(N- 65%)	NMF	NIL	d1.61	NIL	80	6/30	d.28	d.08	9/30	NIL	NIL	YES
	1202	Gabelli Equity		GAB	5.18	–	3	–	1.35	6- 9	(15- 75%)	NMF	1.0	NMF	.05	–	6/30	4.60(q)	5.91(q)	12/31	.018	.001	
	2558	Gallagher (Arthur J.)		AJG	104.96	3	1	3	1.00	120- 145	(15- 40%)	25.9	1.7	4.06	1.80	55	6/30	.79	.58	9/30	.45	.43	YES
	2171	GameStop Corp.		GME					SEE FINAL REPORT														
	1528	Gaming and Leisure	(NDQ)	GLPI	38.02	4	3	3	1.35	50- 75	(30- 95%)	18.1	6.3	2.10	2.40	65	6/30	.52	.43	9/30	.60	.68	YES
	2382	Gannett Co., Inc.		GCI					SEE FINAL REPORT														
	2201	Gap (The), Inc.		GPS	17.20	▲3	4	4	1.45	25- 40	(45-135%)	81.9	NIL	.21	NIL	54	7/31	d.17	.63	9/30	NIL	.243	YES
	1309	Garmin Ltd.	(NDQ)	GRMN	95.38	2	2	2	1.00	90- 125	(N- 30%)	23.5	2.7	4.06	2.56	61	6/30	.96	1.17	9/30	.61	.57	YES
	438	Gartner Inc.		IT	126.53	2	3	4	1.15	185- 275	(45-115%)	52.7	NIL	2.40	NIL	9	6/30	1.20	1.45	9/30	NIL	NIL	YES
	2225	GasLog Ltd.		GLOG					SEE FINAL SUPPLEMENT														
1426	1714	Gates Industrial plc		GTES	11.08	3	3	2	1.35	15- 20	(35- 80%)	17.3	NIL	▲.64	NIL	49	6/30	.03	.26	9/30	NIL	NIL	YES
	1217	Generac Holdings		GNRC	190.18	2	3	3	1.05	240- 365	(25- 90%)	33.8	NIL	5.62	NIL	27	6/30	1.02	.98	9/30	NIL	NIL	YES
	1203	Gen'l Amer. Invest		GAM	33.86	–	3	–	1.10	45- 65	(35- 90%)	NMF	1.2	NMF	.40	–	6/30	38.51(q)	42.33(q)	9/30	NIL	NIL	
	711	Gen'l Dynamics		GD	140.92	3	1	3	1.10	215- 260	(55- 85%)	12.4	3.1	11.32	4.40	69	6/30	2.18	2.77	12/31	1.10	1.02	YES
	1759	Gen'l Electric		GE	6.20	–	4	–	1.30	11- 19	(75-205%)	NMF	0.6	▼d.05	.04	60	6/30	d.15	.17	12/31	.01	.01	YES
	1914	Gen'l Mills		GIS	59.90	1	1	2	.65	60- 70	(N- 15%)	16.1	3.4	3.72	2.04	18	8/31	◆1.00	.79	12/31	▲.51	.49	YES
1240	106	Gen'l Motors		GM	29.44	4	3	3	1.30	55- 80	(85-170%)	14.5	NIL	2.03	NIL	45	6/30	d.50	1.64	9/30	NIL	.38	YES
	2158	Genesco Inc.		GCO	22.36	5	3	5	1.65	70- 100	(215-345%)	10.4	NIL	2.15	NIL	82	7/31	d1.23	.15	9/30	NIL	NIL	YES
	386	Genpact Limited		G	38.98	2	2	2	1.05	55- 70	(40- 80%)	18.0	1.0	2.17	.39	39	6/30	.52	.49	9/30	.098	.085	YES
	983	Gentex Corp.	(NDQ)	GNTX	25.71	3	3	2	.95	35- 50	(35- 95%)	20.7	1.9	1.24	.48	70	6/30	.02	.45	12/31	.12	.115	YES
	984	Gentherm Inc.	(NDQ)	THRM	41.05	3	3	2	1.15	55- 80	(35- 95%)	46.1	NIL	.89	NIL	70	6/30	d.32	.08	9/30	NIL	NIL	YES
	985	Genuine Parts		GPC	95.74	3	3	4	1.20	125- 165	(30- 70%)	18.8	3.3	5.08	3.16	70	6/30	1.32	1.57	12/31	.79	.763	YES
1028	1557	Genworth Fin'l		GNW	3.27	–	5	–	1.40	2- 5	(N- 55%)	32.7	NIL	.10	NIL	51	6/30	d.04	.40	9/30	NIL	NIL	YES
	120	Geospace Technologies		GEOS					SEE FINAL REPORT														
	742	Gibraltar Inds.	(NDQ)	ROCK	64.51	2	3	2	1.10	50- 75	(N- 15%)	20.4	NIL	3.17	NIL	67	6/30	.84	.73	9/30	NIL	NIL	YES
	2107	Gildan Activewear		GIL	20.21	4	3	4	1.35	30- 45	(50-125%)	NMF	NIL	.19	NIL	90	6/30	d.99	.56	9/30	▼NIL	.134	YES
1427	1617	Gilead Sciences	(NDQ)	GILD	62.85	1	2	3	.65	75- 105	(20- 65%)	39.8	4.3	1.58	2.72	14	6/30	d2.66	1.47	9/30	.68	.63	YES
	2448	Gladstone Capital	(NDQ)	GLAD	7.51	–	3	–	1.40	20- 30	(165-300%)	7.4	10.4	1.02	.78	–	6/30	.48	.30	9/30	.195	.21	YES
	1176	Glatfelter (P.H.)		GLT	13.78	3	3	3	1.15	25- 40	(80-190%)	49.2	3.9	.28	.54	42	6/30	d.05	.14	12/31	◆.135	.13	YES
	182	Glaukos Corp.		GKOS	50.55	4	4	5	1.25	75- 125	(50-145%)	NMF	NIL	d1.21	NIL	50	6/30	d.90	d.12	9/30	NIL	NIL	YES
	1618	GlaxoSmithKline ADR(g)		GSK	37.86	2	1	3	.85	55- 70	(45- 85%)	11.8	5.0	3.20	1.88	14	6/30	1.13	.49	9/30	.474	.53	YES
	2559	Global Payments		GPN	178.56	–	3	–	1.20	170- 255	(N- 45%)	NMF	0.4	1.68	.78	55	6/30	.12	.77	9/30	.195	.01	YES
	1558	Globe Life Inc.		GL	79.85	3	1	4	1.15	110- 135	(40- 70%)	11.5	0.9	6.97	.75	51	6/30	1.65	1.67	12/31	.188	.173	YES
	183	Globus Medical		GMED	49.67	3	3	1	.80	55- 85	(10- 70%)	46.0	NIL	1.08	NIL	50	6/30	d.21	.38	9/30	NIL	NIL	YES
	2012	Glu Mobile	(NDQ)	GLUU	7.46	3	5	2	.80	7- 13	(N- 75%)	28.7	NIL	.26	NIL	4	6/30	d.05	.02	9/30	NIL	NIL	YES
	1826	GoDaddy Inc.		GDDY	74.93	2	3	1	1.05	▲ 90- 135	(20- 80%)	57.2	NIL	▲1.31	NIL	22	6/30	.25	.11	9/30	NIL	NIL	YES
	923	Gogo Inc.		GOGO					SEE FINAL REPORT														
★★	333	Golar LNG Ltd.	(NDQ)	GLNG	6.06	4	5	5	1.40	12- 20	(100-230%)	NMF	NIL	d.64	NIL	71	6/30	d1.59	d1.11	9/30	NIL	.15	YES
	1810	Goldman Sachs		GS	199.07	3	2	3	1.15	300- 405	(50-105%)	9.1	2.5	21.89	5.00	53	6/30	6.26	5.81	9/30	1.25	1.25	YES
	986	Goodyear Tire	(NDQ)	GT	7.73	4	4	3	1.40	19- 30	(145-290%)	NMF	NIL	d1.45	NIL	70	6/30	d1.87	.25	9/30	NIL	.16	YES
	1332	GoPro, Inc.	(NDQ)	GPRO	4.47	–	5	–	1.35	5- 9	(10-100%)	NMF	NIL	d.41	NIL	59	6/30	d.34	d.08	9/30	NIL	NIL	YES
	160	Gorman-Rupp Co.		GRC	30.26	3	3	3	1.00	40- 60	(30-100%)	26.3	1.9	1.15	.58	64	6/30	.28	.40	9/30	.145	.135	YES
	573	Grace (W.R.) & Co.		GRA	41.83	▼4	3	4	1.20	85- 130	(105-210%)	13.8	3.1	3.04	1.29	58	6/30	.49	1.16	9/30	.30	.27	YES
	1715	Graco Inc.		GGG	61.16	3	2	3	1.05	50- 65	(N- 5%)	35.6	1.1	▲1.72	.70	49	6/30	.37	.50	12/31	.175	.16	YES
	1760	Graham Hldgs.		GHC	404.94	4	3	4	1.15	▲ 650- 970	(60-140%)	18.3	1.4	▲22.12	5.80	60	6/30	2.43	9.36	12/31	1.45	1.39	
	1310	Grainger (W.W.)		GWW	353.67	3	2	2	1.00	350- 470	(N- 35%)	22.0	1.7	16.06	6.12	61	6/30	3.75	4.64	9/30	▲1.53	1.44	YES
	2001	Grand Canyon Educ.	(NDQ)	LOPE	83.76	3	3	4	.95	120- 175	(45-110%)	15.5	NIL	5.42	NIL	48	6/30	1.03	1.09	9/30	NIL	NIL	YES
	1230	Granite Construction		GVA	18.15	–	3	–	1.20	40- 60	(120-230%)	NMF	2.9	d1.76	.52	52	9/30	.58	1.42	12/31	.13	.13	YES
	1177	Graphic Packaging		GPK	13.89	3	3	3	1.00	20- 30	(45-115%)	16.2	2.2	.86	.30	42	6/30	.19	.22	12/31	.075	.075	YES
	2333	Gray Television		GTN	14.15	4	4	4	1.45	30- 50	(110-255%)	7.6	NIL	1.85	NIL	57	6/30	d.02	.31	9/30	NIL	NIL	YES
	1218	Green Plains Inc.	(NDQ)	GPRE	15.03	–	5	–	1.30	11- 20	(N- 35%)	NMF	NIL	d1.93	NIL	27	6/30	d.24	d1.13	9/30	NIL	NIL	YES
2225	342	Greenbrier (The) Cos.		GBX	29.78	3	3	4	1.40	35- 50	(20- 70%)	18.2	3.6	1.64	1.08	28	5/31	1.05	.89	9/30	.27	.25	YES
	1811	Greenhill & Co.		GHL	11.18	4	4	4	1.05	30- 45	(170-305%)	NMF	1.8	▲d.10	.20	53	6/30	d.79	d.53	9/30	.05	.05	YES
	2024	Greenlight Capital Re	(NDQ)	GLRE	6.58	4	4	3	1.00	10- 17	(50-160%)	NMF	NIL	d2.89	NIL	66	6/30	NIL	.42	9/30	NIL	NIL	YES

★★ Supplementary Report in this week's issue.
▲ Arrow indicates the direction of a change. When it appears with the Latest Dividend, the arrow signals that a change in the regular payment rate has occurred in the latest quarter. For Timeliness, 3-5 year Target Price Range, or Estimated Earnings 12 months to 3-31-21, the arrow indicates a change since the preceding week. When a diamond ◆ (indicating a new figure) appears alongside the latest quarterly earnings results, the rank change probably was primarily caused by the earnings report. In other cases, the change is due to the dynamics of the ranking system and could simply be the result of the improvement or weakening of other stocks.

PAGE NUMBERS
Bold type refers to full report.
The number on the left signifies a Supplement (if available).

Do Options Trade?

Supplement	Page	NAME OF STOCK		Ticker Symbol	Recent Price	RANKS Timeliness	RANKS Safety	RANKS Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	LATEST RESULTS Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	1178	Greif, Inc.		GEF	**36.79**	**3**	**3**	**4**	1.25	65- 95	(75-160%)	**10.6**	**4.8**	3.46	1.76	**42**	7/31	**.85**	1.26	12/31	.44	.44	YES
	1761	Griffon Corp.		GFF	**20.16**	**2**	**3**	**1**	1.40	25- 40	(25-100%)	**12.7**	**1.5**	▲1.59	.31	**60**	6/30	**.59**	.31	9/30	.075	.073	YES
	1951	Grocery Outlet	(NDQ)	GO	**38.03**	**–**	**3**	**–**	NMF	20- 30	(N- N%)	**55.1**	**NIL**	.69	NIL	**21**	6/30	**.30**	d.15	9/30	NIL	NIL	YES
	2126	Group 1 Automotive		GPI	**89.36**	**▲3**	**3**	**2**	1.30	95- 140	(5- 55%)	**9.9**	**NIL**	9.04	NIL	**44**	6/30	**3.77**	2.83	9/30	NIL	.28	YES
450	**2649**	Groupon, Inc.	(NDQ)	GRPN	**23.82**	**5**	**5**	**3**	1.90	20- 40	(N- 70%)	**NMF**	**NIL**	d9.87	NIL	**23**	6/30	**d2.53**	d1.40	9/30	NIL	NIL	YES
	2650	Grubhub Inc.		GRUB	**72.30**	**–**	**4**	**–**	1.20	35- 55	(N- N%)	**NMF**	**NIL**	d.35	NIL	**23**	6/30	**d.49**	.01	9/30	NIL	NIL	YES
	798	Guardant Health	(NDQ)	GH	**108.99**	**3**	**3**	**4**	.90	95- 145	(N- 35%)	**NMF**	**NIL**	d1.61	NIL	**33**	6/30	**d.57**	d.13	9/30	NIL	NIL	YES
	2108	Guess?, Inc.		GES	**11.93**	**5**	**4**	**4**	1.45	20- 35	(70-195%)	**74.6**	**3.8**	.16	.45	**90**	7/31	**d.01**	.38	12/31	▲.113	NIL	YES
	2594	Guidewire Software		GWRE	**106.12**	**2**	**3**	**2**	.90	125- 190	(20- 80%)	**NMF**	**NIL**	d.11	NIL	**2**	7/31	**.46**	.28	9/30	NIL	NIL	YES
	799	**HCA Healthcare**		HCA	**121.36**	**3**	**3**	**3**	1.15	160- 240	(30-100%)	**12.2**	**0.4**	9.97	.45	**33**	6/30	**1.50**	2.21	9/30	NIL	.40	YES
450	**1112**	HD Supply Holdings	(NDQ)	HDS	**40.87**	**3**	**3**	**3**	1.10	55- 85	(35-110%)	**13.7**	**NIL**	2.98	NIL	**38**	7/31	**.83**	1.08	9/30	NIL	NIL	YES
	1150	HNI Corp.		HNI	**31.38**	**4**	**3**	**3**	1.10	50- 80	(60-155%)	**20.4**	**3.9**	1.54	1.22	**78**	6/30	**.20**	.38	9/30	.305	.305	YES
	1400	HP Inc.		HPQ	**18.86**	**3**	**3**	**4**	1.25	30- 45	(60-140%)	**9.2**	**3.7**	2.04	.70	**20**	7/31	**.49**	.58	12/31	.176	.16	YES
★★	**2516**	HSBC Holdings PLC		HSBC	**19.96**	**3**	**4**	**3**	.85	50- 70	(150-250%)	**NMF**	**NIL**	d.70	NIL	**73**	6/30	**.05**	1.10	9/30	NIL	1.00	YES
	215	Haemonetics Corp.		HAE	**87.77**	**3**	**3**	**4**	.80	110- 160	(25- 80%)	**29.3**	**NIL**	3.00	NIL	**24**	6/30	**.46**	.81	9/30	NIL	NIL	YES
	1915	Hain Celestial Group	(NDQ)	HAIN	**33.56**	**3**	**3**	**2**	.75	30- 45	(N- 35%)	**38.1**	**NIL**	.88	NIL	**18**	6/30	**.32**	.21	9/30	NIL	NIL	YES
	2418	Halliburton Co.		HAL	**12.76**	**4**	**4**	**3**	1.70	20- 35	(55-175%)	**NMF**	**1.4**	d.06	.18	**94**	6/30	**.05**	.35	9/30	.045	.18	YES
	781	Hancock Whitney Corp.	(NDQ)	HWC	**19.14**	**5**	**3**	**3**	1.45	35- 50	(85-160%)	**30.4**	**5.6**	.63	1.08	**84**	6/30	**d1.36**	1.01	9/30	.27	.27	YES
	2109	Hanesbrands, Inc.		HBI	**15.79**	**3**	**3**	**3**	.95	18- 25	(15- 60%)	**18.6**	**3.8**	.85	.60	**90**	6/30	**.60**	.45	9/30	.15	.15	YES
	764	Hanover Insurance		THG	**92.79**	**3**	**2**	**3**	.95	120- 160	(30- 70%)	**11.4**	**2.8**	8.12	2.60	**34**	6/30	**1.63**	1.88	9/30	.65	.60	YES
2664	**2309**	Harley-Davidson		HOG	**23.91**	**4**	**3**	**3**	1.25	70- 110	(195-360%)	**25.2**	**0.3**	.95	.08	**81**	6/30	**d.60**	1.23	9/30	.02	.375	YES
	953	Harmonic, Inc.		HLIT					SEE FINAL REPORT														
	387	Harsco Corp.		HSC	**13.97**	**4**	**3**	**3**	1.50	25- 35	(80-150%)	**20.2**	**NIL**	.69	NIL	**39**	6/30	**.13**	.21	9/30	NIL	NIL	YES
	2560	Hartford Fin'l Svcs.		HIG	**36.88**	**4**	**2**	**3**	1.15	60- 80	(65-115%)	**7.7**	**3.5**	4.81	1.30	**55**	6/30	**1.22**	1.33	9/30	.325	.30	YES
2664	**2310**	Hasbro, Inc.	(NDQ)	HAS	**78.25**	**3**	**3**	**3**	1.20	115- 170	(45-115%)	**24.8**	**3.5**	3.15	2.72	**81**	6/30	**.02**	.78	12/31	.68	.68	YES
	2172	Haverty Furniture		HVT	**20.43**	**3**	**3**	**3**	.90	20- 30	(N- 45%)	**28.8**	**3.9**	.71	.80	**72**	6/30	**d.52**	.29	9/30	▲.20	.20	YES
	2217	Hawaiian Elec.		HE	**33.18**	**3**	**2**	**3**	.80	30- 40	(N- 20%)	**19.2**	**4.0**	1.73	1.32	**16**	6/30	**.45**	.39	9/30	.33	.32	YES
	309	Hawaiian Hldgs.	(NDQ)	HA	**13.38**	**5**	**3**	**4**	1.55	25- 35	(85-160%)	**NMF**	**NIL**	d8.26	NIL	**89**	6/30	**d3.81**	1.21	9/30	NIL	.12	YES
	730	Haynes International	(NDQ)	HAYN	**17.82**	**4**	**3**	**3**	1.15	50- 70	(180-295%)	**NMF**	**4.9**	d.98	.88	**79**	6/30	**d.65**	.30	9/30	.22	.22	YES
	1529	Healthcare R'lty Trust		HR	**29.91**	**2**	**3**	**5**	.85	35- 50	(15- 65%)	**39.4**	**4.0**	.76	1.20	**65**	6/30	**.56**	.03	9/30	.30	.30	YES
	388	Healthcare Svcs.	(NDQ)	HCSG	**20.93**	**3**	**3**	**3**	.90	35- 50	(65-140%)	**17.7**	**3.9**	1.18	.82	**39**	6/30	**.31**	.24	9/30	▲.204	.199	YES
	821	HealthEquity, Inc.	(NDQ)	HQY	**49.52**	**2**	**3**	**4**	1.25	75- 115	(50-130%)	**31.5**	**NIL**	1.57	NIL	**30**	7/31	**.42**	.45	9/30	NIL	NIL	YES
	1530	Healthpeak Properties		PEAK	**27.33**	**1**	**3**	**4**	1.05	25- 40	(N- 45%)	**NMF**	**5.4**	.20	1.48	**65**	6/30	**.09**	d.03	9/30	.37	.37	YES
	321	Heartland Express	(NDQ)	HTLD	**19.08**	**2**	**2**	**1**	.75	20- 30	(5- 55%)	**21.4**	**0.4**	.89	.08	**29**	6/30	**.24**	.27	12/31	.02	.04	YES
	1572	Hecla Mining		HL	**5.01**	**2**	**4**	**1**	.95	10- 16	(100-220%)	**33.4**	**0.4**	.15	.02	**5**	6/30	**d.03**	d.10	9/30	.003	.003	YES
	712	HEICO Corp.		HEI	**105.44**	**3**	**3**	**3**	1.05	105- 155	(N- 45%)	**69.8**	**0.2**	1.51	.16	**69**	7/31	**.40**	.59	9/30	.08	.07	YES
	1641	Heidrick & Struggles	(NDQ)	HSII	**19.80**	**3**	**3**	**3**	.85	35- 50	(75-155%)	**NMF**	**3.0**	d.64	.60	**68**	6/30	**d1.33**	.73	9/30	.15	.15	YES
	1003	Helen of Troy Ltd.	(NDQ)	HELE	**197.23**	**2**	**3**	**2**	1.00	145- 215	(N- 10%)	**19.4**	**NIL**	10.15	NIL	**47**	5/31	**2.53**	2.06	9/30	NIL	NIL	YES
	1762	Helios Technologies	(NDQ)	HLIO	**36.93**	**4**	**3**	**3**	.80	60- 90	(60-145%)	**20.6**	**1.0**	▲1.79	.36	**60**	6/30	**.55**	.65	12/31	◆.09	.09	YES
	2419	Helix Energy Solutions		HLX	**2.52**	**–**	**5**	**–**	2.15	6- 12	(140-375%)	**63.0**	**NIL**	.04	NIL	**94**	6/30	**.04**	.11	9/30	NIL	NIL	YES
	2420	Helmerich & Payne		HP	**14.86**	**5**	**3**	**3**	1.55	30- 45	(100-205%)	**NMF**	**6.7**	d3.54	1.00	**94**	6/30	**d.34**	.40	9/30	.25	.71	YES
	2628	Henry (Jack) & Assoc.	(NDQ)	JKHY	**162.72**	**1**	**1**	**2**	.85	145- 180	(N- 10%)	**38.4**	**1.1**	4.24	1.72	**15**	6/30	**.80**	.79	9/30	.43	.40	YES
2225	**1916**	Herbalife Nutrition		HLF	**47.41**	**2**	**3**	**2**	1.00	55- 85	(15- 80%)	**18.0**	**NIL**	2.64	NIL	**18**	6/30	**.95**	.70	9/30	NIL	NIL	YES
	1917	Hershey Co.		HSY	**140.41**	**3**	**2**	**1**	.85	130- 180	(N- 30%)	**24.0**	**2.3**	5.86	3.25	**18**	6/30	**1.31**	1.31	9/30	▲.804	.773	YES
	508	Hess Corp.		HES	**41.03**	**4**	**3**	**3**	1.50	75- 115	(85-180%)	**NMF**	**2.4**	d3.05	1.00	**92**	6/30	**d1.05**	d.09	9/30	.25	.25	YES
	1401	Hewlett Packard Ent.		HPE	**9.48**	**4**	**3**	**4**	1.35	19- 30	(100-215%)	**7.3**	**5.1**	1.29	.48	**20**	7/31	**.32**	.45	12/31	.12	.113	YES
	2437	Hexcel Corp.		HXL	**34.35**	**4**	**3**	**3**	1.35	60- 90	(75-160%)	**39.9**	**NIL**	.86	NIL	**56**	6/30	**.08**	.94	9/30	NIL	.17	YES
2450	**2173**	Hibbett Sports	(NDQ)	HIBB	**38.62**	**3**	**4**	**3**	1.45	25- 35	(N- N%)	**13.8**	**NIL**	2.80	NIL	**72**	7/31	**2.95**	d.13	9/30	NIL	NIL	YES
	216	Hill-Rom Hldgs.		HRC	**82.92**	**2**	**3**	**3**	1.00	115- 175	(40-110%)	**14.4**	**1.1**	5.74	.88	**24**	6/30	**1.95**	1.23	9/30	.22	.21	YES
	1846	Hillenbrand, Inc.		HI	**28.20**	**2**	**3**	**3**	1.15	▼ 30- 45	(5- 60%)	**13.5**	**3.0**	▼2.09	.85	**–**	6/30	**.65**	.57	9/30	.213	.21	YES
	2356	Hilton Grand Vacations		HGV	**21.98**	**4**	**3**	**4**	1.50	40- 60	(80-175%)	**70.9**	**NIL**	.31	NIL	**87**	6/30	**d.56**	.43	9/30	NIL	NIL	YES
	2357	Hilton Worldwide Hldgs.		HLT	**89.06**	**3**	**3**	**4**	1.10	115- 170	(30- 90%)	**72.4**	**NIL**	1.23	NIL	**87**	6/30	**d1.55**	1.06	9/30	NIL	.15	YES
	1985	Hitachi, Ltd. ADR(g)	(PNK)	HTHIY	**69.78**	**3**	**3**	**4**	1.05	65- 100	(N- 45%)	**49.8**	**2.6**	1.40	1.79	**37**	6/30	**4.28**	2.31	9/30	NIL	NIL	
	624	Holly Energy Part.		HEP	**12.35**	**4**	**4**	**3**	.90	20- 35	(60-185%)	**8.0**	**11.3**	1.55	1.40	**93**	6/30	**.40**	.43	9/30	.35	.673	YES
	509	HollyFrontier Corp.		HFC	**20.89**	**4**	**3**	**3**	1.35	40- 60	(90-185%)	**NMF**	**6.9**	d.18	1.44	**92**	6/30	**d.25**	2.18	9/30	.35	.33	YES
	217	Hologic, Inc.	(NDQ)	HOLX	**65.77**	**3**	**3**	**2**	1.10	90- 135	(35-105%)	**21.4**	**NIL**	3.07	NIL	**24**	6/30	**.75**	.35	9/30	NIL	NIL	YES
636	**1140**	Home Depot		HD	**272.33**	**3**	**1**	**2**	1.05	255- 310	(N- 15%)	**22.9**	**2.3**	11.87	6.15	**7**	7/31	**4.02**	3.17	9/30	1.50	1.36	YES
	107	Honda Motor ADR(g)		HMC	**23.66**	**3**	**2**	**3**	1.00	35- 50	(50-110%)	**14.8**	**2.3**	1.60	.55	**45**	6/30	**d.43**	.92	9/30	.103	.263	YES
848	**1763**	Honeywell Int'l		HON	**164.64**	**3**	**1**	**4**	1.15	185- 225	(10- 35%)	**25.2**	**2.3**	6.54	3.72	**60**	6/30	**1.26**	2.10	12/31	▲.93	.90	YES
	1619	Horizon Therapeutics PLC	(NDQ)	HZNP	**79.67**	**3**	**3**	**3**	1.00	80- 120	(N- 50%)	**54.2**	**NIL**	1.47	NIL	**14**	6/30	**d.42**	d.03	9/30	NIL	NIL	YES
	1918	Hormel Foods		HRL	**48.96**	**1**	**1**	**2**	.55	50- 65	(N- 35%)	**29.0**	**2.0**	1.69	1.00	**18**	7/31	**.37**	.37	12/31	◆.233	.21	YES
	1127	Horton D.R.		DHI	**74.49**	**2**	**3**	**2**	1.20	70- 100	(N- 35%)	**12.2**	**1.0**	6.10	.72	**13**	6/30	**1.72**	1.26	9/30	.175	.15	YES
	1531	Host Hotels & Resorts		HST	**10.93**	**4**	**3**	**4**	1.10	14- 20	(30- 85%)	**NMF**	**NIL**	d1.40	NIL	**65**	6/30	**d.50**	.39	9/30	▼NIL	.20	YES
	1919	Hostess Brands	(NDQ)	TWNK	**12.53**	**2**	**3**	**3**	.75	17- 25	(35-100%)	**18.7**	**NIL**	.67	NIL	**18**	6/30	**.22**	.17	9/30	NIL	NIL	YES
	1812	Houlihan Lokey		HLI	**57.06**	**▼3**	**2**	**2**	.70	60- 85	(5- 50%)	**21.9**	**2.3**	▲2.60	1.32	**53**	6/30	**.56**	.65	9/30	▲.33	.31	YES
	389	Howard Hughes Corp.		HHC	**58.20**	**5**	**3**	**4**	1.70	110- 160	(90-175%)	**NMF**	**NIL**	d.97	NIL	**39**	6/30	**d.61**	.31	9/30	NIL	NIL	YES
	713	Howmet Aerospace		HWM	**17.19**	**–**	**3**	**–**	1.70	20- 35	(15-105%)	**30.7**	**NIL**	.56	NIL	**69**	6/30	**.12**	.58	9/30	NIL	.02	YES
	322	Hub Group	(NDQ)	HUBG	**50.55**	**3**	**3**	**2**	.80	60- 85	(20- 70%)	**19.2**	**NIL**	2.63	NIL	**29**	6/30	**.39**	.87	9/30	NIL	NIL	YES
	1311	Hubbell Inc.		HUBB	**136.96**	**3**	**2**	**1**	1.20	170- 235	(25- 70%)	**18.9**	**2.8**	7.26	3.77	**61**	6/30	**1.87**	2.31	9/30	.91	.84	YES
	1827	HubSpot, Inc.		HUBS	**301.86**	**3**	**3**	**3**	1.25	165- 245	(N- N%)	**NMF**	**NIL**	▼d1.44	NIL	**22**	6/30	**d.67**	d.41	9/30	NIL	NIL	YES
	800	Humana Inc.		HUM	**400.00**	**2**	**3**	**3**	1.20	390- 585	(N- 45%)	**21.2**	**0.7**	18.85	2.65	**33**	6/30	**12.56**	6.05	12/31	.625	.55	YES
	323	Hunt (J.B.)	(NDQ)	JBHT	**130.55**	**3**	**2**	**1**	.95	125- 170	(N- 30%)	**26.3**	**0.8**	4.97	1.09	**29**	6/30	**1.14**	1.37	9/30	.27	.26	YES
	782	Huntington Bancshs.	(NDQ)	HBAN	**9.12**	**4**	**3**	**4**	1.25	14- 20	(55-120%)	**11.5**	**6.6**	.79	.60	**84**	6/30	**.13**	.33	12/31	.15	.15	YES
	714	Huntington Ingalls		HII	**143.13**	**3**	**3**	**3**	1.10	250- 375	(75-160%)	**9.8**	**2.9**	14.57	4.12	**69**	6/30	**1.30**	3.07	9/30	1.03	.86	YES
	2438	Huntsman Corp.		HUN	**22.22**	**3**	**3**	**4**	1.30	25- 40	(15- 80%)	**NMF**	**2.9**	.19	.65	**56**	6/30	**d.28**	.48	9/30	.163	.163	YES
	390	Huron Consulting	(NDQ)	HURN	**39.76**	**4**	**3**	**3**	1.00	65- 95	(65-140%)	**24.0**	**NIL**	1.66	NIL	**39**	6/30	**.68**	.76	9/30	NIL	NIL	YES
	510	Husky Energy	(TSE)	HSE.TO	**3.19b**	**5**	**3**	**1**	1.30	6- 9	(90-180%)	**NMF**	**1.6**	d2.64	.05	**92**	6/30	**d.31(b)**	.36(b)	12/31	.013	.125(b)	YES
	2358	Hyatt Hotels		H	**54.49**	**4**	**3**	**4**	1.10	60- 95	(10- 75%)	**NMF**	**NIL**	d2.10	NIL	**87**	6/30	**d1.80**	.76	9/30	NIL	.19	YES
	161	Hyster-Yale Materials		HY	**37.63**	**4**	**3**	**3**	1.10	70- 105	(85-180%)	**47.6**	**3.4**	.79	1.27	**64**	6/30	**.21**	.98	9/30	.318	.318	YES
2028	**2651**	**IAC/InterActiveCorp**	(NDQ)	IAC	**117.93**	**–**	**3**	**–**	NMF	110- 160	(N- 35%)	**NMF**	**NIL**	.56	NIL	**23**	6/30	**d1.13**	1.19	9/30	NIL	NIL	YES
	801	ICON plc	(NDQ)	ICLR	**186.04**	**2**	**2**	**3**	.90	200- 270	(10- 45%)	**29.3**	**NIL**	6.35	NIL	**33**	6/30	**1.20**	1.69	9/30	NIL	NIL	YES
	184	ICU Medical	(NDQ)	ICUI	**185.48**	**3**	**3**	**3**	.90	185- 275	(N- 50%)	**29.5**	**NIL**	6.28	NIL	**50**	6/30	**1.65**	1.99	9/30	NIL	NIL	YES

(•) All data adjusted for announced stock split or stock dividend. See back page of Ratings & Reports.
◆ New figure this week.
(b) Canadian Dollars.
(d) Deficit.
(f) The estimate may reflect a probable increase or decrease. If a dividend boost or cut is possible but not probable, two figures are shown, the first is the more likely.
(g) Dividends subject to foreign withholding tax for U.S. residents.
(h) Est'd Earnings & Est'd Dividends after conversion to U.S. dollars at Value Line estimated translation rate.
(j) All Index data expressed in hundreds.
(p) 6 months (q) Asset Value
N=Negative figure NA=Not available NMF=No meaningful figure

PAGE NUMBERS
Bold type refers to full report.
The number on the left signifies a Supplement (if available).

Suppl.	Page	NAME OF STOCK		Ticker Symbol	Recent Price	RANKS Timeliness	Safety	Technical	Beta	3-5 year Target Price Range and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	LATEST RESULTS Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	924	IDT Corp.		IDT	6.50	–	4	–	NMF	9- 15 (40-130%)	27.1	NIL	.24	NIL	17	4/30	.02	.09	9/30	NIL	NIL	YES
	439	IHS Markit	(NDQ)	INFO	80.06	3	3	2	1.15	90- 135 (10- 70%)	28.7	0.8	2.79	.68	9	8/31	◆.77	.67	9/30	.17	NIL	YES
	121	II-VI Inc.	(NDQ)	IIVI	41.21	2	3	3	1.00	60- 90 (45-120%)	25.6	NIL	1.61	NIL	31	6/30	.53	.43	9/30	NIL	NIL	YES
	1390	IPG Photonics	(NDQ)	IPGP	167.22	3	3	3	.90	210- 315 (25- 90%)	48.9	NIL	3.42	NIL	3	6/30	.71	1.34	9/30	NIL	NIL	YES
	802	IQVIA Holdings		IQV	155.31	3	3	2	1.15	170- 255 (10- 65%)	24.1	NIL	6.45	NIL	33	6/30	1.18	1.53	9/30	NIL	NIL	YES
	1764	ITT Inc.		ITT	59.98	3	3	3	1.30	75- 110 (25- 85%)	22.1	1.1	2.72	.68	60	6/30	.53	.75	12/31	.169	.294	YES
	2218	IDACORP, Inc.		IDA	81.23	2	2	3	.80	85- 115 (5- 40%)	17.4	3.5	4.66	2.83	16	6/30	1.19	1.05	9/30	.67	.63	YES
	1716	IDEX Corp.		IEX	181.32	3	2	3	1.05	175- 240 (N- 30%)	38.0	1.1	4.77	2.00	49	6/30	1.10	1.50	12/31	◆.50	.50	YES
	218	IDEXX Labs.	(NDQ)	IDXX	386.37	1	3	3	1.00	385- 580 (N- 50%)	65.5	NIL	5.90	NIL	24	6/30	1.72	1.43	9/30	NIL	NIL	YES
	2334	iHeartMedia, Inc.	(NDQ)	IHRT	8.79	–	4	–	NMF	11- 19 (25-115%)	NMF	NIL	d1.14	NIL	57	6/30	d1.35	.27	9/30	NIL	NIL	YES
	731	Illinois Tool Works		ITW	195.68	3	1	3	1.10	225- 275 (15- 40%)	35.7	2.3	5.48	4.56	79	6/30	1.01	1.91	12/31	▲1.14	1.07	YES
450	219	Illumina Inc.	(NDQ)	ILMN	305.46	3	3	2	.85	360- 540 (20- 75%)	50.7	NIL	6.03	NIL	24	6/30	.32	1.99	9/30	NIL	NIL	YES
	2311	IMAX Corp.		IMAX	12.16	4	3	3	.80	35- 50 (190-310%)	NMF	NIL	d.42	NIL	81	6/30	d.44	.32	9/30	NIL	NIL	YES
	2013	Immersion Corp.	(NDQ)	IMMR	6.99	–	5	–	.95	9- 15 (30-115%)	NMF	NIL	d.54	NIL	4	6/30	d.03	d.27	9/30	NIL	NIL	YES
1427	834	Immunomedics, Inc.	(NDQ)	IMMU	85.52	–	4	–	1.35	35- 60 (N- N%)	NMF	NIL	d1.21	NIL	12	6/30	d.30	d.40	9/30	NIL	NIL	YES
	511	Imperial Oil Ltd.	(ASE)	IMO	12.48	4	3	3	1.45	25- 35 (100-180%)	NMF	5.1	d.56	.64	92	6/30	d.53	.54	12/31	.16	.17	YES
	835	Incyte Corp.	(NDQ)	INCY	90.36	3	3	2	.90	130- 190 (45-110%)	25.2	NIL	3.58	NIL	12	6/30	1.32	.48	9/30	NIL	NIL	YES
	421	India Fund (The)		IFN	16.34	–	3	–	.95	18- 30 (10- 85%)	NMF	0.2	NMF	.04	–	6/30	17.78(q)	23.70(q)	9/30	NIL	.017	YES
450	954	Infinera Corp.	(NDQ)	INFN	5.96	2	5	1	1.20	6- 12 (N-100%)	NMF	NIL	d1.20	NIL	32	6/30	d.33	d.64	9/30	NIL	NIL	YES
	2629	Infosys Ltd. ADR		INFY	13.63	3	1	3	.95	20- 25 (45- 85%)	22.7	1.8	.60	.25	15	6/30	.13	.13	9/30	.127	NIL	YES
	1717	Ingersoll Rand Inc.		IR	36.05	–	3	–	NMF	45- 65 (25- 80%)	27.7	NIL	1.30	NIL	49	6/30	.31	NA	9/30	NIL	NIL	YES
	574	Ingevity Corp.		NGVT	49.70	4	3	3	1.30	95- 145 (90-190%)	13.3	NIL	3.73	NIL	58	6/30	.49	1.36	9/30	NIL	NIL	YES
	1952	Ingles Markets	(NDQ)	IMKTA	37.43	2	3	1	.50	40- 60 (5- 60%)	7.6	1.8	4.91	.66	21	6/30	3.12	1.16	12/31	◆.165	.165	YES
	1920	Ingredion Inc.		INGR	76.60	3	3	4	.90	110- 160 (45-110%)	11.2	3.3	6.84	2.54	18	6/30	1.12	1.66	9/30	.63	.625	YES
	575	Innospec Inc.	(NDQ)	IOSP	63.95	3	3	3	.95	85- 130 (35-105%)	NMF	1.7	d.09	1.06	58	6/30	d1.62	.90	9/30	NIL	NIL	YES
	220	Inogen, Inc.	(NDQ)	INGN	28.41	5	3	4	.80	90- 135 (215-375%)	64.6	NIL	.44	NIL	24	6/30	.12	.45	9/30	NIL	NIL	YES
	1359	Inphi Corp.		IPHI	111.59	2	3	3	1.10	125- 190 (10- 70%)	31.6	NIL	3.53	NIL	11	6/30	.95	.35	9/30	NIL	NIL	YES
	2174	Insight Enterprises	(NDQ)	NSIT	56.44	3	3	3	1.10	75- 115 (35-105%)	13.4	NIL	4.20	NIL	72	6/30	1.32	1.38	9/30	NIL	NIL	YES
	1642	Insperity Inc.		NSP	65.97	4	4	3	1.35	75- 125 (15- 90%)	19.0	2.4	3.47	1.60	68	6/30	1.33	.69	9/30	.40	.30	YES
	743	Insteel Industries	(NDQ)	IIIN	18.68	3	3	3	1.15	40- 60 (115-220%)	21.0	0.6	.89	.12	67	6/30	.34	.11	9/30	.03	.03	YES
	185	Insulet Corp.	(NDQ)	PODD	227.38	2	3	3	.95	95- 145 (N- N%)	NMF	NIL	.41	NIL	50	6/30	.22	.02	9/30	NIL	NIL	YES
	1333	Integer Holdings		ITGR	58.80	4	3	3	1.40	90- 135 (55-130%)	23.5	NIL	2.50	NIL	59	6/30	.32	1.23	9/30	NIL	NIL	YES
	186	Integra LifeSciences	(NDQ)	IART	46.76	3	3	4	1.00	65- 95 (40-105%)	22.6	NIL	2.07	NIL	50	6/30	.33	.73	9/30	NIL	NIL	YES
2665	1360	Intel Corp.	(NDQ)	INTC	51.43	1	1	5	.85	90- 105 (75-105%)	11.3	2.6	4.55	1.32	11	6/30	1.23	1.06	12/31	.33	.315	YES
	1004	Inter Parfums	(NDQ)	IPAR	37.50	4	3	3	1.10	60- 90 (60-140%)	37.5	NIL	1.00	NIL	47	6/30	d.10	.39	9/30	▼NIL	.275	YES
	1802	Interactive Brokers	(NDQ)	IBKR	48.37	3	3	3	1.05	50- 75 (5- 55%)	24.7	0.8	▲1.96	.40	6	6/30	.57	.43	9/30	.10	.10	YES
	836	Intercept Pharmac.	(NDQ)	ICPT	40.53	3	4	3	1.45	75- 125 (85-210%)	NMF	NIL	d8.74	NIL	12	6/30	d1.92	d2.28	9/30	NIL	NIL	YES
	1803	Intercontinental Exch.		ICE	101.23	1	2	3	.90	100- 140 (N- 40%)	22.6	1.2	4.47	1.20	6	6/30	1.07	.94	9/30	.30	.275	YES
	599	InterDigital Inc.	(NDQ)	IDCC	57.12	2	3	1	1.15	90- 140 (60-145%)	35.7	2.5	1.60	1.40	36	6/30	.72	.24	12/31	.35	.35	YES
	1151	Interface Inc. 'A'	(NDQ)	TILE	6.38	3	4	3	1.50	30- 45 (370-605%)	5.6	0.6	1.13	.04	78	6/30	.27	.51	9/30	.01	.065	YES
2451	1402	Int'l Business Mach.		IBM	121.73	3	1	4	1.05	165- 200 (35- 65%)	11.0	5.4	11.06	6.52	20	6/30	2.18	3.17	9/30	1.63	1.62	YES
	576	Int'l Flavors & Frag.		IFF	121.40	–	1	–	.90	175- 215 (45- 75%)	20.6	2.6	5.88	3.12	58	6/30	1.36	1.61	12/31	▲.77	.75	YES
	2359	Int'l Game Tech. PLC		IGT	11.55	4	4	4	1.65	17- 30 (45-160%)	NMF	NIL	d.58	NIL	87	6/30	d.59	.26	9/30	NIL	.20	YES
	1163	Int'l Paper		IP	41.17	3	3	5	1.15	60- 90 (45-120%)	18.1	5.0	2.28	2.05	62	6/30	.67	.73	9/30	.513	.50	YES
	2391	Interpublic Group		IPG	17.05	3	3	4	1.20	35- 55 (105-225%)	13.4	6.0	1.27	1.02	74	6/30	d.12	.44	9/30	.255	.235	YES
	2595	Intuit Inc.	(NDQ)	INTU	325.55	▲1	2	3	1.05	325- 440 (N- 35%)	35.4	0.7	9.19	2.36	2	7/31	1.81	d.09	12/31	▲.59	.53	YES
	187	Intuitive Surgical	(NDQ)	ISRG	693.16	3	2	3	1.15	680- 920 (N- 35%)	91.4	NIL	7.58	NIL	50	6/30	.57	2.67	9/30	NIL	NIL	YES
	221	Invacare Corp.		IVC	7.45	–	5	–	1.45	9- 17 (20-130%)	NMF	NIL	d.46	NIL	24	6/30	d.21	d.31	9/30	▼NIL	.013	YES
	2561	Invesco Ltd.		IVZ	11.49	4	3	4	1.45	35- 50 (205-335%)	10.7	5.4	1.07	.62	55	6/30	.09	.09	9/30	.155	.31	YES
	1504	Investors Bancorp	(NDQ)	ISBC	7.29	4	3	4	1.05	11- 17 (50-135%)	9.5	6.6	.77	.48	63	6/30	.18	.18	9/30	.12	.11	YES
	837	Ionis Pharmac.	(NDQ)	IONS	49.03	3	4	4	1.05	65- 110 (35-125%)	NMF	NIL	d.20	NIL	12	6/30	d.23	d.01	9/30	NIL	NIL	YES
	925	Iridium Communic.	(NDQ)	IRDM	25.21	3	3	2	1.10	40- 60 (60-140%)	NMF	NIL	d.11	NIL	17	6/30	d.09	d.16	9/30	NIL	NIL	YES
	1334	iRobot Corp.	(NDQ)	IRBT	77.20	2	3	2	.85	90- 140 (15- 80%)	27.4	NIL	2.82	NIL	59	6/30	1.06	.25	9/30	NIL	NIL	YES
	391	Iron Mountain		IRM	26.60	3	3	2	.95	40- 60 (50-125%)	27.1	9.3	.98	2.48	39	6/30	.22	.23	12/31	.619	.611	YES
	1620	Ironwood Pharmac.	(NDQ)	IRWD	9.53	3	4	3	.95	19- 30 (100-215%)	16.4	NIL	.58	NIL	14	6/30	.16	.08	9/30	NIL	NIL	YES
	600	Itron Inc.	(NDQ)	ITRI	59.20	4	3	3	1.10	85- 125 (45-110%)	80.0	NIL	.74	NIL	36	6/30	d.14	.49	9/30	NIL	NIL	YES
	1921	**J&J Snack Foods**	(NDQ)	JJSF	130.38	4	1	4	.90	175- 215 (35- 65%)	NMF	1.8	1.16	2.30	18	6/30	d.67	1.63	12/31	.575	.50	YES
2225	2517	JPMorgan Chase		JPM	96.16	3	1	4	1.10	105- 125 (10- 30%)	15.5	3.7	6.22	3.60	73	6/30	1.38	2.82	12/31	.90	.90	YES
455	926	j2 Global	(NDQ)	JCOM	70.34	2	3	4	1.05	100- 150 (40-115%)	23.6	NIL	2.98	NIL	17	6/30	.80	.66	9/30	NIL	NIL	YES
	1335	Jabil Inc.		JBL	33.89	3	3	3	1.25	60- 90 (75-165%)	11.3	0.9	3.00	.32	59	8/31	◆.98	.88	9/30	.08	.08	YES
	362	Jack in the Box	(NDQ)	JACK	80.78	3	4	2	1.30	100- 170 (25-110%)	16.2	2.0	4.98	1.60	75	6/30	1.37	1.07	9/30	▲.40	.40	YES
	1231	Jacobs Engineering		J	92.47	3	3	3	1.15	130- 190 (40-105%)	16.9	0.8	5.46	.76	52	6/30	1.26	1.40	12/31	.19	.17	YES
	1113	James Hardie ADS		JHX	23.52	3	4	2	1.35	15- 25 (N- 5%)	52.3	0.4	.45	.10	38	6/30	.02	.20	9/30	NIL	.26	
	2562	Janus Henderson plc		JHG	21.43	3	3	3	1.35	35- 55 (65-155%)	10.9	6.7	1.96	1.44	55	6/30	.55	.56	9/30	.36	.36	YES
	422	Japan Smaller Cap Fd		JOF	8.80	–	3	–	.90	10- 14 (15- 60%)	NMF	0.6	NMF	.05	–	2/28	8.85(q)	10.17(q)	9/30	NIL	NIL	
	838	Jazz Pharmac. plc	(NDQ)	JAZZ	141.49	3	2	5	.95	215- 290 (50-105%)	9.1	NIL	15.55	NIL	12	6/30	3.71	4.05	9/30	NIL	NIL	YES
	1765	Jefferies Fin'l Group		JEF	18.48	▲2	3	4	1.20	35- 50 (90-170%)	10.4	3.2	▲1.78	.60	60	8/31	◆1.07	.15	12/31	◆.15	.125	YES
	1114	JELD-WEN Holding		JELD	22.30	4	3	3	1.75	25- 35 (10- 55%)	26.2	NIL	.85	NIL	38	6/30	.23	.22	9/30	NIL	NIL	YES
	310	JetBlue Airways	(NDQ)	JBLU	11.95	4	4	5	1.55	14- 25 (15-110%)	NMF	NIL	d4.53	NIL	89	6/30	d2.02	.60	9/30	NIL	NIL	YES
	1766	John Bean Tech.		JBT	95.94	4	3	3	1.20	110- 165 (15- 70%)	25.3	0.4	▲3.79	.40	60	6/30	1.09	1.42	9/30	.10	.10	YES
2451	222	Johnson & Johnson		JNJ	147.11	3	1	3	.85	190- 230 (30- 55%)	18.6	2.7	7.90	4.04	24	6/30	1.67	2.58	9/30	1.01	.95	YES
	1767	Johnson Ctrls. Int'l plc		JCI	41.44	3	3	3	1.15	45- 70 (10- 70%)	17.9	2.5	▲2.32	1.04	60	6/30	.67	.65	9/30	.26	.26	YES
	392	Jones Lang LaSalle		JLL	97.47	4	3	4	1.40	225- 335 (130-245%)	15.3	NIL	6.36	NIL	39	6/30	.71	3.08	9/30	NIL	NIL	YES
	955	Juniper Networks		JNPR	21.98	3	3	4	1.00	30- 45 (35-105%)	13.8	3.7	1.59	.82	32	6/30	.35	.40	9/30	.20	.19	YES
	2127	**KAR Auction Svcs.**		KAR	14.35	–	3	–	NMF	30- 45 (110-215%)	43.5	NIL	.33	NIL	44	6/30	d.27	.21	9/30	▼NIL	.19	YES
	1128	KB Home		KBH	38.64	3	3	2	1.75	40- 60 (5- 55%)	13.9	0.9	2.77	.36	13	8/31	.83	.73	9/30	.09	.09	YES
	1232	KBR, Inc.		KBR	22.72	4	3	3	1.45	35- 55 (55-140%)	13.5	1.8	1.68	.40	52	6/30	.39	.41	12/31	.10	.08	YES
	2449	KKR & Co.		KKR	34.95	–	3	–	1.30	40- 60 (15- 70%)	19.1	1.5	1.83	.54	–	6/30	.39	.39	9/30	.135	.125	YES
	122	KLA Corp.	(NDQ)	KLAC	193.25	1	3	3	1.10	210- 315 (10- 65%)	16.7	1.9	11.58	3.60	31	6/30	2.73	1.78	9/30	▲.90	.75	YES
	1768	Kadant Inc.		KAI	112.22	3	3	1	1.05	95- 145 (N- 30%)	24.3	0.9	4.61	.96	60	6/30	1.06	1.42	12/31	.24	.23	YES
	1588	Kaiser Aluminum	(NDQ)	KALU	53.47	4	3	3	1.20	95- 140 (80-160%)	33.6	5.0	1.59	2.68	76	6/30	.36	1.18	9/30	.67	.60	YES
	1769	Kaman Corp.		KAMN	39.91	2	3	3	1.20	50- 70 (25- 75%)	21.3	2.0	▲1.87	.80	60	6/30	.36	.16	12/31	.20	.20	YES

★★ Supplementary Report in this week's issue.
▲ Arrow indicates the direction of a change. When it appears with the Latest Dividend, the arrow signals that a change in the regular payment rate has occurred in the latest quarter. For Timeliness, 3-5 year Target Price Range, or Estimated Earnings 12 months to 3-31-21, the arrow indicates a change since the preceding week. When a diamond ◆ (indicating a new figure) appears alongside the latest quarterly earnings results, the rank change probably was primarily caused by the earnings report. In other cases, the change is due to the dynamics of the ranking system and could simply be the result of the improvement or weakening of other stocks.

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PAGE NUMBERS
Bold type refers to full report.
The number on the left signifies a Supplement (if available).

Suppl.	Page	NAME OF STOCK		Ticker Symbol	Recent Price	Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
1240	343	Kansas City South'n		KSU	184.88	–	3	–	1.10	190- 280	(5- 50%)	28.7	0.9	6.44	1.60	28	6/30	1.15	1.64	12/31	.40	.36	YES
	1922	Kellogg		K	63.38	3	1	2	.65	70- 90	(10- 40%)	16.4	3.6	3.86	2.30	18	6/30	1.24	.99	9/30	.57	.57	YES
	1643	Kelly Services 'A'	(NDQ)	KELYA	16.89	4	3	3	1.15	30- 40	(80-135%)	11.6	NIL	1.45	NIL	68	6/30	.51	.72	9/30	NIL	.075	YES
	2563	Kemper Corp.		KMPR	68.14	3	3	1	1.10	80- 115	(15- 70%)	10.6	1.8	6.42	1.20	55	6/30	1.20	1.38	9/30	.30	.25	YES
	732	Kennametal Inc.		KMT	29.57	4	3	4	1.40	40- 60	(35-105%)	37.0	2.7	.80	.80	79	6/30	.15	.84	9/30	.20	.20	YES
	1975	Keurig Dr Pepper		KDP	27.84	–	3	–	NMF	40- 60	(45-115%)	34.8	2.2	.80	.62	26	6/30	.21	.22	12/31	.15	.15	YES
	2518	KeyCorp		KEY	12.13	4	3	4	1.40	20- 30	(65-145%)	13.8	6.1	.88	.74	73	6/30	.16	.40	9/30	.185	.185	YES
	123	Keysight Technologies		KEYS	100.25	3	2	3	.85	115- 160	(15- 60%)	22.7	NIL	4.41	NIL	31	7/31	1.19	1.25	9/30	NIL	NIL	YES
451	1644	Kforce Inc.	(NDQ)	KFRC	32.78	3	3	3	.95	40- 60	(20- 85%)	14.4	2.4	2.28	.80	68	6/30	.47	.66	9/30	.20	.18	YES
	1152	Kimball Int'l	(NDQ)	KBAL	10.47	4	3	3	1.15	25- 35	(140-235%)	9.5	3.4	1.10	.36	78	6/30	.25	.30	12/31	.09	.09	YES
	1193	Kimberly-Clark		KMB	147.56	1	1	2	.75	175- 215	(20- 45%)	18.0	2.9	8.22	4.28	1	6/30	2.20	1.67	12/31	1.07	1.03	YES
	1532	Kimco Realty		KIM	11.56	4	3	5	1.10	25- 40	(115-245%)	5.1	3.5	2.27	.40	65	6/30	1.71	.20	9/30	▼.10	.28	YES
	612	Kinder Morgan Inc.		KMI	12.61	4	3	3	1.30	35- 50	(180-295%)	26.8	8.3	.47	1.05	83	6/30	d.28	.23	9/30	.263	.25	YES
	1573	Kinross Gold		KGC	8.87	2	4	3	.65	13- 20	(45-125%)	12.7	1.4	.70	.12	5	6/30	.15	.06	12/31	▲.03	NIL	YES
	334	Kirby Corp.		KEX	37.08	4	3	3	1.15	60- 90	(60-145%)	20.2	NIL	1.84	NIL	71	6/30	.42	.79	9/30	NIL	NIL	YES
	324	Knight-Swift Trans.		KNX	42.30	2	3	1	.85	45- 70	(5- 65%)	19.1	0.8	2.21	.32	29	6/30	.57	.58	9/30	.08	.06	YES
	1415	Knoll Inc.		KNL	12.25	4	3	4	1.35	25- 40	(105-225%)	30.6	2.0	.40	.24	85	6/30	d.20	.44	9/30	▲.06	.17	YES
	956	Knowles Corp.		KN	15.04	3	3	5	1.15	20- 30	(35-100%)	26.4	NIL	.57	NIL	32	6/30	d.01	.22	9/30	NIL	NIL	YES
637	2145	Kohl's Corp.		KSS	19.48	5	4	5	1.65	40- 65	(105-235%)	NMF	NIL	d1.25	NIL	19	7/31	d.25	1.55	9/30	▼NIL	.67	YES
	423	Korea Fund		KF	29.49	–	3	–	1.10	45- 65	(55-120%)	NMF	0.2	NMF	.07	–	6/30	31.09(q)	32.78(q)	9/30	NIL	NIL	
	1645	Korn Ferry		KFY	29.27	4	3	3	1.15	40- 65	(35-120%)	58.5	1.4	.50	.40	68	7/31	d.19	.76	12/31	.10	.10	YES
	1718	Kornit Digital Ltd.	(NDQ)	KRNT	62.67	3	3	4	.95	60- 90	(N- 45%)	NMF	NIL	.20	NIL	49	6/30	d.11	.01	9/30	NIL	NIL	YES
	1923	Kraft Heinz Co.	(NDQ)	KHC	29.83	3	3	1	.90	40- 60	(35-100%)	12.6	5.4	2.36	1.60	18	6/30	.80	.78	9/30	.40	.40	YES
	577	Kraton Corp.		KRA	17.10	4	4	5	1.80	20- 35	(15-105%)	NMF	NIL	d.17	NIL	58	6/30	d.25	1.28	9/30	NIL	NIL	YES
	715	Kratos Defense & Sec.	(NDQ)	KTOS	19.35	3	4	3	1.40	25- 40	(30-105%)	45.0	NIL	.43	NIL	69	6/30	.08	.01	9/30	NIL	NIL	YES
	1953	Kroger Co.		KR	33.70	1	3	2	.55	35- 55	(5- 65%)	13.6	2.1	2.48	.72	21	7/31	.73	.44	12/31	.18	.16	YES
	578	Kronos Worldwide		KRO	12.70	3	4	4	1.20	15- 25	(20- 95%)	34.3	5.7	.37	.72	58	6/30	.16	.25	9/30	.18	.18	YES
	1391	Kulicke & Soffa	(NDQ)	KLIC	22.54	2	3	2	1.00	35- 55	(55-145%)	24.0	2.4	.94	.54	3	6/30	.21	.06	12/31	.12	.12	YES
	2202	**L Brands**		LB	31.53	3	4	3	1.50	25- 40	(N- 25%)	55.3	NIL	.57	NIL	54	7/31	d.18	.14	9/30	NIL	.30	YES
	716	L3Harris Technologies		LHX	178.63	–	2	–	NMF	265- 360	(50-100%)	23.0	1.9	7.76	3.40	69	6/30	1.30	NA	9/30	.85	.75	YES
	987	LCI Industries		LCII	105.32	3	3	1	1.20	145- 215	(40-105%)	17.8	2.8	5.93	3.00	70	6/30	.52	1.89	9/30	▲.75	.65	YES
	803	LHC Group	(NDQ)	LHCG	207.45	3	3	3	.80	245- 370	(20- 80%)	38.1	NIL	5.45	NIL	33	6/30	1.43	.82	9/30	NIL	NIL	YES
	988	LKQ Corp.	(NDQ)	LKQ	28.26	3	3	3	1.45	50- 75	(75-165%)	13.9	NIL	2.03	NIL	70	6/30	.53	.66	9/30	NIL	NIL	YES
	1804	LPL Financial Hldgs.	(NDQ)	LPLA	77.15	3	3	2	1.30	145- 215	(90-180%)	14.1	1.3	5.48	1.00	6	6/30	1.27	1.72	9/30	.25	.25	YES
	1153	La-Z-Boy Inc.		LZB	30.94	3	3	2	1.10	50- 75	(60-140%)	15.1	0.9	2.05	.28	78	7/31	.18	.42	9/30	▲.07	.13	YES
	804	Laboratory Corp.		LH	184.07	3	2	3	1.20	215- 295	(15- 60%)	14.9	NIL	12.38	NIL	33	6/30	2.57	2.93	9/30	NIL	NIL	YES
	1392	Lam Research	(NDQ)	LRCX	336.61	▼2	3	3	1.30	330- 495	(N- 45%)	16.6	1.5	20.23	5.20	3	6/30	4.78	3.62	12/31	▲1.30	1.15	YES
	2392	Lamar Advertising	(NDQ)	LAMR	67.46	4	3	4	1.50	95- 145	(40-115%)	31.4	3.0	2.15	2.00-1.00	74	6/30	.31	1.19	9/30	.50	.96	YES
	1924	Lamb Weston Holdings		LW	66.77	4	3	5	1.15	70- 105	(5- 55%)	35.9	1.4	1.86	.92	18	5/31	d.01	.75	12/31	.23	.20	YES
	1925	Lancaster Colony	(NDQ)	LANC	183.02	3	2	3	.70	135- 180	(N- N%)	35.9	1.5	5.10	2.80	18	6/30	1.10	1.20	9/30	.70	.65	YES
	2360	Las Vegas Sands		LVS	47.62	4	4	4	1.10	70- 120	(45-150%)	NMF	NIL	.03	NIL	87	6/30	d1.05	.72	9/30	NIL	.77	YES
	1361	Lattice Semiconductor	(NDQ)	LSCC	28.75	3	3	3	1.10	30- 50	(5- 75%)	44.2	NIL	.65	NIL	11	6/30	.17	.15	9/30	NIL	NIL	YES
849	1005	Lauder (Estee)		EL	215.75	3	2	3	.90	180- 245	(N- 15%)	60.8	1.0	3.55	2.12	47	6/30	d.50	.64	9/30	▲.48	.43	YES
1427	2002	Laureate Education	(NDQ)	LAUR	12.99	–	3	–	1.35	20- 30	(55-130%)	56.5	NIL	.23	NIL	48	6/30	1.47	.46	9/30	NIL	NIL	YES
	2564	Lazard Ltd.		LAZ	32.01	3	3	5	1.30	50- 75	(55-135%)	19.2	5.9	1.67	1.88	55	6/30	.67	.73	9/30	.47	.47	YES
	989	Lear Corp.		LEA	107.35	3	3	3	1.15	145- 215	(35-100%)	26.5	NIL	4.05	NIL	70	6/30	d4.14	3.78	9/30	NIL	.75	YES
	1154	Leggett & Platt		LEG	42.15	4	3	4	1.25	60- 85	(40-100%)	22.3	3.8	1.89	1.60	78	6/30	.16	.64	12/31	.40	.40	YES
	2565	Legg Mason		LM					SEE FINAL REPORT														
	393	Leidos Hldgs.		LDOS	91.57	1	3	3	1.15	100- 155	(10- 70%)	16.2	1.5	5.66	1.36	39	6/30	1.55	1.16	9/30	.34	.34	YES
	1129	Lennar Corp.		LEN	79.64	2	3	2	1.35	75- 110	(N- 40%)	13.1	0.6	6.08	.50	13	8/31	2.12	1.59	9/30	.125	.04	YES
	1719	Lennox Int'l		LII	271.80	3	3	2	1.00	235- 355	(N- 30%)	30.2	1.1	8.99	3.08	49	6/30	2.97	3.74	12/31	.77	.77	YES
	2110	Levi Strauss & Co.		LEVI	13.59	–	3	–	NMF	18- 25	(30- 85%)	NMF	NIL	d.67	NIL	90	5/31	d.91	.07	9/30	▼NIL	NIL	YES
	1204	Liberty All-Star		USA	5.97	–	3	–	1.20	6- 8	(N- 35%)	NMF	10.7	NMF	.64	–	6/30	6.18(q)	6.66(q)	9/30	.16	.17	
	1018	Liberty Global plc	(NDQ)	LBTYA	21.33	3	3	3	.90	25- 35	(15- 65%)	NMF	NIL	d1.60	NIL	8	6/30	d.86	d.50	9/30	NIL	NIL	YES
	927	Liberty Latin Amer.	(NDQ)	LILA	8.33	4	3	3	1.05	18- 25	(115-200%)	NMF	NIL	d2.04	NIL	17	6/30	d2.15	d.64	9/30	NIL	NIL	YES
	1621	Lilly (Eli)		LLY	148.10	2	1	3	.75	160- 200	(10- 35%)	19.9	2.0	7.44	2.96	14	6/30	1.89	1.50	9/30	.74	.645	YES
	990	Linamar Corp.	(TSE)	LNR.TO	39.31b	3	3	3	1.05	75- 115	(90-195%)	13.1	0.6	3.00	.24	70	6/30	d.58(b)	2.28(b)	9/30	.06	.12	
	1720	Lincoln Elec Hldgs.	(NDQ)	LECO	91.42	3	2	2	1.10	90- 125	(N- 35%)	26.5	2.1	▲3.45	1.96	49	6/30	.80	1.28	12/31	.49	.47	YES
	1559	Lincoln Nat'l Corp.		LNC	32.05	3	3	3	1.90	50- 80	(55-150%)	6.3	5.3	5.06	1.69	51	6/30	.97	2.36	12/31	.40	.37	YES
	579	Linde plc		LIN	237.05	–	3	–	.95	250- 375	(5- 60%)	29.8	1.8	7.96	4.17	58	6/30	1.90	1.83	9/30	.963	.875	YES
	1721	Lindsay Corp.		LNN	96.71	2	3	1	.85	80- 120	(N- 25%)	30.5	1.3	▲3.17	1.28	49	5/31	.93	.50	9/30	.32	.31	YES
	2335	Lions Gate 'A'		LGFA	9.31	3	3	5	.85	15- 25	(60-170%)	NMF	NIL	d.25	NIL	57	6/30	.23	d.25	9/30	NIL	NIL	YES
	2128	Lithia Motors		LAD	228.32	3	3	1	1.15	130- 195	(N- N%)	19.8	0.5	11.56	1.24	44	6/30	3.38	2.63	9/30	▲.31	.30	YES
	1312	Littelfuse Inc.	(NDQ)	LFUS	176.81	3	3	2	1.10	185- 275	(5- 55%)	43.0	1.1	4.11	1.92	61	6/30	.71	1.91	9/30	.48	.48	YES
	188	LivaNova PLC	(NDQ)	LIVN	43.82	4	3	4	1.35	60- 95	(35-115%)	NMF	NIL	d.39	NIL	50	6/30	d1.81	.07	9/30	NIL	NIL	YES
	2336	Live Nation Entertain.		LYV	54.41	4	3	4	1.20	55- 95	(N- 75%)	NMF	NIL	d7.06	NIL	57	6/30	d.94	.41	9/30	NIL	NIL	YES
	1954	Loblaw Cos. Ltd.	(TSE)	L.TO	70.72b	3	2	3	.60	75- 100	(5- 40%)	26.6	1.8	2.66	1.26	21	6/30	.47(b)	.77(b)	12/31	.315(b)	.315(b)	YES
	717	Lockheed Martin		LMT	390.51	1	1	3	.95	420- 510	(10- 30%)	16.5	2.7	23.67	10.40	69	6/30	5.79	5.00	12/31	▲2.60	2.40	YES
	2566	Loews Corp.		L	34.73	4	2	4	1.10	75- 100	(115-190%)	11.1	0.7	3.12	.25	55	6/30	d2.96	.82	9/30	.063	.063	YES
	1403	Logitech Int'l	(NDQ)	LOGI	74.98	2	2	3	.70	85- 115	(15- 55%)	29.4	1.2	2.55	.88	20	6/30	.42	.27	9/30	.876	.736	YES
	1028	LogMeIn Inc.		LOGM					SEE FINAL SUPPLEMENT														
	1164	Louisiana-Pacific		LPX	31.27	3	3	2	1.40	40- 60	(30- 90%)	13.5	1.9	2.31	.58	62	6/30	.29	.14	9/30	.145	.135	YES
	1141	Lowe's Cos.		LOW	162.59	1	2	2	1.15	155- 205	(N- 25%)	19.2	1.5	8.48	2.40	7	7/31	3.75	2.15	12/31	▲.60	.55	YES
	2203	lululemon athletica	(NDQ)	LULU	318.73	3	3	2	1.00	240- 360	(N- 15%)	66.0	NIL	4.83	NIL	54	7/31	.66	.96	9/30	NIL	NIL	YES
	1142	Lumber Liquidators		LL	21.76	3	5	2	1.40	20- 40	(N- 85%)	24.7	NIL	.88	NIL	7	6/30	.09	d.10	9/30	NIL	NIL	YES
	124	Lumentum Holdings	(NDQ)	LITE	75.14	3	3	3	.85	75- 115	(N- 55%)	35.8	NIL	2.10	NIL	31	6/30	d.06	d.34	9/30	NIL	NIL	YES
	1589	Lundin Mining	(TSE)	LUN.TO	7.22	2	3	2	1.25	14- 20	(95-175%)	32.8	2.2	.22	.16	76	6/30	.07	d.01	9/30	.04	.03	YES
	2596	Lyft, Inc.	(NDQ)	LYFT	28.05	–	4	–	NMF	60- 95	(115-240%)	NMF	NIL	d3.75	NIL	2	6/30	d1.41	d2.13	9/30	NIL	NIL	YES
	580	LyondellBasell Inds.		LYB	71.21	4	3	4	1.35	80- 120	(10- 70%)	15.2	5.9	4.69	4.20	58	6/30	.94	2.71	9/30	1.05	1.05	YES
	2519	**M&T Bank Corp.**		MTB	94.22	4	2	4	1.10	190- 260	(100-175%)	10.3	4.7	9.12	4.40	73	6/30	1.74	3.34	9/30	1.10	1.00	YES
	1130	M.D.C. Holdings		MDC	47.04	2	3	2	1.30	55- 85	(15- 80%)	9.3	2.8	5.04	1.32	13	6/30	1.31	.86	9/30	.33	.30	YES
	536	MDU Resources		MDU	22.45	2	2	4	1.10	40- 55	(80-145%)	12.3	3.7	1.82	.83	86	6/30	.50	.31	12/31	.208	.203	YES

(•) All data adjusted for announced stock split or stock dividend. See back page of Ratings & Reports.
◆ New figure this week.
(b) Canadian Dollars.
(d) Deficit.
(f) The estimate may reflect a probable increase or decrease. If a dividend boost or cut is possible but not probable, two figures are shown, the first is the more likely.
(g) Dividends subject to foreign withholding tax for U.S. residents.
(h) Est'd Earnings & Est'd Dividends after conversion to U.S. dollars at Value Line estimated translation rate.
(j) All Index data expressed in hundreds.
(p) 6 months (q) Asset Value
N=Negative figure NA=Not available NMF=No meaningful figure

PAGE NUMBERS
Bold type refers to full report. The number on the left signifies a Supplement (if available).

Supplement	Page	NAME OF STOCK	Ticker Symbol	Recent Price	Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	1205	MFS Multimarket	MMT	5.74	–	4	–	.80	5- 9	(N- 55%)	NMF	8.4	NMF	.48	–	4/30	5.78(q)	6.26(q)	9/30	.124	.127	
	912	MGE Energy (NDQ)	MGEE	63.15	3	1	4	.70	65- 80	(5- 25%)	23.6	2.4	2.68	1.50	43	6/30	.53	.45	9/30	▲.37	.352	YES
	2567	MGIC Investment	MTG	9.04	4	3	5	1.50	20- 30	(120-230%)	4.5	2.7	2.03	.24	55	6/30	.04	.46	9/30	.06	.06	YES
	1533	MGM Growth Properties	MGP	28.74	4	3	3	1.20	40- 60	(40-110%)	23.0	6.8	1.25	1.95	65	6/30	.30	.24	12/31	.488	.47	YES
451	2361	MGM Resorts Int'l	MGM	22.63	▲4	3	4	1.75	40- 65	(75-185%)	NMF	NIL	d1.60	.01	87	6/30	d1.52	.08	9/30	.003	.13	YES
	1976	MGP Ingredients (NDQ)	MGPI	38.18	2	3	4	.80	55- 85	(45-125%)	17.0	1.3	2.24	.48	26	6/30	.54	.46	9/30	.12	.10	YES
	1393	MKS Instruments (NDQ)	MKSI	110.49	2	3	5	1.15	120- 180	(10- 65%)	16.6	0.7	6.66	.80	3	6/30	1.62	1.09	9/30	.20	.20	YES
	625	MPLX LP	MPLX	16.65	4	3	4	1.15	35- 50	(110-200%)	6.9	16.5	2.43	2.75-1.75	93	6/30	.58	.55	9/30	.688	.668	YES
	2421	MRC Global	MRC	4.67	–	5	–	1.35	15- 25	(220-435%)	NMF	NIL	d.84	NIL	94	6/30	d.10	.21	9/30	NIL	NIL	YES
	1722	MSA Safety	MSA	134.51	3	3	3	1.00	110- 165	(N- 25%)	29.4	1.3	4.57	1.74	49	6/30	1.11	1.22	9/30	.43	.42	YES
	1723	MSC Industrial Direct	MSM	63.02	3	2	3	.95	120- 165	(90-160%)	13.9	4.8	4.54	3.00	49	5/31	1.40	1.45	9/30	.75	.63	YES
	440	MSCI Inc.	MSCI	354.47	1	3	3	.95	260- 390	(N- 10%)	47.9	0.9	7.40	3.12	9	6/30	1.77	1.54	9/30	▲.78	.68	YES
	2337	MSG Networks	MSGN	9.93	4	3	4	.80	25- 40	(150-305%)	4.4	NIL	2.25	NIL	57	6/30	.97	.54	9/30	NIL	NIL	YES
	125	MTS Systems (NDQ)	MTSC	19.88	5	4	3	1.65	55- 85	(175-330%)	12.0	NIL	1.66	NIL	31	6/30	.44	.70	9/30	NIL	.30	YES
	1534	Macerich Comp. (The)	MAC	7.09	5	4	3	1.45	20- 35	(180-395%)	39.4	8.5	.18	.60	65	6/30	d.18	.11	9/30	▼.15	.75	YES
	1535	Mack-Cali R'lty	CLI	13.02	–	3	–	.95	20- 30	(55-130%)	NMF	6.1	d.92	.80	65	6/30	d.41	d.45	9/30	.20	.20	YES
	1362	MACOM Tech. Solutions (NDQ)	MTSI	33.09	2	3	3	1.25	45- 65	(35- 95%)	24.2	NIL	1.37	NIL	11	6/30	.33	d.42	9/30	NIL	NIL	YES
	394	Macquarie Infra.	MIC	25.99	4	3	4	1.50	40- 60	(55-130%)	76.4	NIL	.34	NIL	39	6/30	d.09	.07	9/30	NIL	1.00	YES
	2146	Macy's Inc.	M	5.96	5	4	4	1.55	20- 35	(235-485%)	NMF	NIL	d3.32	NIL	19	7/31	d.81	.28	9/30	▼NIL	.378	YES
	2159	Madden (Steven) Ltd. (NDQ)	SHOO	19.61	4	3	4	1.10	35- 55	(80-180%)	27.2	NIL	.72	NIL	82	6/30	d.21	.44	9/30	NIL	.14	YES
	2338	Madison Sq. Garden Sport	MSGS	152.89	–	3	–	NMF	190- 290	(25- 90%)	NMF	NIL	.29	NIL	57	6/30	d3.27	d3.08	9/30	NIL	NIL	YES
	626	Magellan Midstream	MMP	35.01	4	4	3	1.20	65- 110	(85-215%)	10.7	11.9	3.27	4.18-3.00	93	6/30	.59	1.11	9/30	1.028	1.013	YES
	991	Magna Int'l 'A'	MGA	45.97	3	3	3	1.40	80- 120	(75-160%)	17.1	3.5	2.69	1.60(h)	70	6/30	d1.71	1.59	9/30	.40	.365	YES
	2407	Magnolia Oil & Gas	MGY	5.60	–	5	–	NMF	12- 18	(115-220%)	NMF	NIL	d1.01	NIL	91	6/30	d.11	.12	9/30	NIL	NIL	YES
	2630	Manhattan Assoc. (NDQ)	MANH	95.37	3	3	2	1.25	85- 125	(N- 30%)	79.5	NIL	1.20	NIL	15	6/30	.30	.32	9/30	NIL	NIL	YES
	162	Manitowoc Co.	MTW	8.40	4	4	3	1.15	14- 25	(65-200%)	NMF	NIL	d.52	NIL	64	6/30	d.47	.94	9/30	NIL	NIL	YES
	1646	ManpowerGroup Inc.	MAN	72.63	3	3	4	1.15	95- 145	(30-100%)	71.2	3.1	1.02	2.23	68	6/30	d1.11	2.11	9/30	NIL	NIL	YES
	2631	ManTech Int'l 'A' (NDQ)	MANT	70.54	2	3	2	.85	85- 125	(20- 75%)	26.2	1.8	2.69	1.28	15	6/30	.74	.60	9/30	.32	.27	YES
	1560	Manulife Fin'l	MFC	14.16	2	3	3	1.40	25- 35	(75-145%)	6.6	5.9	2.14	.84	51	6/30	.57	.55	9/30	.21	.192	YES
	1926	Maple Leaf Foods (TSE)	MFI.TO	27.99	2	3	1	.60	40- 55	(45- 95%)	27.2	2.3	1.03	.64	18	6/30	.21	d.05	9/30	.16	.145	YES
	2408	Marathon Oil Corp.	MRO	4.29	5	3	2	1.65	12- 18	(180-320%)	NMF	NIL	d1.54	NIL	91	6/30	d.60	.23	9/30	NIL	.05	YES
237	512	Marathon Petroleum	MPC	29.95	–	3	–	1.75	60- 90	(100-200%)	NMF	7.7	.25	2.32	92	6/30	.01	1.73	9/30	.58	.53	YES
1650	2362	Marcus Corp.	MCS	8.19	5	4	3	1.35	25- 45	(205-450%)	NMF	NIL	d1.16	NIL	87	6/30	d1.37	.58	9/30	NIL	.16	YES
	2175	MarineMax	HZO	26.40	2	4	1	1.40	30- 50	(15- 90%)	11.6	NIL	2.28	NIL	72	6/30	1.58	.84	9/30	NIL	NIL	YES
	765	Markel Corp.	MKL	978.37	2	2	3	1.10	1380-1870	(40- 90%)	9.9	NIL	99.25	NIL	34	6/30	65.75	36.07	9/30	NIL	NIL	YES
	1805	MarketAxess Holdings (NDQ)	MKTX	476.05	1	3	2	.80	370- 555	(N- 15%)	62.3	0.5	7.64	2.40	6	6/30	2.20	1.27	9/30	.60	.51	YES
	2363	Marriott Int'l (NDQ)	MAR	96.00	4	3	4	1.25	120- 180	(25- 90%)	48.0	NIL	2.00	NIL	87	6/30	d.64	.69	9/30	NIL	.48	YES
	2364	Marriott Vacations	VAC	94.19	4	3	4	1.65	145- 220	(55-135%)	60.8	NIL	1.55	NIL	87	6/30	d1.76	1.99	9/30	NIL	NIL	YES
	2568	Marsh & McLennan	MMC	114.54	2	1	3	.95	110- 135	(N- 20%)	25.3	1.6	4.52	1.86	55	6/30	1.12	.65	12/31	◆.465	.455	YES
	1115	Martin Marietta	MLM	231.88	3	3	4	1.15	240- 365	(5- 55%)	23.8	1.0	9.74	2.30	38	6/30	3.49	3.01	9/30	▲.57	.55	YES
	957	Marvell Technology (NDQ)	MRVL	39.89	2	3	3	1.05	35- 55	(N- 40%)	39.1	0.6	1.02	.24	32	7/31	.20	.16	12/31	◆.06	.06	YES
	1116	Masco Corp.	MAS	56.72	2	3	3	1.20	50- 75	(N- 30%)	20.7	1.0	2.74	.57	38	6/30	.84	.74	12/31	▲.14	.135	YES
	223	Masimo Corp. (NDQ)	MASI	230.76	2	3	3	.85	105- 155	(N- N%)	66.5	NIL	3.47	NIL	24	6/30	.96	.79	9/30	NIL	NIL	YES
	1155	Masonite Int'l	DOOR	96.07	3	3	2	1.15	100- 150	(5- 55%)	29.9	NIL	3.21	NIL	78	6/30	1.38	.96	9/30	NIL	NIL	YES
	1233	MasTec	MTZ	43.13	4	3	3	1.40	80- 125	(85-190%)	8.6	NIL	5.00	NIL	52	6/30	.95	1.58	9/30	NIL	NIL	YES
	2569	MasterCard Inc.	MA	338.39	3	1	3	1.05	270- 335	(N- N%)	40.2	0.5	8.42	1.60	55	6/30	1.36	1.89	12/31	◆.40	.33	YES
2028	2652	Match Group (NDQ)	MTCH	108.59	3	4	2	1.05	55- 95	(N- N%)	51.5	NIL	2.11	NIL	23	6/30	.51	.43	9/30	NIL	NIL	YES
	1590	Materion Corp.	MTRN	53.91	3	3	2	1.15	65- 100	(20- 85%)	26.0	0.9	2.07	.46	76	6/30	.49	.88	9/30	.115	.11	YES
2226	335	Matson, Inc.	MATX	39.59	3	3	2	.90	40- 60	(N- 50%)	17.1	2.3	2.31	.92	71	6/30	.76	.43	9/30	▲.23	.22	YES
	2312	Mattel, Inc. (NDQ)	MAT	11.40	3	4	3	1.20	14- 25	(25-120%)	NMF	NIL	.05	NIL	81	6/30	d.26	d.31	9/30	NIL	NIL	YES
	1847	Matthews Int'l	MATW					SEE FINAL REPORT														
451	718	Maxar Technologies	MAXR	25.41	3	5	2	1.30	14- 25	(N- N%)	NMF	0.2	d.32	.04	69	6/30	NIL	2.32	9/30	.01	.01	YES
2227	1363	Maxim Integrated (NDQ)	MXIM	68.02	–	3	–	.95	55- 85	(N- 25%)	28.6	2.8	2.38	1.92	11	6/30	.58	.57	9/30	.48	.46	YES
	395	MAXIMUS Inc.	MMS	68.75	2	2	1	.80	100- 140	(45-105%)	19.3	1.7	3.56	1.16	39	6/30	1.04	.97	9/30	.28	.25	YES
2028	1364	MaxLinear, Inc.	MXL	22.79	3	3	2	1.20	30- 45	(30- 95%)	29.6	NIL	.77	NIL	11	6/30	.09	.22	9/30	NIL	NIL	YES
	1927	McCormick & Co.	MKC	195.18	1	1	3	.85	165- 200	(N- N%)	34.6	1.3	5.64	2.50	18	8/31	◆1.53	1.46	12/31	◆.62	.57	YES
2665	363	McDonald's Corp.	MCD	220.26	3	1	3	.95	225- 275	(N- 25%)	36.2	2.3	6.08	5.00	75	6/30	.66	2.05	9/30	1.25	1.16	YES
	224	McKesson Corp.	MCK	150.09	3	2	2	1.00	315- 430	(110-185%)	10.1	1.1	14.80	1.68	24	6/30	2.77	3.43	12/31	▲.42	.41	YES
	1828	Medallia Inc	MDLA	27.73	–	4	–	NMF	25- 40	(N- 45%)	NMF	NIL	▼d.71	NIL	22	7/31	d.25	d.87	9/30	NIL	NIL	YES
	1928	Medifast, Inc.	MED	165.51	2	3	1	1.05	145- 215	(N- 30%)	22.5	2.7	7.34	4.52	18	6/30	1.96	1.75	12/31	1.13	1.13	YES
1427	805	MEDNAX, Inc.	MD	16.19	4	3	3	1.35	50- 75	(210-365%)	9.1	NIL	1.78	NIL	33	6/30	.32	.89	9/30	NIL	NIL	YES
2671	806	Medpace Holdings (NDQ)	MEDP	109.91	3	3	2	1.15	100- 150	(N- 35%)	28.3	NIL	3.89	NIL	33	6/30	.64	.73	9/30	NIL	NIL	YES
	189	Medtronic plc	MDT	103.63	3	1	3	.95	115- 140	(10- 35%)	21.6	2.2	4.80	2.32	50	7/31	.62	1.28	12/31	.58	.54	YES
	2365	Melco Resorts & Entert. (NDQ)	MLCO	16.59	3	4	3	1.10	25- 35	(50-110%)	NMF	NIL	d.59	NIL	87	6/30	d.77	.22	9/30	NIL	.165	YES
	1829	Mercadolibre Inc. (NDQ)	MELI	1093.43	2	3	2	1.00	▲1070-1600	(N- 45%)	NMF	NIL	▲1.69	NIL	22	6/30	1.11	.31	9/30	NIL	NIL	YES
238	1622	Merck & Co.	MRK	82.76	3	1	2	.90	100- 125	(20- 50%)	14.5	2.9	5.70	2.44	14	6/30	1.37	1.30	12/31	.61	.55	YES
	766	Mercury General	MCY	41.89	3	3	3	.90	65- 100	(55-140%)	9.6	6.0	4.38	2.52	34	6/30	1.86	.74	9/30	.63	.628	YES
	1404	Mercury Systems (NDQ)	MRCY	78.61	2	3	3	1.00	85- 130	(10- 65%)	34.0	NIL	2.31	NIL	20	6/30	.72	.47	9/30	NIL	NIL	YES
637	2377	Meredith Corp.	MDP	12.74	5	4	4	1.25	45- 80	(255-530%)	5.0	NIL	2.54	NIL	88	6/30	d.14	.85	9/30	NIL	.575	YES
	225	Meridian Bioscience (NDQ)	VIVO	16.61	3	3	3	.75	25- 35	(50-110%)	20.3	NIL	.82	NIL	24	6/30	.55	.16	9/30	NIL	NIL	YES
	992	Meritor, Inc.	MTOR	21.32	3	4	1	1.35	25- 40	(15- 90%)	96.9	NIL	.22	NIL	70	6/30	d.47	1.20	9/30	NIL	NIL	YES
	1131	Meritage Homes	MTH	107.97	2	3	3	1.40	105- 155	(N- 45%)	11.8	NIL	9.17	NIL	13	6/30	2.38	1.31	9/30	NIL	NIL	YES
	581	Methanex Corp. (NDQ)	MEOH	23.77	4	4	5	1.85	25- 45	(5- 90%)	NMF	0.6	d2.75	.15	58	6/30	d.84	.34	9/30	.038	.36	YES
★★	1336	Methode Electronics	MEI	28.28	3	3	3	1.15	50- 70	(75-150%)	11.5	1.6	2.45	.44	59	7/31	.54	.75	9/30	.11	.11	YES
	1561	MetLife Inc.	MET	37.25	3	3	4	1.40	55- 85	(50-130%)	7.0	4.9	5.32	1.84	51	6/30	.83	1.38	9/30	.46	.44	YES
	1955	Metro Inc. (TSE)	MRU.TO	64.26b	2	2	3	.50	55- 75	(N- 15%)	18.6	1.4	3.46	.92	21	6/30	1.08(b)	.90(b)	12/31	◆.225(b)	.20(b)	YES
	126	Mettler-Toledo Int'l	MTD	968.47	3	2	3	.95	655- 890	(N- N%)	42.8	NIL	22.62	NIL	31	6/30	5.22	5.06	9/30	NIL	NIL	YES
	424	Mexico Fund	MXF	10.05	–	4	–	1.10	13- 20	(30-100%)	NMF	1.5	NMF	.15	–	7/31	11.83(q)	14.62(q)	9/30	NIL	.047	
1242	2176	Michaels Cos. (The) (NDQ)	MIK	9.58	3	5	3	1.75	18- 35	(90-265%)	6.8	NIL	1.40	NIL	72	7/31	.30	.19	9/30	NIL	NIL	YES
	1365	Microchip Technology (NDQ)	MCHP	103.07	3	3	2	1.10	125- 190	(20- 85%)	17.3	1.4	5.95	1.48	11	6/30	1.56	1.41	9/30	.368	.366	YES
	1366	Micron Technology (NDQ)	MU	49.72	▲2	3	3	1.30	90- 140	(80-180%)	13.9	NIL	3.57	NIL	11	8/31	◆1.08	.56	9/30	NIL	NIL	YES
	2597	Microsoft Corp. (NDQ)	MSFT	209.44	1	1	3	.90	220- 265	(5- 25%)	33.8	1.0	6.20	2.04	2	6/30	1.46	1.37	9/30	.51	.46	YES

★★ Supplementary Report in this week's issue.
▲ Arrow indicates the direction of a change. When it appears with the Latest Dividend, the arrow signals that a change in the regular payment rate has occurred in the latest quarter. For Timeliness, 3-5 year Target Price Range, or Estimated Earnings 12 months to 3-31-21, the arrow indicates a change since the preceding week. When a diamond ◆ (indicating a new figure) appears alongside the latest quarterly earnings results, the rank change probably was primarily caused by the earnings report. In other cases, the change is due to the dynamics of the ranking system and could simply be the result of the improvement or weakening of other stocks.

PAGE NUMBERS
Bold type refers to full report.
The number on the left signifies a Supplement (if available).

Supplement	Page	NAME OF STOCK	Ticker Symbol	Recent Price	RANKS Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	1536	Mid-America Apartment	MAA	117.14	3	2	5	1.00	105- 145	(N- 25%)	51.6	3.4	2.27	4.00	65	6/30	.65	.53	12/31	◆1.00	.96	YES
	1724	Middleby Corp. (The) (NDQ)	MIDD	90.90	▲3	3	4	1.45	135- 205	(50-125%)	23.8	NIL	▲3.82	NIL	49	6/30	.39	1.66	9/30	NIL	NIL	YES
	1794	Middlesex Water (NDQ)	MSEX	62.37	2	2	2	.70	50- 65	(N- 5%)	28.9	1.7	2.16	1.04	10	6/30	.55	.49	9/30	.256	.24	YES
1651	1156	Miller (Herman) (NDQ)	MLHR	30.34	4	3	4	1.25	40- 65	(30-115%)	20.1	NIL	1.51	NIL	78	8/31	1.25	.84	12/31	NIL	.21	YES
	928	Millicom Int'l Cellular (NDQ)	TIGO	29.12	–	3	–	NMF	45- 70	(55-140%)	NMF	NIL	d.99	NIL	17	6/30	d1.14	d.27	9/30	NIL	NIL	
	582	Minerals Techn.	MTX	51.19	3	3	3	1.25	80- 120	(55-135%)	23.5	0.4	2.18	.20	58	6/30	.42	.75	9/30	.05	.05	YES
	1623	Mirati Therapeutics (NDQ)	MRTX	166.99	3	4	5	1.05	135- 200	(N- 20%)	NMF	NIL	d8.33	NIL	14	6/30	d1.89	d1.26	9/30	NIL	NIL	YES
	2027	Mobile Mini	MINI					SEE FINAL SUPPLEMENT														
	839	Moderna, Inc. (NDQ)	MRNA	70.55	–	4	–	NMF	50- 90	(N- 30%)	NMF	NIL	d1.15	NIL	12	6/30	d.31	d.41	9/30	NIL	NIL	YES
	993	Modine Mfg.	MOD					SEE FINAL REPORT														
2226	1157	Mohawk Inds.	MHK	98.42	4	3	4	1.40	160- 240	(65-145%)	16.2	NIL	6.09	NIL	78	6/30	.37	2.89	9/30	NIL	NIL	YES
	807	Molina Healthcare	MOH	163.07	2	3	1	1.05	205- 305	(25- 85%)	13.2	NIL	12.33	NIL	33	6/30	4.79	2.96	9/30	NIL	NIL	YES
	1977	Molson Coors Beverage	TAP	33.58	3	3	3	1.00	65- 95	(95-185%)	10.7	NIL	3.14	NIL	26	6/30	.90	1.52	9/30	NIL	.57	YES
	2366	Monarch Casino (NDQ)	MCRI	45.99	4	3	3	1.40	50- 75	(10- 65%)	NMF	NIL	.25	NIL	87	6/30	d.24	.50	9/30	NIL	NIL	YES
	1929	Mondelez Int'l (NDQ)	MDLZ	57.01	3	2	2	.90	65- 85	(15- 50%)	21.4	2.2	2.66	1.26	18	6/30	.63	.57	12/31	▲.315	.285	YES
	1367	Monolithic Power Sys. (NDQ)	MPWR	274.88	2	3	3	1.00	175- 260	(N- N%)	59.2	0.7	4.64	2.00	11	6/30	1.08	.45	12/31	.50	.40	YES
	2129	Monro, Inc. (NDQ)	MNRO	40.71	▼4	3	3	.80	75- 110	(85-170%)	47.9	2.2	.85	.88	44	6/30	.15	.67	9/30	.22	.22	YES
	1978	Monster Beverage (NDQ)	MNST	80.51	2	3	3	.85	80- 115	(N- 45%)	39.3	NIL	2.05	NIL	26	6/30	.59	.53	9/30	NIL	NIL	YES
	441	Moody's Corp.	MCO	285.16	1	3	3	1.15	235- 350	(N- 25%)	32.9	0.8	8.67	2.24	9	6/30	2.81	2.07	9/30	.56	.50	YES
	719	Moog Inc. 'A'	MOGA	64.29	4	3	5	1.40	80- 120	(25- 85%)	15.0	1.6	4.28	1.00	69	6/30	.93	1.35	9/30	▲.25	.25	YES
	1813	Morgan Stanley	MS	48.38	▲2	3	2	1.30	▲ 85- 125	(75-160%)	8.9	2.9	5.44	1.40	53	6/30	1.96	1.23	9/30	.35	.35	YES
	1603	Mosaic Company	MOS	18.47	4	3	3	1.30	20- 35	(10- 90%)	31.3	1.3	.59	.24	77	6/30	.11	.13	9/30	.05	.05	YES
	994	Motorcar Parts Of Amer. (NDQ)	MPAA	15.40	3	3	3	1.00	25- 35	(60-125%)	10.3	NIL	1.50	NIL	70	6/30	.03	.09	9/30	NIL	NIL	YES
	958	Motorola Solutions	MSI	156.63	3	2	5	.90	180- 240	(15- 55%)	21.1	1.7	7.41	2.60	32	6/30	1.39	1.69	12/31	.64	.57	YES
	2177	Movado Group	MOV	10.39	5	3	4	1.30	35- 55	(235-430%)	12.1	NIL	.86	NIL	72	7/31	d.07	.36	9/30	NIL	.20	YES
	733	Mueller Inds.	MLI	27.53	3	3	2	1.20	40- 60	(45-120%)	15.5	1.5	1.78	.40	79	6/30	.50	.50	9/30	.10	.10	YES
	1725	Mueller Water Prod.	MWA	10.47	3	3	3	1.15	17- 25	(60-140%)	21.8	2.0	.48	.21	49	6/30	.11	.24	9/30	.053	.05	YES
	513	Murphy Oil Corp.	MUR	9.20	5	4	3	1.80	25- 45	(170-390%)	NMF	5.4	d3.82	.50	92	6/30	d2.05	.40	9/30	.125	.25	YES
	2178	Murphy USA Inc.	MUSA	132.15	3	3	2	.75	120- 185	(N- 40%)	20.1	NIL	6.58	NIL	72	6/30	5.73	1.01	9/30	NIL	NIL	YES
	1770	Myers Inds.	MYE	13.35	3	3	2	1.15	19- 30	(40-125%)	18.3	4.0	▲.73	.54	60	6/30	.23	.18	12/31	.135	.135	YES
	1624	Mylan N.V. (NDQ)	MYL	14.64	–	3	–	.90	25- 35	(70-140%)	26.1	NIL	.56	NIL	14	6/30	.08	d.33	9/30	NIL	NIL	YES
	1625	MyoKardia, Inc. (NDQ)	MYOK	133.90	3	5	3	1.05	105- 160	(N- 20%)	NMF	NIL	d5.75	NIL	14	6/30	d1.27	d.83	9/30	NIL	NIL	YES
	840	Myriad Genetics (NDQ)	MYGN	12.66	5	3	3	.95	14- 20	(10- 60%)	NMF	NIL	d.11	NIL	12	6/30	d.31	.41	9/30	NIL	NIL	YES
	1337	**NCR Corp.**	NCR	20.03	5	3	4	1.55	45- 65	(125-225%)	12.2	NIL	1.64	NIL	59	6/30	.27	.76	9/30	NIL	NIL	YES
	767	NMI Holdings (NDQ)	NMIH	17.80	3	3	5	1.55	40- 60	(125-235%)	11.1	NIL	1.61	NIL	34	6/30	.36	.56	9/30	NIL	NIL	YES
	2663	NN Inc.	NNBR					SEE FINAL SUPPLEMENT														
	1219	NRG Energy	NRG	29.52	3	3	3	1.25	40- 60	(35-105%)	8.1	4.1	3.66	1.20	27	6/30	1.27	.75	9/30	.30	.03	YES
	1132	NVR, Inc.	NVR	4078.55	3	3	2	1.10	2880-4320	(N- 5%)	20.2	NIL	202.03	NIL	13	6/30	42.50	53.09	9/30	NIL	NIL	
	1369	NXP Semiconductors NV (NDQ)	NXPI	124.00	3	3	2	1.10	175- 260	(40-110%)	25.2	1.2	4.92	1.50	11	6/30	.94	1.81	12/31	.375	.375	YES
	2422	Nabors Inds.	NBR	26.55	–	5	–	1.75	45- 80	(70-200%)	NMF	NIL	NMF	NIL	94	6/30	d22.13	d20.50	9/30	▼NIL	.50	YES
	1806	Nasdaq, Inc. (NDQ)	NDAQ	125.37	2	3	3	1.05	100- 145	(N- 15%)	21.8	1.6	5.75	1.96	6	6/30	1.54	1.22	9/30	.49	.47	YES
	2520	Nat'l Bank of Canada (TSE)	NA.TO	67.21b	3	2	3	1.10	80- 110	(20- 65%)	15.5	4.3	4.35	2.86	73	7/31	1.66(b)	1.66(b)	12/31	.71(b)	.68(b)	YES
	1979	National Beverage (NDQ)	FIZZ	69.38	2	3	2	.75	70- 105	(N- 50%)	26.2	NIL	2.65	NIL	26	7/31	1.09	.74	9/30	NIL	NIL	YES
	2393	National CineMedia	NCMI					SEE FINAL REPORT														
	537	National Fuel Gas	NFG	42.12	3	3	3	.90	85- 130	(100-210%)	15.4	4.2	2.73	1.78	86	6/30	.47	.73	12/31	.445	.435	YES
	127	National Instruments (NDQ)	NATI	35.38	3	3	4	1.15	45- 65	(25- 85%)	65.5	2.9	.54	1.04	31	6/30	.08	.22	9/30	.26	.25	YES
	2423	National Oilwell Varco	NOV	9.80	5	4	3	1.25	19- 30	(95-205%)	NMF	NIL	d1.16	NIL	94	6/30	d.24	d14.11	9/30	NIL	.05	YES
	1771	National Presto Ind.	NPK	83.40	2	3	3	.65	85- 125	(N- 50%)	13.7	6.0	▲6.08	5.00	60	6/30	1.80	1.16	9/30	NIL	NIL	
	2179	National Vision Holdings (NDQ)	EYE	38.24	3	3	2	1.80	25- 35	(N- N%)	NMF	NIL	d.02	NIL	72	6/30	d.55	.13	9/30	NIL	NIL	YES
	1591	Natural Resource	NRP	12.31	4	4	5	1.05	17- 30	(40-145%)	NMF	14.6	d9.17	1.80-.90	76	6/30	d10.64	.85	9/30	▲.45	.45	YES
	226	Natus Medical (NDQ)	NTUS	16.96	4	3	5	.85	35- 50	(105-195%)	80.8	NIL	.21	NIL	24	6/30	d.26	.10	9/30	NIL	NIL	YES
	2570	Navient Corp. (NDQ)	NAVI	8.25	4	3	3	1.55	14- 20	(70-140%)	3.7	7.8	2.22	.64	55	6/30	.64	.64	9/30	.16	.16	YES
1427	163	Navistar Int'l	NAV	43.00	–	5	–	1.70	35- 60	(N- 40%)	NMF	NIL	d.02	NIL	64	7/31	d.37	1.47	9/30	NIL	NIL	YES
	1165	Neenah, Inc.	NP	39.03	▼4	3	3	1.15	60- 90	(55-130%)	39.8	4.8	.98	1.88	62	6/30	d.08	.80	9/30	.47	.45	YES
	1626	Nektar Therapeutics (NDQ)	NKTR	16.84	2	5	3	1.00	20- 40	(20-140%)	NMF	NIL	d2.27	NIL	14	6/30	d.45	d.63	9/30	NIL	NIL	YES
	227	Neogen Corp. (NDQ)	NEOG	77.59	2	3	3	.85	75- 110	(N- 40%)	65.2	NIL	1.19	NIL	24	8/31	.30	.28	12/31	NIL	NIL	YES
	1930	Nestle SA ADS (PNK)	NSRGY	118.55	2	1	2	.65	120- 145	(N- 20%)	27.3	2.3	4.35	2.77	18	6/30	2.13(p)	1.68(p)	9/30	NIL	NIL	
	1405	NetApp, Inc. (NDQ)	NTAP	43.60	2	3	4	1.10	70- 105	(60-140%)	12.8	4.6	3.40	2.00	20	7/31	.73	.65	12/31	.48	.48	YES
	2339	Netflix, Inc. (NDQ)	NFLX	490.65	1	3	2	.80	470- 710	(N- 45%)	72.9	NIL	6.73	NIL	57	6/30	1.59	.60	9/30	NIL	NIL	YES
	959	NETGEAR (NDQ)	NTGR	30.06	–	3	–	NMF	35- 55	(15- 85%)	13.9	NIL	2.17	NIL	32	6/30	.54	.28	9/30	NIL	NIL	YES
	841	Neurocrine Biosci. (NDQ)	NBIX	97.40	2	3	2	1.00	180- 270	(85-175%)	37.3	NIL	2.61	NIL	12	6/30	.81	.54	9/30	NIL	NIL	YES
	190	Nevro Corp.	NVRO	139.76	3	4	2	1.25	85- 145	(N- 5%)	NMF	NIL	d3.12	NIL	50	6/30	d1.21	d.91	9/30	NIL	NIL	YES
2029	538	New Fortress Energy LLC (NDQ)	NFE	40.74	–	3	–	NMF	25- 40	(N- N%)	NMF	1.0	d2.43	.40	86	6/30	d2.40	d.28	9/30	▲.10	NIL	YES
	425	New Germany Fund	GF	16.60	–	3	–	1.00	17- 25	(N- 50%)	NMF	1.5	NMF	.25	–	6/30	17.86(q)	16.19(q)	9/30	NIL	NIL	
	549	New Jersey Resources	NJR	26.66	4	2	3	.90	35- 45	(30- 70%)	12.5	4.7	2.14	1.25	41	6/30	d.06	d.20	12/31	.313	.313	YES
	2003	New Orient. Ed. ADS	EDU	149.66	▼3	3	3	.95	130- 195	(N- 30%)	43.8	NIL	3.42	NIL	48	5/31	.30	.60	9/30	NIL	NIL	YES
	1830	New Relic, Inc.	NEWR	56.32	2	3	3	1.00	85- 130	(50-130%)	NMF	NIL	▼d1.40	NIL	22	6/30	d.50	d.26	9/30	NIL	NIL	YES
	1505	New York Community	NYCB	8.53	3	3	4	.80	13- 20	(50-135%)	9.8	8.0	.87	.68	63	6/30	.21	.19	9/30	.17	.17	YES
	2383	New York Times	NYT	42.24	2	3	2	.85	30- 50	(N- 20%)	44.5	0.6	.95	.24	–	6/30	.14	.15	12/31	◆.06	.05	YES
	1194	Newell Brands (NDQ)	NWL	17.22	3	3	4	1.20	45- 70	(160-305%)	23.9	5.3	.72	.92-.30	1	6/30	.18	.29	9/30	.23	.23	YES
	583	NewMarket Corp.	NEU	345.73	3	1	3	.85	410- 550	(20- 60%)	23.3	2.2	14.83	7.60	58	6/30	2.05	6.63	12/31	1.90	1.90	YES
	1574	Newmont Corp.	NEM	62.13	1	3	2	.60	65- 95	(5- 55%)	20.0	1.6	3.10	1.00	5	6/30	.32	.12	9/30	.25	.14	YES
	2384	News Corp. 'A' (NDQ)	NWSA	14.34	3	3	2	1.10	18- 25	(25- 75%)	NMF	1.4	d.91	.20	–	6/30	d.67	d.09	12/31	.10	.10	YES
	2340	Nexstar Media Group (NDQ)	NXST	94.54	2	3	4	1.55	225- 340	(140-260%)	6.5	2.4	14.60	2.24	57	6/30	2.13	1.42	9/30	.56	.45	YES
★★	144	NextEra Energy	NEE	284.14	3	1	3	.85	265- 320	(N- 15%)	30.4	2.1	9.34	5.88	46	6/30	2.59	2.56	9/30	1.40	1.25	YES
	822	NextGen Healthcare (NDQ)	NXGN	12.78	4	3	3	1.05	17- 25	(35- 95%)	15.0	NIL	.85	NIL	30	6/30	.21	.16	9/30	NIL	NIL	YES
	442	Nielsen Hldgs. plc	NLSN	14.16	3	3	4	1.00	30- 45	(110-220%)	20.2	1.7	.70	.24	9	6/30	d.08	.34	9/30	.06	.35	YES
1652	2160	NIKE, Inc. 'B'	NKE	124.32	3	1	4	1.10	110- 130	(N- 5%)	NMF	0.8	1.19	.98	82	8/31	.95	.86	12/31	.245	.22	YES
	550	NiSource Inc.	NI	21.85	3	2	4	.85	30- 40	(35- 85%)	16.6	3.8	1.32	.84	41	6/30	.13	.05	12/31	.21	.20	YES
	108	Nissan Motor ADR(g) (PNK)	NSANY	7.05	3	3	3	.90	15- 25	(115-255%)	NMF	NIL	d2.20	NIL	45	6/30	d1.35	.03	9/30	▼NIL	.529	
	2409	Noble Energy	NBL	8.75	–	3	–	1.85	15- 25	(70-185%)	NMF	0.9	d2.53	.08	91	6/30	d.85	d.02	9/30	.02	.11	YES
	960	Nokia Corp. ADR	NOK	3.90	3	3	1	.90	5- 8	(30-105%)	12.6	NIL	.31	NIL	32	6/30	.06	.05	9/30	NIL	.056	YES

(•) All data adjusted for announced stock split or stock dividend. See back page of Ratings & Reports.
◆ New figure this week.
(b) Canadian Dollars.
(d) Deficit.
(f) The estimate may reflect a probable increase or decrease. If a dividend boost or cut is possible but not probable, two figures are shown, the first is the more likely.
(g) Dividends subject to foreign withholding tax for U.S. residents.
(h) Est'd Earnings & Est'd Dividends after conversion to U.S. dollars at Value Line estimated translation rate.
(j) All Index data expressed in hundreds.
(p) 6 months (q) Asset Value
N=Negative figure NA=Not available NMF=No meaningful figure

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Suppl.	Page	NAME OF STOCK		Ticker Symbol	Recent Price	Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	1726	Nordson Corp.	(NDQ)	NDSN	189.80	3	3	3	1.25	▲ 180- 270	(N- 40%)	33.7	0.8	5.63	1.57	49	7/31	1.42	1.62	9/30	.39	.38	YES
	2147	Nordstrom, Inc.		JWN	12.27	5	4	3	1.30	35- 60	(185-390%)	NMF	NIL	d1.17	NIL	19	7/31	d1.62	.90	9/30	NIL	.37	YES
	344	Norfolk Southern		NSC	221.02	3	2	3	1.15	255- 350	(15- 60%)	27.4	1.7	8.07	3.76	28	6/30	1.53	2.70	9/30	.94	.94	YES
	783	Northern Trust Corp.	(NDQ)	NTRS	78.61	3	3	4	1.10	95- 140	(20- 80%)	13.9	3.6	5.65	2.80	84	6/30	1.46	1.75	12/31	.70	.70	YES
	1220	Northland Power	(TSE)	NPI.TO	39.52b	2	3	3	.90	45- 65	(15- 65%)	27.1	3.0	1.46	1.20	27	6/30	.26(b)	.28(b)	9/30	.30(b)	.30(b)	YES
	720	Northrop Grumman		NOC	329.52	1	1	3	.85	480- 590	(45- 80%)	14.2	1.8	23.25	5.80	69	6/30	6.01	5.06	9/30	1.45	1.32	YES
	1506	Northwest Bancshares	(NDQ)	NWBI	9.39	3	3	4	.90	12- 18	(30- 90%)	16.5	8.1	.57	.76	63	6/30	d.05	.25	9/30	.19	.18	YES
	551	Northwest Natural		NWN	43.94	4	1	3	.80	70- 85	(60- 95%)	18.5	4.3	2.37	1.91	41	6/30	d.17	.07	9/30	.478	.475	YES
	2219	NorthWestern Corp.		NWE	49.15	4	2	3	.90	65- 85	(30- 75%)	14.2	5.0	3.45	2.45	16	6/30	.43	.49	9/30	.60	.575	YES
	2598	NortonLifeLock Inc.	(NDQ)	NLOK	21.07	–	3	–	NMF	25- 35	(20- 65%)	18.3	2.4	1.15	.50	2	6/30	d.31	.21	9/30	.125	.125	YES
	2313	Norwegian Cruise Line		NCLH	16.68	5	5	4	1.65	35- 60	(110-260%)	NMF	NIL	d5.61	NIL	81	6/30	d2.99	1.11	9/30	NIL	NIL	YES
	128	Novanta Inc.	(NDQ)	NOVT	106.39	3	3	2	.95	70- 105	(N- N%)	NMF	NIL	.71	NIL	31	6/30	.33	.29	9/30	NIL	NIL	YES
	1627	Novartis AG ADR		NVS	87.05	3	1	4	.80	110- 135	(25- 55%)	24.2	3.5	3.59	3.09	14	6/30	.82	.91	9/30	NIL	NIL	YES
	1628	Novo Nordisk ADR(g)		NVO	69.17	2	1	3	.80	75- 90	(10- 30%)	26.0	1.9	2.66	1.30	14	6/30	.68	.61	9/30	.518	.445	YES
	228	NovoCure Limited	(NDQ)	NVCR	108.32	2	4	3	1.15	80- 135	(N- 25%)	NMF	NIL	.36	NIL	24	6/30	.02	d.01	9/30	NIL	NIL	YES
2034	1006	Nu Skin Enterprises		NUS	50.84	3	3	3	1.10	65- 100	(30- 95%)	15.9	3.0	3.19	1.52	47	6/30	.81	.83	9/30	.375	.37	YES
	2599	Nuance Communic.	(NDQ)	NUAN	33.27	3	3	3	1.05	25- 40	(N- 20%)	NMF	NIL	.07	NIL	2	6/30	.06	.03	9/30	NIL	NIL	YES
	744	Nucor Corp.		NUE	46.27	3	3	3	1.20	75- 115	(60-150%)	28.7	3.5	1.61	1.61	67	6/30	.36	1.26	12/31	.403	.403	YES
	627	NuStar Energy L.P.		NS	10.40	5	4	3	1.30	30- 50	(190-380%)	23.1	15.4	.45	1.60-1.20	93	6/30	d.06	.11	9/30	.40	.60	YES
1029	1831	Nutanix, Inc.	(NDQ)	NTNX	22.01	3	4	3	1.15	55- 95	(150-330%)	NMF	NIL	d3.68	NIL	22	7/31	d.93	d1.04	9/30	NIL	NIL	YES
	1604	Nutrien Ltd.		NTR	39.89	–	3	–	1.15	50- 75	(25- 90%)	19.0	4.7	2.10	1.86	77	6/30	1.37	1.50	12/31	.45	.45	YES
	191	NuVasive, Inc.	(NDQ)	NUVA	49.15	4	3	4	1.05	85- 130	(75-165%)	NMF	NIL	.40	NIL	50	6/30	d.98	.29	9/30	NIL	NIL	YES
	1206	Nuveen Muni Value Fund		NUV	10.58	–	1	–	.60	9- 12	(N- 15%)	NMF	3.5	NMF	.37	–	4/30	10.03(q)	10.29(q)	9/30	.093	.093	
	1313	nVent Electric plc		NVT	17.76	4	3	3	1.30	25- 40	(40-125%)	17.9	3.9	.99	.70	61	6/30	.29	.35	12/31	◆.175	.175	YES
	1368	NVIDIA Corp.	(NDQ)	NVDA	521.40	1	3	3	1.10	190- 280	(N- N%)	80.1	0.1	6.51	.64	11	7/31	.99	.90	9/30	.16	.16	YES
	1179	**O-I Glass**		OI	10.57	4	4	3	1.40	13- 20	(25- 90%)	22.0	NIL	.48	NIL	42	6/30	d.64	.42	9/30	NIL	.05	YES
	1416	ODP Corp.	(NDQ)	ODP	18.45	4	5	3	1.25	30- 60	(65-225%)	10.0	NIL	1.85	NIL	85	6/30	d.07	.70	9/30	NIL	.25	YES
	913	OGE Energy		OGE	29.66	3	2	3	1.05	40- 55	(35- 85%)	14.0	5.5	2.12	1.64	43	6/30	.51	.50	12/31	▲.403	.388	YES
	129	OSI Systems	(NDQ)	OSIS	78.26	3	3	5	.90	110- 165	(40-110%)	17.9	NIL	4.37	NIL	31	6/30	.76	.89	9/30	NIL	NIL	YES
	514	Occidental Petroleum		OXY	10.34	5	4	3	1.55	35- 60	(240-480%)	NMF	0.4	d4.88	.04	92	6/30	d1.76	.97	12/31	.01	.79	YES
	2424	Oceaneering Int'l		OII	3.68	–	5	–	1.85	11- 20	(200-445%)	NMF	NIL	d1.14	NIL	94	6/30	d.14	d.36	9/30	NIL	NIL	YES
	2425	Oil States Int'l		OIS					SEE FINAL REPORT														
	2600	Okta, Inc.	(NDQ)	OKTA	213.33	3	3	3	.65	100- 150	(N- N%)	NMF	NIL	d1.08	NIL	2	7/31	d.48	d.37	9/30	NIL	NIL	YES
	325	Old Dominion Freight	(NDQ)	ODFL	187.35	3	1	2	.95	120- 165	(N- N%)	38.3	0.3	4.89	.61	29	6/30	1.25	1.44	9/30	.15	.113	YES
	784	Old Nat'l Bancorp	(NDQ)	ONB	12.67	3	3	3	.95	20- 30	(60-135%)	10.4	4.4	1.22	.56	84	6/30	.32	.36	9/30	.14	.13	YES
	768	Old Republic		ORI	14.94	3	3	3	1.10	40- 60	(170-300%)	9.5	5.6	1.57	.84	34	6/30	.42	.45	9/30	.21	.20	YES
	1605	Olin Corp.		OLN	12.25	4	3	5	1.30	11- 17	(N- 40%)	NMF	6.5	d1.42	.80	77	6/30	d.73	d.10	9/30	.20	.20	YES
	2148	Ollie's Bargain Outlet	(NDQ)	OLLI	87.52	2	3	1	1.05	100- 150	(15- 70%)	36.6	NIL	2.39	NIL	19	7/31	1.04	.38	9/30	NIL	NIL	YES
	229	Omnicell, Inc.	(NDQ)	OMCL	71.65	3	3	4	.95	100- 150	(40-110%)	34.3	NIL	2.09	NIL	24	6/30	.37	.37	9/30	NIL	NIL	YES
	2394	Omnicom Group		OMC	49.64	3	3	3	.95	110- 150	(120-200%)	11.7	5.2	4.26	2.60	74	6/30	d.11	1.68	12/31	.65	.65	YES
	1370	ON Semiconductor	(NDQ)	ON	21.73	3	3	2	1.40	30- 45	(40-105%)	27.2	NIL	.80	NIL	11	6/30	.12	.42	9/30	NIL	NIL	YES
	552	ONE Gas, Inc.		OGS	68.49	3	2	3	.80	105- 145	(55-110%)	19.1	3.3	3.58	2.28	41	6/30	.48	.46	9/30	.54	.50	YES
	2653	1-800-FLOWERS.COM	(NDQ)	FLWS	25.64	2	3	2	.90	19- 30	(N- 15%)	30.2	NIL	.85	NIL	23	6/30	.15	d.13	9/30	NIL	NIL	YES
	823	1Life Healthcare	(NDQ)	ONEM	25.98	–	3	–	NMF	40- 65	(55-150%)	NMF	NIL	d.86	NIL	30	6/30	d.24	NA	9/30	NIL	NIL	YES
	613	ONEOK Inc.		OKE	26.01	5	3	4	1.60	70- 110	(170-325%)	9.0	14.7	2.90	3.82-1.91	83	6/30	.32	.75	9/30	.935	.89	YES
	1394	Onto Innovation		ONTO	29.76	2	3	2	1.10	60- 90	(100-200%)	16.9	NIL	1.76	NIL	3	6/30	.42	.22	9/30	NIL	NIL	YES
	929	Ooma, Inc.		OOMA	13.13	2	4	1	1.15	11- 19	(N- 45%)	NMF	NIL	d.20	NIL	17	7/31	d.02	d.24	9/30	NIL	NIL	YES
	1832	Open Text Corp.	(NDQ)	OTEX	42.40	3	2	1	.95	50- 65	(20- 55%)	35.3	1.7	▼1.20	.70	22	6/30	.10	.27	9/30	.175	.175	YES
2458	1629	Opko Health	(NDQ)	OPK	3.18	3	5	3	1.05	2- 4	(N- 25%)	NMF	NIL	d.31	NIL	14	6/30	.05	d.10	9/30	NIL	NIL	YES
1428	2601	Oracle Corp.		ORCL	59.58	1	1	3	.85	85- 100	(45- 70%)	14.4	1.6	4.15	.96	2	8/31	.93	.81	12/31	.24	.24	YES
	2130	O'Reilly Automotive	(NDQ)	ORLY	457.34	3	3	2	.95	415- 625	(N- 35%)	27.7	NIL	16.53	NIL	44	6/30	7.10	4.51	9/30	NIL	NIL	YES
	1221	Ormat Technologies		ORA	58.36	3	3	4	.65	80- 120	(35-105%)	31.7	0.8	1.84	.44	27	6/30	.45	.66	9/30	.11	.11	YES
	164	Oshkosh Corp.		OSK	73.17	3	3	3	1.25	105- 160	(45-120%)	15.2	1.6	4.80	1.20	64	6/30	1.29	2.72	9/30	.30	.27	YES
	1727	Otis Worldwide		OTIS	62.51	–	3	–	NMF	▲ 60- 90	(N- 45%)	26.6	1.3	▲2.35	.80	49	6/30	.56	NA	9/30	.20	NIL	YES
	914	Otter Tail Corp.	(NDQ)	OTTR	36.54	4	2	3	.85	45- 60	(25- 65%)	16.4	4.2	2.23	1.54	43	6/30	.42	.39	9/30	.37	.35	YES
	2395	OUTFRONT Media		OUT	15.01	5	4	4	1.70	30- 45	(100-200%)	NMF	NIL	d.44	NIL	74	6/30	d.44	.35	9/30	NIL	.36	YES
	539	Ovintiv Inc.		OVV	8.79	▲4	4	3	1.75	11- 18	(25-105%)	NMF	4.3	d.70	.38	86	6/30	d.43	1.05	9/30	.094	.094	YES
	1117	Owens Corning		OC	68.81	3	3	2	1.30	70- 100	(N- 45%)	19.8	1.4	3.48	.96	38	6/30	.88	1.26	12/31	.24	.22	YES
	2111	Oxford Inds.		OXM	40.07	4	3	3	1.30	70- 110	(75-175%)	70.3	2.5	.57	1.00	90	7/31	d.38	1.84	12/31	.25	.37	YES
	515	**PBF Energy**		PBF	6.02	5	4	3	1.90	30- 50	(400-730%)	1.8	NIL	3.38	NIL	92	6/30	3.23	d.27	9/30	NIL	.30	YES
	2180	PC Connection	(NDQ)	CNXN	41.33	3	3	2	.85	50- 75	(20- 80%)	14.0	NIL	2.95	NIL	72	6/30	.29	.89	9/30	NIL	NIL	YES
	540	PDC Energy	(NDQ)	PDCE	12.10	5	4	4	1.40	30- 50	(150-315%)	NMF	NIL	d2.76	NIL	86	6/30	d2.23	1.04	9/30	NIL	NIL	YES
	635	PDL BioPharma		PDLI					SEE FINAL SUPPLEMENT														
	2521	PNC Financial Serv.		PNC	108.13	4	2	5	1.15	140- 185	(30- 70%)	44.1	4.3	2.45	4.60	73	6/30	d1.90	2.88	9/30	1.15	1.15	YES
	2220	PNM Resources		PNM	41.45	2	3	3	.95	35- 55	(N- 35%)	18.3	3.0	2.27	1.26	16	6/30	.72	.36	12/31	◆.308	.29	YES
	808	PPD, Inc.	(NDQ)	PPD	34.40	–	3	–	NMF	35- 50	(N- 45%)	29.2	NIL	1.18	NIL	33	6/30	.25	NA	9/30	NIL	NIL	YES
	2439	PPG Inds.		PPG	121.74	3	1	3	1.10	120- 150	(N- 25%)	34.5	1.8	3.53	2.16	56	6/30	.43	1.14	9/30	▲.54	.51	YES
452	145	PPL Corp.		PPL	26.68	3	2	4	1.10	35- 45	(30- 70%)	11.5	6.3	2.33	1.67	46	6/30	.45	.60	12/31	.415	.413	YES
	584	PQ Group Holdings		PQG	10.17	3	3	3	.95	20- 30	(95-195%)	22.6	NIL	.45	NIL	58	6/30	.12	.23	9/30	NIL	NIL	YES
	809	PRA Health Sciences	(NDQ)	PRAH	99.15	3	3	2	1.25	130- 195	(30- 95%)	21.1	NIL	4.70	NIL	33	6/30	.86	1.22	9/30	NIL	NIL	YES
	2602	PTC Inc.	(NDQ)	PTC	82.90	2	3	2	1.10	60- 90	(N- 10%)	82.9	NIL	1.00	NIL	2	6/30	.30	d.13	9/30	NIL	NIL	YES
	2112	PVH Corp.		PVH	61.89	5	3	4	1.70	130- 190	(110-205%)	38.0	NIL	1.63	NIL	90	7/31	.13	2.10	9/30	NIL	.037	YES
	165	PACCAR Inc.	(NDQ)	PCAR	86.55	3	2	2	1.10	90- 120	(5- 40%)	27.3	2.7	3.17	2.30	64	6/30	.43	1.78	12/31	.32	.32	YES
	1180	Packaging Corp.		PKG	111.15	3	3	4	1.00	135- 200	(20- 80%)	22.0	2.9	5.06	3.25	42	6/30	1.38	2.04	12/31	.79	.79	YES
	2603	Palo Alto Networks		PANW	245.94	3	3	2	1.00	300- 450	(20- 85%)	NMF	NIL	d1.11	NIL	2	7/31	d.61	d.22	9/30	NIL	NIL	YES
	1575	Pan Amer. Silver	(NDQ)	PAAS	32.10	3	4	3	.90	25- 45	(N- 40%)	27.0	0.6	1.19	.20	5	6/30	.28	.04	9/30	.05	.035	YES
	1986	Panasonic Corp.(g)	(PNK)	PCRFY	8.72	3	3	4	1.10	18- 25	(105-185%)	11.6	3.3	.75	.29	37	6/30	d.04	.20	9/30	NIL	NIL	
	364	Papa John's Int'l	(NDQ)	PZZA	83.42	2	3	2	.65	55- 85	(N- N%)	50.6	1.1	1.65	.90	75	6/30	.48	.28	9/30	.225	.225	YES
	516	Par Pacific Holdings		PARR	6.49	3	4	3	1.25	17- 30	(160-360%)	NMF	NIL	d1.85	NIL	92	6/30	d.76	.56	9/30	NIL	NIL	YES
	541	Paramount Resources		POU.TO					SEE FINAL REPORT														
	1537	Park Hotels & Resorts		PK	10.21	5	4	5	1.65	30- 45	(195-340%)	NMF	NIL	d3.21	NIL	65	6/30	d1.10	.40	9/30	▼NIL	.45	YES
	785	Park National	(ASE)	PRK	83.29	2	3	4	.80	90- 135	(10- 60%)	13.7	4.9	6.09	4.08	84	6/30	1.80	1.33	9/30	1.02	1.01	YES

★★ Supplementary Report in this week's issue.
▲ Arrow indicates the direction of a change. When it appears with the Latest Dividend, the arrow signals that a change in the regular payment rate has occurred in the latest quarter. For Timeliness, 3-5 year Target Price Range, or Estimated Earnings 12 months to 3-31-21, the arrow indicates a change since the preceding week. When a diamond ◆ (indicating a new figure) appears alongside the latest quarterly earnings results, the rank change probably was primarily caused by the earnings report. In other cases, the change is due to the dynamics of the ranking system and could simply be the result of the improvement or weakening of other stocks.

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Supplement	Page	NAME OF STOCK		Ticker Symbol	Recent Price	RANKS Timeliness	RANKS Safety	RANKS Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	LATEST RESULTS Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	1772	Park-Ohio	(NDQ)	PKOH	**16.47**	**5**	**4**	**4**	1.50	45- 70	(175-325%)	**NMF**	**NIL**	▲d.28	NIL	**60**	6/30	**d1.17**	1.07	9/30	NIL	.125	YES
	1773	Parker-Hannifin		PH	**202.94**	**3**	**3**	**2**	1.40	240- 325	(20- 60%)	**20.5**	**1.7**	9.90	3.52	**60**	6/30	**2.55**	3.31	9/30	.88	.88	YES
	2410	Parsley Energy		PE	**9.69**	**4**	**4**	**3**	1.40	12- 18	(25- 85%)	**NMF**	**2.1**	d1.45	.20	**91**	6/30	**d.95**	.41	9/30	.05	.03	YES
	721	Parsons Corp.		PSN	**34.12**	**–**	**3**	**–**	NMF	40- 55	(15- 60%)	**23.2**	**NIL**	1.47	NIL	**69**	6/30	**.23**	.43	9/30	NIL	NIL	YES
	230	Patterson Cos.	(NDQ)	PDCO	**24.27**	**3**	**3**	**2**	.95	25- 35	(5- 45%)	**30.3**	**4.3**	.80	1.04	**24**	7/31	**.25**	.32	12/31	.26	.26	YES
	2426	Patterson-UTI Energy	(NDQ)	PTEN	**3.00**	**–**	**5**	**–**	1.55	5- 9	(65-200%)	**NMF**	**2.7**	d2.76	.08	**94**	6/30	**d.56**	d.17	9/30	.02	.04	YES
	2632	Paychex, Inc.	(NDQ)	PAYX	**79.58**	**3**	**2**	**4**	1.15	85- 115	(5- 45%)	**28.8**	**3.2**	2.76	2.52	**15**	5/31	**.61**	.64	9/30	.62	.62	YES
	2604	Paycom Software		PAYC	**290.83**	**2**	**3**	**3**	1.15	270- 410	(N- 40%)	**78.2**	**NIL**	3.72	NIL	**2**	6/30	**.62**	.75	9/30	NIL	NIL	YES
	1833	Paylocity Holding	(NDQ)	PCTY	**158.55**	**3**	**3**	**3**	1.15	95- 145	(N- N%)	**NMF**	**NIL**	▼1.19	NIL	**22**	6/30	**.09**	.18	9/30	NIL	NIL	YES
	2571	PayPal Holdings	(NDQ)	PYPL	**192.02**	**3**	**2**	**3**	.95	100- 150	(N- N%)	**NMF**	**NIL**	1.80	NIL	**55**	6/30	**1.29**	.69	9/30	NIL	NIL	YES
	635	Peabody Energy		BTU					SEE FINAL SUPPLEMENT														
1240	**2314**	Peloton Interactive	(NDQ)	PTON	**96.91**	**–**	**3**	**–**	NMF	70- 100	(N- 5%)	**NMF**	**NIL**	d.45	NIL	**81**	6/30	**.27**	NA	9/30	NIL	NIL	YES
	614	Pembina Pipeline	(TSE)	PPL.TO	**29.14b**	**4**	**3**	**3**	1.15	65- 100	(125-245%)	**12.1**	**8.6**	2.40	2.52	**83**	6/30	**.39(b)**	1.23(b)	9/30	.63(b)	.60(b)	
	2367	Penn Nat'l Gaming	(NDQ)	PENN	**72.92**	**3**	**4**	**2**	1.65	25- 45	(N- N%)	**NMF**	**NIL**	d3.71	NIL	**87**	6/30	**d1.69**	.44	9/30	NIL	NIL	YES
	2131	Penske Auto		PAG	**48.18**	**3**	**3**	**2**	1.50	55- 85	(15- 75%)	**16.0**	**NIL**	3.01	NIL	**44**	6/30	**.56**	1.42	9/30	NIL	.40	YES
	1774	Pentair plc		PNR	**45.85**	**3**	**3**	**2**	1.30	50- 75	(10- 65%)	**22.1**	**1.7**	2.07	.76	**60**	6/30	**.44**	.69	12/31	◆.19	.18	YES
	192	Penumbra Inc.		PEN	**194.46**	**3**	**3**	**1**	1.15	180- 270	(N- 40%)	**NMF**	**NIL**	.10	NIL	**50**	6/30	**d.30**	.27	9/30	NIL	NIL	YES
	1507	People's United Fin'l	(NDQ)	PBCT	**10.23**	**3**	**3**	**4**	1.00	16- 25	(55-145%)	**10.2**	**7.0**	1.00	.72	**63**	6/30	**.21**	.33	9/30	.18	.178	YES
	1980	PepsiCo, Inc.	(NDQ)	PEP	**137.97**	**3**	**1**	**3**	.80	140- 175	(N- 25%)	**26.4**	**3.0**	5.22	4.09	**26**	6/30	**1.32**	1.54	9/30	1.023	.955	YES
	2004	Perdoceo Education	(NDQ)	PRDO	**12.22**	**3**	**4**	**3**	1.15	25- 45	(105-270%)	**8.3**	**NIL**	1.48	NIL	**48**	6/30	**.41**	.39	9/30	NIL	NIL	YES
	1956	Performance Food		PFGC	**34.79**	**3**	**3**	**4**	1.50	35- 60	(N- 70%)	**NMF**	**NIL**	.27	NIL	**21**	6/30	**d.86**	.70	9/30	NIL	NIL	YES
	130	PerkinElmer Inc.		PKI	**121.89**	**1**	**2**	**3**	1.00	150- 200	(25- 65%)	**22.9**	**0.2**	5.33	.28	**31**	6/30	**1.57**	1.00	12/31	.07	.07	YES
	1630	Perrigo Co. plc		PRGO	**45.63**	**1**	**3**	**3**	1.00	75- 110	(65-140%)	**11.2**	**2.1**	4.06	.98	**14**	6/30	**1.03**	.86	9/30	.225	.21	YES
2453	**968**	PetMed Express	(NDQ)	PETS	**31.67**	**2**	**3**	**2**	.65	35- 50	(10- 60%)	**21.1**	**3.5**	1.50	1.12	**23**	6/30	**.39**	.26	9/30	.28	.27	YES
	517	Petroleo Brasileiro ADR		PBR	**7.20**	**5**	**5**	**3**	1.65	14- 25	(95-245%)	**NMF**	**NIL**	NIL	NIL	**92**	6/30	**d.06**	.72	9/30	NIL	NIL	YES
2667	**1631**	Pfizer, Inc.		PFE	**36.39**	**–**	**1**	**–**	.85	45- 55	(25- 50%)	**15.3**	**4.2**	2.38	1.52	**14**	6/30	**.61**	.89	12/31	◆.38	.36	YES
	1931	Phibro Animal Health	(NDQ)	PAHC	**17.84**	**▼4**	**3**	**3**	.90	40- 60	(125-235%)	**17.5**	**2.7**	1.02	.48	**18**	6/30	**.14**	.22	9/30	.12	.12	YES
	1987	Philips Electronics NV(g)		PHG	**46.49**	**3**	**3**	**1**	1.00	50- 75	(10- 60%)	**NMF**	**NIL**	.31	NIL	**37**	6/30	**.26**	.31	9/30	NIL	NIL	YES
	1993	Philip Morris Int'l		PM	**76.31**	**3**	**3**	**4**	.95	85- 125	(10- 65%)	**15.1**	**6.3**	5.04	4.80	**25**	6/30	**1.29**	1.46	12/31	▲1.20	1.17	YES
	518	Phillips 66		PSX	**53.98**	**4**	**3**	**3**	1.30	100- 150	(85-180%)	**NMF**	**6.9**	d.19	3.70	**92**	6/30	**d.33**	3.12	9/30	.90	.90	YES
	628	Phillips 66 Partners		PSXP	**22.61**	**2**	**3**	**3**	1.05	65- 100	(185-340%)	**5.9**	**15.5**	3.82	3.50	**93**	6/30	**1.05**	1.15	9/30	.875	.855	YES
	1395	Photronics Inc.	(NDQ)	PLAB	**10.08**	**2**	**3**	**3**	.85	18- 25	(80-150%)	**13.6**	**NIL**	.74	NIL	**3**	7/31	**.17**	.10	9/30	NIL	NIL	YES
	1932	Pilgrim's Pride Corp.	(NDQ)	PPC	**15.06**	**4**	**3**	**4**	.80	30- 50	(100-230%)	**9.2**	**NIL**	1.63	NIL	**18**	6/30	**d.02**	.68	9/30	NIL	NIL	YES
	2221	Pinnacle West Capital		PNW	**73.89**	**1**	**1**	**4**	.85	95- 115	(30- 55%)	**16.1**	**4.4**	4.58	3.27	**16**	6/30	**1.71**	1.28	9/30	.783	.738	YES
	2654	Pinterest, Inc.		PINS	**40.98**	**–**	**4**	**–**	NMF	19- 30	(N- N%)	**NMF**	**NIL**	d.82	NIL	**23**	6/30	**d.17**	d2.62	9/30	NIL	NIL	YES
	2411	Pioneer Natural Res.		PXD	**88.31**	**4**	**3**	**3**	1.35	165- 250	(85-185%)	**65.4**	**2.5**	1.35	2.20	**91**	6/30	**d.32**	2.01	12/31	.55	.44	YES
	1814	Piper Sandler Cos.		PIPR	**72.00**	**2**	**3**	**3**	1.30	75- 110	(5- 55%)	**13.9**	**2.7**	▲5.17	1.95	**53**	6/30	**1.93**	1.32	9/30	.30	.375	YES
	1417	Pitney Bowes		PBI	**5.52**	**–**	**5**	**–**	1.30	5- 10	(N- 80%)	**22.1**	**3.6**	.25	.20	**85**	6/30	**.04**	.21	9/30	.05	.05	YES
	629	Plains All Amer. Pipe.		PAA	**5.89**	**5**	**4**	**3**	1.55	25- 40	(325-580%)	**6.0**	**12.2**	.98	.72-.36	**93**	6/30	**.13**	.54	9/30	.18	.36	YES
	630	Plains GP Holdings L.P.		PAGP	**6.11**	**5**	**4**	**3**	1.50	25- 40	(310-555%)	**6.6**	**11.8**	.93	.72-.36	**93**	6/30	**.09**	.40	9/30	.18	.36	YES
	2315	Planet Fitness		PLNT	**61.32**	**4**	**3**	**4**	1.30	95- 145	(55-135%)	**68.9**	**NIL**	.89	NIL	**81**	6/30	**d.32**	.45	9/30	NIL	NIL	YES
1029	**1338**	Plantronics Inc.		PLT	**12.27**	**4**	**4**	**3**	1.20	35- 55	(185-350%)	**6.3**	**NIL**	1.95	NIL	**59**	6/30	**.33**	1.32	9/30	NIL	.15	YES
	1339	Plexus Corp.	(NDQ)	PLXS	**71.67**	**2**	**3**	**1**	1.05	70- 105	(N- 45%)	**16.3**	**NIL**	4.39	NIL	**59**	6/30	**1.20**	.81	9/30	NIL	NIL	YES
	2316	Polaris Inc.		PII	**92.08**	**3**	**3**	**1**	1.35	150- 220	(65-140%)	**23.4**	**2.7**	3.93	2.48	**81**	6/30	**1.30**	1.73	9/30	.62	.61	YES
	2317	Pool Corp.	(NDQ)	POOL	**325.20**	**2**	**2**	**3**	.90	185- 250	(N- N%)	**44.9**	**0.7**	7.25	2.32	**81**	6/30	**3.87**	3.22	9/30	.58	.55	YES
	2522	Popular Inc.	(NDQ)	BPOP	**36.71**	**4**	**3**	**4**	1.35	80- 120	(120-225%)	**6.8**	**4.4**	5.38	1.60	**73**	6/30	**1.49**	1.76	12/31	.40	.30	YES
850	**2222**	Portland General		POR	**35.60**	**2**	**3**	**3**	.85	45- 60	(25- 70%)	**44.0**	**4.6**	.81	1.63	**16**	6/30	**.43**	.28	12/31	▲.408	.385	YES
	745	POSCO ADR(g)		PKX	**42.07**	**3**	**3**	**4**	1.20	65- 95	(55-125%)	**14.0**	**4.3**	3.00	1.80	**67**	6/30	**1.13(p)**	3.65(p)	9/30	.105	.411	YES
	1933	Post Holdings		POST	**84.66**	**3**	**3**	**4**	.95	115- 175	(35-105%)	**23.1**	**NIL**	3.67	NIL	**18**	6/30	**.75**	1.19	9/30	NIL	NIL	YES
	1166	PotlatchDeltic Corp.	(NDQ)	PCH	**41.80**	**3**	**3**	**1**	1.10	50- 75	(20- 80%)	**22.8**	**3.8**	1.83	1.60	**62**	6/30	**.04**	.25	9/30	.40	.40	YES
	1371	Power Integrations	(NDQ)	POWI	**54.30**	**2**	**3**	**2**	.85	40- 60	(N- 10%)	**40.5**	**0.8**	1.34	.44	**11**	6/30	**.22**	.19	9/30	▲.11	.085	YES
	824	Premier, Inc.	(NDQ)	PINC	**32.57**	**3**	**3**	**3**	.75	40- 60	(25- 85%)	**13.9**	**2.3**	2.35	.76	**30**	6/30	**.58**	.68	9/30	▲.19	NIL	YES
452	**1576**	Pretium Resources		PVG	**12.56**	**2**	**5**	**3**	.60	20- 40	(60-220%)	**14.1**	**NIL**	.89	NIL	**5**	6/30	**.18**	.06	9/30	NIL	NIL	YES
	2572	Price (T. Rowe) Group	(NDQ)	TROW	**128.55**	**3**	**1**	**2**	1.05	145- 175	(15- 35%)	**17.6**	**2.9**	7.29	3.70	**55**	6/30	**2.55**	2.15	9/30	.90	.76	YES
	2149	PriceSmart	(NDQ)	PSMT	**67.94**	**3**	**3**	**3**	.70	85- 125	(25- 85%)	**28.8**	**1.0**	2.36	.70	**19**	5/31	**.41**	.46	9/30	.35	.35	YES
	1562	Primerica, Inc.		PRI	**114.76**	**2**	**3**	**1**	1.30	130- 195	(15- 70%)	**11.8**	**1.4**	9.70	1.60	**51**	6/30	**2.51**	2.28	9/30	.40	.34	YES
	1981	Primo Water Corp.		PRMW	**14.19**	**3**	**3**	**2**	1.10	12- 18	(N- 25%)	**88.7**	**1.7**	.16	.24	**26**	6/30	**d.85**	.03	9/30	.06	.06	YES
	1234	Primoris Services	(NDQ)	PRIM	**18.74**	**2**	**3**	**4**	1.20	30- 45	(60-140%)	**9.7**	**1.3**	1.93	.24	**52**	6/30	**.68**	.35	12/31	.06	.06	YES
	2573	Principal Fin'l Group	(NDQ)	PFG	**40.10**	**4**	**3**	**3**	1.45	60- 90	(50-125%)	**7.7**	**5.6**	5.20	2.24	**55**	6/30	**1.46**	1.52	9/30	.56	.55	YES
235	**1195**	Procter & Gamble		PG	**138.01**	**1**	**1**	**3**	.75	120- 150	(N- 10%)	**25.7**	**2.3**	5.36	3.16	**1**	6/30	**1.16**	1.10	9/30	.791	.746	YES
	769	Progressive Corp.		PGR	**93.98**	**1**	**1**	**3**	.80	100- 125	(5- 35%)	**15.8**	**0.4**	5.93	.40	**34**	6/30	**1.84**	1.42	12/31	.10	.10	YES
	1538	Prologis		PLD	**100.03**	**1**	**2**	**2**	1.05	95- 130	(N- 30%)	**43.7**	**2.4**	2.29	2.44	**65**	6/30	**.54**	.60	9/30	.58	.53	YES
	2427	ProPetro Holding		PUMP	**4.08**	**–**	**5**	**–**	1.90	8- 15	(95-270%)	**NMF**	**NIL**	d.77	NIL	**94**	6/30	**d.26**	.35	9/30	NIL	NIL	YES
	734	Proto Labs, Inc.		PRLB	**131.78**	**3**	**3**	**2**	1.10	140- 210	(5- 60%)	**63.4**	**NIL**	2.08	NIL	**79**	6/30	**.47**	.60	9/30	NIL	NIL	YES
	1508	Provident Fin'l Svcs.		PFS	**12.42**	**4**	**3**	**3**	1.15	18- 25	(45-100%)	**12.3**	**7.4**	1.01	.92	**63**	6/30	**.22**	.38	9/30	.23	.23	YES
	1563	Prudential Fin'l		PRU	**64.03**	**4**	**3**	**3**	1.50	95- 145	(50-125%)	**6.5**	**6.9**	9.83	4.40	**51**	6/30	**1.85**	3.14	9/30	1.10	1.00	YES
	146	Public Serv. Enterprise		PEG	**54.35**	**3**	**1**	**3**	.90	55- 65	(N- 20%)	**14.8**	**3.7**	3.67	2.00	**46**	6/30	**.89**	.86	9/30	.49	.47	YES
	1539	Public Storage		PSA	**221.13**	**3**	**1**	**5**	.85	230- 285	(5- 30%)	**29.4**	**3.6**	7.51	8.00	**65**	6/30	**1.41**	1.76	9/30	2.00	2.00	YES
2667	**1133**	PulteGroup, Inc.		PHM	**45.76**	**2**	**3**	**2**	1.40	45- 70	(N- 55%)	**10.8**	**1.1**	4.25	.50	**13**	6/30	**1.15**	.86	12/31	.12	.11	YES
	1406	Pure Storage		PSTG	**15.22**	**2**	**4**	**3**	1.15	25- 45	(65-195%)	**NMF**	**NIL**	d.41	NIL	**20**	7/31	**d.25**	d.26	9/30	NIL	NIL	YES
	542	**QEP Resources**		QEP					SEE FINAL REPORT														
	842	QIAGEN N.V.	(NDQ)	QGEN	**51.51**	**▲2**	**3**	**3**	.75	60- 90	(15- 75%)	**27.4**	**NIL**	1.88	NIL	**12**	6/30	**.38**	.19	9/30	NIL	NIL	YES
241	**1372**	Qorvo Inc.	(NDQ)	QRVO	**128.43**	**3**	**3**	**3**	1.10	160- 245	(25- 90%)	**25.2**	**NIL**	5.10	NIL	**11**	6/30	**.83**	.33	9/30	NIL	NIL	YES
	2378	Quad/Graphics Inc.		QUAD					SEE FINAL REPORT														
	585	Quaker Chemical		KWR	**179.02**	**3**	**3**	**1**	1.05	140- 210	(N- 15%)	**48.8**	**0.9**	3.67	1.54	**58**	6/30	**.21**	1.56	9/30	.385	.385	YES
235	**961**	Qualcomm Inc.	(NDQ)	QCOM	**118.47**	**3**	**3**	**3**	1.00	155- 235	(30-100%)	**23.6**	**2.2**	5.03	2.60	**32**	6/30	**.86**	.80	9/30	.65	.62	YES
	1118	Quanex Bldg. Prod.		NX	**18.66**	**▲3**	**3**	**5**	1.35	15- 25	(N- 35%)	**23.9**	**1.7**	.78	.32	**38**	7/31	**.34**	.41	9/30	.08	.08	YES
	1235	Quanta Services		PWR	**52.89**	**3**	**3**	**3**	1.25	65- 100	(25- 90%)	**14.0**	**0.4**	3.78	.20	**52**	6/30	**.74**	.31	12/31	.05	.04	YES
	810	Quest Diagnostics		DGX	**113.88**	**3**	**2**	**3**	.95	125- 170	(10- 50%)	**15.5**	**2.0**	7.36	2.24	**33**	6/30	**1.42**	1.73	12/31	.56	.53	YES
1029	**231**	Quidel Corp.	(NDQ)	QDEL	**198.64**	**3**	**3**	**3**	.75	250- 380	(25- 90%)	**32.2**	**NIL**	6.17	NIL	**24**	6/30	**1.55**	.03	9/30	NIL	NIL	YES
1428	**2181**	Qurate Retail	(NDQ)	QRTEA	**7.39**	**–**	**3**	**–**	1.20	18- 25	(145-240%)	**7.0**	**NIL**	1.05	NIL	**72**	6/30	**.53**	.28	9/30	NIL	NIL	YES
	1728	**RBC Bearings**	(NDQ)	ROLL	**122.75**	**3**	**3**	**3**	1.35	125- 185	(N- 50%)	**31.5**	**NIL**	3.90	NIL	**49**	6/30	**.95**	1.23	9/30	NIL	NIL	YES

(•) All data adjusted for announced stock split or stock dividend. See back page of Ratings & Reports.
◆ New figure this week.
(b) Canadian Dollars.
(d) Deficit.
(f) The estimate may reflect a probable increase or decrease. If a dividend boost or cut is possible but not probable, two figures are shown, the first is the more likely.
(g) Dividends subject to foreign withholding tax for U.S. residents.
(h) Est'd Earnings & Est'd Dividends after conversion to U.S. dollars at Value Line estimated translation rate.
(j) All Index data expressed in hundreds.
(p) 6 months (q) Asset Value
N=Negative figure NA=Not available NMF=No meaningful figure

PAGE NUMBERS
Bold type refers to full report.
The number on the left signifies a Supplement (if available).

Supp.	Page	NAME OF STOCK	Ticker Symbol	Recent Price	Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
1428	1158	RH	RH	361.06	3	4	3	1.60	250- 415	(N- 15%)	37.1	NIL	9.73	NIL	78	7/31	4.90	3.20	9/30	NIL	NIL	YES
2668	770	RLI Corp.	RLI	84.52	2	2	1	.75	80- 110	(N- 30%)	32.9	1.1	2.57	.96	34	6/30	.77	.66	9/30	.24	.23	YES
	2428	RPC Inc.	RES	2.66	–	5	–	1.10	4- 8	(50-200%)	NMF	NIL	d.66	NIL	94	6/30	d.10	.03	9/30	NIL	NIL	YES
	586	RPM Int'l	RPM	82.49	3	3	2	1.10	85- 130	(5- 60%)	31.8	1.7	2.59	1.44	58	5/31	.84	1.24	9/30	.36	.35	YES
	2113	Ralph Lauren	RL	70.44	4	3	5	1.20	125- 190	(75-170%)	31.3	NIL	2.25	NIL	90	6/30	d1.82	1.77	9/30	▼NIL	.688	YES
	1373	Rambus Inc. (NDQ)	RMBS	13.75	3	3	3	1.05	13- 19	(N- 40%)	NMF	NIL	d.08	NIL	11	6/30	d.09	.22	9/30	NIL	NIL	YES
	2412	Range Resources	RRC	7.30	3	4	2	.95	10- 16	(35-120%)	NMF	NIL	d.22	NIL	91	6/30	d.10	.02	9/30	NIL	.02	YES
	631	Rattler Midstream LP (NDQ)	RTLR	6.00	–	4	–	NMF	19- 30	(215-400%)	8.3	19.3	.72	1.16-NIL	93	6/30	.05	.11	9/30	.29	NIL	YES
	1775	Raven Inds. (NDQ)	RAVN	21.91	4	3	3	1.05	▼ 35- 55	(60-150%)	40.6	NIL	▲.54	NIL	60	7/31	.16	.24	12/31	▼NIL	.13	YES
	1815	Raymond James Fin'l	RJF	72.69	3	3	4	1.15	100- 150	(40-105%)	13.8	2.3	▲5.28	1.70	53	6/30	1.23	1.80	9/30	.37	.34	YES
	1167	Rayonier Inc.	RYN	26.89	3	3	3	1.05	25- 35	(N- 30%)	96.0	4.0	.28	1.08	62	6/30	.11	.14	9/30	.27	.27	YES
2668	722	Raytheon Technologies	RTX	58.89	–	1	–	NMF	105- 130	(80-120%)	NMF	3.3	d.53	1.92	69	6/30	d2.55	2.20	9/30	.475	.735	YES
	1776	Realogy Holdings	RLGY	9.53	3	4	2	1.55	▲ 18- 30	(90-215%)	17.3	NIL	▲.55	NIL	60	6/30	.23	.59	9/30	NIL	.09	YES
	2204	RealReal (The) (NDQ)	REAL	15.47	–	4	–	NMF	17- 25	(10- 60%)	NMF	NIL	d1.06	NIL	54	6/30	d.42	d.28	9/30	NIL	NIL	YES
	1540	Realty Income Corp.	O	61.67	▼2	3	4	1.00	70- 110	(15- 80%)	41.4	4.7	1.49	2.88	65	6/30	.31	.31	9/30	▲.701	.68	YES
	365	Red Robin Gourmet (NDQ)	RRGB	13.60	5	5	5	1.40	20- 35	(45-155%)	NMF	NIL	d6.44	NIL	75	6/30	d3.31	1.03	9/30	NIL	NIL	YES
	2368	Red Rock Resorts (NDQ)	RRR	17.53	5	4	4	1.60	16- 25	(N- 45%)	NMF	NIL	d1.89	NIL	87	6/30	d1.01	.13	9/30	NIL	.10	YES
	1729	Regal Beloit	RBC	95.88	3	3	2	1.15	▼ 100- 155	(5- 60%)	21.1	1.3	▲4.54	1.20	49	6/30	.95	1.52	9/30	.30	.30	YES
	1541	Regency Centers Corp.	REG	38.56	4	3	3	1.05	55- 85	(45-120%)	25.0	6.2	1.54	2.38	65	6/30	.11	.31	9/30	.595	.585	YES
	843	Regeneron Pharmac. (NDQ)	REGN	571.92	1	3	2	.70	645- 970	(15- 70%)	21.1	NIL	27.07	NIL	12	6/30	7.61	5.23	9/30	NIL	NIL	YES
	2523	Regions Financial	RF	11.51	4	3	5	1.40	19- 30	(65-160%)	21.7	5.4	.53	.62-.40	73	6/30	d.25	.37	12/31	.155	.155	YES
	1007	Regis Corp.	RGS	5.76	–	4	–	1.30	15- 25	(160-335%)	NMF	NIL	d.61	NIL	47	6/30	d1.01	.62	9/30	NIL	NIL	YES
	1564	Reinsurance Group	RGA	97.22	4	3	5	1.45	105- 155	(10- 60%)	16.1	3.0	6.04	2.90	51	6/30	1.36	3.31	9/30	.70	.70	YES
2668	746	Reliance Steel	RS	104.27	3	3	2	1.15	130- 195	(25- 85%)	19.0	2.4	5.50	2.50	67	6/30	1.24	2.69	9/30	.625	.55	YES
	2025	RenaissanceRe Hldgs.	RNR	170.04	3	2	1	.85	160- 215	(N- 25%)	14.0	0.8	12.14	1.40	66	6/30	4.06	4.78	9/30	.35	.34	YES
	2150	Rent-A-Center (NDQ)	RCII	30.44	2	4	2	1.20	30- 55	(N- 80%)	12.8	3.8	2.38	1.16	19	6/30	.80	.60	12/31	◆.29	.25	YES
	409	Republic Services	RSG	94.46	3	2	3	.90	95- 125	(N- 30%)	29.1	1.8	3.25	1.70	40	6/30	.81	.79	12/31	◆▲.425	.405	YES
	1340	Resideo Technologies	REZI	11.13	3	4	2	1.70	14- 25	(25-125%)	23.2	NIL	.48	NIL	59	6/30	d.62	d.09	9/30	NIL	NIL	YES
	232	ResMed Inc.	RMD	172.00	1	3	2	.95	110- 165	(N- N%)	38.3	0.9	4.49	1.56	24	6/30	1.22	.48	9/30	.39	.39	YES
	396	Resources Connection (NDQ)	RGP	11.76	3	3	3	1.05	25- 40	(115-240%)	12.6	4.8	.93	.56	39	5/31	.13	.29	9/30	.14	.14	YES
	366	Restaurant Brands Int'l	QSR	57.91	3	3	4	1.15	95- 140	(65-140%)	33.5	3.7	1.73	2.14	75	6/30	.33	.71	12/31	.52	.50	YES
	1008	Revlon Inc.	REV	6.73	–	4	–	1.15	17- 30	(155-345%)	NMF	NIL	d2.99	NIL	47	6/30	d1.56	d.99	9/30	NIL	NIL	YES
638	2205	Revolve Group	RVLV	16.87	–	3	–	NMF	20- 30	(20- 80%)	52.7	NIL	.32	NIL	54	6/30	.20	.18	9/30	NIL	NIL	YES
	1730	Rexnord Corp.	RXN	29.23	3	3	2	1.20	50- 75	(70-155%)	19.5	1.1	1.50	.32	49	6/30	.29	.38	9/30	.08	NIL	YES
	1181	Reynolds Consumer (NDQ)	REYN	31.22	–	3	–	NMF	35- 50	(10- 60%)	15.2	2.8	2.05	.88	42	6/30	.53	NA	9/30	▲.22	NIL	YES
	962	Ribbon Communications(NDQ)	RBBN	3.80	–	5	–	1.05	6- 10	(60-165%)	NMF	NIL	d.13	NIL	32	6/30	d.06	.45	9/30	NIL	NIL	YES
	2605	RingCentral, Inc.	RNG	267.80	2	3	3	.95	295- 445	(10- 65%)	NMF	NIL	1.12	NIL	2	6/30	.24	.21	9/30	NIL	NIL	YES
	1592	Rio Tinto plc	RIO	60.49	3	3	2	1.10	80- 120	(30-100%)	9.7	6.5	6.25	3.96	76	6/30	2.94(p)	3.02(p)	9/30	1.55	1.51	YES
	397	Ritchie Brothers	RBA	58.19	3	3	2	.95	50- 75	(N- 30%)	39.6	1.5	1.47	.88	39	6/30	.49	.49	9/30	▲.22	.20	YES
★★	969	Rite Aid Corp.	RAD	9.78	2	5	1	.70	14- 25	(45-155%)	32.6	NIL	.30	NIL	19	8/31	◆.25	.12	9/30	NIL	NIL	YES
	1647	Robert Half Int'l	RHI	53.24	3	2	3	1.20	75- 100	(40- 90%)	23.6	2.7	2.26	1.42	68	6/30	.41	.98	9/30	.34	.31	YES
	1314	Rockwell Automation	ROK	219.99	3	2	2	1.15	215- 290	(N- 30%)	33.3	1.9	6.61	4.08	61	6/30	1.27	2.40	9/30	1.02	.97	YES
	1777	Rogers Communications(TSE)	RCIB.TO	53.00b	3	2	3	.75	75- 100	(40- 90%)	18.3	4.0	▼2.89	2.10	60	6/30	.60(b)	1.16(b)	12/31	.50(b)	.50(b)	YES
	1341	Rogers Corp.	ROG	99.10	3	3	2	1.15	120- 185	(20- 85%)	22.1	NIL	4.48	NIL	59	6/30	1.13	1.64	9/30	NIL	NIL	YES
1651	2341	Roku, Inc. (NDQ)	ROKU	186.29	3	4	3	.95	150- 250	(N- 35%)	NMF	NIL	d1.15	NIL	57	6/30	d.35	d.08	9/30	NIL	NIL	YES
	398	Rollins, Inc.	ROL	54.66	1	2	3	.85	55- 70	(N- 30%)	71.0	0.6	.77	.32	39	6/30	.23	.20	9/30	.08	.105	YES
	1731	Roper Tech.	ROP	400.60	3	1	1	1.00	415- 510	(5- 25%)	31.7	0.5	12.65	2.05	49	6/30	2.94	3.07	12/31	.513	.463	YES
2453	2005	Rosetta Stone	RST	29.90	3	4	3	.95	18- 30	(N- N%)	NMF	NIL	d.89	NIL	48	6/30	d.15	d.13	9/30	NIL	NIL	YES
	2206	Ross Stores (NDQ)	ROST	92.26	3	3	5	1.25	110- 165	(20- 80%)	39.8	NIL	2.32	NIL	54	7/31	.06	1.14	9/30	NIL	.255	YES
	2524	Royal Bank of Canada (TSE)	RY.TO	95.56b	3	1	3	.85	120- 145	(25- 50%)	20.8	4.7	4.60	4.50	73	7/31	2.20(b)	2.22(b)	12/31	1.08(b)	1.05(b)	YES
	2318	Royal Caribbean	RCL	66.09	5	5	5	1.50	90- 165	(35-150%)	NMF	NIL	d7.72	NIL	81	6/30	d7.83	2.25	9/30	▼NIL	.70	YES
	519	Royal Dutch Shell 'B'	RDSB	25.12	4	3	3	1.30	65- 100	(160-300%)	NMF	5.1	d4.80	1.28	92	6/30	d4.66	.74	9/30	.32	.94	YES
	1577	Royal Gold (NDQ)	RGLD	119.20	2	3	1	.75	165- 245	(40-105%)	38.0	1.0	3.14	1.20	5	6/30	.53	.40	12/31	.28	.265	YES
	1207	Royce Value Trust	RVT	12.59	–	3	–	1.20	16- 25	(25-100%)	NMF	1.0	NMF	.13	–	6/30	14.33(q)	17.35(q)	12/31	NIL	NIL	
	2132	Rush Enterprises 'A' (NDQ)	RUSHA	50.34	3	3	2	1.00	45- 70	(N- 40%)	36.2	1.1	1.39	.56	44	6/30	.46	1.10	9/30	▲.14	.13	YES
	747	Russel Metals (TSE)	RUS.TO	18.09b	3	3	3	1.20	30- 45	(65-150%)	24.8	8.4	.73	1.52-.76	67	6/30	.07(b)	.50(b)	9/30	.38(b)	.38(b)	YES
	311	Ryanair Hldgs plc ADS(NDQ)	RYAAY	81.41	3	4	2	1.05	80- 135	(N- 65%)	NMF	NIL	d3.85	NIL	89	6/30	d.94	1.16	9/30	NIL	NIL	YES
	326	Ryder System	R	41.91	▲3	3	4	1.20	55- 85	(30-105%)	NMF	5.3	d.83	2.24	29	6/30	d.95	1.40	9/30	.56	.56	YES
	1542	Ryman Hospitality	RHP	37.60	5	3	4	1.60	70- 105	(85-180%)	NMF	NIL	d8.35	NIL	65	6/30	d3.16	.95	9/30	▼NIL	.90	YES
	443	**S&P Global**	SPGI	355.55	1	2	3	1.05	270- 365	(N- 5%)	32.7	0.8	10.87	2.85	9	6/30	3.40	2.43	9/30	.67	.57	YES
	2606	SAP SE	SAP	157.08	2	2	2	.90	145- 195	(N- 25%)	35.7	1.1	4.40	1.77	2	6/30	.82	.67	9/30	NIL	NIL	YES
	601	SBA Communications (NDQ)	SBAC	310.48	▼3	3	3	.90	255- 385	(N- 25%)	NMF	0.7	1.79	2.18	36	6/30	.20	.28	9/30	.465	.37	YES
	2633	SEI Investments (NDQ)	SEIC	51.59	3	2	4	1.25	75- 105	(45-105%)	17.3	1.4	2.98	.74	15	6/30	.68	.82	9/30	NIL	NIL	YES
	336	SFL Corp. Ltd	SFL	7.55	4	4	4	1.25	13- 20	(70-165%)	8.3	13.2	.91	1.00-.50	71	6/30	.11	.26	9/30	.25	.35	YES
	1795	SJW Group	SJW	61.23	–	3	–	.80	65- 95	(5- 55%)	28.2	2.1	2.17	1.28	10	6/30	.69	.47	9/30	.32	.30	YES
	1543	SL Green Realty	SLG	48.27	4	3	4	1.30	85- 125	(75-160%)	25.4	2.4	1.90	1.18	65	6/30	.74	1.94	9/30	.885	.85	YES
	2574	SLM Corporation (NDQ)	SLM	7.97	3	3	5	1.15	17- 25	(115-215%)	21.0	1.5	.38	.12	55	6/30	d.23	.34	9/30	.03	.03	YES
	1236	SNC-Lavalin Group (TSE)	SNC.TO	21.79b	4	3	3	1.00	30- 50	(40-130%)	10.6	0.4	2.06	.08	52	6/30	d.22(b)	d12.07(b)	9/30	.02(b)	.02(b)	YES
	1778	SPX Corp.	SPXC	45.45	3	3	3	1.40	45- 70	(N- 55%)	17.3	NIL	2.63	NIL	60	6/30	.64	.67	9/30	NIL	NIL	YES
	1732	SPX FLOW, Inc.	FLOW	43.38	3	3	2	1.75	40- 60	(N- 40%)	53.6	NIL	▲.81	NIL	49	6/30	.15	.26	9/30	NIL	NIL	YES
	2607	SS&C Techn. Hldgs (NDQ)	SSNC	61.42	3	3	2	1.15	80- 125	(30-105%)	16.1	0.9	3.82	.56	2	6/30	1.04	.91	9/30	▲.14	.10	YES
	2525	SVB Fin'l Group (NDQ)	SIVB	237.48	3	3	2	1.25	305- 455	(30- 90%)	15.4	NIL	15.42	NIL	73	6/30	4.42	6.08	9/30	NIL	NIL	YES
	1834	Sabre Corp. (NDQ)	SABR	6.71	5	5	4	1.85	▼ 20- 40	(200-495%)	NMF	NIL	▼d2.71	NIL	22	6/30	d1.30	.24	9/30	NIL	.14	YES
	1632	Sage Therapeutics (NDQ)	SAGE	59.89	2	4	5	1.40	80- 135	(35-125%)	NMF	NIL	d9.96	NIL	14	6/30	d2.63	d3.28	9/30	NIL	NIL	YES
	1237	St. Joe Corp.	JOE	20.85	3	3	2	.85	25- 40	(20- 90%)	48.5	NIL	.43	NIL	52	6/30	.13	.17	9/30	NIL	NIL	YES
848	1835	salesforce.com	CRM	246.67	▲1	3	3	.85	▲ 225- 340	(N- 40%)	69.7	NIL	▲3.54	NIL	22	7/31	2.85	.11	9/30	NIL	NIL	YES
	1009	Sally Beauty	SBH	9.06	4	3	2	1.05	20- 30	(120-230%)	9.2	NIL	.98	NIL	47	6/30	d.21	.59	9/30	NIL	NIL	YES
	1934	Sanderson Farms (NDQ)	SAFM	119.97	3	3	4	.55	125- 190	(5- 60%)	21.9	1.5	5.48	1.76	18	7/31	1.48	2.41	12/31	▲.44	.32	YES
	1935	Sanfilippo (John B.) (NDQ)	JBSS	74.84	2	3	2	.55	75- 110	(N- 45%)	17.7	0.9	4.22	.65	18	6/30	.89	.98	9/30	.65	.60	YES
	1342	Sanmina Corp. (NDQ)	SANM	27.13	3	3	4	1.00	45- 65	(65-140%)	9.0	NIL	3.01	NIL	59	6/30	.86	.82	9/30	NIL	NIL	YES
	1633	Sanofi ADR (NDQ)	SNY	51.00	2	1	3	.85	50- 60	(N- 20%)	10.3	3.4	4.96	1.75	14	6/30	3.40	d.04	9/30	NIL	NIL	YES
	2575	Santander Consumer USA	SC	17.22	4	3	4	1.50	25- 40	(45-130%)	8.4	5.1	2.05	.88	55	6/30	d.30	1.05	9/30	.22	.22	YES

★★ Supplementary Report in this week's issue.
▲ Arrow indicates the direction of a change. When it appears with the Latest Dividend, the arrow signals that a change in the regular payment rate has occurred in the latest quarter. For Timeliness, 3-5 year Target Price Range, or Estimated Earnings 12 months to 3-31-21, the arrow indicates a change since the preceding week. When a diamond ◆ (indicating a new figure) appears alongside the latest quarterly earnings results, the rank change probably was primarily caused by the earnings report. In other cases, the change is due to the dynamics of the ranking system and could simply be the result of the improvement or weakening of other stocks.

PAGE NUMBERS
Bold type refers to full report.
The number on the left signifies a Supplement (if available).

Supp.	Page	NAME OF STOCK	Ticker Symbol	Recent Price	RANKS Timeliness	Safety	Technical	Beta	3-5 year Target Price Range and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	LATEST RESULTS Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	1936	Saputo Inc. (TSE)	SAP.TO	33.81b	2	1	3	.60	40- 50 (20- 50%)	24.2	2.1	1.40	.70	18	6/30	.39(b)	.42(b)	12/31	▲.175(b)	.17(b)	YES
	844	Sarepta Therapeutics (NDQ)	SRPT	143.20	2	4	2	1.15	170- 280 (20- 95%)	NMF	NIL	d6.27	NIL	12	6/30	d1.93	d3.74	9/30	NIL	NIL	YES
1030	1407	ScanSource (NDQ)	SCSC	19.98	4	3	4	1.15	35- 55 (75-175%)	13.0	NIL	1.54	NIL	20	6/30	.19	.71	9/30	NIL	NIL	YES
	233	Schein (Henry) (NDQ)	HSIC	59.65	–	3	–	NMF	85- 125 (40-110%)	27.5	NIL	2.17	NIL	24	6/30	d.08	.78	9/30	NIL	NIL	YES
	2429	Schlumberger Ltd.	SLB	16.45	5	3	3	1.30	30- 45 (80-175%)	NMF	3.0	NIL	.50	94	6/30	.05	.35	12/31	.125	.50	YES
	327	Schneider National	SNDR	25.45	2	3	1	.80	25- 35 (N- 40%)	22.1	1.0	1.15	.26	29	6/30	.26	.19	9/30	.065	.06	YES
	748	Schnitzer Steel (NDQ)	SCHN	19.93	3	3	4	1.10	35- 55 (75-175%)	NMF	3.8	.11	.75	67	5/31	d.18	.56	9/30	.188	.188	YES
	2379	Scholastic Corp. (NDQ)	SCHL	20.81	▼4	3	3	.95	35- 50 (70-140%)	NMF	2.9	d4.38	.60	88	8/31	◆d.90	d1.59	12/31	◆.15	.15	YES
	1807	Schwab (Charles) (NDQ)	SCHW	36.20	3	3	5	1.15	50- 70 (40- 95%)	18.2	2.1	1.99	.75	6	6/30	.56	.66	9/30	.18	.17	YES
	1994	Schweitzer-Mauduit Int'l	SWM	28.79	3	3	3	1.05	35- 55 (20- 90%)	9.8	6.1	2.95	1.76	25	6/30	.68	.66	9/30	.44	.44	YES
	399	Science Applications	SAIC	79.87	2	3	3	1.20	130- 195 (65-145%)	12.5	1.9	6.37	1.48	39	7/31	1.63	1.35	12/31	.37	.37	YES
1434	2369	Scientific Games (NDQ)	SGMS	36.69	4	5	5	1.90	25- 45 (N- 25%)	NMF	NIL	d2.65	NIL	87	6/30	d2.15	d.09	9/30	NIL	NIL	YES
	2014	SciPlay Corp. (NDQ)	SCPL	16.14	–	3	–	NMF	18- 25 (10- 55%)	16.8	NIL	.96	NIL	4	6/30	.27	.54	9/30	NIL	NIL	YES
	1196	Scotts Miracle-Gro	SMG	152.30	2	3	1	1.05	115- 175 (N- 15%)	22.2	1.6	6.87	2.48	1	6/30	3.80	3.15	9/30	▲.62	.58	YES
★★	2342	Scripps (E.W.) 'A' (NDQ)	SSP	11.36	–	3	–	1.25	25- 40 (120-250%)	NMF	1.8	d.05	.20	57	6/30	d.27	d.01	9/30	.05	.05	YES
638	1988	Sea Limited ADS	SE	159.97	3	4	3	.90	65- 105 (N- N%)	NMF	NIL	d2.21	NIL	37	6/30	d.68	d.49	9/30	NIL	NIL	YES
	1408	Seagate Technology (NDQ)	STX	49.66	1	3	5	1.10	45- 70 (N- 40%)	11.0	5.3	4.50	2.65	20	6/30	1.20	.86	12/31	.65	.63	YES
	1182	Sealed Air	SEE	37.89	2	3	2	1.05	60- 90 (60-140%)	13.0	1.7	2.91	.64	42	6/30	.64	.16	9/30	.16	.16	YES
	845	Seattle Genetics (NDQ)	SGEN	190.51	2	4	4	.90	155- 265 (N- 40%)	NMF	NIL	d1.42	NIL	12	6/30	d.12	d.49	9/30	NIL	NIL	YES
	2319	SeaWorld Entertainment	SEAS	20.64	3	4	4	1.30	30- 50 (45-140%)	NMF	NIL	d1.33	NIL	81	6/30	d1.68	.64	9/30	NIL	NIL	YES
	811	Select Med. Hldgs.	SEM	19.82	4	3	3	1.45	25- 35 (25- 75%)	15.5	NIL	1.28	NIL	33	6/30	.38	.33	9/30	NIL	NIL	YES
	771	Selective Ins. Group (NDQ)	SIGI	49.99	3	3	3	.85	55- 85 (10- 70%)	13.5	1.8	3.71	.92	34	6/30	.40	1.16	9/30	.23	.20	YES
	2223	Sempra Energy	SRE	116.71	1	2	3	.95	140- 190 (20- 65%)	16.3	3.7	7.15	4.34	16	6/30	1.57	.85	12/31	1.045	.968	YES
	1374	Semtech Corp. (NDQ)	SMTC	53.19	2	3	1	1.00	60- 85 (15- 60%)	30.1	NIL	1.77	NIL	11	7/31	.43	.38	9/30	NIL	NIL	YES
	131	Sensata Techn. plc	ST	42.89	3	3	4	1.30	65- 95 (50-120%)	23.6	NIL	1.82	NIL	31	6/30	.18	.93	9/30	NIL	NIL	YES
	1937	Sensient Techn.	SXT	57.58	3	3	4	.90	55- 85 (N- 50%)	20.0	2.8	2.88	1.60	18	6/30	.72	.81	9/30	.39	.36	YES
	1848	Service Corp. Int'l	SCI	43.07	2	3	3	1.00	50- 75 (15- 75%)	21.9	1.8	1.97	.76	–	6/30	.58	.47	9/30	.19	.18	YES
	1544	Service Properties (NDQ)	SVC	8.23	5	3	4	1.90	20- 30 (145-265%)	NMF	0.5	d1.90	.04	65	6/30	d.23	.05	9/30	.01	.54	YES
	400	ServiceMaster Global	SERV	41.38	–	3	–	NMF	40- 60 (N- 45%)	46.5	NIL	.89	NIL	39	6/30	.30	.43	9/30	NIL	NIL	YES
	2634	ServiceNow, Inc.	NOW	484.21	1	3	3	.95	280- 420 (N- N%)	NMF	NIL	1.20	NIL	15	6/30	.20	d.06	9/30	NIL	NIL	YES
	367	Shake Shack	SHAK	68.50	4	4	5	1.15	55- 90 (N- 30%)	NMF	NIL	d.67	NIL	75	6/30	d.45	.29	9/30	NIL	NIL	YES
	1019	Shaw Commun. 'B' (TSE)	SJRB.TO	24.63b	3	2	3	.80	25- 35 (N- 40%)	18.7	4.9	1.32	1.20	8	5/31	.35(b)	.44(b)	9/30	.296(b)	.296(b)	YES
	632	Shell Midstream L.P.	SHLX	9.49	5	4	3	1.15	25- 40 (165-320%)	7.4	19.4	1.29	1.84-.92	93	6/30	.32	.38	9/30	.46	.43	YES
	930	Shenandoah Telecom. (NDQ)	SHEN	44.22	2	3	1	.75	60- 85 (35- 90%)	26.0	0.7	1.70	.32	17	6/30	.58	.26	9/30	NIL	NIL	YES
	1143	Sherwin-Williams	SHW	707.06	2	2	3	1.00	605- 820 (N- 15%)	30.4	0.8	23.27	5.54	7	6/30	7.10	6.57	9/30	1.34	1.13	YES
	1836	Shopify Inc.	SHOP	966.50	2	3	3	1.00	▲ 805-1205 (N- 25%)	NMF	NIL	▲2.61	NIL	22	6/30	1.05	.14	9/30	NIL	NIL	YES
	166	Shyft Group (NDQ)	SHYF	18.86	3	3	2	.90	25- 35 (35- 85%)	16.7	0.5	1.13	.10	64	6/30	d.03	.15	9/30	.025	NIL	YES
	1779	Siemens AG (ADS) (PNK)	SIEGY	69.97	–	2	–	1.05	60- 85 (N- 20%)	23.7	3.0	▲2.95	2.12	60	6/30	.68	.75	9/30	NIL	NIL	
2672	602	Sierra Wireless (NDQ)	SWIR	10.58	3	4	1	1.25	16- 25 (50-135%)	NMF	NIL	d1.28	NIL	36	6/30	d.43	d.78	9/30	NIL	NIL	YES
	2526	Signature Bank (NDQ)	SBNY	85.54	4	3	3	1.10	175- 265 (105-210%)	8.8	2.6	9.72	2.24	73	6/30	2.21	2.72	9/30	.56	.56	YES
	2182	Signet Jewelers Ltd.	SIG	19.39	5	4	5	1.85	35- 60 (80-210%)	NMF	NIL	d.06	NIL	72	7/31	d1.13	.51	9/30	NIL	.37	YES
	1183	Silgan Holdings (NDQ)	SLGN	36.79	2	3	3	.85	45- 60 (20- 65%)	13.5	1.3	2.73	.48	42	6/30	.70	.28	9/30	.12	.11	YES
	1375	Silicon Labs. (NDQ)	SLAB	98.37	2	3	3	1.00	90- 135 (N- 35%)	NMF	NIL	.60	NIL	11	6/30	d.04	d.37	9/30	NIL	NIL	YES
	193	Silk Road Medical (NDQ)	SILK	66.50	–	3	–	NMF	20- 30 (N- N%)	NMF	NIL	d.63	NIL	50	6/30	d.32	d.38	9/30	NIL	NIL	YES
	1545	Simon Property Group	SPG	65.79	5	3	4	1.40	120- 180 (80-175%)	17.2	7.9	3.82	5.20	65	6/30	.83	1.60	12/31	◆1.30	2.10	YES
	1938	Simply Good Foods (NDQ)	SMPL	22.00	–	3	–	NMF	15- 25 (N- 15%)	26.2	NIL	.84	NIL	18	5/31	.17	.16	9/30	NIL	NIL	YES
	1119	Simpson Manufacturing	SSD	96.43	2	3	3	1.10	90- 130 (N- 35%)	24.9	1.0	3.87	.92	38	6/30	1.22	.88	12/31	.23	.23	YES
	2343	Sinclair Broadcast (NDQ)	SBGI	20.28	2	3	4	1.25	35- 55 (75-170%)	8.3	3.9	2.45	.80	57	6/30	3.12	.45	9/30	.20	.20	YES
	2344	Sirius XM Holdings (NDQ)	SIRI	5.29	3	4	3	.95	18- 30 (240-465%)	13.9	0.9	.38	.05	57	6/30	.05	.06	9/30	.013	.012	YES
	1546	SITE Centers	SITC	7.26	5	4	4	1.20	7- 12 (N- 65%)	NMF	NIL	d.09	NIL	65	6/30	d.05	.05	9/30	▼NIL	.20	YES
	2183	SiteOne Landscape	SITE	120.46	2	3	3	1.25	105- 155 (N- 30%)	66.2	NIL	1.82	NIL	72	6/30	1.83	1.52	9/30	NIL	NIL	YES
	2320	Six Flags Entertainment	SIX	21.53	5	4	4	1.25	35- 60 (65-180%)	NMF	NIL	d1.75	NIL	81	6/30	d1.62	.94	9/30	NIL	.82	YES
	2161	Skechers U.S.A.	SKX	29.67	3	3	4	1.25	55- 80 (85-170%)	26.5	NIL	1.12	NIL	82	6/30	d.44	.49	9/30	NIL	NIL	YES
	312	SkyWest (NDQ)	SKYW	31.21	5	3	4	1.60	50- 75 (60-140%)	61.2	NIL	.51	NIL	89	6/30	d.51	1.71	9/30	▼NIL	.12	YES
	1376	Skyworks Solutions (NDQ)	SWKS	143.97	3	3	3	1.10	145- 220 (N- 55%)	23.3	1.4	6.18	2.00	11	6/30	1.25	1.35	9/30	▲.50	.44	YES
	1837	Slack Technologies	WORK	27.07	–	3	–	NMF	30- 45 (10- 65%)	NMF	NIL	▲d.38	NIL	22	7/31	d.13	d.65	9/30	NIL	NIL	YES
	2184	Sleep Number Corp. (NDQ)	SNBR	48.34	3	3	3	1.15	65- 95 (35- 95%)	25.4	NIL	1.90	NIL	72	6/30	d.45	.14	9/30	NIL	NIL	YES
1241	1838	Smartsheet Inc.	SMAR	50.23	3	4	5	.45	55- 90 (10- 80%)	NMF	NIL	d.67	NIL	22	7/31	d.22	d.17	9/30	NIL	NIL	YES
849	2321	Smith & Wesson Brands (NDQ)	SWBI	15.51	–	3	–	.45	13- 20 (N- 30%)	14.1	1.3	1.10	.20	81	7/31	.86	d.04	12/31	▲.05	NIL	YES
	1733	Smith (A.O.)	AOS	53.29	3	3	3	.95	50- 75 (N- 40%)	27.5	1.8	▲1.94	.96	49	6/30	.42	.61	9/30	.24	.22	YES
	1939	Smucker (J.M.)	SJM	113.24	1	2	2	.65	120- 160 (5- 40%)	16.8	3.2	6.75	3.60	18	7/31	2.08	1.36	9/30	▲.90	.88	YES
	2655	Snap Inc.	SNAP	25.74	3	4	3	.95	11- 18 (N- N%)	NMF	NIL	d.59	NIL	23	6/30	d.23	d.19	9/30	NIL	NIL	YES
	1734	Snap-on Inc.	SNA	146.71	3	2	3	1.15	185- 250 (25- 70%)	15.7	3.4	▼9.36	4.92	49	6/30	1.85	3.22	9/30	1.08	.95	YES
	1222	SolarEdge Tech. (NDQ)	SEDG	218.29	2	3	3	1.15	170- 250 (N- 15%)	60.0	NIL	3.64	NIL	27	6/30	.70	.69	9/30	NIL	NIL	YES
	2608	SolarWinds Corp.	SWI	20.16	–	3	–	NMF	25- 40 (25-100%)	21.9	NIL	.92	NIL	2	6/30	.25	.20	9/30	NIL	NIL	YES
	2133	Sonic Automotive	SAH	40.92	3	3	2	1.65	35- 50 (N- 20%)	17.1	1.0	2.40	.40	44	6/30	.71	.62	12/31	.10	.10	YES
	1184	Sonoco Products	SON	51.01	3	2	3	1.00	50- 70 (N- 35%)	16.1	3.4	3.16	1.72	42	6/30	.79	.95	9/30	.43	.43	YES
453	1343	Sonos, Inc. (NDQ)	SONO	14.41	3	4	3	.95	14- 25 (N- 75%)	NMF	NIL	d.22	NIL	59	6/30	d.52	d.13	9/30	NIL	NIL	YES
	1989	Sony Corp. ADR(g)	SNE	77.28	2	3	3	.85	70- 105 (N- 35%)	35.9	0.4	2.15	.34	37	6/30	1.73	1.10	9/30	NIL	NIL	YES
	553	South Jersey Inds.	SJI	19.14	▼4	3	3	1.00	35- 45 (85-135%)	12.3	6.4	1.55	1.23	41	6/30	d.01	d.13	12/31	.295	.583	YES
	147	Southern Co.	SO	53.71	3	2	5	.90	50- 70 (N- 30%)	17.1	4.8	3.14	2.60	46	6/30	.75	.85	9/30	.64	.62	YES
	1593	Southern Copper	SCCO	44.89	3	3	2	1.20	50- 70 (10- 55%)	26.9	3.6	1.67	1.60	76	6/30	.34	.52	9/30	▲.40	.40	YES
	313	Southwest Airlines	LUV	38.24	4	3	5	1.05	50- 70 (30- 85%)	NMF	NIL	d6.10	NIL	89	6/30	d2.67	1.37	9/30	NIL	.18	YES
	554	Southwest Gas	SWX	62.44	2	3	4	.90	80- 120 (30- 90%)	14.6	3.7	4.29	2.31	41	6/30	.68	.41	12/31	◆.57	.545	YES
	543	Southwestern Energy	SWN	2.50	3	5	3	.80	8- 16 (220-540%)	11.4	NIL	.22	NIL	86	6/30	NIL	.08	9/30	NIL	NIL	YES
	1957	SpartanNash Co. (NDQ)	SPTN	16.25	2	4	1	.60	20- 35 (25-115%)	15.2	4.7	1.07	.77	21	6/30	.80	d.19	9/30	.193	.19	YES
	1780	Spectrum Brands	SPB	57.29	3	3	3	1.50	▲ 60- 95 (5- 65%)	14.7	2.9	▲3.89	1.68	60	6/30	1.36	1.35	9/30	.42	.42	YES
	555	Spire Inc.	SR	52.89	3	2	3	.80	90- 120 (70-125%)	44.1	4.9	1.20	2.58	41	6/30	d1.87	d.09	12/31	.623	.593	YES
	723	Spirit AeroSystems	SPR	19.98	5	3	4	1.50	45- 65 (125-225%)	NMF	0.2	d3.96	.04	69	6/30	d2.46	1.26	9/30	.01	.12	YES
	314	Spirit Airlines	SAVE	16.53	5	4	4	1.75	20- 35 (20-110%)	NMF	NIL	d7.49	NIL	89	6/30	d3.59	1.69	9/30	NIL	NIL	YES
	1839	Splunk Inc. (NDQ)	SPLK	187.90	3	3	2	1.10	165- 245 (N- 30%)	NMF	NIL	▼d2.96	NIL	22	7/31	d1.64	d.67	9/30	NIL	NIL	YES
	2345	Spotify Tech. S.A.	SPOT	236.42	–	3	–	NMF	175- 265 (N- 10%)	NMF	NIL	d1.45	NIL	57	6/30	d2.10	d.47	9/30	NIL	NIL	YES

(•) All data adjusted for announced stock split or stock dividend. See back page of Ratings & Reports.
◆ New figure this week.
(b) Canadian Dollars.
(d) Deficit.
(f) The estimate may reflect a probable increase or decrease. If a dividend boost or cut is possible but not probable, two figures are shown, the first is the more likely.
(g) Dividends subject to foreign withholding tax for U.S. residents.
(h) Est'd Earnings & Est'd Dividends after conversion to U.S. dollars at Value Line estimated translation rate.
(j) All Index data expressed in hundreds.
(p) 6 months (q) Asset Value
N=Negative figure NA=Not available NMF=No meaningful figure

PAGE NUMBERS
Bold type refers to full report.
The number on the left signifies a Supplement (if available).

Suppl.	Page	NAME OF STOCK	Ticker Symbol	Recent Price	Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	% appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	1958	Sprouts Farmers Market (NDQ)	SFM	21.18	2	3	1	.65	30- 45	(40-110%)	14.7	NIL	1.44	NIL	21	6/30	.57	.30	9/30	NIL	NIL	YES
2029	2609	Square, Inc.	SQ	160.76	2	4	3	1.50	75- 130	(N- N%)	NMF	NIL	d.24	NIL	2	6/30	d.03	d.02	9/30	NIL	NIL	YES
	995	Standard Motor Prod.	SMP	43.97	3	3	3	.80	60- 90	(35-105%)	16.4	NIL	2.68	NIL	70	6/30	.52	.90	9/30	NIL	.23	YES
	1781	Standex Int'l	SXI	59.78	4	3	3	1.05	75- 115	(25- 90%)	18.7	1.5	▼3.20	.88	60	6/30	.65	1.16	9/30	.22	.20	YES
	1735	Stanley Black & Decker	SWK	164.07	3	3	2	1.45	145- 220	(N- 35%)	20.3	1.7	▲8.10	2.80	49	6/30	1.52	2.66	9/30	▲.70	.69	YES
	1238	Stantec Inc. (TSE)	STN.TO	40.86b	2	2	2	.75	50- 65	(20- 60%)	19.8	1.5	2.06	.62	52	6/30	.52(b)	.50(b)	12/31	.155(b)	.145(b)	YES
	368	Starbucks Corp. (NDQ)	SBUX	86.07	3	1	4	1.00	120- 145	(40- 70%)	79.0	2.1	1.09	1.80	75	6/30	d.46	.78	9/30	.41	.36	YES
	2527	State Street Corp.	STT	60.49	1	3	3	1.20	80- 120	(30-100%)	10.0	3.4	6.03	2.08	73	6/30	1.86	1.42	12/31	.52	.52	YES
	749	Steel Dynamics (NDQ)	STLD	29.98	3	3	3	1.25	50- 80	(65-165%)	18.5	3.3	1.62	1.00	67	6/30	.36	.88	12/31	.25	.24	YES
	1159	Steelcase, Inc. 'A'	SCS	9.90	4	3	3	1.15	20- 30	(100-205%)	18.0	4.0	.55	.40	78	8/31	.55	.50	12/31	◆.10	.145	YES
	587	Stepan Company	SCL	110.03	3	3	2	.85	105- 160	(N- 45%)	23.1	1.0	4.77	1.15	58	6/30	1.54	1.30	9/30	.275	.25	YES
	410	Stericycle Inc. (NDQ)	SRCL	63.61	3	3	2	1.10	60- 85	(N- 35%)	28.9	NIL	2.20	NIL	40	6/30	.46	.56	9/30	NIL	NIL	YES
	194	STERIS plc	STE	172.96	3	2	4	1.05	160- 215	(N- 25%)	32.9	0.9	5.25	1.60	50	6/30	1.31	1.23	9/30	▲.40	.37	YES
	1816	Stifel Financial Corp.	SF	50.93	4	3	4	1.35	65- 100	(30- 95%)	10.3	1.4	▲4.95	.71	53	6/30	1.55	1.41	9/30	.17	.15	YES
	1377	STMicroelectronics	STM	30.27	3	3	3	1.15	40- 60	(30-100%)	36.0	0.6	.84	.17	11	6/30	.10	.18	9/30	.042	.06	YES
	996	Stoneridge, Inc.	SRI	18.34	4	3	3	1.10	20- 30	(10- 65%)	NMF	NIL	d.68	NIL	70	6/30	d.81	1.41	9/30	NIL	NIL	YES
	1344	Stratasys Ltd. (NDQ)	SSYS	12.14	4	4	3	.85	17- 30	(40-145%)	NMF	NIL	d1.05	NIL	59	6/30	d.51	.02	9/30	NIL	NIL	YES
	2006	Strategic Education (NDQ)	STRA	94.88	–	3	–	NMF	165- 245	(75-160%)	12.9	2.5	7.34	2.40	48	6/30	2.06	1.59	9/30	.60	.50	YES
	195	Stryker Corp.	SYK	207.25	3	1	4	1.10	230- 285	(10- 40%)	33.9	1.1	6.11	2.30	50	6/30	.64	1.98	12/31	.575	.52	YES
	2322	Sturm, Ruger & Co.	RGR	62.08	2	3	1	.70	55- 85	(N- 35%)	16.9	2.5	3.68	1.54	81	6/30	1.05	.35	9/30	.42	.14	YES
	633	Suburban Propane	SPH	15.00	4	3	5	1.20	25- 35	(65-135%)	12.5	8.0	1.20	1.20-1.55	93	6/30	d.25	d.47	9/30	▼.30	.60	YES
	1120	Summit Materials	SUM	16.83	3	3	4	1.65	30- 45	(80-165%)	14.6	NIL	1.15	NIL	38	6/30	.50	.32	9/30	NIL	NIL	YES
	2576	Sun Life Fin'l Svcs. (TSE)	SLF.TO	54.98b	2	2	3	1.05	60- 80	(10- 45%)	10.9	4.0	5.04	2.20	55	6/30	1.26(b)	1.00(b)	9/30	.55(b)	.525(b)	YES
	520	Suncor Energy (TSE)	SU.TO	17.26b	4	3	2	1.30	60- 85	(250-390%)	NMF	4.9	d.44	.84	92	6/30	d.40(b)	1.74(b)	9/30	.21(b)	.42(b)	YES
	2185	Sunoco LP	SUN	24.70	4	3	3	1.25	30- 50	(20-100%)	10.0	13.4	2.48	3.30	72	6/30	1.64	.43	9/30	.826	.826	YES
1030	1223	SunPower Corp. (NDQ)	SPWR	11.70	–	5	–	1.05	14- 25	(20-115%)	NMF	NIL	d.79	NIL	27	6/30	.11	.75	9/30	NIL	NIL	YES
	196	SurModics, Inc. (NDQ)	SRDX	38.97	2	3	1	.95	35- 55	(N- 40%)	NMF	NIL	d.09	NIL	50	6/30	.18	.11	9/30	NIL	NIL	YES
	963	Switch, Inc.	SWCH	15.48	2	4	2	.85	20- 35	(30-125%)	57.3	1.3	.27	.20	32	6/30	.06	.02	9/30	▲.05	.029	YES
2453	964	Synaptics (NDQ)	SYNA	81.06	3	3	3	1.15	70- 105	(N- 30%)	25.4	NIL	3.19	NIL	32	6/30	.34	d.39	9/30	NIL	NIL	YES
	2577	Synchrony Financial	SYF	25.79	4	3	4	1.50	40- 65	(55-150%)	13.6	3.4	1.90	.88	55	6/30	.06	1.24	9/30	.22	.22	YES
	812	Syneos Health (NDQ)	SYNH	53.39	3	4	3	1.25	75- 130	(40-145%)	16.1	NIL	3.32	NIL	33	6/30	.58	.74	9/30	NIL	NIL	YES
	401	SYNNEX Corp.	SNX	131.50	–	3	–	1.05	170- 255	(30- 95%)	12.1	NIL	10.89	NIL	39	8/31	◆3.33	3.30	9/30	NIL	.375	YES
	2610	Synopsys, Inc. (NDQ)	SNPS	212.64	1	1	3	1.00	170- 205	(N- N%)	38.2	NIL	5.57	NIL	2	7/31	1.74	1.18	9/30	NIL	NIL	YES
	2528	Synovus Financial	SNV	21.10	5	3	4	1.50	60- 95	(185-350%)	10.6	6.3	2.00	1.32-.66	73	6/30	.57	.96	12/31	.33	.30	YES
	1959	Sysco Corp.	SYY	61.85	4	3	5	1.15	75- 100	(20- 60%)	71.1	2.9	.87	1.80	21	6/30	d.29	1.10	12/31	.45	.39	YES
453	931	**T-Mobile US** (NDQ)	TMUS	114.24	–	3	–	.80	110- 165	(N- 45%)	33.6	NIL	3.40	NIL	17	6/30	.64	1.09	9/30	NIL	NIL	YES
	615	TC Energy Corp.	TRP	44.23	3	3	2	1.10	65- 95	(45-115%)	13.1	5.5	3.38	2.44	83	6/30	1.01	.93	9/30	.611	.576	YES
	786	TCF Financial (NDQ)	TCF	23.73	–	3	–	NMF	50- 70	(110-195%)	11.3	5.9	2.10	1.40	84	6/30	.14	1.07	9/30	.35	.35	YES
	1808	TD Ameritrade Holding (NDQ)	AMTD	39.17	–	3	–	1.15	60- 90	(55-130%)	11.1	3.2	3.53	1.24	6	6/30	1.05	1.00	9/30	.31	.30	YES
	1345	TE Connectivity	TEL	97.09	3	2	3	1.15	110- 145	(15- 50%)	25.6	2.0	3.80	1.92	59	6/30	.59	1.50	9/30	.48	.46	YES
	2207	TJX Companies	TJX	55.60	3	3	4	1.10	75- 110	(35-100%)	32.7	NIL	1.70	NIL	54	7/31	d.18	.62	9/30	NIL	.23	YES
	1224	TPI Composites (NDQ)	TPIC	27.76	3	4	1	1.40	35- 55	(25-100%)	NMF	NIL	d.94	NIL	27	6/30	d1.87	.05	9/30	NIL	NIL	YES
	1134	TRI Pointe Group	TPH	17.74	2	3	2	1.50	30- 45	(70-155%)	7.7	NIL	2.31	NIL	13	6/30	.51	.18	9/30	NIL	NIL	YES
	402	TTEC Holdings (NDQ)	TTEC	54.01	2	3	1	1.05	70- 110	(30-105%)	20.3	1.5	2.66	.80	39	6/30	.75	.34	12/31	.40	.32	YES
	1378	TTM Technologies (NDQ)	TTMI	11.44	3	3	5	1.10	25- 35	(120-205%)	11.2	NIL	1.02	NIL	11	6/30	.31	.20	9/30	NIL	NIL	YES
	426	Taiwan Fund	TWN	23.50	–	4	–	.95	30- 45	(30- 90%)	NMF	NIL	NMF	NIL	–	2/28	22.68(q)	19.58(q)	9/30	NIL	NIL	
	1379	Taiwan Semic. ADR	TSM	79.77	2	1	3	.80	55- 70	(N- N%)	26.6	2.1	3.00	1.68	11	6/30	.78	.41	9/30	.424	1.29	YES
	2015	Take-Two Interactive (NDQ)	TTWO	167.46	1	3	2	.65	125- 185	(N- 10%)	56.4	NIL	2.97	NIL	4	6/30	.77	.41	9/30	NIL	NIL	YES
	197	Tandem Diabetes Care (NDQ)	TNDM	110.49	3	4	3	1.15	110- 185	(N- 65%)	NMF	NIL	d.60	NIL	50	6/30	d.45	d.03	9/30	NIL	NIL	YES
	2186	Tapestry Inc.	TPR	16.58	5	3	4	1.45	25- 35	(50-110%)	26.7	NIL	.62	NIL	72	6/30	d.25	.61	9/30	NIL	.338	YES
	544	Targa Resources	TRGP	14.65	5	4	3	1.85	40- 65	(175-345%)	NMF	2.7	d.10	.40	86	6/30	.21	d.18	9/30	.10	.91	YES
	2151	Target Corp.	TGT	156.46	1	2	3	.70	120- 160	(N- N%)	25.9	1.7	6.04	2.72	19	7/31	3.35	1.82	12/31	◆.68	.66	YES
	109	Tata Motors ADR	TTM	8.98	4	4	4	1.35	15- 25	(65-180%)	NMF	NIL	d3.25	NIL	45	6/30	d1.52	d.79	9/30	NIL	NIL	YES
	1135	Taylor Morrison Home	TMHC	25.13	3	3	2	1.60	40- 60	(60-140%)	7.4	NIL	3.38	NIL	13	6/30	.80	.76	9/30	NIL	NIL	YES
	1594	Teck Resources 'B' (TSE)	TECKB.TO	18.69b	4	3	5	1.15	25- 35	(35- 85%)	NMF	1.1	d.18	.20	76	6/30	d.28(b)	.41(b)	9/30	.05(b)	.05(b)	YES
	2225	Teekay Corp.	TK	SEE FINAL SUPPLEMENT																		
	2346	TEGNA Inc.	TGNA	11.94	▼4	4	4	.85	25- 40	(110-235%)	7.4	2.3	1.61	.28	57	6/30	.09	.37	12/31	.07	.07	YES
	825	Teladoc Health	TDOC	215.09	2	4	3	.60	215- 355	(N- 65%)	NMF	NIL	d1.25	NIL	30	6/30	d.34	d.41	9/30	NIL	NIL	YES
	724	Teledyne Technologies	TDY	315.39	3	3	3	1.10	300- 455	(N- 45%)	32.8	NIL	9.63	NIL	69	6/30	2.48	2.80	9/30	NIL	NIL	YES
	198	Teleflex Inc.	TFX	341.89	2	3	2	1.10	415- 625	(20- 85%)	55.0	0.4	6.22	1.36	50	6/30	.24	1.77	9/30	.34	.34	YES
	1027	Telefonica SA ADR(g)	TEF	3.52	3	4	1	.85	6- 11	(70-215%)	8.0	13.1	.44	.46	35	6/30	.08	.18	9/30	.199	.226	YES
	932	Telephone & Data	TDS	19.01	2	3	2	1.00	35- 50	(85-165%)	13.5	3.6	1.41	.69	17	6/30	.56	.28	9/30	.17	.165	YES
	933	TELUS Corporation (TSE)	T.TO	24.01b	2	2	3	.70	35- 45	(45- 85%)	23.5	5.0	1.02	1.21	17	6/30	.23(b)	.33(b)	12/31	.292(b)	.282(b)	YES
	427	Templeton Emerg'g	EMF	15.22	–	4	–	.95	17- 30	(10- 95%)	NMF	2.6	NMF	.40	–	5/31	14.40(q)	15.93(q)	9/30	NIL	NIL	
	1160	Tempur Sealy Int'l	TPX	90.30	3	4	3	1.50	80- 135	(N- 50%)	26.0	NIL	3.47	NIL	78	6/30	.44	.76	9/30	NIL	NIL	YES
	735	Tenaris S.A. ADS	TS	9.86	4	3	3	1.20	25- 40	(155-305%)	NMF	NIL	d.23	NIL	79	6/30	.08	.41	9/30	NIL	NIL	YES
	813	Tenet Healthcare	THC	23.64	4	4	3	1.45	50- 85	(110-260%)	8.2	NIL	2.87	NIL	33	6/30	1.26	.56	9/30	NIL	NIL	YES
	1736	Tennant Co.	TNC	61.33	3	3	2	1.05	80- 115	(30- 90%)	23.3	1.4	▲2.63	.88	49	6/30	.96	1.13	9/30	.22	.22	YES
453	997	Tenneco Inc.	TEN	6.83	4	4	3	1.90	15- 25	(120-265%)	NMF	NIL	d1.94	NIL	70	6/30	d2.15	1.20	9/30	NIL	NIL	YES
453	2611	Teradata Corp.	TDC	23.20	3	3	4	.95	35- 55	(50-135%)	NMF	NIL	.15	NIL	2	6/30	d.40	d.01	9/30	NIL	NIL	YES
	1396	Teradyne Inc. (NDQ)	TER	79.20	3	3	2	1.10	65- 100	(N- 25%)	21.1	0.5	3.75	.40	3	6/30	1.05	.55	9/30	.10	.09	YES
	167	Terex Corp.	TEX	19.04	4	4	3	1.40	20- 35	(5- 85%)	NMF	1.3	d.25	.24	64	6/30	d.13	1.21	9/30	NIL	.11	YES
	235	TerraForm Power	TERP	SEE FINAL SUPPLEMENT																		
1240	110	Tesla, Inc. (NDQ)	TSLA	421.20	▼3	3	3	1.25	140- 235	(N- N%)	NMF	NIL	.82	NIL	45	6/30	.10	d.46	9/30	NIL	NIL	YES
	411	Tetra Tech (NDQ)	TTEK	94.63	3	3	3	.90	70- 110	(N- 15%)	27.6	0.7	3.43	.68	40	6/30	.78	.89	9/30	.17	.15	YES
	1634	Teva Pharmac. ADR	TEVA	8.80	3	4	4	1.15	14- 25	(60-185%)	3.8	NIL	2.32	NIL	14	6/30	.55	.60	9/30	NIL	NIL	YES
	1380	Texas Instruments (NDQ)	TXN	141.94	1	1	2	.90	110- 135	(N- N%)	26.2	2.9	5.41	4.08	11	6/30	1.48	1.36	12/31	▲1.02	.90	YES
	369	Texas Roadhouse (NDQ)	TXRH	62.01	3	3	2	.90	85- 125	(35-100%)	NMF	NIL	.12	NIL	75	6/30	d.48	.63	9/30	NIL	.30	YES
	1782	Textron, Inc.	TXT	36.81	4	3	3	1.40	60- 90	(65-145%)	21.7	0.2	▲1.70	.08	60	6/30	.13	.93	12/31	.02	.02	YES
	132	Thermo Fisher Sci.	TMO	428.39	1	1	3	.90	315- 385	(N- N%)	40.3	0.2	10.63	.88	31	6/30	2.90	2.03	12/31	.22	.19	YES
	1737	Thermon Group	THR	11.11	4	3	3	.95	30- 45	(170-305%)	44.4	NIL	.25	NIL	49	6/30	d.18	.04	9/30	NIL	NIL	YES
454	2026	Third Point Reinsurance	TPRE	6.97	–	3	–	1.10	14- 20	(100-185%)	6.7	NIL	1.04	NIL	66	6/30	1.33	.57	9/30	NIL	NIL	YES

★★ Supplementary Report in this week's issue.
▲ Arrow indicates the direction of a change. When it appears with the Latest Dividend, the arrow signals that a change in the regular payment rate has occurred in the latest quarter. For Timeliness, 3-5 year Target Price Range, or Estimated Earnings 12 months to 3-31-21, the arrow indicates a change since the preceding week. When a diamond ◆ (indicating a new figure) appears alongside the latest quarterly earnings results, the rank change probably was primarily caused by the earnings report. In other cases, the change is due to the dynamics of the ranking system and could simply be the result of the improvement or weakening of other stocks.

PAGE NUMBERS
Bold type refers to full report.
The number on the left signifies a Supplement (if available).

Suppl.	Page	NAME OF STOCK		Ticker Symbol	Recent Price	Timeliness	Safety	Technical	Beta	3-5 year Target Price Range and % appreciation potential		Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	444	Thomson Reuters	(TSE)	TRI.TO	107.19b	3	2	3	.85	105- 140	(N- 30%)	55.8	1.4	1.92	1.52	9	6/30	.44(b)	.29(b)	9/30	.38(b)	.36(b)	YES
	2323	Thor Inds.		THO	94.65	3	3	2	1.45	115- 170	(20- 80%)	16.4	1.7	5.78	1.64	81	7/31	◆2.14	2.13	9/30	.40	.39	YES
	1346	3D Systems		DDD	4.79	4	5	3	1.35	7- 13	(45-170%)	NMF	NIL	d1.08	NIL	59	6/30	d.33	d.21	9/30	NIL	NIL	YES
2666	1783	3M Company		MMM	161.66	3	1	3	.95	205- 250	(25- 55%)	19.4	3.6	8.34	5.88	60	6/30	1.78	2.20	9/30	1.47	1.44	YES
	2187	Tiffany & Co.		TIF	116.70	–	3	–	.80	125- 185	(5- 60%)	40.5	2.0	2.88	2.32	72	7/31	.32	1.12	12/31	.58	.58	YES
	2208	Tilly's, Inc.		TLYS	6.42	–	4	–	1.10	16- 25	(150-290%)	NMF	NIL	d.21	NIL	54	7/31	.18	.31	9/30	NIL	NIL	YES
453	1425	Tilray, Inc.	(NDQ)	TLRY	4.82	5	4	1	2.10	12- 20	(150-315%)	NMF	NIL	d1.42	NIL	80	6/30	d.65	d.37	9/30	NIL	NIL	YES
	736	Timken Co.		TKR	54.81	3	3	2	1.45	55- 85	(N- 55%)	15.1	2.0	3.64	1.12	79	6/30	1.02	1.27	9/30	.28	.28	YES
	2663	TimkenSteel Corp.		TMST	SEE FINAL SUPPLEMENT																		
454	814	Tivity Health	(NDQ)	TVTY	14.03	4	4	3	1.70	18- 30	(30-115%)	10.2	NIL	1.37	NIL	33	6/30	.58	.37	9/30	NIL	NIL	YES
	1136	Toll Brothers		TOL	49.35	3	3	3	1.65	45- 70	(N- 40%)	14.1	0.9	3.50	.44	13	7/31	.90	1.00	12/31	◆.11	.11	YES
	1940	Tootsie Roll		TR	30.48	2	1	3	.50	35- 45	(15- 50%)	31.1	1.2	.98	.37	18	6/30	.11	.18	9/30	.09	.087	YES
	1121	TopBuild Corp.		BLD	167.73	3	3	3	1.10	155- 235	(N- 40%)	28.5	NIL	5.89	NIL	38	6/30	1.67	1.51	9/30	NIL	NIL	YES
	1738	Toro Co.		TTC	84.21	2	2	3	1.00	70- 95	(N- 15%)	26.2	1.3	▲3.21	1.08	49	7/31	.82	.56	12/31	.25	.225	YES
	168	Toromont Inds.	(TSE)	TIH.TO	78.10	2	2	3	.80	75- 100	(N- 30%)	25.7	1.6	3.04	1.24	64	6/30	.62	.94	12/31	.31	.27	YES
	2529	Toronto-Dominion	(TSE)	TD.TO	62.37b	3	1	3	.85	90- 115	(45- 85%)	18.7	5.2	3.34	3.22	73	7/31	1.21(b)	1.74(b)	12/31	.79(b)	.74(b)	YES
	521	Total S.A. ADR		TOT	33.79	4	3	3	1.15	60- 90	(80-165%)	NMF	8.9	d3.99	3.00	92	6/30	d3.27	1.00	9/30	.775	.722	YES
	1381	Tower Semiconductor	(NDQ)	TSEM	18.50	3	3	3	1.05	35- 55	(90-195%)	18.7	NIL	.99	NIL	11	6/30	.22	.24	9/30	NIL	NIL	YES
	111	Toyota Motor ADR(g)		TM	136.01	2	2	3	.85	170- 230	(25- 70%)	21.4	3.0	6.35	4.05	45	6/30	1.05	4.43	9/30	NIL	NIL	YES
	1144	Tractor Supply	(NDQ)	TSCO	142.02	1	2	1	.85	130- 175	(N- 25%)	22.4	1.1	6.34	1.60	7	6/30	2.90	1.80	9/30	▲.40	.35	YES
	2396	Trade Desk (The)	(NDQ)	TTD	487.63	3	3	3	1.20	200- 300	(N- N%)	NMF	NIL	2.75	NIL	74	6/30	.52	.58	9/30	NIL	NIL	YES
	1739	Trane Technologies plc		TT	121.51	–	3	–	NMF	125- 190	(5- 55%)	31.6	1.7	3.84	2.12	49	6/30	1.27	NA	9/30	.53	NIL	YES
	1225	TransAlta Corp.	(TSE)	TA.TO	8.05b	3	4	3	1.10	11- 18	(35-125%)	NMF	2.1	d.90	.17	27	6/30	d.22(b)	NIL(b)	12/31	.043(b)	.04(b)	YES
	725	TransDigm Group		TDG	498.60	4	3	4	1.15	400- 595	(N- 20%)	75.3	NIL	6.62	NIL	69	6/30	d.10	2.57	9/30	NIL	NIL	YES
1240	2430	Transocean Ltd.		RIG	SEE FINAL SUPPLEMENT																		
	445	TransUnion		TRU	83.74	3	3	2	1.10	85- 125	(N- 50%)	29.7	0.4	2.82	.30	9	6/30	.66	.69	9/30	.075	.075	YES
2669	772	Travelers Cos.		TRV	110.22	3	1	3	1.00	200- 240	(80-120%)	12.8	3.1	8.63	3.40	34	6/30	d.20	2.02	9/30	.85	.82	YES
	588	Tredegar Corp.		TG	15.07	3	3	3	1.10	25- 40	(65-165%)	12.4	3.3	1.22	.50	58	6/30	.33	.44	12/31	.12	.12	YES
	1941	TreeHouse Foods		THS	40.38	2	3	3	.70	50- 80	(25-100%)	16.1	NIL	2.51	NIL	18	6/30	.58	.36	9/30	NIL	NIL	YES
	1122	Trex Co.		TREX	71.06	2	3	3	1.15	55- 85	(N- 20%)	49.0	NIL	1.45	NIL	38	6/30	.41	.31	9/30	NIL	NIL	YES
	1208	Tri-Continental		TY	25.83	–	2	–	1.00	35- 45	(35- 75%)	NMF	3.9	NMF	1.02	–	6/30	24.71(q)	30.03(q)	9/30	.262	.26	
	2385	Tribune Publishing Co.	(NDQ)	TPCO	11.75	–	4	–	1.25	12- 20	(N- 70%)	NMF	NIL	NIL	NIL	–	6/30	d.02	.10	9/30	NIL	NIL	YES
	1784	TriMas Corp.	(NDQ)	TRS	23.14	3	3	3	.90	35- 50	(50-115%)	15.8	NIL	▲1.46	NIL	60	6/30	.43	.43	9/30	NIL	NIL	YES
	1315	Trimble Inc.	(NDQ)	TRMB	48.70	3	3	2	1.20	50- 70	(5- 45%)	38.0	NIL	1.28	NIL	61	6/30	.25	.37	9/30	NIL	NIL	YES
2669	1648	TriNet Group		TNET	60.28	2	3	1	1.20	70- 105	(15- 75%)	20.2	NIL	2.99	NIL	68	6/30	1.87	.64	9/30	NIL	NIL	YES
	345	Trinity Inds.		TRN	19.76	–	4	–	NMF	25- 40	(25-100%)	NMF	3.8	.14	.76	28	6/30	.02	.29	12/31	.19	.17	YES
	2440	Trinseo S.A.		TSE	26.51	4	3	4	1.15	55- 80	(105-200%)	NMF	6.0	d.81	1.60	56	6/30	d2.95	.68	12/31	◆.40	.40	YES
	2656	Trip.com Ltd. ADS	(NDQ)	TCOM	32.00	3	4	4	1.05	40- 65	(25-105%)	NMF	NIL	.07	NIL	23	6/30	◆d.11	d.11	9/30	NIL	NIL	YES
	2657	TripAdvisor, Inc.	(NDQ)	TRIP	19.82	4	4	3	1.00	30- 50	(50-150%)	NMF	NIL	d.48	NIL	23	6/30	d1.14	.24	9/30	NIL	NIL	YES
	726	Triumph Group		TGI	7.01	–	5	–	2.10	20- 35	(185-400%)	NMF	NIL	d.35	NIL	69	6/30	d.19	.46	9/30	NIL	.04	YES
	589	Tronox Holding plc		TROX	7.94	4	5	3	1.85	11- 20	(40-150%)	NMF	3.5	d.38	.28	58	6/30	d.03	d.41	9/30	.07	.045	YES
2673	1649	TrueBlue, Inc.		TBI	15.72	4	3	3	.85	20- 30	(25- 90%)	50.7	NIL	.31	NIL	68	6/30	d.23	.49	9/30	NIL	NIL	YES
	2530	Truist Fin'l		TFC	37.45	2	3	4	1.30	50- 75	(35-100%)	11.8	4.8	3.17	1.80	73	6/30	.82	1.12	9/30	.45	.45	YES
	1995	Turning Point Brands		TPB	28.38	2	4	3	1.00	30- 50	(5- 75%)	15.0	0.7	1.89	.20	25	6/30	.71	.53	12/31	.05	.045	YES
	1239	Tutor Perini		TPC	11.71	3	4	3	1.30	25- 40	(115-240%)	5.8	NIL	2.01	NIL	52	6/30	.37	d6.38	9/30	NIL	NIL	YES
	1840	Twilio Inc.		TWLO	244.52	3	3	2	.95	185- 280	(N- 15%)	NMF	NIL	▲.14	NIL	22	6/30	.09	.03	9/30	NIL	NIL	YES
	2658	Twitter Inc.		TWTR	44.15	3	4	3	1.10	35- 55	(N- 25%)	NMF	NIL	.26	NIL	23	6/30	d.16	.05	9/30	NIL	NIL	YES
	2635	Tyler Technologies		TYL	346.69	2	3	2	.75	305- 460	(N- 35%)	64.2	NIL	5.40	NIL	15	6/30	1.38	1.30	9/30	NIL	NIL	YES
	1942	Tyson Foods 'A'		TSN	59.76	3	3	4	.75	90- 130	(50-120%)	14.3	2.9	4.17	1.74	18	6/30	1.40	1.47	12/31	.42	.42	YES
	1547	**UDR, Inc.**		UDR	33.00	1	3	4	1.00	40- 65	(20- 95%)	NMF	4.5	.29	1.49	65	6/30	.19	.12	12/31	.36	.343	YES
	1123	UFP Industries	(NDQ)	UFPI	56.38	2	3	2	1.10	65- 100	(15- 75%)	16.3	0.9	3.45	.50	38	6/30	1.08	.88	9/30	.125	NIL	YES
	556	UGI Corp.		UGI	32.72	3	2	3	1.00	45- 65	(40-100%)	11.8	4.0	2.77	1.32	41	6/30	.08	.13	12/31	.33	.325	YES
	412	US Ecology	(NDQ)	ECOL	32.25	4	3	3	1.00	50- 75	(55-135%)	44.2	NIL	.73	NIL	40	6/30	d.08	.66	9/30	NIL	.18	YES
	1960	US Foods Hldg.		USFD	23.04	3	3	4	1.60	40- 60	(75-160%)	20.0	NIL	1.15	NIL	21	6/30	d.25	.67	9/30	NIL	NIL	YES
	1943	USANA Health Sciences		USNA	74.24	2	3	1	.95	65- 95	(N- 30%)	14.1	NIL	5.26	NIL	18	6/30	1.32	.91	9/30	NIL	NIL	YES
2029	2612	Uber Technologies		UBER	35.56	–	4	–	NMF	40- 70	(10- 95%)	NMF	NIL	d2.46	NIL	2	6/30	d.80	d3.05	9/30	NIL	NIL	YES
	603	Ubiquiti Inc.		UI	160.93	2	3	2	.75	195- 290	(20- 80%)	27.5	1.0	5.85	1.60	36	6/30	1.45	1.01	9/30	▲.40	.30	YES
	2188	Ulta Beauty	(NDQ)	ULTA	225.74	4	3	4	1.25	265- 400	(15- 75%)	26.4	NIL	8.54	NIL	72	7/31	.14	2.76	9/30	NIL	NIL	YES
	2114	Under Armour 'A'		UAA	11.43	5	4	5	1.30	13- 20	(15- 75%)	NMF	NIL	d.46	NIL	90	6/30	d.31	d.04	9/30	NIL	NIL	YES
	2115	Unifi, Inc.		UFI	12.57	5	3	4	1.40	19- 30	(50-140%)	NMF	NIL	d.19	NIL	90	6/30	d1.10	.05	9/30	NIL	NIL	YES
	403	UniFirst Corp.		UNF	190.97	3	2	2	.95	210- 285	(10- 50%)	29.1	0.5	6.56	1.00	39	5/31	1.12	2.46	9/30	.25	.45	YES
2670	1944	Unilever PLC ADR(g)		UL	61.73	2	1	2	.80	70- 85	(15- 40%)	22.0	3.0	2.80	1.83	18	6/30	1.40(p)	1.31(p)	9/30	.469	.459	YES
	346	Union Pacific		UNP	199.45	3	1	3	1.10	230- 280	(15- 40%)	27.1	1.9	7.35	3.88	28	6/30	1.67	2.22	9/30	.97	.97	YES
	1409	Unisys Corp.		UIS	10.75	–	5	–	1.20	12- 25	(10-135%)	24.4	NIL	.44	NIL	20	6/30	d.15	.42	9/30	NIL	NIL	YES
	315	United Airlines Hldgs.	(NDQ)	UAL	35.94	5	4	4	1.55	55- 90	(55-150%)	NMF	NIL	d23.43	NIL	89	6/30	d9.31	4.21	9/30	NIL	NIL	YES
★★	1961	United Natural Foods		UNFI	19.18	3	4	2	.50	30- 45	(55-135%)	9.0	NIL	2.13	NIL	21	7/31	◆1.06	.36	9/30	NIL	NIL	YES
239	316	United Parcel Serv.		UPS	168.90	3	1	3	.80	145- 180	(N- 5%)	23.0	2.4	7.35	4.04	89	6/30	2.13	1.96	9/30	1.01	.96	YES
	1740	United Rentals		URI	175.73	3	3	2	1.55	195- 295	(10- 70%)	11.7	NIL	▲15.00	NIL	49	6/30	3.68	4.75	9/30	NIL	NIL	YES
	787	U.S. Bancorp		USB	36.10	4	2	5	1.15	50- 70	(40- 95%)	15.3	4.7	2.36	1.68	84	6/30	.41	1.09	12/31	.42	.42	YES
	934	U.S. Cellular		USM	30.11	3	3	2	.75	40- 60	(35-100%)	15.5	NIL	1.94	NIL	17	6/30	.78	.35	9/30	NIL	NIL	YES
	635	U.S. Silica Holdings		SLCA	SEE FINAL SUPPLEMENT																		
1658	750	U.S. Steel Corp.		X	7.58	4	5	4	1.50	10- 19	(30-150%)	NMF	0.5	d6.00	.04	67	6/30	d3.36	.41	9/30	.01	.05	YES
	846	United Therapeutics	(NDQ)	UTHR	101.51	3	3	2	.85	135- 200	(35- 95%)	8.2	NIL	12.39	NIL	12	6/30	3.68	3.63	9/30	NIL	NIL	YES
	815	UnitedHealth Group		UNH	303.23	2	1	3	1.05	360- 440	(20- 45%)	17.4	1.6	17.38	5.00	33	6/30	7.12	3.60	9/30	1.25	1.08	YES
	2441	Univar Solutions		UNVR	17.22	4	3	3	1.40	40- 60	(130-250%)	14.6	NIL	1.18	NIL	56	6/30	.33	.42	9/30	NIL	NIL	YES
	1996	Universal Corp.		UVV	41.72	2	3	3	.75	45- 70	(10- 70%)	11.9	7.4	3.50	3.08	25	6/30	.29	.08	12/31	.77	.76	YES
	1316	Universal Display	(NDQ)	OLED	174.60	3	3	2	1.20	145- 215	(N- 25%)	83.1	0.4	2.10	.63	61	6/30	.02	.92	9/30	.15	.10	YES
	2016	Universal Electronics	(NDQ)	UEIC	37.67	3	3	3	1.00	55- 85	(45-125%)	34.6	NIL	1.09	NIL	4	6/30	1.02	d.37	9/30	NIL	NIL	YES
	816	Universal Health 'B'		UHS	104.41	4	3	4	1.25	190- 285	(80-175%)	9.8	NIL	10.66	NIL	33	6/30	2.95	2.66	9/30	NIL	.20	YES
	1565	Unum Group		UNM	17.08	4	3	3	1.60	35- 55	(105-220%)	3.3	6.7	5.25	1.14	51	6/30	1.23	1.36	9/30	.285	.285	YES
	2209	Urban Outfitters	(NDQ)	URBN	22.09	4	3	4	1.10	50- 75	(125-240%)	85.0	NIL	.26	NIL	54	7/31	.35	.61	9/30	NIL	NIL	YES
	2116	**V.F. Corp.**		VFC	71.19	4	3	5	1.20	80- 120	(10- 70%)	64.7	2.7	1.10	1.92	90	6/30	d.57	.30	9/30	.48	.43	YES

(•) All data adjusted for announced stock split or stock dividend. See back page of Ratings & Reports.
◆ New figure this week.
(b) Canadian Dollars.
(d) Deficit.
(f) The estimate may reflect a probable increase or decrease. If a dividend boost or cut is possible but not probable, two figures are shown, the first is the more likely.
(g) Dividends subject to foreign withholding tax for U.S. residents.
(h) Est'd Earnings & Est'd Dividends after conversion to U.S. dollars at Value Line estimated translation rate.
(j) All Index data expressed in hundreds.
(p) 6 months (q) Asset Value
N=Negative figure NA=Not available NMF=No meaningful figure

PAGE NUMBERS
Bold type refers to full report.
The number on the left signifies a Supplement (if available).

Supplement	Page	NAME OF STOCK		Ticker Symbol	Recent Price	RANKS Timeliness	RANKS Safety	RANKS Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	LATEST RESULTS Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
	2370	Vail Resorts		MTN	222.63	3	3	4	.90	250- 375	(10- 70%)	50.5	NIL	4.41	NIL	87	7/31◆	d3.82	d2.22	9/30	▼NIL	1.76	YES
	1595	Vale S.A. ADR		VALE	10.49	3	4	3	1.40	14- 25	(35-140%)	12.1	3.3	.87	.35	76	6/30	.19	d.03	9/30	NIL	NIL	YES
	522	Valero Energy		VLO	44.82	4	3	3	1.55	75- 115	(65-155%)	NMF	8.7	d1.59	3.92	92	6/30	d1.25	1.47	9/30	.98	.90	YES
	1785	Valmont Inds.		VMI	122.32	3	2	3	1.05	160- 215	(30- 75%)	17.6	1.5	6.96	1.80	60	6/30	2.00	1.90	12/31	.45	.375	YES
	998	Valvoline Inc.		VVV	19.36	3	3	1	1.40	30- 45	(55-130%)	13.6	2.5	1.42	.48	70	6/30	.28	.37	9/30	.113	.106	YES
	199	Varian Medical Sys.		VAR	171.95	–	2	–	1.05	150- 200	(N- 15%)	56.0	NIL	3.07	NIL	50	6/30	.67	.32	9/30	NIL	NIL	YES
	133	Veeco Instruments	(NDQ)	VECO	11.98	2	4	3	1.30	20- 35	(65-190%)	NMF	NIL	d.55	NIL	31	6/30	d.17	d.33	9/30	NIL	NIL	YES
	826	Veeva Systems		VEEV	281.92	2	3	3	.95	190- 285	(N- N%)	NMF	NIL	2.59	NIL	30	7/31	.72	.55	9/30	NIL	NIL	YES
	1548	Ventas, Inc.		VTR	42.88	4	3	4	1.20	50- 70	(15- 65%)	NMF	4.2	d.01	1.80	65	6/30	d.43	.58	12/31	.45	.793	YES
	2210	Vera Bradley Inc.		VRA					SEE FINAL REPORT														
	2659	VeriSign Inc.	(NDQ)	VRSN	204.72	1	3	3	.95	150- 225	(N- 10%)	37.0	NIL	5.53	NIL	23	6/30	1.32	1.24	9/30	NIL	NIL	YES
	446	Verisk Analytics	(NDQ)	VRSK	184.52	1	2	3	.90	145- 200	(N- 10%)	42.3	0.6	4.36	1.10	9	6/30	1.08	.90	9/30	.27	.25	YES
2670	935	Verizon Communic.		VZ	59.36	1	1	3	.65	85- 105	(45- 75%)	12.2	4.2	4.88	2.51	17	6/30	1.18	1.23	12/31	▲.628	.615	YES
	847	Vertex Pharmac.	(NDQ)	VRTX	267.73	1	3	3	.90	345- 520	(30- 95%)	27.6	NIL	9.71	NIL	12	6/30	3.18	1.03	9/30	NIL	NIL	YES
	2347	ViacomCBS Inc.	(NDQ)	VIAC	29.84	4	3	5	1.45	65- 100	(120-235%)	7.9	3.2	3.77	.96	57	6/30	1.25	1.16	12/31	.24	.18	YES
	1786	Viad Corp.		VVI	21.35	5	4	4	1.75	40- 60	(85-180%)	NMF	NIL	▼d4.53	NIL	60	6/30	d2.59	1.44	9/30	▼NIL	.10	YES
	604	ViaSat, Inc.	(NDQ)	VSAT	34.19	4	3	3	1.35	60- 90	(75-165%)	NMF	NIL	d.40	NIL	36	6/30	d.20	d.19	9/30	NIL	NIL	YES
	1347	Viavi Solutions	(NDQ)	VIAV	11.90	3	3	3	.95	15- 25	(25-110%)	16.1	NIL	.74	NIL	59	6/30	.18	.17	9/30	NIL	NIL	YES
	1549	VICI Properties		VICI	24.19	–	3	–	1.40	30- 40	(25- 65%)	13.8	5.5	1.75	1.32	65	6/30	.47	.37	12/31	▲.33	.298	YES
	1317	Vicor Corp.	(NDQ)	VICR	75.85	2	3	2	1.15	75- 115	(N- 50%)	NMF	NIL	.39	NIL	61	6/30	.06	.06	9/30	NIL	NIL	YES
	1962	Village Super Market	(NDQ)	VLGEA	24.93	2	3	2	.50	35- 50	(40-100%)	13.4	4.0	1.86	1.00	21	4/30	.77	.35	12/31	.25	.25	
	2324	Virgin Galactic		SPCE	20.51	–	4	–	NMF	25- 40	(20- 95%)	NMF	NIL	d.90	NIL	81	6/30	d.30	d.23	9/30	NIL	NIL	YES
	2578	Visa Inc.		V	200.32	3	1	3	1.00	225- 275	(10- 35%)	36.8	0.6	5.44	1.23	55	6/30	1.06	1.37	9/30	.30	.25	YES
	1348	Vishay Intertechnology		VSH	15.89	▼4	3	4	1.20	35- 50	(120-215%)	16.9	2.4	.94	.38	59	6/30	.18	.36	9/30	.095	.095	YES
	999	Visteon Corp.		VC	68.51	3	3	3	1.10	120- 180	(75-165%)	NMF	NIL	.05	NIL	70	6/30	d1.62	.25	9/30	NIL	NIL	YES
	1226	Vistra Corp.		VST	17.97	3	3	3	1.15	40- 60	(125-235%)	12.9	3.0	1.39	.54	27	6/30	.34	.70	9/30	.135	.125	YES
	2613	VMware, Inc.		VMW	142.99	2	3	4	.90	160- 240	(10- 70%)	23.5	NIL	6.08	NIL	2	7/31	1.81	1.53	9/30	NIL	NIL	YES
2672	965	Vocera Communications		VCRA	28.72	2	3	2	.75	30- 50	(5- 75%)	NMF	NIL	d.52	NIL	32	6/30	d.11	d.16	9/30	NIL	NIL	YES
	936	Vodafone Group ADR(g)	(NDQ)	VOD	13.48	2	3	2	.95	25- 40	(85-195%)	30.0	8.2	.45	1.10	17	3/31	.53(p)	.18(p)	9/30	.53	.464	YES
	937	Vonage Holdings		VG	10.25	3	3	2	1.05	10- 15	(N- 45%)	68.3	NIL	.15	NIL	17	6/30	.04	.08	9/30	NIL	NIL	YES
240	1550	Vornado R'lty Trust		VNO	34.76	4	3	3	1.25	60- 90	(75-160%)	NMF	6.1	d.63	2.12	65	6/30	d1.03	12.56	9/30	▼.53	.66	YES
	2579	Voya Financial		VOYA	47.98	3	3	3	1.45	75- 115	(55-140%)	17.1	1.3	2.81	.60	55	6/30	d.55	1.51	9/30	.15	.15	YES
	1124	Vulcan Materials		VMC	133.72	3	3	4	1.15	145- 220	(10- 65%)	27.6	1.0	4.85	1.36	38	6/30	1.58	1.48	9/30	.34	.31	YES
	1197	**WD-40 Co.**	(NDQ)	WDFC	189.44	3	1	2	.45	110- 130	(N- N%)	45.9	1.4	4.13	2.68	1	5/31	1.06	1.30	9/30	.67	.61	YES
	915	WEC Energy Group		WEC	96.48	3	1	3	.80	85- 105	(N- 10%)	25.3	2.8	3.82	2.66	43	6/30	.76	.74	9/30	.633	.59	YES
	1551	W.P. Carey Inc.		WPC	66.60	4	3	3	1.10	75- 110	(15- 65%)	33.6	6.3	1.98	4.18	65	6/30	.61	.38	12/31	▲1.044	1.036	YES
	2397	WPP PLC ADR		WPP	39.14	4	3	4	1.20	100- 150	(155-285%)	15.7	1.7	2.50	.66	74	6/30	d14.16(p)	1.56(p)	9/30	NIL	2.50	YES
★★	545	WPX Energy		WPX	5.17	–	4	–	1.75	17- 30	(230-480%)	12.0	NIL	.43	NIL	86	6/30	.12	.09	9/30	NIL	NIL	YES
	2189	WW International	(NDQ)	WW	18.59	4	4	3	1.25	40- 65	(115-250%)	9.8	NIL	1.89	NIL	72	6/30	.20	.78	9/30	NIL	NIL	YES
	169	Wabash National		WNC	12.40	3	3	3	1.15	20- 35	(60-180%)	31.8	2.6	.39	.32	64	6/30	NIL	.55	12/31	.08	.08	YES
	347	Wabtec Corp.		WAB	62.96	3	3	3	1.25	100- 150	(60-140%)	16.9	0.8	3.73	.48	28	6/30	.87	1.06	9/30	.12	.12	YES
2227	970	Walgreens Boots	(NDQ)	WBA	36.07	3	3	3	.80	70- 90	(95-150%)	8.5	5.2	4.26	1.87	19	5/31	.83	1.47	9/30	▲.468	.44	YES
638	2152	Walmart Inc.		WMT	137.25	1	1	3	.55	145- 175	(5- 30%)	27.3	1.6	5.02	2.18	19	7/31	1.56	1.27	9/30	.54	.53	YES
	1509	Washington Federal	(NDQ)	WAFD	21.08	4	3	3	1.00	30- 45	(40-115%)	13.1	4.2	1.61	.88	63	6/30	.46	.67	9/30	.22	.21	YES
	1552	Washington R.E.I.T.		WRE	20.41	3	3	3	.95	25- 35	(20- 70%)	NMF	5.9	.14	1.20	65	6/30	d.07	d.08	12/31	.30	.30	YES
	413	Waste Connections		WCN	105.00	2	2	3	.80	105- 145	(N- 40%)	NMF	0.7	.76	.74	40	6/30	d.86	.56	9/30	.185	.16	YES
	414	Waste Management		WM	114.04	3	1	3	.80	110- 130	(N- 15%)	29.9	1.9	3.82	2.18	40	6/30	.88	1.11	9/30	.545	.513	YES
	134	Waters Corp.		WAT	193.29	3	2	3	.95	265- 355	(35- 85%)	21.9	NIL	8.83	NIL	31	6/30	1.98	2.08	9/30	NIL	NIL	YES
2671	1145	Watsco, Inc.		WSO	233.49	3	1	2	.90	195- 260	(N- 10%)	36.3	3.1	6.43	7.18	7	6/30	2.26	2.40	9/30	1.775	1.60	YES
	1741	Watts Water Techn.		WTS	98.19	3	2	3	1.00	95- 125	(N- 25%)	29.8	1.0	▲3.30	.94	49	6/30	.74	1.09	9/30	.23	.23	YES
	2660	Wayfair Inc.		W	300.74	3	4	2	1.60	155- 260	(N- N%)	NMF	NIL	d7.00	NIL	23	6/30	2.54	d1.98	9/30	NIL	NIL	YES
	2531	Webster Fin'l		WBS	25.62	▼5	3	3	1.40	55- 85	(115-230%)	11.3	6.2	2.26	1.60	73	6/30	.57	1.05	9/30	.40	.40	YES
	1553	Weingarten Realty		WRI	17.10	4	3	4	1.15	30- 45	(75-165%)	24.1	4.2	.71	.72	65	6/30	.09	.66	12/31	.18	.395	YES
	1963	Weis Markets		WMK	48.28	2	3	1	.55	45- 70	(N- 45%)	14.0	2.6	3.46	1.24	21	6/30	1.54	.76	9/30	.31	.31	YES
	1742	Welbilt, Inc.		WBT	6.29	5	5	3	1.50	8- 16	(25-155%)	NMF	NIL	▲d.04	NIL	49	6/30	d.07	.22	9/30	NIL	NIL	YES
2228	2532	Wells Fargo		WFC	23.82	4	3	4	1.15	45- 70	(90-195%)	32.6	1.7	.73	.40	73	6/30	d.66	1.30	9/30	▼.10	.51	YES
	1554	Welltower Inc.		WELL	54.39	4	3	4	.95	60- 90	(10- 65%)	37.5	4.5	1.45	2.44	65	6/30	.42	.34	9/30	.61	.87	YES
	370	Wendy's Company	(NDQ)	WEN	22.15	3	3	2	1.20	25- 35	(15- 60%)	38.9	0.9	.57	.20	75	6/30	.12	.18	9/30	.05	.10	YES
	328	Werner Enterprises	(NDQ)	WERN	43.43	2	3	2	.80	45- 70	(5- 60%)	18.1	0.8	2.40	.36	29	6/30	.62	.63	12/31	.09	.09	YES
638	1318	WESCO Int'l		WCC	43.73	4	3	3	1.45	65- 95	(50-115%)	10.8	NIL	4.04	NIL	61	6/30	1.04	1.45	9/30	NIL	NIL	YES
	1168	West Fraser Timber	(TSE)	WFT.TO	62.22b	3	3	1	1.35	90- 135	(45-115%)	10.0	1.3	6.23	.80	62	6/30	1.13(b)	d.25(b)	12/31	.20(b)	.20(b)	YES
	234	West Pharmac. Svcs.		WST	272.39	1	2	3	.80	220- 300	(N- 10%)	62.5	0.2	4.36	.64	24	6/30	1.21	.88	9/30	.16	.15	YES
455	1410	Western Digital	(NDQ)	WDC	38.62	2	3	5	1.40	70- 110	(80-185%)	11.9	NIL	3.25	NIL	20	6/30	1.23	.17	9/30	▼NIL	.50	YES
	634	Western Midstream Part.		WES	7.71	5	4	3	1.40	25- 45	(225-485%)	4.2	16.1	1.82	1.24-.62	93	6/30	.60	.37	9/30	.311	.618	YES
	2580	Western Union		WU	21.99	3	3	1	.85	25- 35	(15- 60%)	13.0	4.1	1.69	.90	55	6/30	.41	.45	9/30	.225	.20	YES
	590	Westlake Chemical		WLK	62.59	3	3	4	1.35	85- 130	(35-110%)	38.6	1.7	1.62	1.08	58	6/30	.11	.92	9/30	▲.27	.263	YES
	1964	Weston (George)	(TSE)	WN.TO	99.50b	2	2	4	.60	125- 170	(25- 70%)	12.5	2.1	7.99	2.10	21	6/30	.93(b)	1.70(b)	12/31	.525(b)	.525(b)	YES
	1185	WestRock Co.		WRK	34.98	4	3	5	1.20	55- 85	(55-145%)	14.3	2.3	2.45	.80	42	6/30	.76	1.11	9/30	.20	.455	YES
	2581	WEX Inc.		WEX	143.78	4	3	3	1.50	180- 270	(25- 90%)	19.2	NIL	7.49	NIL	55	6/30	1.21	2.28	9/30	NIL	NIL	YES
	1169	Weyerhaeuser Co.		WY	28.31	3	3	2	1.40	35- 50	(25- 75%)	35.4	NIL	.80	NIL	62	6/30	.10	.17	9/30	NIL	.34	YES
	1578	Wheaton Precious Met.		WPM	48.29	2	3	2	.65	40- 60	(N- 25%)	38.9	0.8	1.24	.40	5	6/30	.24	.10	9/30	.10	.09	YES
	1787	Whirlpool Corp.		WHR	185.00	3	3	2	1.40	175- 260	(N- 40%)	13.8	2.6	▲13.43	4.80	60	6/30	2.15	4.01	9/30	1.20	1.20	YES
	1020	WideOpenWest, Inc.		WOW	5.21	–	4	–	1.40	8- 14	(55-170%)	17.4	NIL	.30	NIL	8	6/30	.03	.12	9/30	NIL	NIL	YES
	2380	Wiley (John) & Sons		JWA	31.70	2	3	3	.90	60- 85	(90-170%)	12.1	4.3	2.62	1.37	88	7/31	.29	.06	12/31	◆.343	.34	YES
	616	Williams Cos.		WMB	20.40	3	4	3	1.50	30- 50	(45-145%)	18.7	7.8	1.09	1.60	83	6/30	.25	.26	9/30	.40	.38	YES
	2190	Williams-Sonoma		WSM	88.36	2	3	1	1.15	80- 115	(N- 30%)	20.5	2.2	4.32	1.92	72	7/31	1.70	.79	12/31	.48	.48	YES
	2582	Willis Towers Wat. plc	(NDQ)	WLTW	206.85	–	2	–	.90	240- 325	(15- 55%)	18.5	1.3	11.16	2.72	55	6/30	1.80	1.78	12/31	.68	.65	YES
	371	Wingstop Inc.	(NDQ)	WING	138.87	2	3	2	1.00	100- 150	(N- 10%)	NMF	0.4	1.36	.56	75	6/30	.39	.17	9/30	▲.14	.11	YES
	2325	Winnebago		WGO	49.96	3	3	2	1.50	70- 110	(40-120%)	21.7	1.0	2.30	.48	81	5/31	d.37	1.14	12/31	▲.12	.11	YES
	788	Wintrust Financial	(NDQ)	WTFC	40.57	4	3	3	1.20	60- 95	(50-135%)	11.6	2.8	3.49	1.12	84	6/30	.34	1.38	9/30	.28	.25	YES
	2162	Wolverine World Wide		WWW	26.08	4	3	4	1.30	45- 65	(75-150%)	18.0	1.5	1.45	.40	82	6/30	.08	.52	12/31	.10	.10	YES
	135	Woodward, Inc.	(NDQ)	WWD	78.82	4	3	3	1.30	70- 105	(N- 35%)	31.4	0.4	2.51	.33	31	6/30	.61	1.02	12/31	◆.081	.163	YES

★★ Supplementary Report in this week's issue.
▲ Arrow indicates the direction of a change. When it appears with the Latest Dividend, the arrow signals that a change in the regular payment rate has occurred in the latest quarter. For Timeliness, 3-5 year Target Price Range, or Estimated Earnings 12 months to 3-31-21, the arrow indicates a change since the preceding week. When a diamond ◆ (indicating a new figure) appears alongside the latest quarterly earnings results, the rank change probably was primarily caused by the earnings report. In other cases, the change is due to the dynamics of the ranking system and could simply be the result of the improvement or weakening of other stocks.

WQ-ZY

PAGE NUMBERS
Bold type refers to full report.
The number on the left signifies a Supplement (if available).

Supplement	Page	NAME OF STOCK		Ticker Symbol	Recent Price	RANKS Timeliness	Safety	Technical	Beta	3-5 year Target Price Range	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 3-31-21	(f) Est'd Div'd next 12 mos.	Industry Rank	LATEST RESULTS Qtr. Ended	Earns. Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Do Options Trade?
1034	1841	Workday, Inc.		WDAY	220.34	2	3	3	1.00	185- 280	(N- 25%)	NMF	NIL	▲d.62	NIL	22	7/31	d.12	d.53	9/30	NIL	NIL	YES
	617	World Fuel Services		INT	21.94	4	3	3	1.05	45- 65	(105-195%)	12.8	1.8	1.72	.40	83	6/30	d.16	.55	12/31	.10	.10	YES
	2348	World Wrestling Ent.		WWE	39.87	4	3	3	.75	70- 105	(75-165%)	46.4	1.2	.86	.48	57	6/30	.52	.13	9/30	.12	.12	YES
	751	Worthington Inds.		WOR	40.95	3	3	1	1.30	55- 80	(35- 95%)	19.5	2.4	2.10	1.00	67	8/31	◆.48	.46	12/31	◆.25	.24	YES
	200	Wright Medical N.V.	(NDQ)	WMGI	30.57	–	3	–	.80	14- 20	(N- N%)	NMF	NIL	d.79	NIL	50	6/30	d.41	d.15	9/30	NIL	NIL	YES
	2371	Wyndham Destinations		WYND	31.84	–	4	–	NMF	50- 85	(55-165%)	46.8	3.8	.68	1.20	87	6/30	d1.11	1.45	9/30	▼.30	.45	YES
	2372	Wyndham Hotels		WH	50.86	–	3	–	NMF	55- 80	(10- 55%)	34.6	0.6	1.47	.32	87	6/30	d1.86	.27	9/30	.08	.29	YES
	2373	Wynn Resorts	(NDQ)	WYNN	73.62	▼5	5	3	1.50	95- 180	(30-145%)	NMF	NIL	d7.03	NIL	87	6/30	d6.14	.88	9/30	NIL	1.00	YES
	329	**XPO Logistics**		XPO	86.27	3	3	2	1.45	115- 175	(35-105%)	56.0	NIL	1.54	NIL	29	6/30	.63	1.28	9/30	NIL	NIL	YES
	2224	Xcel Energy Inc.	(NDQ)	XEL	68.85	3	1	3	.80	55- 65	(N- N%)	24.2	2.6	2.84	1.77	16	6/30	.54	.46	12/31	.43	.405	YES
	1418	Xerox Holdings		XRX	18.58	4	3	4	1.35	30- 45	(60-140%)	12.5	5.4	1.49	1.00	85	6/30	.15	.79	12/31	.25	.25	YES
	1382	Xilinx Inc.	(NDQ)	XLNX	103.80	3	3	3	.90	115- 170	(10- 65%)	37.1	1.5	2.80	1.52	11	6/30	.65	.97	9/30	.38	.37	YES
	1383	Xperi Holding	(NDQ)	XPER	11.51	–	4	–	.95	18- 25	(55-115%)	71.9	1.7	.16	.20	11	6/30	d.33	.68	9/30	▼.05	.20	YES
	1743	Xylem Inc.		XYL	83.86	3	2	3	1.05	80- 110	(N- 30%)	40.1	1.2	▲2.09	1.04	49	6/30	.40	.79	9/30	.26	.24	YES
	1579	**Yamana Gold**		AUY	5.68	3	5	2	.80	6- 10	(5- 75%)	25.8	1.2	.22	.07	5	6/30	NIL	.01	12/31	▲.018	.01	YES
	2661	Yelp, Inc.		YELP	20.13	4	3	3	1.10	25- 35	(25- 75%)	NMF	NIL	d.61	NIL	23	6/30	d.33	.16	9/30	NIL	NIL	YES
	2326	YETI Holdings		YETI	45.93	–	3	–	NMF	45- 70	(N- 50%)	43.7	NIL	1.05	NIL	81	6/30	.38	.33	9/30	NIL	NIL	YES
	1796	York Water Co. (The)	(NDQ)	YORW	43.39	2	3	2	.80	30- 50	(N- 15%)	34.2	1.7	1.27	.72	10	6/30	.32	.28	9/30	.18	.173	YES
	372	Yum! Brands		YUM	91.88	3	3	3	1.05	105- 155	(15- 70%)	28.7	2.0	3.20	1.88	75	6/30	.61	.87	9/30	.47	.42	YES
	373	Yum China Holdings		YUMC	52.00	2	3	3	.75	65- 95	(25- 85%)	30.8	NIL	1.69	NIL	75	6/30	.35	.46	9/30	NIL	.12	YES
	605	**Zebra Techn. ‘A’**	(NDQ)	ZBRA	260.56	3	3	3	1.05	225- 340	(N- 30%)	22.3	NIL	11.68	NIL	36	6/30	2.41	3.02	9/30	NIL	NIL	YES
	1842	Zendesk Inc.		ZEN	101.91	3	3	3	1.05	85- 130	(N- 30%)	NMF	NIL	▼d1.42	NIL	22	6/30	d.56	d.50	9/30	NIL	NIL	YES
455	2662	Zillow Group ‘C’	(NDQ)	Z	101.16	3	3	4	1.10	30- 50	(N- N%)	NMF	NIL	d1.33	NIL	23	6/30	d.38	d.35	9/30	NIL	NIL	YES
	201	Zimmer Biomet Hldgs.		ZBH	136.31	3	2	2	1.10	140- 190	(5- 40%)	28.4	0.7	4.80	.96	50	6/30	.05	1.93	12/31	.24	.24	YES
	2533	Zions Bancorp.	(NDQ)	ZION	29.38	3	3	4	1.20	55- 80	(85-170%)	11.9	4.6	2.46	1.36	73	6/30	.34	.99	9/30	.34	.34	YES
	1635	Zoetis Inc.		ZTS	161.32	2	2	3	1.05	155- 205	(N- 25%)	43.7	0.5	3.69	.80	14	6/30	.89	.90	9/30	.20	.164	YES
	938	Zoom Video Communic.	(NDQ)	ZM	487.66	–	4	–	NMF	485- 805	(N- 65%)	NMF	NIL	2.36	NIL	17	7/31	.63	.02	9/30	NIL	NIL	YES
	1843	Zscaler, Inc.	(NDQ)	ZS	138.42	3	4	4	.60	75- 125	(N- N%)	NMF	NIL	▼d.78	NIL	22	7/31	d.38	d.04	9/30	NIL	NIL	YES
	2211	Zumiez Inc.	(NDQ)	ZUMZ	27.67	2	3	4	1.05	35- 55	(25-100%)	12.6	NIL	2.19	NIL	54	7/31	1.01	.36	9/30	NIL	NIL	YES
	2017	Zynga Inc.	(NDQ)	ZNGA	9.07	2	3	2	.75	5- 8	(N- N%)	30.2	NIL	.30	NIL	4	6/30	d.16	d.06	9/30	NIL	NIL	YES

(•) All data adjusted for announced stock split or stock dividend. See back page of Ratings & Reports.
◆ New figure this week.
(b) Canadian Dollars.
(d) Deficit.
(f) The estimate may reflect a probable increase or decrease. If a dividend boost or cut is possible but not probable, two figures are shown, the first is the more likely.
(g) Dividends subject to foreign withholding tax for U.S. residents.
(h) Est'd Earnings & Est'd Dividends after conversion to U.S. dollars at Value Line estimated translation rate.
(j) All Index data expressed in hundreds.
(p) 6 months (q) Asset Value
N=Negative figure NA=Not available NMF=No meaningful figure

INDUSTRIES, IN ORDER OF TIMELINESS RANK*

Arrow (▲▼) before name indicates that a **significant change in Rank** has occurred since the preceding week.

1 Household Products
2 Computer Software
3 Semiconductor Equip
4 Entertainment Tech
5 Precious Metals
6 Brokers & Exchanges
7 Retail Building Supply
8 Cable TV
9 Information Services
10 Water Utility
11 Semiconductor
12 Biotechnology
13 Homebuilding
14 Drug
15 IT Services
16 Electric Utility (West)
17 Telecom. Services
18 Food Processing
19 Retail Store
20 Computers/Peripherals
21 Retail/Wholesale Food
22 E-Commerce
23 Internet
24 Med Supp Non-Invasive
25 Tobacco
26 Beverage
27 Power
28 Railroad
29 Trucking
30 Healthcare Information
31 Precision Instrument
32 Telecom. Equipment
33 Medical Services
34 Insurance (Prop/Cas.)
35 Telecom. Utility
36 Wireless Networking
37 Foreign Electronics
38▲ Building Materials
39 Industrial Services
40 Environmental
41 Natural Gas Utility
42 Packaging & Container
43 Electric Util. (Central)
44 Retail Automotive
45 Automotive
46 Electric Utility (East)
47 Toiletries/Cosmetics
48▼ Educational Services
49 Machinery
50 Med Supp Invasive
51 Insurance (Life)
52 Engineering & Const
53 Investment Banking
54▲ Retail (Softlines)
55 Financial Svcs. (Div.)
56 Chemical (Diversified)
57 Entertainment
58 Chemical (Specialty)
59 Electronics
60▲ Diversified Co.
61 Electrical Equipment
62 Paper/Forest Products
63 Thrift
64 Heavy Truck & Equip
65 R.E.I.T.
66 Reinsurance
67 Steel
68 Human Resources
69 Aerospace/Defense
70 Auto Parts
71 Maritime
72 Retail (Hardlines)
73 Bank
74 Advertising
75 Restaurant
76 Metals & Mining (Div.)
77▼ Chemical (Basic)
78 Furn/Home Furnishings
79 Metal Fabricating
80 Cannabis
81 Recreation
82 Shoe
83 Oil/Gas Distribution
84 Bank (Midwest)
85 Office Equip/Supplies
86 Natural Gas (Div.)
87 Hotel/Gaming
88 Publishing
89 Air Transport
90 Apparel
91 Petroleum (Producing)
92 Petroleum (Integrated)
93 Pipeline MLPs
94 Oilfield Svcs/Equip.

***Based on the Timeliness™ ranks of the stocks in the industry**

Noteworthy Rank Changes

Listed below are some of the stocks whose Timeliness ranks have changed this week. We include mostly rank changes caused by fundamentals such as new earnings reports. Even when a significant change in earnings momentum has been forecast, the stock's rank will not be affected until the actual results, confirming that forecast, are reported. In most cases, we omit stocks that have been bumped up or down in rank by the dynamism of the ranking system.

STOCKS MOVING UP IN TIMELINESS RANK

Stock Name	Old Rank	New Rank	Reason for Change	Earnings Est. 12 months to 3-31-21
Best Buy Co.	2	1	Dynamism of the ranking system.	
Intuit Inc.	2	1	Dynamism of the ranking system.	
Micron Technology	3	2	Earnings turnaround. Aug. period $1.08 vs. year ago 56¢. Our estimate was $1.00.	Under Review
salesforce.com	2	1	Dynamism of the ranking system.	(A)

STOCKS MOVING DOWN IN TIMELINESS RANK

Stock Name	Old Rank	New Rank	Reason for Change	Earnings Est. 12 months to 3-31-21
Anthem, Inc.	1	2	Dynamism of the ranking system.	
Lam Research	1	2	Dynamism of the ranking system.	
Realty Income Corp.	1	2	Dynamism of the ranking system.	

(A) New full-page report in this week's Ratings & Reports.

TIMELY STOCKS IN TIMELY INDUSTRIES

Page No.	Industry (Industry Rank)	Recent Price	RANKS Timeliness	RANKS Safety	RANKS Technical	Beta	Current P/E Ratio	% Est'd Yield	Est'd. 3-5 Year Price Apprec.
	Household Products (INDUSTRY RANK 1)								
1187	Central Garden & Pet	38.54	2	3	1	0.75	18.8	NIL	55-120%
1188	Church & Dwight	93.46	1	1	2	0.65	31.9	1.0	N- N%
1189	Clorox Co.	211.97	1	1	3	0.50	28.0	2.1	N- N%
1190	Colgate-Palmolive	76.61	1	1	3	0.70	25.8	2.3	N- 5%
1192	Energizer Holdings	39.64	2	3	1	1.05	14.8	3.0	75-165%
1193	Kimberly-Clark	147.56	1	1	2	0.75	18.0	2.9	20- 45%
1195	Procter & Gamble	138.01	1	1	3	0.75	25.7	2.3	N- 10%
1196	Scotts Miracle-Gro	152.30	2	3	1	1.05	22.2	1.6	N- 15%
	Computer Software (INDUSTRY RANK 2)								
2584	Adobe Inc.	488.51	1	2	3	0.80	58.2	NIL	5- 40%
2585	Alteryx, Inc.	113.69	2	3	2	0.90	NMF	NIL	50-120%
2587	Autodesk, Inc.	232.15	1	3	2	1.00	98.8	NIL	N- 5%
2588	Cadence Design Sys.	105.25	1	2	3	0.95	41.1	NIL	N- N%
2589	Citrix Sys.	138.32	1	3	2	0.75	25.5	1.0	30- 95%
2592	FireEye Inc.	12.86	2	4	3	1.20	NMF	NIL	30-135%
2593	Fortinet Inc.	117.31	1	3	2	0.90	50.8	NIL	30-100%
2594	Guidewire Software	106.12	2	3	2	0.90	NMF	NIL	20- 80%
2595	Intuit Inc.	325.55	1	2	3	1.05	35.4	0.7	N- 35%
2597	Microsoft Corp.	209.44	1	1	3	0.90	33.8	1.0	5- 25%
2601	Oracle Corp.	59.58	1	1	3	0.85	14.4	1.6	45- 70%
2602	PTC Inc.	82.90	2	3	2	1.10	82.9	NIL	N- 10%
2604	Paycom Software	290.83	2	3	3	1.15	78.2	NIL	N- 40%
2605	RingCentral, Inc.	267.80	2	3	3	0.95	NMF	NIL	10- 65%
2606	SAP SE	157.08	2	2	2	0.90	35.7	1.1	N- 25%
2609	Square, Inc.	160.76	2	4	3	1.50	NMF	NIL	N- N%
2610	Synopsys, Inc.	212.64	1	1	3	1.00	38.2	NIL	N- N%
2613	VMware, Inc.	142.99	2	3	4	0.90	23.5	NIL	10- 70%
	Semiconductor Equip (INDUSTRY RANK 3)								
1385	Amkor Technology	11.28	2	4	2	1.20	12.4	NIL	25-120%
1386	Applied Materials	59.36	1	3	3	1.20	13.4	1.5	10- 70%
1387	Axcelis Technologies	22.28	2	3	3	1.25	20.8	NIL	10- 55%
1388	Entegris, Inc.	71.40	2	3	2	1.10	29.1	0.5	N- 25%
1389	FormFactor, Inc.	24.75	2	3	3	1.20	19.8	NIL	60-140%
1391	Kulicke & Soffa	22.54	2	3	2	1.00	24.0	2.4	55-145%
1392	Lam Research	336.61	2	3	3	1.30	16.6	1.5	N- 45%
1393	MKS Instruments	110.49	2	3	3	1.15	16.6	0.7	10- 65%
1394	Onto Innovation	29.76	2	3	2	1.10	16.9	NIL	100-200%
1395	Photronics Inc.	10.08	2	3	3	0.85	13.6	NIL	80-150%
	Entertainment Tech (INDUSTRY RANK 4)								
2008	Activision Blizzard	81.95	1	3	2	0.70	32.8	0.5	N- 5%
2011	Electronic Arts	132.28	1	3	2	0.65	30.1	NIL	N- 50%
2015	Take-Two Interactive	167.46	1	3	2	0.65	56.4	NIL	N- 10%
2017	Zynga Inc.	9.07	2	3	2	0.75	30.2	NIL	N- N%
	Precious Metals (INDUSTRY RANK 5)								
1568	Agnico Eagle Mines	78.28	2	3	3	0.55	32.5	1.0	45-125%
1569	AngloGold Ashanti ADS	25.82	2	4	3	0.55	10.8	0.5	35-130%
1570	Barrick Gold	27.76	2	3	2	0.60	23.3	1.2	10- 45%
1571	Franco-Nevada Corp.	138.76	2	3	1	0.45	50.8	0.7	N- 25%
1572	Hecla Mining	5.01	2	4	1	0.95	33.4	0.4	100-220%
1573	Kinross Gold	8.87	2	4	3	0.65	12.7	1.4	45-125%
1574	Newmont Corp.	62.13	1	3	2	0.60	20.0	1.6	5- 55%
1576	Pretium Resources	12.56	2	5	3	0.60	14.1	NIL	60-220%
1577	Royal Gold	119.20	2	3	1	0.75	38.0	1.0	40-105%
1578	Wheaton Precious Met.	48.29	2	3	2	0.65	38.9	0.8	N- 25%
	Brokers & Exchanges (INDUSTRY RANK 6)								
1799	Cboe Global Markets	89.00	1	2	5	0.90	20.3	1.9	55-115%
1803	Intercontinental Exch.	101.23	1	2	3	0.90	22.6	1.2	N- 40%
1805	MarketAxess Holdings	476.05	1	3	2	0.80	62.3	0.5	N- 15%
1806	Nasdaq, Inc.	125.37	2	3	3	1.05	21.8	1.6	N- 15%
	Retail Building Supply (INDUSTRY RANK 7)								
1138	Fastenal Co.	45.77	1	2	3	0.95	33.9	2.2	N- 10%
1141	Lowe's Cos.	162.59	1	2	2	1.15	19.2	1.5	N- 25%
1143	Sherwin-Williams	707.06	2	2	3	1.00	30.4	0.8	N- 15%
1144	Tractor Supply	142.02	1	2	1	0.85	22.4	1.1	N- 25%
	Cable TV (INDUSTRY RANK 8)								
1011	Altice USA	26.54	2	3	2	1.05	35.4	NIL	15- 90%
1012	Cable One	1762.68	2	2	1	0.90	39.0	0.6	N- 30%
1013	Charter Communic.	628.23	1	3	2	0.95	41.8	NIL	N- 5%
1015	Comcast Corp.	46.76	1	1	3	0.80	20.0	2.0	50- 80%
	Information Services (INDUSTRY RANK 9)								
430	Broadridge Fin'l	132.00	1	2	2	0.85	24.4	1.7	10- 50%
433	CoStar Group	857.13	2	2	3	0.95	88.3	NIL	N- 25%
434	Equifax, Inc.	158.11	1	3	3	1.05	27.0	1.0	10- 65%
436	FactSet Research	333.29	2	2	2	1.05	32.3	0.9	N- N%
438	Gartner Inc.	126.53	2	3	4	1.15	52.7	NIL	45-115%
440	MSCI Inc.	354.47	1	3	3	0.95	47.9	0.9	N- 10%
441	Moody's Corp.	285.16	1	3	3	1.15	32.9	0.8	N- 25%
443	S&P Global	355.55	1	2	3	1.05	32.7	0.8	N- 5%
446	Verisk Analytics	184.52	1	2	3	0.90	42.3	0.6	N- 10%
	Water Utility (INDUSTRY RANK 10)								
1789	Amer. States Water	74.33	2	2	4	0.65	31.6	1.8	N- 10%
1790	Amer. Water Works	144.55	1	3	3	0.85	37.2	1.6	N- N%
1793	Essential Utilities	39.93	2	2	2	0.90	39.1	2.6	N- 40%
1794	Middlesex Water	62.37	2	2	2	0.70	28.9	1.7	N- 5%
1796	York Water Co. (The)	43.39	2	3	2	0.80	34.2	1.7	N- 15%
	Semiconductor (INDUSTRY RANK 11)								
1350	Advanced Energy	61.98	2	3	2	1.30	13.6	NIL	55-125%
1351	Advanced Micro Dev.	79.48	1	4	3	1.20	77.9	NIL	N- N%
1353	Analog Devices	117.06	1	2	2	0.95	22.2	2.1	5- 40%
1355	CEVA, Inc.	39.07	2	3	2	1.05	NMF	NIL	40-120%
1356	Cirrus Logic	64.95	2	3	3	0.90	20.3	NIL	10- 60%
1359	Inphi Corp.	111.59	2	3	3	1.10	31.6	NIL	10- 70%
1360	Intel Corp.	51.43	1	1	5	0.85	11.3	2.6	75-105%
1362	MACOM Tech. Solutions	33.09	2	3	3	1.25	24.2	NIL	35- 95%
1366	Micron Technology	49.72	2	3	3	1.30	13.9	NIL	80-180%
1367	Monolithic Power Sys.	274.88	2	3	3	1.00	59.2	0.7	N- N%
1368	NVIDIA Corp.	521.40	1	3	3	1.10	80.1	0.1	N- N%
1371	Power Integrations	54.30	2	3	2	0.85	40.5	0.8	N- 10%
1374	Semtech Corp.	53.19	2	3	1	1.00	30.1	NIL	15- 60%
1375	Silicon Labs.	98.37	2	3	3	1.00	NMF	NIL	N- 35%
1379	Taiwan Semic. ADR	79.77	2	1	3	0.80	26.6	2.1	N- N%
1380	Texas Instruments	141.94	1	1	2	0.90	26.2	2.9	N- N%
	Biotechnology (INDUSTRY RANK 12)								
829	Alnylam Pharmac.	139.81	2	4	3	1.05	NMF	NIL	N- 60%
830	Amgen	247.03	1	1	3	0.85	15.7	2.8	20- 45%
831	Bio-Techne Corp.	243.74	2	2	2	0.80	58.3	0.5	N- 10%
832	BioMarin Pharmac.	77.99	2	3	3	1.00	NMF	NIL	35-100%
841	Neurocrine Biosci.	97.40	2	3	2	1.00	37.3	NIL	85-175%
842	QIAGEN N.V.	51.51	2	3	3	0.75	27.4	NIL	15- 75%
843	Regeneron Pharmac.	571.92	1	3	2	0.70	21.1	NIL	15- 70%
844	Sarepta Therapeutics	143.20	2	4	2	1.15	NMF	NIL	20- 95%
845	Seattle Genetics	190.51	2	4	4	0.90	NMF	NIL	N- 40%
847	Vertex Pharmac.	267.73	1	3	3	0.90	27.6	NIL	30- 95%
	Homebuilding (INDUSTRY RANK 13)								
1127	Horton D.R.	74.49	2	3	2	1.20	12.2	1.0	N- 35%
1129	Lennar Corp.	79.64	2	3	2	1.35	13.1	0.6	N- 40%
1130	M.D.C. Holdings	47.04	2	3	2	1.30	9.3	2.8	15- 80%
1131	Meritage Homes	107.97	2	3	3	1.40	11.8	NIL	N- 45%
1133	PulteGroup, Inc.	45.76	2	3	2	1.40	10.8	1.1	N- 55%
1134	TRI Pointe Group	17.74	2	3	2	1.50	7.7	NIL	70-155%
	Drug (INDUSTRY RANK 14)								
1607	AbbVie Inc.	87.28	1	3	2	1.00	8.0	5.4	50-130%
1609	AstraZeneca PLC (ADS)	54.75	2	2	3	0.80	46.0	2.6	20- 55%
1612	Biogen	282.04	1	3	4	0.90	8.4	NIL	30- 95%
1615	Emergent BioSolutions	103.64	2	4	3	0.85	17.2	NIL	5- 75%
1617	Gilead Sciences	62.85	1	2	3	0.65	39.8	4.3	20- 65%
1618	GlaxoSmithKline ADR	37.86	2	1	3	0.85	11.8	5.0	45- 85%
1621	Lilly (Eli)	148.10	2	1	3	0.75	19.9	2.0	10- 35%
1626	Nektar Therapeutics	16.84	2	5	3	1.00	NMF	NIL	20-140%
1628	Novo Nordisk ADR	69.17	2	1	3	0.80	26.0	1.9	10- 30%
1630	Perrigo Co. plc	45.63	1	3	3	1.00	11.2	2.1	65-140%
1632	Sage Therapeutics	59.89	2	4	5	1.40	NMF	NIL	35-125%
1633	Sanofi ADR	51.00	2	1	3	0.85	10.3	3.4	N- 20%
1635	Zoetis Inc.	161.32	2	2	3	1.05	43.7	0.5	N- 25%
	IT Services (INDUSTRY RANK 15)								
2615	ACI Worldwide	25.70	2	3	3	1.00	25.7	NIL	15- 75%
2616	Accenture Plc	222.78	2	1	2	0.95	29.3	1.6	10- 30%
2619	CACI Int'l	217.68	2	3	2	0.95	15.9	NIL	25- 90%
2621	CSG Systems Int'l	41.15	2	3	3	0.75	16.5	2.3	10- 70%
2624	EPAM Systems	328.96	2	3	3	1.00	65.4	NIL	N- 55%
2627	Fiserv Inc.	104.07	1	2	4	1.00	21.0	NIL	N- 40%
2628	Henry (Jack) & Assoc.	162.72	1	1	2	0.85	38.4	1.1	N- 10%
2631	ManTech Int'l 'A'	70.54	2	3	2	0.85	26.2	1.8	20- 75%
2634	ServiceNow, Inc.	484.21	1	3	3	0.95	NMF	NIL	N- N%
2635	Tyler Technologies	346.69	2	3	2	0.75	64.2	NIL	N- 35%

TIMELY STOCKS IN TIMELY INDUSTRIES

Page No.	Industry (Industry Rank)	Recent Price	Timeliness (RANKS)	Safety (RANKS)	Technical (RANKS)	Beta	Current P/E Ratio	% Est'd Yield	Est'd. 3-5 Year Price Apprec.
	Electric Utility (West) (INDUSTRY RANK 16)								
2218	IDACORP, Inc.	81.23	2	2	3	0.80	17.4	3.5	5- 40%
2220	PNM Resources	41.45	2	3	3	0.95	18.3	3.0	N- 35%
2221	Pinnacle West Capital	73.89	1	1	4	0.85	16.1	4.4	30- 55%
2222	Portland General	35.60	2	3	3	0.85	44.0	4.6	25- 70%
2223	Sempra Energy	116.71	1	2	3	0.95	16.3	3.7	20- 65%
	Telecom. Services (INDUSTRY RANK 17)								
918	ATN International	50.79	2	3	2	0.75	66.8	1.3	10- 65%
920	Bandwidth Inc.	171.08	2	3	3	0.70	NMF	NIL	N- 30%
926	j2 Global	70.34	2	3	4	1.05	23.6	NIL	40-115%
929	Ooma, Inc.	13.13	2	4	1	1.15	NMF	NIL	N- 45%
930	Shenandoah Telecom.	44.22	2	3	1	0.75	26.0	0.7	35- 90%
932	Telephone & Data	19.01	2	3	2	1.00	13.5	3.6	85-165%
933	TELUS Corporation	24.01	2	2	3	0.70	23.5	5.0	45- 85%
935	Verizon Communic.	59.36	1	1	3	0.65	12.2	4.2	45- 75%
936	Vodafone Group ADR	13.48	2	3	2	0.95	30.0	8.2	85-195%
	Food Processing (INDUSTRY RANK 18)								
1903	B&G Foods	28.44	2	3	2	0.50	14.6	6.7	40-110%
1906	Cal-Maine Foods	39.23	2	3	2	0.60	20.8	NIL	15- 80%
1908	Campbell Soup	47.98	1	2	2	0.60	16.4	2.9	N- 25%
1909	Conagra Brands	35.46	1	3	2	0.75	14.2	2.5	N- 55%
1911	Flowers Foods	24.02	2	3	2	0.60	23.1	3.4	5- 45%
1913	Freshpet, Inc.	107.48	2	4	3	1.00	NMF	NIL	N- N%
1914	Gen'l Mills	59.90	1	1	2	0.65	16.1	3.4	N- 15%
1916	Herbalife Nutrition	47.41	2	3	2	1.00	18.0	NIL	15- 80%
1918	Hormel Foods	48.96	1	1	2	0.55	29.0	2.0	N- 35%
1919	Hostess Brands	12.53	2	3	3	0.75	18.7	NIL	35-100%
1926	Maple Leaf Foods	27.99	2	3	1	0.60	27.2	2.3	45- 95%
1927	McCormick & Co.	195.18	1	1	3	0.85	34.6	1.3	N- N%
1928	Medifast, Inc.	165.51	2	3	1	1.05	22.5	2.7	N- 30%
1930	Nestle SA ADS	118.55	2	1	2	0.65	27.3	2.3	N- 20%
1935	Sanfilippo (John B.)	74.84	2	3	2	0.55	17.7	0.9	N- 45%
1936	Saputo Inc.	33.81	2	1	3	0.60	24.2	2.1	20- 50%
1939	Smucker (J.M.)	113.24	1	2	2	0.65	16.8	3.2	5- 40%
1940	Tootsie Roll	30.48	2	1	3	0.50	31.1	1.2	15- 50%
1941	TreeHouse Foods	40.38	2	3	3	0.70	16.1	NIL	25-100%
1943	USANA Health Sciences	74.24	2	3	1	0.95	14.1	NIL	N- 30%
1944	Unilever PLC ADR	61.73	2	1	2	0.80	22.0	3.0	15- 40%
	Retail Store (INDUSTRY RANK 19)								
2137	Big Lots Inc.	47.76	2	3	2	1.15	7.7	2.6	5- 70%
967	CVS Health	57.94	1	2	3	0.90	8.1	3.5	65-100%
2140	Costco Wholesale	349.62	1	1	3	0.65	39.6	0.8	10- 30%
2142	Dollar General	209.80	1	3	3	0.70	26.8	0.7	N- 30%
2143	Dollar Tree, Inc.	90.94	2	3	3	0.75	17.7	NIL	35-105%
2144	Five Below, Inc.	128.33	2	3	3	1.20	48.2	NIL	5- 55%
2148	Ollie's Bargain Outlet	87.52	2	3	1	1.05	36.6	NIL	15- 70%
2150	Rent-A-Center	30.44	2	4	2	1.20	12.8	3.8	N- 80%
969	Rite Aid Corp.	9.78	2	5	1	0.70	32.6	NIL	45-155%
2151	Target Corp.	156.46	1	2	3	0.70	25.9	1.7	N- N%
2152	Walmart Inc.	137.25	1	1	3	0.55	27.3	1.6	5- 30%
	Computers/Peripherals (INDUSTRY RANK 20)								
1403	Logitech Int'l	74.98	2	2	3	0.70	29.4	1.2	15- 55%
1404	Mercury Systems	78.61	2	3	3	1.00	34.0	NIL	10- 65%
1405	NetApp, Inc.	43.60	2	3	4	1.10	12.8	4.6	60-140%
1406	Pure Storage	15.22	2	4	3	1.15	NMF	NIL	65-195%
1408	Seagate Technology	49.66	1	3	5	1.10	11.0	5.3	N- 40%
1410	Western Digital	38.62	2	3	5	1.40	11.9	NIL	80-185%
	Retail/Wholesale Food (INDUSTRY RANK 21)								
1950	Empire Company Ltd.	38.67	2	3	2	0.55	17.2	1.3	N- 30%
1952	Ingles Markets	37.43	2	3	1	0.50	7.6	1.8	5- 60%
1953	Kroger Co.	33.70	1	3	2	0.55	13.6	2.1	5- 65%
1955	Metro Inc.	64.26	2	2	3	0.50	18.6	1.4	N- 15%
1957	SpartanNash Co.	16.25	2	4	1	0.60	15.2	4.7	25-115%
1958	Sprouts Farmers Market	21.18	2	3	1	0.65	14.7	NIL	40-110%
1962	Village Super Market	24.93	2	3	2	0.50	13.4	4.0	40-100%
1963	Weis Markets	48.28	2	3	1	0.55	14.0	2.6	N- 45%
1964	Weston (George)	99.50	2	2	4	0.60	12.5	2.1	25- 70%
	E-Commerce (INDUSTRY RANK 22)								
1818	Akamai Technologies	110.97	1	3	3	0.75	30.4	NIL	15- 65%
1820	Avalara, Inc.	132.45	2	3	5	0.75	NMF	NIL	N- N%
1821	Black Knight, Inc.	85.80	2	3	3	0.85	41.3	NIL	N- 35%
1822	Check Point Software	121.60	2	1	2	0.75	19.9	NIL	5- 30%
1823	Cornerstone OnDemand	35.20	2	3	4	1.30	28.9	NIL	40-115%
1826	GoDaddy Inc.	74.93	2	3	1	1.05	57.2	NIL	20- 80%
1829	Mercadolibre Inc.	1093.43	2	3	2	1.00	NMF	NIL	N- 45%
1830	New Relic, Inc.	56.32	2	3	3	1.00	NMF	NIL	50-130%
1835	salesforce.com	246.67	1	3	3	0.85	69.7	NIL	N- 40%
1836	Shopify Inc.	966.50	2	3	3	1.00	NMF	NIL	N- 25%
1841	Workday, Inc.	220.34	2	3	3	1.00	NMF	NIL	N- 25%
	Internet (INDUSTRY RANK 23)								
2637	ANGI Homeservices	10.55	2	3	1	0.90	NMF	NIL	N- 40%
2638	Alibaba Group ADS	276.01	2	3	3	0.90	33.1	NIL	N- 30%
2639	Alphabet Inc.	1464.52	1	1	2	0.90	26.9	NIL	55- 90%
2640	Amazon.com	3174.05	1	2	2	0.80	83.9	NIL	N- 30%
2645	eBay Inc.	54.04	1	3	2	1.00	14.6	1.2	40-115%
2646	Etsy, Inc.	123.69	2	3	2	1.20	NMF	NIL	N- N%
2653	1-800-FLOWERS.COM	25.64	2	3	2	0.90	30.2	NIL	N- 15%
968	PetMed Express	31.67	2	3	2	0.65	21.1	3.5	10- 60%
2659	VeriSign Inc.	204.72	1	3	3	0.95	37.0	NIL	N- 10%
	Med Supp Non-Invasive (INDUSTRY RANK 24)								
203	Abbott Labs.	104.44	2	1	3	1.00	30.6	1.4	5- 30%
206	AmerisourceBergen	97.58	1	2	2	0.90	12.2	1.7	30- 95%
208	Bio-Rad Labs. 'A'	513.92	2	2	3	0.80	61.6	NIL	N- N%
211	Charles River	223.42	2	3	3	1.20	43.1	NIL	N- N%
214	DexCom Inc.	400.19	2	4	3	0.95	NMF	NIL	N- 10%
216	Hill-Rom Hldgs.	82.92	2	3	3	1.00	14.4	1.1	40-110%
218	IDEXX Labs.	386.37	1	3	3	1.00	65.5	NIL	N- 50%
223	Masimo Corp.	230.76	2	3	3	0.85	66.5	NIL	N- N%
227	Neogen Corp.	77.59	2	3	3	0.85	65.2	NIL	N- 40%
228	NovoCure Limited	108.32	2	4	3	1.15	NMF	NIL	N- 25%
232	ResMed Inc.	172.00	1	3	2	0.95	38.3	0.9	N- N%
234	West Pharmac. Svcs.	272.39	1	2	3	0.80	62.5	0.2	N- 10%
	Tobacco (INDUSTRY RANK 25)								
1995	Turning Point Brands	28.38	2	4	3	1.00	15.0	0.7	5- 75%
1996	Universal Corp.	41.72	2	3	3	0.75	11.9	7.4	10- 70%
	Beverage (INDUSTRY RANK 26)								
1967	Boston Beer 'A'	899.91	2	3	3	0.70	85.6	NIL	N- N%
1976	MGP Ingredients	38.18	2	3	4	0.80	17.0	1.3	45-125%
1978	Monster Beverage	80.51	2	3	3	0.85	39.3	NIL	N- 45%
1979	National Beverage	69.38	2	3	2	0.75	26.2	NIL	N- 50%
	Power (INDUSTRY RANK 27)								
1211	BWX Technologies	57.86	2	3	3	0.90	20.2	1.3	20- 75%
1216	First Solar, Inc.	65.37	2	3	2	1.10	26.1	NIL	40-115%
1217	Generac Holdings	190.18	2	3	3	1.05	33.8	NIL	25- 90%
1220	Northland Power	39.52	2	3	3	0.90	27.1	3.0	15- 65%
1222	SolarEdge Tech.	218.29	2	3	3	1.15	60.0	NIL	N- 15%
	Railroad (INDUSTRY RANK 28)								
339	Can. National Railway	106.58	2	1	2	0.90	27.0	1.6	20- 50%
340	Can. Pacific Railway	301.70	2	2	2	1.05	22.9	1.0	5- 60%
	Trucking (INDUSTRY RANK 29)								
321	Heartland Express	19.08	2	2	1	0.75	21.4	0.4	5- 55%
324	Knight-Swift Trans.	42.30	2	3	1	0.85	19.1	0.8	5- 65%
327	Schneider National	25.45	2	3	1	0.80	22.1	1.0	N- 40%
328	Werner Enterprises	43.43	2	3	2	0.80	18.1	0.8	5- 60%
	Healthcare Information (INDUSTRY RANK 30)								
821	HealthEquity, Inc.	49.52	2	3	4	1.25	31.5	NIL	50-130%
825	Teladoc Health	215.09	2	4	3	0.60	NMF	NIL	N- 65%
826	Veeva Systems	281.92	2	3	3	0.95	NMF	NIL	N- N%
	Precision Instrument (INDUSTRY RANK 31)								
113	Agilent Technologies	99.51	2	2	3	0.90	30.7	0.7	N- 35%
121	II-VI Inc.	41.21	2	3	3	1.00	25.6	NIL	45-120%
122	KLA Corp.	193.25	1	3	3	1.10	16.7	1.9	10- 65%
130	PerkinElmer Inc.	121.89	1	2	3	1.00	22.9	0.2	25- 65%
132	Thermo Fisher Sci.	428.39	1	1	3	0.90	40.3	0.2	N- N%
133	Veeco Instruments	11.98	2	4	3	1.30	NMF	NIL	65-190%
	Telecom. Equipment (INDUSTRY RANK 32)								
943	AudioCodes Ltd.	31.62	2	3	3	0.95	25.7	0.9	25- 90%
945	Calix, Inc.	18.03	2	4	2	1.10	30.6	NIL	65-175%
947	Ciena Corp.	39.78	2	3	1	1.00	13.6	NIL	75-150%
951	Ericsson ADR	10.71	2	3	2	0.90	20.2	1.5	5- 50%
954	Infinera Corp.	5.96	2	5	1	1.20	NMF	NIL	N-100%
957	Marvell Technology	39.89	2	3	3	1.05	39.1	0.6	N- 40%
963	Switch, Inc.	15.48	2	4	2	0.85	57.3	1.3	30-125%
965	Vocera Communications	28.72	2	3	2	0.75	NMF	NIL	5- 75%
	Medical Services (INDUSTRY RANK 33)								
791	Anthem, Inc.	257.06	2	3	3	1.15	10.9	1.6	55-135%
792	Centene Corp.	55.52	1	3	2	1.05	10.2	NIL	55-135%
793	Cigna Corp.	164.29	2	3	3	1.20	8.7	NIL	70-155%
794	DaVita Inc.	84.50	1	3	2	1.00	12.4	NIL	20- 80%
797	Fresenius Medical ADR	42.18	2	2	1	0.90	15.7	1.7	40-100%
800	Humana Inc.	400.00	2	3	3	1.20	21.2	0.7	N- 45%
801	ICON plc	186.04	2	2	3	0.90	29.3	NIL	10- 45%
807	Molina Healthcare	163.07	2	3	1	1.05	13.2	NIL	25- 85%
815	UnitedHealth Group	303.23	2	1	3	1.05	17.4	1.6	20- 45%

Timely Stocks

Stocks Ranked 1 (Highest) for Relative Price Performance (Next 12 Months)

Page No.	Stock Name	Ticker	Recent Price	Ranks Safety	Ranks Technical	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
1607	AbbVie Inc.	ABBV	87.28	3	2	8.0	5.4	Drug	14
2008	Activision Blizzard	ATVI	81.95	3	2	32.8	0.5	Entertainment Tech	4
2584	Adobe Inc.	ADBE	488.51	2	3	58.2	NIL	Computer Software	2
1351	Advanced Micro Dev.	AMD	79.48	4	3	77.9	NIL	Semiconductor	11
1818	Akamai Technologies	AKAM	110.97	3	3	30.4	NIL	E-Commerce	22
1511	Alexandria Real Estate	ARE	161.35	3	2	44.1	2.6	R.E.I.T.	65
754	Allstate Corp.	ALL	93.22	1	4	7.8	2.3	Insurance (Prop/Cas.)	34
2639	Alphabet Inc.	GOOG	1464.52	1	2	26.9	NIL	Internet	23
2640	Amazon.com	AMZN	3174.05	2	2	83.9	NIL	Internet	23
904	Ameren Corp.	AEE	78.42	2	2	22.0	2.7	Electric Util. (Central)	43
592	Amer. Tower 'A'	AMT	240.00	2	3	57.6	2.0	Wireless Networking	36
1790	Amer. Water Works	AWK	144.55	3	3	37.2	1.6	Water Utility	10
206	AmerisourceBergen	ABC	97.58	2	2	12.2	1.7	Med Supp Non-Invasive	24
830	Amgen	AMGN	247.03	1	3	15.7	2.8	Biotechnology	12
1353	Analog Devices	ADI	117.06	2	2	22.2	2.1	Semiconductor	11
1386	Applied Materials	AMAT	59.36	3	3	13.4	1.5	Semiconductor Equip	3
2542	Assurant Inc.	AIZ	120.10	2	3	13.5	2.1	Financial Svcs. (Div.)	55
547	Atmos Energy	ATO	95.04	1	3	19.6	2.6	Natural Gas Utility	41
2587	Autodesk, Inc.	ADSK	232.15	3	2	98.8	NIL	Computer Software	2
2167	Best Buy Co. ■	BBY	108.44	3	2	16.6	2.0	Retail (Hardlines)	72
1612	Biogen	BIIB	282.04	3	4	8.4	NIL	Drug	14
430	Broadridge Fin'l	BR	132.00	2	2	24.4	1.7	Information Services	9
1799	Cboe Global Markets	CBOE	89.00	2	5	20.3	1.9	Brokers & Exchanges	6
380	C.H. Robinson	CHRW	103.25	2	3	27.7	2.0	Industrial Services	39
967	CVS Health	CVS	57.94	2	3	8.1	3.5	Retail Store	19
2588	Cadence Design Sys.	CDNS	105.25	2	3	41.1	NIL	Computer Software	2
1908	Campbell Soup	CPB	47.98	2	2	16.4	2.9	Food Processing	18
792	Centene Corp.	CNC	55.52	3	2	10.2	NIL	Medical Services	33
1013	Charter Communic.	CHTR	628.23	3	2	41.8	NIL	Cable TV	8
1188	Church & Dwight	CHD	93.46	1	2	31.9	1.0	Household Products	1
2589	Citrix Sys.	CTXS	138.32	3	2	25.5	1.0	Computer Software	2
1189	Clorox Co.	CLX	211.97	1	3	28.0	2.1	Household Products	1
1190	Colgate-Palmolive	CL	76.61	1	3	25.8	2.3	Household Products	1
1015	Comcast Corp.	CMCSA	46.76	1	3	20.0	2.0	Cable TV	8
1909	Conagra Brands	CAG	35.46	3	2	14.2	2.5	Food Processing	18
2140	Costco Wholesale	COST	349.62	1	3	39.6	0.8	Retail Store	19
794	DaVita Inc.	DVA	84.50	3	2	12.4	NIL	Medical Services	33
2142	Dollar General	DG	209.80	3	3	26.8	0.7	Retail Store	19
359	Domino's Pizza	DPZ	421.54	2	2	33.9	0.7	Restaurant	75
2645	eBay Inc.	EBAY	54.04	3	2	14.6	1.2	Internet	23
2011	Electronic Arts	EA	132.28	3	2	30.1	NIL	Entertainment Tech	4
434	Equifax, Inc.	EFX	158.11	3	3	27.0	1.0	Information Services	9
1138	Fastenal Co.	FAST	45.77	2	3	33.9	2.2	Retail Building Supply	7
2515	First Republic Bank	FRC	108.17	3	2	21.0	0.7	Bank	73
2627	Fiserv Inc.	FISV	104.07	2	4	21.0	NIL	IT Services	15
2593	Fortinet Inc.	FTNT	117.31	3	2	50.8	NIL	Computer Software	2
1914	Gen'l Mills	GIS	59.90	1	2	16.1	3.4	Food Processing	18
1617	Gilead Sciences	GILD	62.85	2	3	39.8	4.3	Drug	14
1530	Healthpeak Properties	PEAK	27.33	3	4	NMF	5.4	R.E.I.T.	65
2628	Henry (Jack) & Assoc.	JKHY	162.72	1	2	38.4	1.1	IT Services	15
1918	Hormel Foods	HRL	48.96	1	2	29.0	2.0	Food Processing	18
218	IDEXX Labs.	IDXX	386.37	3	3	65.5	NIL	Med Supp Non-Invasive	24
1360	Intel Corp.	INTC	51.43	1	5	11.3	2.6	Semiconductor	11
1803	Intercontinental Exch.	ICE	101.23	2	3	22.6	1.2	Brokers & Exchanges	6
2595	Intuit Inc. ■	INTU	325.55	2	3	35.4	0.7	Computer Software	2
122	KLA Corp.	KLAC	193.25	3	3	16.7	1.9	Precision Instrument	31
1193	Kimberly-Clark	KMB	147.56	1	2	18.0	2.9	Household Products	1
1953	Kroger Co.	KR	33.70	3	2	13.6	2.1	Retail/Wholesale Food	21
393	Leidos Hldgs.	LDOS	91.57	3	3	16.2	1.5	Industrial Services	39
717	Lockheed Martin	LMT	390.51	1	3	16.5	2.7	Aerospace/Defense	69
1141	Lowe's Cos.	LOW	162.59	2	2	19.2	1.5	Retail Building Supply	7
440	MSCI Inc.	MSCI	354.47	3	3	47.9	0.9	Information Services	9
1805	MarketAxess Holdings	MKTX	476.05	3	2	62.3	0.5	Brokers & Exchanges	6
1927	McCormick & Co.	MKC	195.18	1	3	34.6	1.3	Food Processing	18
2597	Microsoft Corp.	MSFT	209.44	1	3	33.8	1.0	Computer Software	2
441	Moody's Corp.	MCO	285.16	3	3	32.9	0.8	Information Services	9
2339	Netflix, Inc.	NFLX	490.65	3	2	72.9	NIL	Entertainment	57
1574	Newmont Corp.	NEM	62.13	3	2	20.0	1.6	Precious Metals	5
720	Northrop Grumman	NOC	329.52	1	3	14.2	1.8	Aerospace/Defense	69
1368	NVIDIA Corp.	NVDA	521.40	3	3	80.1	0.1	Semiconductor	11
2601	Oracle Corp.	ORCL	59.58	1	3	14.4	1.6	Computer Software	2
130	PerkinElmer Inc.	PKI	121.89	2	3	22.9	0.2	Precision Instrument	31
1630	Perrigo Co. plc	PRGO	45.63	3	3	11.2	2.1	Drug	14
2221	Pinnacle West Capital	PNW	73.89	1	4	16.1	4.4	Electric Utility (West)	16
1195	Procter & Gamble	PG	138.01	1	3	25.7	2.3	Household Products	1
769	Progressive Corp.	PGR	93.98	1	3	15.8	0.4	Insurance (Prop/Cas.)	34
1538	Prologis	PLD	100.03	2	2	43.7	2.4	R.E.I.T.	65
843	Regeneron Pharmac.	REGN	571.92	3	2	21.1	NIL	Biotechnology	12
232	ResMed Inc.	RMD	172.00	3	2	38.3	0.9	Med Supp Non-Invasive	24
398	Rollins, Inc.	ROL	54.66	2	3	71.0	0.6	Industrial Services	39
443	S&P Global	SPGI	355.55	2	3	32.7	0.8	Information Services	9
1835	salesforce.com ■	CRM	246.67	3	3	69.7	NIL	E-Commerce	22
1408	Seagate Technology	STX	49.66	3	5	11.0	5.3	Computers/Peripherals	20
2223	Sempra Energy	SRE	116.71	2	3	16.3	3.7	Electric Utility (West)	16
2634	ServiceNow, Inc.	NOW	484.21	3	3	NMF	NIL	IT Services	15
1939	Smucker (J.M.)	SJM	113.24	2	2	16.8	3.2	Food Processing	18
2527	State Street Corp.	STT	60.49	3	3	10.0	3.4	Bank	73
2610	Synopsys, Inc.	SNPS	212.64	1	3	38.2	NIL	Computer Software	2
2015	Take-Two Interactive	TTWO	167.46	3	2	56.4	NIL	Entertainment Tech	4
2151	Target Corp.	TGT	156.46	2	3	25.9	1.7	Retail Store	19
1380	Texas Instruments	TXN	141.94	1	2	26.2	2.9	Semiconductor	11
132	Thermo Fisher Sci.	TMO	428.39	1	3	40.3	0.2	Precision Instrument	31
1144	Tractor Supply	TSCO	142.02	2	1	22.4	1.1	Retail Building Supply	7
1547	UDR, Inc.	UDR	33.00	3	4	NMF	4.5	R.E.I.T.	65
2659	VeriSign Inc.	VRSN	204.72	3	3	37.0	NIL	Internet	23
446	Verisk Analytics	VRSK	184.52	2	3	42.3	0.6	Information Services	9
935	Verizon Communic.	VZ	59.36	1	3	12.2	4.2	Telecom. Services	17
847	Vertex Pharmac.	VRTX	267.73	3	3	27.6	NIL	Biotechnology	12
2152	Walmart Inc.	WMT	137.25	1	3	27.3	1.6	Retail Store	19
234	West Pharmac. Svcs.	WST	272.39	2	3	62.5	0.2	Med Supp Non-Invasive	24

■ **Newly added this week.**

Rank 1 Deletions:
Anthem, Inc.; Lam Research; Realty Income Corp.

Rank removed–see supplement or report:
None.

Continued from preceding page

TIMELY STOCKS

Stocks Ranked 2 (Above Average) for Relative Price Performance in the Next 12 Months

Page No.	Stock Name	Ticker	Recent Price	Ranks Safety	Ranks Technical	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
1702	AAON, Inc.	AAON	**58.40**	**3**	**2**	40.8	0.7	Machinery	49
2615	ACI Worldwide	ACIW	**25.70**	**3**	**3**	25.7	NIL	IT Services	15
2637	ANGI Homeservices	ANGI	**10.55**	**3**	**1**	NMF	NIL	Internet	23
918	ATN International	ATNI	**50.79**	**3**	**2**	66.8	1.3	Telecom. Services	17
203	Abbott Labs.	ABT	**104.44**	**1**	**3**	30.6	1.4	Med Supp Non-Invasive	24
2616	Accenture Plc	ACN	**222.78**	**1**	**2**	29.3	1.6	IT Services	15
2118	Advance Auto Parts	AAP	**153.39**	**3**	**2**	19.1	0.7	Retail Automotive	44
1350	Advanced Energy	AEIS	**61.98**	**3**	**2**	13.6	NIL	Semiconductor	11
113	Agilent Technologies	A	**99.51**	**2**	**3**	30.7	0.7	Precision Instrument	31
1568	Agnico Eagle Mines	AEM	**78.28**	**3**	**3**	32.5	1.0	Precious Metals	5
2432	Air Products & Chem.	APD	**292.67**	**1**	**3**	33.6	1.8	Chemical (Diversified)	56
2638	Alibaba Group ADS	BABA	**276.01**	**3**	**3**	33.1	NIL	Internet	23
753	Alleghany Corp.	Y	**517.86**	**1**	**4**	12.0	NIL	Insurance (Prop/Cas.)	34
829	Alnylam Pharmac.	ALNY	**139.81**	**4**	**3**	NMF	NIL	Biotechnology	12
2585	Alteryx, Inc.	AYX	**113.69**	**3**	**2**	NMF	NIL	Computer Software	2
1011	Altice USA	ATUS	**26.54**	**3**	**2**	35.4	NIL	Cable TV	8
1789	Amer. States Water	AWR	**74.33**	**2**	**4**	31.6	1.8	Water Utility	10
1385	Amkor Technology	AMKR	**11.28**	**4**	**2**	12.4	NIL	Semiconductor Equip	3
1569	AngloGold Ashanti ADS	AU	**25.82**	**4**	**3**	10.8	0.5	Precious Metals	5
791	Anthem, Inc. ▼	ANTM	**257.06**	**3**	**3**	10.9	1.6	Medical Services	33
1609	AstraZeneca PLC (ADS)	AZN	**54.75**	**2**	**3**	46.0	2.6	Drug	14
305	Atlas Air Worldwide	AAWW	**62.36**	**3**	**2**	5.2	NIL	Air Transport	89
943	AudioCodes Ltd.	AUDC	**31.62**	**3**	**3**	25.7	0.9	Telecom. Equipment	32
2121	AutoZone Inc.	AZO	**1155.56**	**3**	**2**	18.0	NIL	Retail Automotive	44
1820	Avalara, Inc. ■	AVLR	**132.45**	**3**	**5**	NMF	NIL	E-Commerce	22
1387	Axcelis Technologies	ACLS	**22.28**	**3**	**3**	20.8	NIL	Semiconductor Equip	3
1903	B&G Foods	BGS	**28.44**	**3**	**2**	14.6	6.7	Food Processing	18
1211	BWX Technologies	BWXT	**57.86**	**3**	**3**	20.2	1.3	Power	27
565	Balchem Corp.	BCPC	**96.70**	**3**	**2**	35.3	0.5	Chemical (Specialty)	58
2503	BancorpSouth Bank	BXS	**19.31**	**3**	**3**	10.2	3.8	Bank	73
920	Bandwidth Inc.	BAND	**171.08**	**3**	**3**	NMF	NIL	Telecom. Services	17
1570	Barrick Gold	GOLD	**27.76**	**3**	**2**	23.3	1.2	Precious Metals	5
1174	Berry Global Group	BERY	**48.32**	**3**	**1**	10.2	NIL	Packaging & Container	42
2137	Big Lots Inc.	BIG	**47.76**	**3**	**2**	7.7	2.6	Retail Store	19
208	Bio-Rad Labs. 'A'	BIO	**513.92**	**2**	**3**	61.6	NIL	Med Supp Non-Invasive	24
831	Bio-Techne Corp.	TECH	**243.74**	**2**	**2**	58.3	0.5	Biotechnology	12
832	BioMarin Pharmac.	BMRN	**77.99**	**3**	**3**	NMF	NIL	Biotechnology	12
1821	Black Knight, Inc.	BKI	**85.80**	**3**	**3**	41.3	NIL	E-Commerce	22
2543	BlackRock, Inc.	BLK	**558.65**	**2**	**3**	19.6	2.6	Financial Svcs. (Div.)	55
1107	Boise Cascade	BCC	**40.11**	**3**	**1**	14.1	1.0	Building Materials	38
376	Booz Allen Hamilton	BAH	**84.95**	**3**	**3**	23.6	1.5	Industrial Services	39
1967	Boston Beer 'A'	SAM	**899.91**	**3**	**3**	85.6	NIL	Beverage	26
2387	Boston Omaha	BOMN	**15.53**	**3**	**3**	28.2	NIL	Advertising	74
1707	Brooks Automation	BRKS	**46.26**	**3**	**2**	37.9	0.9	Machinery	49
2545	Brown & Brown	BRO	**44.87**	**1**	**3**	30.3	0.8	Financial Svcs. (Div.)	55
2194	Buckle (The), Inc. ▲	BKE	**20.79**	**3**	**5**	11.3	5.8	Retail (Softlines)	54
1108	Builders FirstSource	BLDR	**32.30**	**4**	**3**	14.6	NIL	Building Materials	38
2619	CACI Int'l	CACI	**217.68**	**3**	**2**	15.9	NIL	IT Services	15
1355	CEVA, Inc.	CEVA	**39.07**	**3**	**2**	NMF	NIL	Semiconductor	11
2621	CSG Systems Int'l	CSGS	**41.15**	**3**	**3**	16.5	2.3	IT Services	15
1012	Cable One	CABO	**1762.68**	**2**	**1**	39.0	0.6	Cable TV	8
566	Cabot Microelectr's	CCMP	**142.44**	**3**	**2**	28.0	1.3	Chemical (Specialty)	58
1906	Cal-Maine Foods	CALM	**39.23**	**3**	**2**	20.8	NIL	Food Processing	18
945	Calix, Inc.	CALX	**18.03**	**4**	**2**	30.6	NIL	Telecom. Equipment	32
339	Can. National Railway	CNI	**106.58**	**1**	**2**	27.0	1.6	Railroad	28
340	Can. Pacific Railway	CP	**301.70**	**2**	**2**	22.9	1.0	Railroad	28
1422	Canopy Growth Corp.	CGC	**14.21**	**4**	**3**	NMF	NIL	Cannabis	80
2123	CarMax, Inc. ▲	KMX	**95.05**	**3**	**2**	31.2	NIL	Retail Automotive	44
406	Casella Waste Sys.	CWST	**55.55**	**3**	**2**	81.7	NIL	Environmental	40
176	Catalent, Inc.	CTLT	**84.11**	**3**	**3**	94.5	NIL	Med Supp Invasive	50
1327	Celestica Inc.	CLS	**6.99**	**3**	**1**	7.9	NIL	Electronics	59
1187	Central Garden & Pet	CENT	**38.54**	**3**	**1**	18.8	NIL	Household Products	1
211	Charles River	CRL	**223.42**	**3**	**3**	43.1	NIL	Med Supp Non-Invasive	24
1822	Check Point Software	CHKP	**121.60**	**1**	**2**	19.9	NIL	E-Commerce	22
2000	Chegg, Inc.	CHGG	**70.79**	**3**	**3**	60.0	NIL	Educational Services	48
1753	Chemed Corp.	CHE	**480.36**	**2**	**2**	28.8	0.3	Diversified Co.	60
608	Cheniere Energy Inc.	LNG	**49.33**	**3**	**3**	17.2	NIL	Oil/Gas Distribution	83
548	Chesapeake Utilities	CPK	**86.56**	**2**	**3**	21.9	2.1	Natural Gas Utility	41
947	Ciena Corp.	CIEN	**39.78**	**3**	**1**	13.6	NIL	Telecom. Equipment	32
793	Cigna Corp.	CI	**164.29**	**3**	**3**	8.7	NIL	Medical Services	33
1356	Cirrus Logic	CRUS	**64.95**	**3**	**3**	20.3	NIL	Semiconductor	11
1598	Compass Minerals Int'l	CMP	**58.96**	**3**	**3**	21.1	4.9	Chemical (Basic)	77
1823	Cornerstone OnDemand	CSOD	**35.20**	**3**	**4**	28.9	NIL	E-Commerce	22
433	CoStar Group	CSGP	**857.13**	**2**	**3**	88.3	NIL	Information Services	9
1640	Cross Country Health.	CCRN	**6.34**	**4**	**4**	NMF	NIL	Human Resources	68
1519	CyrusOne Inc.	CONE	**72.23**	**3**	**1**	NMF	2.8	R.E.I.T.	65
408	Darling Ingredients	DAR	**33.87**	**3**	**3**	20.7	NIL	Environmental	40
2157	Deckers Outdoor	DECK	**219.27**	**3**	**3**	26.9	NIL	Shoe	82
1026	Deutsche Telekom ADR	DTEGY	**16.75**	**3**	**1**	17.8	4.4	Telecom. Utility	35
214	DexCom Inc.	DXCM	**400.19**	**4**	**3**	NMF	NIL	Med Supp Non-Invasive	24
2169	Dick's Sporting Goods	DKS	**57.81**	**4**	**3**	21.0	2.2	Retail (Hardlines)	72
1520	Digital Realty Trust	DLR	**145.94**	**3**	**2**	NMF	3.2	R.E.I.T.	65
2143	Dollar Tree, Inc.	DLTR	**90.94**	**3**	**3**	17.7	NIL	Retail Store	19
1002	e.l.f. Beauty	ELF	**18.75**	**4**	**2**	28.8	NIL	Toiletries/Cosmetics	47
2624	EPAM Systems	EPAM	**328.96**	**3**	**3**	65.4	NIL	IT Services	15
1111	Eagle Materials	EXP	**84.82**	**3**	**4**	14.4	0.2	Building Materials	38
709	Elbit Systems	ESLT	**121.19**	**2**	**3**	17.4	1.5	Aerospace/Defense	69
1615	Emergent BioSolutions	EBS	**103.64**	**4**	**3**	17.2	NIL	Drug	14
1950	Empire Company Ltd.	EMPA.TO	**38.67**	**3**	**2**	17.2	1.3	Retail/Wholesale Food	21
1192	Energizer Holdings	ENR	**39.64**	**3**	**1**	14.8	3.0	Household Products	1
1388	Entegris, Inc.	ENTG	**71.40**	**3**	**2**	29.1	0.5	Semiconductor Equip	3
1522	Equinix, Inc.	EQIX	**764.81**	**3**	**2**	NMF	1.5	R.E.I.T.	65
951	Ericsson ADR	ERIC	**10.71**	**3**	**2**	20.2	1.5	Telecom. Equipment	32
1793	Essential Utilities	WTRG	**39.93**	**2**	**2**	39.1	2.6	Water Utility	10
1524	Essex Property Trust	ESS	**207.52**	**3**	**4**	38.5	4.1	R.E.I.T.	65
2646	Etsy, Inc.	ETSY	**123.69**	**3**	**2**	NMF	NIL	Internet	23
331	Euronav NV	EURN	**8.68**	**4**	**3**	4.3	12.7	Maritime	71
141	Eversource Energy	ES	**82.65**	**1**	**2**	22.7	2.8	Electric Utility (East)	46
1525	Extra Space Storage	EXR	**108.12**	**3**	**4**	32.0	3.3	R.E.I.T.	65
436	FactSet Research	FDS	**333.29**	**2**	**2**	32.3	0.9	Information Services	9
308	FedEx Corp.	FDX	**254.44**	**2**	**3**	28.0	1.0	Air Transport	89
103	Ferrari N.V.	RACE	**183.28**	**3**	**2**	56.6	0.7	Automotive	45
2553	Fidelity Nat'l Fin'l	FNF	**31.59**	**3**	**4**	10.6	4.2	Financial Svcs. (Div.)	55
2592	FireEye Inc.	FEYE	**12.86**	**4**	**3**	NMF	NIL	Computer Software	2
1216	First Solar, Inc.	FSLR	**65.37**	**3**	**2**	26.1	NIL	Power	27
2144	Five Below, Inc.	FIVE	**128.33**	**3**	**3**	48.2	NIL	Retail Store	19
1911	Flowers Foods	FLO	**24.02**	**3**	**2**	23.1	3.4	Food Processing	18
1503	Flushing Financial	FFIC	**10.71**	**3**	**3**	6.4	7.8	Thrift	63
1389	FormFactor, Inc.	FORM	**24.75**	**3**	**3**	19.8	NIL	Semiconductor Equip	3
911	Fortis Inc.	FTS.TO	**54.51**	**2**	**3**	21.4	3.7	Electric Util. (Central)	43
1571	Franco-Nevada Corp.	FNV	**138.76**	**3**	**1**	50.8	0.7	Precious Metals	5
797	Fresenius Medical ADR	FMS	**42.18**	**2**	**1**	15.7	1.7	Medical Services	33
1913	Freshpet, Inc.	FRPT	**107.48**	**4**	**3**	NMF	NIL	Food Processing	18
1309	Garmin Ltd.	GRMN	**95.38**	**2**	**2**	23.5	2.7	Electrical Equipment	61
438	Gartner Inc.	IT	**126.53**	**3**	**4**	52.7	NIL	Information Services	9
1217	Generac Holdings	GNRC	**190.18**	**3**	**3**	33.8	NIL	Power	27
386	Genpact Limited	G	**38.98**	**2**	**2**	18.0	1.0	Industrial Services	39
742	Gibraltar Inds.	ROCK	**64.51**	**3**	**2**	20.4	NIL	Steel	67
1618	GlaxoSmithKline ADR	GSK	**37.86**	**1**	**3**	11.8	5.0	Drug	14
1826	GoDaddy Inc.	GDDY	**74.93**	**3**	**1**	57.2	NIL	E-Commerce	22
1761	Griffon Corp.	GFF	**20.16**	**3**	**1**	12.7	1.5	Diversified Co.	60
2594	Guidewire Software	GWRE	**106.12**	**3**	**2**	NMF	NIL	Computer Software	2
1529	Healthcare R'lty Trust	HR	**29.91**	**3**	**5**	39.4	4.0	R.E.I.T.	65
821	HealthEquity, Inc.	HQY	**49.52**	**3**	**4**	31.5	NIL	Healthcare Information	30
321	Heartland Express	HTLD	**19.08**	**2**	**1**	21.4	0.4	Trucking	29
1572	Hecla Mining	HL	**5.01**	**4**	**1**	33.4	0.4	Precious Metals	5
1003	Helen of Troy Ltd.	HELE	**197.23**	**3**	**2**	19.4	NIL	Toiletries/Cosmetics	47
1916	Herbalife Nutrition	HLF	**47.41**	**3**	**2**	18.0	NIL	Food Processing	18
216	Hill-Rom Hldgs.	HRC	**82.92**	**3**	**3**	14.4	1.1	Med Supp Non-Invasive	24
1846	Hillenbrand, Inc.	HI	**28.20**	**3**	**3**	13.5	3.0	Funeral Services	–
1127	Horton D.R.	DHI	**74.49**	**3**	**2**	12.2	1.0	Homebuilding	13
1919	Hostess Brands	TWNK	**12.53**	**3**	**3**	18.7	NIL	Food Processing	18
800	Humana Inc.	HUM	**400.00**	**3**	**3**	21.2	0.7	Medical Services	33
801	ICON plc	ICLR	**186.04**	**2**	**3**	29.3	NIL	Medical Services	33
121	II-VI Inc.	IIVI	**41.21**	**3**	**3**	25.6	NIL	Precision Instrument	31
2218	IDACORP, Inc.	IDA	**81.23**	**2**	**3**	17.4	3.5	Electric Utility (West)	16
954	Infinera Corp.	INFN	**5.96**	**5**	**1**	NMF	NIL	Telecom. Equipment	32
1952	Ingles Markets	IMKTA	**37.43**	**3**	**1**	7.6	1.8	Retail/Wholesale Food	21
1359	Inphi Corp.	IPHI	**111.59**	**3**	**3**	31.6	NIL	Semiconductor	11
185	Insulet Corp.	PODD	**227.38**	**3**	**3**	NMF	NIL	Med Supp Invasive	50
599	InterDigital Inc.	IDCC	**57.12**	**3**	**1**	35.7	2.5	Wireless Networking	36
1334	iRobot Corp.	IRBT	**77.20**	**3**	**2**	27.4	NIL	Electronics	59
926	j2 Global	JCOM	**70.34**	**3**	**4**	23.6	NIL	Telecom. Services	17
1765	Jefferies Fin'l Group ▲	JEF	**18.48**	**3**	**4**	10.4	3.2	Diversified Co.	60
1769	Kaman Corp.	KAMN	**39.91**	**3**	**3**	21.3	2.0	Diversified Co.	60
1573	Kinross Gold	KGC	**8.87**	**4**	**3**	12.7	1.4	Precious Metals	5
324	Knight-Swift Trans.	KNX	**42.30**	**3**	**1**	19.1	0.8	Trucking	29
1391	Kulicke & Soffa	KLIC	**22.54**	**3**	**2**	24.0	2.4	Semiconductor Equip	3
1392	Lam Research ▼	LRCX	**336.61**	**3**	**3**	16.6	1.5	Semiconductor Equip	3
1129	Lennar Corp.	LEN	**79.64**	**3**	**2**	13.1	0.6	Homebuilding	13
1621	Lilly (Eli)	LLY	**148.10**	**1**	**3**	19.9	2.0	Drug	14
1721	Lindsay Corp.	LNN	**96.71**	**3**	**1**	30.5	1.3	Machinery	49
1403	Logitech Int'l	LOGI	**74.98**	**2**	**3**	29.4	1.2	Computers/Peripherals	20
1589	Lundin Mining	LUN.TO	**7.22**	**3**	**2**	32.8	2.2	Metals & Mining (Div.)	76
1130	M.D.C. Holdings	MDC	**47.04**	**3**	**2**	9.3	2.8	Homebuilding	13
536	MDU Resources	MDU	**22.45**	**2**	**4**	12.3	3.7	Natural Gas (Div.)	86
1976	MGP Ingredients	MGPI	**38.18**	**3**	**4**	17.0	1.3	Beverage	26
1393	MKS Instruments	MKSI	**110.49**	**3**	**3**	16.6	0.7	Semiconductor Equip	3
1362	MACOM Tech. Solutions	MTSI	**33.09**	**3**	**3**	24.2	NIL	Semiconductor	11
2631	ManTech Int'l 'A'	MANT	**70.54**	**3**	**2**	26.2	1.8	IT Services	15
1560	Manulife Fin'l	MFC	**14.16**	**3**	**3**	6.6	5.9	Insurance (Life)	51
1926	Maple Leaf Foods	MFI.TO	**27.99**	**3**	**1**	27.2	2.3	Food Processing	18
2175	MarineMax	HZO	**26.40**	**4**	**1**	11.6	NIL	Retail (Hardlines)	72
765	Markel Corp.	MKL	**978.37**	**2**	**3**	9.9	NIL	Insurance (Prop/Cas.)	34
2568	Marsh & McLennan	MMC	**114.54**	**1**	**3**	25.3	1.6	Financial Svcs. (Div.)	55
957	Marvell Technology	MRVL	**39.89**	**3**	**3**	39.1	0.6	Telecom. Equipment	32
1116	Masco Corp.	MAS	**56.72**	**3**	**3**	20.7	1.0	Building Materials	38
223	Masimo Corp.	MASI	**230.76**	**3**	**3**	66.5	NIL	Med Supp Non-Invasive	24
395	MAXIMUS Inc.	MMS	**68.75**	**2**	**1**	19.3	1.7	Industrial Services	39
1928	Medifast, Inc.	MED	**165.51**	**3**	**1**	22.5	2.7	Food Processing	18

▲ Arrow indicates the direction of a change in Timeliness. ■ Newly added this week.

Continued from preceding page

TIMELY STOCKS

Stocks Ranked 2 (Above Average) for Relative Price Performance in the Next 12 Months

Page No.	Stock Name	Ticker	Recent Price	Ranks Technical	Ranks Safety	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
1829	Mercadolibre Inc.	MELI	1093.43	3	2	NMF	NIL	E-Commerce	22
1404	Mercury Systems	MRCY	78.61	3	3	34.0	NIL	Computers/Peripherals	20
1131	Meritage Homes	MTH	107.97	3	3	11.8	NIL	Homebuilding	13
1955	Metro Inc.	MRU.TO	64.26	2	3	18.6	1.4	Retail/Wholesale Food	21
1366	Micron Technology ▲	MU	49.72	3	3	13.9	NIL	Semiconductor	11
1794	Middlesex Water	MSEX	62.37	2	2	28.9	1.7	Water Utility	10
807	Molina Healthcare	MOH	163.07	3	1	13.2	NIL	Medical Services	33
1367	Monolithic Power Sys.	MPWR	274.88	3	3	59.2	0.7	Semiconductor	11
1978	Monster Beverage	MNST	80.51	3	3	39.3	NIL	Beverage	26
1813	Morgan Stanley ▲	MS	48.38	3	2	8.9	2.9	Investment Banking	53
1806	Nasdaq, Inc.	NDAQ	125.37	3	3	21.8	1.6	Brokers & Exchanges	6
1979	National Beverage	FIZZ	69.38	3	2	26.2	NIL	Beverage	26
1771	National Presto Ind.	NPK	83.40	3	3	13.7	6.0	Diversified Co.	60
1626	Nektar Therapeutics	NKTR	16.84	5	3	NMF	NIL	Drug	14
227	Neogen Corp.	NEOG	77.59	3	3	65.2	NIL	Med Supp Non-Invasive	24
1930	Nestle SA ADS	NSRGY	118.55	1	2	27.3	2.3	Food Processing	18
1405	NetApp, Inc.	NTAP	43.60	3	4	12.8	4.6	Computers/Peripherals	20
841	Neurocrine Biosci.	NBIX	97.40	3	2	37.3	NIL	Biotechnology	12
1830	New Relic, Inc.	NEWR	56.32	3	3	NMF	NIL	E-Commerce	22
2383	New York Times	NYT	42.24	3	2	44.5	0.6	Newspaper	–
2340	Nexstar Media Group	NXST	94.54	3	4	6.5	2.4	Entertainment	57
1220	Northland Power	NPI.TO	39.52	3	3	27.1	3.0	Power	27
1628	Novo Nordisk ADR	NVO	69.17	1	3	26.0	1.9	Drug	14
228	NovoCure Limited	NVCR	108.32	4	3	NMF	NIL	Med Supp Non-Invasive	24
2148	Ollie's Bargain Outlet	OLLI	87.52	3	1	36.6	NIL	Retail Store	19
2653	1-800-FLOWERS.COM	FLWS	25.64	3	2	30.2	NIL	Internet	23
1394	Onto Innovation	ONTO	29.76	3	2	16.9	NIL	Semiconductor Equip	3
929	Ooma, Inc.	OOMA	13.13	4	1	NMF	NIL	Telecom. Services	17
2220	PNM Resources	PNM	41.45	3	3	18.3	3.0	Electric Utility (West)	16
2602	PTC Inc.	PTC	82.90	3	2	82.9	NIL	Computer Software	2
364	Papa John's Int'l	PZZA	83.42	3	2	50.6	1.1	Restaurant	75
785	Park National	PRK	83.29	3	4	13.7	4.9	Bank (Midwest)	84
2604	Paycom Software	PAYC	290.83	3	3	78.2	NIL	Computer Software	2
968	PetMed Express	PETS	31.67	3	2	21.1	3.5	Internet	23
628	Phillips 66 Partners	PSXP	22.61	3	3	5.9	15.5	Pipeline MLPs	93
1395	Photronics Inc.	PLAB	10.08	3	3	13.6	NIL	Semiconductor Equip	3
1814	Piper Sandler Cos.	PIPR	72.00	3	3	13.9	2.7	Investment Banking	53
1339	Plexus Corp.	PLXS	71.67	3	1	16.3	NIL	Electronics	59
2317	Pool Corp.	POOL	325.20	2	3	44.9	0.7	Recreation	81
2222	Portland General	POR	35.60	3	3	44.0	4.6	Electric Utility (West)	16
1371	Power Integrations	POWI	54.30	3	2	40.5	0.8	Semiconductor	11
1576	Pretium Resources	PVG	12.56	5	3	14.1	NIL	Precious Metals	5
1562	Primerica, Inc.	PRI	114.76	3	1	11.8	1.4	Insurance (Life)	51
1234	Primoris Services	PRIM	18.74	3	4	9.7	1.3	Engineering & Const	52
1133	PulteGroup, Inc.	PHM	45.76	3	2	10.8	1.1	Homebuilding	13
1406	Pure Storage	PSTG	15.22	4	3	NMF	NIL	Computers/Peripherals	20
842	QIAGEN N.V. ▲	QGEN	51.51	3	3	27.4	NIL	Biotechnology	12
770	RLI Corp.	RLI	84.52	2	1	32.9	1.1	Insurance (Prop/Cas.)	34
1540	Realty Income Corp. ▼	O	61.67	3	4	41.4	4.7	R.E.I.T.	65
2150	Rent-A-Center	RCII	30.44	4	2	12.8	3.8	Retail Store	19
2605	RingCentral, Inc.	RNG	267.80	3	3	NMF	NIL	Computer Software	2
969	Rite Aid Corp.	RAD	9.78	5	1	32.6	NIL	Retail Store	19
1577	Royal Gold	RGLD	119.20	3	1	38.0	1.0	Precious Metals	5
2606	SAP SE	SAP	157.08	2	2	35.7	1.1	Computer Software	2
1632	Sage Therapeutics	SAGE	59.89	4	5	NMF	NIL	Drug	14
1935	Sanfilippo (John B.)	JBSS	74.84	3	2	17.7	0.9	Food Processing	18
1633	Sanofi ADR	SNY	51.00	1	3	10.3	3.4	Drug	14
1936	Saputo Inc.	SAP.TO	33.81	1	3	24.2	2.1	Food Processing	18
844	Sarepta Therapeutics	SRPT	143.20	4	2	NMF	NIL	Biotechnology	12
327	Schneider National	SNDR	25.45	3	1	22.1	1.0	Trucking	29
399	Science Applications	SAIC	79.87	3	3	12.5	1.9	Industrial Services	39
1196	Scotts Miracle-Gro	SMG	152.30	3	1	22.2	1.6	Household Products	1
1182	Sealed Air	SEE	37.89	3	2	13.0	1.7	Packaging & Container	42
845	Seattle Genetics	SGEN	190.51	4	4	NMF	NIL	Biotechnology	12
1374	Semtech Corp.	SMTC	53.19	3	1	30.1	NIL	Semiconductor	11
1848	Service Corp. Int'l	SCI	43.07	3	3	21.9	1.8	Funeral Services	–
930	Shenandoah Telecom.	SHEN	44.22	3	1	26.0	0.7	Telecom. Services	17
1143	Sherwin-Williams	SHW	707.06	2	3	30.4	0.8	Retail Building Supply	7
1836	Shopify Inc.	SHOP	966.50	3	3	NMF	NIL	E-Commerce	22
1183	Silgan Holdings	SLGN	36.79	3	3	13.5	1.3	Packaging & Container	42
1375	Silicon Labs.	SLAB	98.37	3	3	NMF	NIL	Semiconductor	11
1119	Simpson Manufacturing	SSD	96.43	3	3	24.9	1.0	Building Materials	38
2343	Sinclair Broadcast	SBGI	20.28	3	4	8.3	3.9	Entertainment	57
2183	SiteOne Landscape	SITE	120.46	3	3	66.2	NIL	Retail (Hardlines)	72
1222	SolarEdge Tech.	SEDG	218.29	3	3	60.0	NIL	Power	27
1989	Sony Corp. ADR	SNE	77.28	3	3	35.9	0.4	Foreign Electronics	37
554	Southwest Gas	SWX	62.44	3	4	14.6	3.7	Natural Gas Utility	41
1957	SpartanNash Co.	SPTN	16.25	4	1	15.2	4.7	Retail/Wholesale Food	21
1958	Sprouts Farmers Market	SFM	21.18	3	1	14.7	NIL	Retail/Wholesale Food	21
2609	Square, Inc.	SQ	160.76	4	3	NMF	NIL	Computer Software	2
1238	Stantec Inc.	STN.TO	40.86	2	2	19.8	1.5	Engineering & Const	52
2322	Sturm, Ruger & Co.	RGR	62.08	3	1	16.9	2.5	Recreation	81
2576	Sun Life Fin'l Svcs.	SLF.TO	54.98	2	3	10.9	4.0	Financial Svcs. (Div.)	55
196	SurModics, Inc.	SRDX	38.97	3	1	NMF	NIL	Med Supp Invasive	50
963	Switch, Inc.	SWCH	15.48	4	2	57.3	1.3	Telecom. Equipment	32
1134	TRI Pointe Group	TPH	17.74	3	2	7.7	NIL	Homebuilding	13
402	TTEC Holdings	TTEC	54.01	3	1	20.3	1.5	Industrial Services	39
1379	Taiwan Semic. ADR	TSM	79.77	1	3	26.6	2.1	Semiconductor	11
825	Teladoc Health	TDOC	215.09	4	3	NMF	NIL	Healthcare Information	30
198	Teleflex Inc.	TFX	341.89	3	2	55.0	0.4	Med Supp Invasive	50
932	Telephone & Data	TDS	19.01	3	2	13.5	3.6	Telecom. Services	17
933	TELUS Corporation	T.TO	24.01	2	3	23.5	5.0	Telecom. Services	17
1940	Tootsie Roll	TR	30.48	1	3	31.1	1.2	Food Processing	18
1738	Toro Co.	TTC	84.21	2	3	26.2	1.3	Machinery	49
168	Toromont Inds.	TIH.TO	78.10	2	3	25.7	1.6	Heavy Truck & Equip	64
111	Toyota Motor ADR	TM	136.01	2	3	21.4	3.0	Automotive	45
1941	TreeHouse Foods	THS	40.38	3	3	16.1	NIL	Food Processing	18
1122	Trex Co.	TREX	71.06	3	3	49.0	NIL	Building Materials	38
1648	TriNet Group	TNET	60.28	3	1	20.2	NIL	Human Resources	68
2530	Truist Fin'l	TFC	37.45	3	4	11.8	4.8	Bank	73
1995	Turning Point Brands	TPB	28.38	4	3	15.0	0.7	Tobacco	25
2635	Tyler Technologies	TYL	346.69	3	2	64.2	NIL	IT Services	15
1123	UFP Industries	UFPI	56.38	3	2	16.3	0.9	Building Materials	38
1943	USANA Health Sciences	USNA	74.24	3	1	14.1	NIL	Food Processing	18
603	Ubiquiti Inc.	UI	160.93	3	2	27.5	1.0	Wireless Networking	36
1944	Unilever PLC ADR	UL	61.73	1	2	22.0	3.0	Food Processing	18
815	UnitedHealth Group	UNH	303.23	1	3	17.4	1.6	Medical Services	33
1996	Universal Corp.	UVV	41.72	3	3	11.9	7.4	Tobacco	25
133	Veeco Instruments	VECO	11.98	4	3	NMF	NIL	Precision Instrument	31
826	Veeva Systems	VEEV	281.92	3	3	NMF	NIL	Healthcare Information	30
1317	Vicor Corp.	VICR	75.85	3	2	NMF	NIL	Electrical Equipment	61
1962	Village Super Market	VLGEA	24.93	3	2	13.4	4.0	Retail/Wholesale Food	21
2613	VMware, Inc.	VMW	142.99	3	4	23.5	NIL	Computer Software	2
965	Vocera Communications	VCRA	28.72	3	2	NMF	NIL	Telecom. Equipment	32
936	Vodafone Group ADR	VOD	13.48	3	2	30.0	8.2	Telecom. Services	17
413	Waste Connections	WCN	105.00	2	3	NMF	0.7	Environmental	40
1963	Weis Markets	WMK	48.28	3	1	14.0	2.6	Retail/Wholesale Food	21
328	Werner Enterprises	WERN	43.43	3	2	18.1	0.8	Trucking	29
1410	Western Digital	WDC	38.62	3	5	11.9	NIL	Computers/Peripherals	20
1964	Weston (George)	WN.TO	99.50	2	4	12.5	2.1	Retail/Wholesale Food	21
1578	Wheaton Precious Met.	WPM	48.29	3	2	38.9	0.8	Precious Metals	5
2380	Wiley (John) & Sons	JWA	31.70	3	3	12.1	4.3	Publishing	88
2190	Williams-Sonoma	WSM	88.36	3	1	20.5	2.2	Retail (Hardlines)	72
371	Wingstop Inc.	WING	138.87	3	2	NMF	0.4	Restaurant	75
1841	Workday, Inc.	WDAY	220.34	3	3	NMF	NIL	E-Commerce	22
1796	York Water Co. (The)	YORW	43.39	3	2	34.2	1.7	Water Utility	10
373	Yum China Holdings	YUMC	52.00	3	3	30.8	NIL	Restaurant	75
1635	Zoetis Inc.	ZTS	161.32	2	3	43.7	0.5	Drug	14
2211	Zumiez Inc.	ZUMZ	27.67	3	4	12.6	NIL	Retail (Softlines)	54
2017	Zynga Inc.	ZNGA	9.07	3	2	30.2	NIL	Entertainment Tech	4

▲ Arrow indicates the direction of a change in Timeliness. ■ Newly added this week.

Rank 2 Deletions:
Ali. Couche-Tard; FMC Corp.; Houlihan Lokey; New Orient. Ed. ADS; SBA Communications; Tesla, Inc.

Rank removed–see supplement or report:
Carriage Services.

Rank 3 Deletions:
Coherent, Inc.; Exxon Mobil Corp.; Grace (W.R.) & Co.; Monro, Inc.; Neenah, Inc.; Phibro Animal Health; Scholastic Corp.; South Jersey Inds.; TEGNA Inc.; Vishay Intertechnology.

Rank removed–see supplement or report:
Duke Energy; WPX Energy.

Stocks Ranked 1 (Highest) for Relative Safety

Page No.	Stock Name	Recent Price	Rank Time-liness	Rank Tech-nical	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
917	AT&T Inc.	28.38	3	3	8.4	7.4	Telecom. Services	17
203	Abbott Labs.	104.44	2	3	30.6	1.4	Med Supp Non-Invasive	24
2616	Accenture Plc	222.78	2	2	29.3	1.6	IT Services	15
2432	Air Products & Chem.	292.67	2	3	33.6	1.8	Chemical (Diversified)	56
753	Alleghany Corp.	517.86	2	4	12.0	NIL	Insurance (Prop/Cas.)	34
754	Allstate Corp.	93.22	1	4	7.8	2.3	Insurance (Prop/Cas.)	34
2639	Alphabet Inc. (NDQ)	1464.52	1	2	26.9	NIL	Internet	23
2617	Amdocs Ltd. (NDQ)	58.14	3	4	15.3	2.3	IT Services	15
905	Amer. Elec. Power	80.65	3	5	18.3	3.7	Electric Util. (Central)	43
2538	Amer. Express	98.82	3	5	25.7	1.7	Financial Svcs. (Div.)	55
830	Amgen (NDQ)	247.03	1	3	15.7	2.8	Biotechnology	12
1322	Amphenol Corp.	108.18	3	2	30.8	0.9	Electronics	59
2541	Aon plc	203.43	3	3	20.4	0.9	Financial Svcs. (Div.)	55
1398	Apple Inc. (NDQ)	114.96	3	2	32.8	0.7	Computers/Peripherals	20
547	Atmos Energy	95.04	1	3	19.6	2.6	Natural Gas Utility	41
2618	Automatic Data Proc. (NDQ)	137.31	3	4	23.0	2.7	IT Services	15
173	Baxter Int'l Inc.	79.54	3	2	25.2	1.2	Med Supp Invasive	50
174	Becton, Dickinson	225.00	3	2	19.8	1.4	Med Supp Invasive	50
757	Berkley (W.R.)	61.62	3	4	26.7	0.8	Insurance (Prop/Cas.)	34
758	Berkshire Hathaway 'B'	213.54	3	3	23.5	NIL	Insurance (Prop/Cas.)	34
1613	Bristol-Myers Squibb	59.71	3	2	21.0	3.0	Drug	14
2545	Brown & Brown	44.87	2	3	30.3	0.8	Financial Svcs. (Div.)	55
1968	Brown-Forman 'B'	75.63	3	3	42.0	1.0	Beverage	26
339	Can. National Railway	106.58	2	2	27.0	1.6	Railroad	28
1822	Check Point Software (NDQ)	121.60	2	2	19.9	NIL	E-Commerce	22
760	Chubb Ltd.	116.97	3	4	15.6	2.7	Insurance (Prop/Cas.)	34
1188	Church & Dwight	93.46	1	2	31.9	1.0	Household Products	1
948	Cisco Systems (NDQ)	39.13	3	3	12.6	3.7	Telecom. Equipment	32
1189	Clorox Co.	211.97	1	3	28.0	2.1	Household Products	1
1969	Coca-Cola	49.28	3	5	29.0	3.4	Beverage	26
1190	Colgate-Palmolive	76.61	1	3	25.8	2.3	Household Products	1
1015	Comcast Corp. (NDQ)	46.76	1	3	20.0	2.0	Cable TV	8
777	Commerce Bancshs. (NDQ)	55.61	3	4	21.3	1.9	Bank (Midwest)	84
138	Consol. Edison	76.32	3	5	17.9	4.1	Electric Utility (East)	46
2140	Costco Wholesale (NDQ)	349.62	1	3	39.6	0.8	Retail Store	19
1756	Danaher Corp.	209.79	–	–	39.3	0.3	Diversified Co.	60
155	Deere & Co.	221.90	3	3	34.1	1.4	Heavy Truck & Equip	64
1974	Diageo plc	137.55	3	4	22.2	2.5	Beverage	26
568	Ecolab Inc.	198.27	3	2	NMF	0.9	Chemical (Specialty)	58
1306	Emerson Electric	65.52	3	3	21.6	3.1	Electrical Equipment	61
2023	Everest Re Group Ltd.	201.60	3	3	15.4	3.1	Reinsurance	66
141	Eversource Energy	82.65	2	2	22.7	2.8	Electric Utility (East)	46
383	Expeditors Int'l (NDQ)	91.37	3	3	25.5	1.1	Industrial Services	39
1526	Federal Rlty. Inv. Trust	74.94	4	3	49.3	5.7	R.E.I.T.	65
2558	Gallagher (Arthur J.)	104.96	3	3	25.9	1.7	Financial Svcs. (Div.)	55
711	Gen'l Dynamics	140.92	3	3	12.4	3.1	Aerospace/Defense	69
1914	Gen'l Mills	59.90	1	2	16.1	3.4	Food Processing	18
1618	GlaxoSmithKline ADR	37.86	2	3	11.8	5.0	Drug	14
1558	Globe Life Inc.	79.85	3	4	11.5	0.9	Insurance (Life)	51
2628	Henry (Jack) & Assoc. (NDQ)	162.72	1	2	38.4	1.1	IT Services	15
1140	Home Depot	272.33	3	2	22.9	2.3	Retail Building Supply	7
1763	Honeywell Int'l	164.64	3	4	25.2	2.3	Diversified Co.	60
1918	Hormel Foods	48.96	1	2	29.0	2.0	Food Processing	18
731	Illinois Tool Works	195.68	3	3	35.7	2.3	Metal Fabricating	79
2629	Infosys Ltd. ADR	13.63	3	3	22.7	1.8	IT Services	15
1360	Intel Corp. (NDQ)	51.43	1	5	11.3	2.6	Semiconductor	11
1402	Int'l Business Mach.	121.73	3	4	11.0	5.4	Computers/Peripherals	20
576	Int'l Flavors & Frag.	121.40	–	–	20.6	2.6	Chemical (Specialty)	58
1921	J&J Snack Foods (NDQ)	130.38	4	4	NMF	1.8	Food Processing	18
2517	JPMorgan Chase	96.16	3	4	15.5	3.7	Bank	73
222	Johnson & Johnson	147.11	3	3	18.6	2.7	Med Supp Non-Invasive	24
1922	Kellogg	63.38	3	2	16.4	3.6	Food Processing	18
1193	Kimberly-Clark	147.56	1	2	18.0	2.9	Household Products	1
1621	Lilly (Eli)	148.10	2	3	19.9	2.0	Drug	14
717	Lockheed Martin	390.51	1	3	16.5	2.7	Aerospace/Defense	69
912	MGE Energy (NDQ)	63.15	3	4	23.6	2.4	Electric Util. (Central)	43
2568	Marsh & McLennan	114.54	2	3	25.3	1.6	Financial Svcs. (Div.)	55
2569	MasterCard Inc.	338.39	3	3	40.2	0.5	Financial Svcs. (Div.)	55
1927	McCormick & Co.	195.18	1	3	34.6	1.3	Food Processing	18
363	McDonald's Corp.	220.26	3	3	36.2	2.3	Restaurant	75

Page No.	Stock Name	Recent Price	Rank Time-liness	Rank Tech-nical	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
189	Medtronic plc	103.63	3	3	21.6	2.2	Med Supp Invasive	50
1622	Merck & Co.	82.76	3	2	14.5	2.9	Drug	14
2597	Microsoft Corp. (NDQ)	209.44	1	3	33.8	1.0	Computer Software	2
1930	Nestle SA ADS (PNK)	118.55	2	2	27.3	2.3	Food Processing	18
583	NewMarket Corp.	345.73	3	3	23.3	2.2	Chemical (Specialty)	58
144	NextEra Energy	284.14	3	3	30.4	2.1	Electric Utility (East)	46
2160	NIKE, Inc. 'B'	124.32	3	4	NMF	0.8	Shoe	82
720	Northrop Grumman	329.52	1	3	14.2	1.8	Aerospace/Defense	69
551	Northwest Natural	43.94	4	3	18.5	4.3	Natural Gas Utility	41
1627	Novartis AG ADR	87.05	3	4	24.2	3.5	Drug	14
1628	Novo Nordisk ADR	69.17	2	3	26.0	1.9	Drug	14
1206	Nuveen Muni Value Fund	10.58	–	–	NMF	3.5	Investment Co.	–
325	Old Dominion Freight (NDQ)	187.35	3	2	38.3	0.3	Trucking	29
2601	Oracle Corp.	59.58	1	3	14.4	1.6	Computer Software	2
2439	PPG Inds.	121.74	3	3	34.5	1.8	Chemical (Diversified)	56
1980	PepsiCo, Inc. (NDQ)	137.97	3	3	26.4	3.0	Beverage	26
1631	Pfizer, Inc.	36.39	–	–	15.3	4.2	Drug	14
2221	Pinnacle West Capital	73.89	1	4	16.1	4.4	Electric Utility (West)	16
2572	Price (T. Rowe) Group (NDQ)	128.55	3	2	17.6	2.9	Financial Svcs. (Div.)	55
1195	Procter & Gamble	138.01	1	3	25.7	2.3	Household Products	1
769	Progressive Corp.	93.98	1	3	15.8	0.4	Insurance (Prop/Cas.)	34
146	Public Serv. Enterprise	54.35	3	3	14.8	3.7	Electric Utility (East)	46
1539	Public Storage	221.13	3	5	29.4	3.6	R.E.I.T.	65
722	Raytheon Technologies	58.89	–	–	NMF	3.3	Aerospace/Defense	69
1731	Roper Tech.	400.60	3	1	31.7	0.5	Machinery	49
2524	Royal Bank of Canada (TSE)	95.56	3	3	20.8	4.7	Bank	73
1633	Sanofi ADR (NDQ)	51.00	2	3	10.3	3.4	Drug	14
1936	Saputo Inc. (TSE)	33.81	2	3	24.2	2.1	Food Processing	18
368	Starbucks Corp. (NDQ)	86.07	3	4	79.0	2.1	Restaurant	75
195	Stryker Corp.	207.25	3	4	33.9	1.1	Med Supp Invasive	50
2610	Synopsys, Inc. (NDQ)	212.64	1	3	38.2	NIL	Computer Software	2
1379	Taiwan Semic. ADR	79.77	2	3	26.6	2.1	Semiconductor	11
1380	Texas Instruments (NDQ)	141.94	1	2	26.2	2.9	Semiconductor	11
132	Thermo Fisher Sci.	428.39	1	3	40.3	0.2	Precision Instrument	31
1783	3M Company	161.66	3	3	19.4	3.6	Diversified Co.	60
1940	Tootsie Roll	30.48	2	3	31.1	1.2	Food Processing	18
2529	Toronto-Dominion (TSE)	62.37	3	3	18.7	5.2	Bank	73
772	Travelers Cos.	110.22	3	3	12.8	3.1	Insurance (Prop/Cas.)	34
1944	Unilever PLC ADR	61.73	2	2	22.0	3.0	Food Processing	18
346	Union Pacific	199.45	3	3	27.1	1.9	Railroad	28
316	United Parcel Serv.	168.90	3	3	23.0	2.4	Air Transport	89
815	UnitedHealth Group	303.23	2	3	17.4	1.6	Medical Services	33
935	Verizon Communic.	59.36	1	3	12.2	4.2	Telecom. Services	17
2578	Visa Inc.	200.32	3	3	36.8	0.6	Financial Svcs. (Div.)	55
1197	WD-40 Co. (NDQ)	189.44	3	2	45.9	1.4	Household Products	1
915	WEC Energy Group	96.48	3	3	25.3	2.8	Electric Util. (Central)	43
2152	Walmart Inc.	137.25	1	3	27.3	1.6	Retail Store	19
414	Waste Management	114.04	3	3	29.9	1.9	Environmental	40
1145	Watsco, Inc.	233.49	3	2	36.3	3.1	Retail Building Supply	7
2224	Xcel Energy Inc. (NDQ)	68.85	3	3	24.2	2.6	Electric Utility (West)	16

Stocks Ranked 2 (Above Average) for Relative Safety

Page No.	Stock Name	Recent Price	Rank Time-liness	Rank Tech-nical	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
1966	AB InBev ADR	54.38	3	3	17.7	1.8	Beverage	26
1745	ABB Ltd. ADR	25.39	3	1	33.9	3.3	Diversified Co.	60
1200	Adams Divers. Equity Fd	16.09	–	–	NMF	1.2	Investment Co.	–
2584	Adobe Inc. (NDQ)	488.51	1	3	58.2	NIL	Computer Software	2
1556	Aflac Inc.	36.33	3	4	7.4	3.2	Insurance (Life)	51
113	Agilent Technologies	99.51	2	3	30.7	0.7	Precision Instrument	31
902	ALLETE	52.00	3	4	17.2	4.9	Electric Util. (Central)	43
903	Alliant Energy (NDQ)	51.49	3	2	22.1	3.0	Electric Util. (Central)	43
2640	Amazon.com (NDQ)	3174.05	1	2	83.9	NIL	Internet	23
318	AMERCO (NDQ)	356.98	3	3	44.6	NIL	Trucking	29
904	Ameren Corp.	78.42	1	2	22.0	2.7	Electric Util. (Central)	43
1789	Amer. States Water	74.33	2	4	31.6	1.8	Water Utility	10
592	Amer. Tower 'A'	240.00	1	3	57.6	2.0	Wireless Networking	36
206	AmerisourceBergen	97.58	1	2	12.2	1.7	Med Supp Non-Invasive	24
1747	AMETEK, Inc.	99.49	3	2	28.6	0.7	Diversified Co.	60
1353	Analog Devices (NDQ)	117.06	1	2	22.2	2.1	Semiconductor	11
2586	ANSYS, Inc. (NDQ)	318.80	3	3	51.3	NIL	Computer Software	2
1172	AptarGroup	112.36	3	1	35.6	1.3	Packaging & Container	42
1902	Archer Daniels Midl'd	46.50	3	3	16.8	3.1	Food Processing	18
2542	Assurant Inc.	120.10	1	3	13.5	2.1	Financial Svcs. (Div.)	55
1609	AstraZeneca PLC (ADS)(NDQ)	54.75	2	3	46.0	2.6	Drug	14
137	AVANGRID, Inc.	49.35	3	3	24.8	3.6	Electric Utility (East)	46
562	Avery Dennison	123.01	3	3	22.3	1.9	Chemical (Specialty)	58
2213	Avista Corp.	34.12	3	4	17.7	4.8	Electric Utility (West)	16
1324	Avnet, Inc. (NDQ)	26.29	4	4	16.5	3.2	Electronics	59

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2022	AXIS Capital Hldgs.	44.22	3	4	9.7	3.7	Reinsurance	66
1022	BCE Inc.	41.89	3	3	18.0	5.9	Telecom. Utility	35
1173	Ball Corp.	82.24	3	3	43.7	0.7	Packaging & Container	42
2505	Bank of Hawaii	50.94	4	3	13.3	5.3	Bank	73
2506	Bank of Montreal (TSE)	79.59	3	4	17.7	5.4	Bank	73
2507	Bank of New York Mellon	34.29	3	4	8.8	3.6	Bank	73
2508	Bank of Nova Scotia (TSE)	55.97	3	4	10.7	6.4	Bank	73
208	Bio-Rad Labs. 'A'	513.92	2	3	61.6	NIL	Med Supp Non-Invasive	24
831	Bio-Techne Corp. (NDQ)	243.74	2	2	58.3	0.5	Biotechnology	12
2214	Black Hills	53.92	3	4	15.1	4.1	Electric Utility (West)	16
2543	BlackRock, Inc.	558.65	2	3	19.6	2.6	Financial Svcs. (Div.)	55
1999	Bright Horizons Family	148.53	4	5	NMF	NIL	Educational Services	48
430	Broadridge Fin'l	132.00	1	2	24.4	1.7	Information Services	9
1799	Cboe Global Markets (CBOE)	89.00	1	5	20.3	1.9	Brokers & Exchanges	6
380	C.H. Robinson (NDQ)	103.25	1	3	27.7	2.0	Industrial Services	39
1800	CME Group (NDQ)	168.93	3	4	24.8	2.0	Brokers & Exchanges	6
906	CMS Energy Corp.	61.40	3	3	23.6	2.8	Electric Util. (Central)	43
759	CNA Fin'l	30.47	3	3	10.5	4.9	Insurance (Prop/Cas.)	34
2401	CSW Industrials (NDQ)	77.50	3	3	44.3	0.7	Petroleum (Producing)	91
967	CVS Health	57.94	1	3	8.1	3.5	Retail Store	19
1012	Cable One	1762.68	2	1	39.0	0.6	Cable TV	8
2588	Cadence Design Sys. (NDQ)	105.25	1	3	41.1	NIL	Computer Software	2
1517	Camden Property Trust	90.97	3	5	74.6	3.7	R.E.I.T.	65
1908	Campbell Soup	47.98	1	2	16.4	2.9	Food Processing	18
2509	Can. Imperial Bank (TSE)	101.20	3	3	18.3	5.8	Bank	73

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Stocks Ranked 2 (Above Average) for Relative Safety

Page No.	Stock Name		Recent Price	Rank Time-liness	Rank Tech-nical	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
340	Can. Pacific Railway		301.70	2	2	22.9	1.0	Railroad	28
2139	Canadian Tire 'A'	(TSE)	137.61	3	3	16.2	3.3	Retail Store	19
1983	Canon Inc. ADR		17.03	3	3	12.1	8.1	Foreign Electronics	37
1752	Carlisle Cos.		121.22	3	4	22.2	1.7	Diversified Co.	60
153	Caterpillar Inc.		147.68	3	3	25.9	2.8	Heavy Truck & Equip	64
819	Cerner Corp.	(NDQ)	71.60	3	3	24.8	1.0	Healthcare Information	30
1753	Chemed Corp.		480.36	2	2	28.8	0.3	Diversified Co.	60
548	Chesapeake Utilities		86.56	2	3	21.9	2.1	Natural Gas Utility	41
921	China Mobile (ADR)		32.54	3	3	8.0	6.5	Telecom. Services	17
381	Cintas Corp.	(NDQ)	336.00	3	3	43.1	0.9	Industrial Services	39
1014	Cogeco Communic.	(TSE)	110.74	–	–	15.5	2.1	Cable TV	8
2622	Cognizant Technology	(NDQ)	69.32	3	3	18.5	1.3	IT Services	15
1972	Constellation Brands		185.45	3	5	20.9	1.7	Beverage	26
212	Cooper Cos.		334.12	3	4	34.6	NIL	Med Supp Non-Invasive	24
2125	Copart, Inc.	(NDQ)	106.16	3	3	45.8	NIL	Retail Automotive	44
433	CoStar Group	(NDQ)	857.13	2	3	88.3	NIL	Information Services	9
154	Cummins Inc.		212.79	3	2	23.2	2.5	Heavy Truck & Equip	64
1201	DNP Select Inc. Fund		10.14	–	–	NMF	2.6	Investment Co.	–
908	DTE Energy		114.81	3	4	16.5	3.8	Electric Util. (Central)	43
2010	Dolby Labs.		65.99	3	2	43.4	1.3	Entertainment Tech	4
139	Dominion Energy		77.23	3	3	21.2	3.7	Electric Utility (East)	46
359	Domino's Pizza		421.54	1	2	33.9	0.7	Restaurant	75
1711	Donaldson Co.		46.68	3	3	23.3	1.8	Machinery	49
1712	Dover Corp.		108.78	3	2	21.3	1.8	Machinery	49
1600	Dow Inc.		47.48	–	–	47.0	6.2	Chemical (Basic)	77
140	Duke Energy		82.87	–	–	15.9	4.7	Electric Utility (East)	46
1601	DuPont de Nemours		56.55	–	–	18.8	2.2	Chemical (Basic)	77
180	Edwards Lifesciences		77.71	3	3	43.2	NIL	Med Supp Invasive	50
709	Elbit Systems	(NDQ)	121.19	2	3	17.4	1.5	Aerospace/Defense	69
1213	Emera Inc.	(TSE)	55.25	3	3	23.4	4.4	Power	27
909	Entergy Corp.		96.68	3	4	17.4	3.9	Electric Util. (Central)	43
762	Erie Indemnity	(NDQ)	208.49	3	2	36.8	1.9	Insurance (Prop/Cas.)	34
1793	Essential Utilities		39.93	2	2	39.1	2.6	Water Utility	10
910	Evergy, Inc.		50.34	3	3	17.4	4.3	Electric Util. (Central)	43
2648	Facebook Inc.	(NDQ)	256.82	3	1	30.2	NIL	Internet	23
436	FactSet Research		333.29	2	2	32.3	0.9	Information Services	9
1138	Fastenal Co.	(NDQ)	45.77	1	3	33.9	2.2	Retail Building Supply	7
308	FedEx Corp.		254.44	2	3	28.0	1.0	Air Transport	89
2554	Fidelity Nat'l Info.		147.93	–	–	NMF	0.9	Financial Svcs. (Div.)	55
2627	Fiserv Inc.	(NDQ)	104.07	1	4	21.0	NIL	IT Services	15
911	Fortis Inc.	(TSE)	54.51	2	3	21.4	3.7	Electric Util. (Central)	43
2557	Franklin Resources		20.47	3	3	14.4	5.4	Financial Svcs. (Div.)	55
797	Fresenius Medical ADR		42.18	2	1	15.7	1.7	Medical Services	33
1984	FUJIFILM Hldgs. ADR	(PNK)	49.57	3	4	49.6	1.6	Foreign Electronics	37
1309	Garmin Ltd.	(NDQ)	95.38	2	2	23.5	2.7	Electrical Equipment	61
386	Genpact Limited		38.98	2	2	18.0	1.0	Industrial Services	39
1617	Gilead Sciences	(NDQ)	62.85	1	3	39.8	4.3	Drug	14
1810	Goldman Sachs		199.07	3	3	9.1	2.5	Investment Banking	53
1715	Graco Inc.		61.16	3	3	35.6	1.1	Machinery	49
1310	Grainger (W.W.)		353.67	3	2	22.0	1.7	Electrical Equipment	61
764	Hanover Insurance		92.79	3	3	11.4	2.8	Insurance (Prop/Cas.)	34
2560	Hartford Fin'l Svcs.		36.88	4	3	7.7	3.5	Financial Svcs. (Div.)	55
2217	Hawaiian Elec.		33.18	3	3	19.2	4.0	Electric Utility (West)	16
321	Heartland Express	(NDQ)	19.08	2	1	21.4	0.4	Trucking	29
1917	Hershey Co.		140.41	3	1	24.0	2.3	Food Processing	18
107	Honda Motor ADR		23.66	3	3	14.8	2.3	Automotive	45
1812	Houlihan Lokey		57.06	3	2	21.9	2.3	Investment Banking	53
1311	Hubbell Inc.		136.96	3	1	18.9	2.8	Electrical Equipment	61
323	Hunt (J.B.)	(NDQ)	130.55	3	1	26.3	0.8	Trucking	29
801	ICON plc	(NDQ)	186.04	2	3	29.3	NIL	Medical Services	33
2218	IDACORP, Inc.		81.23	2	3	17.4	3.5	Electric Utility (West)	16
1716	IDEX Corp.		181.32	3	3	38.0	1.1	Machinery	49
1803	Intercontinental Exch.		101.23	1	3	22.6	1.2	Brokers & Exchanges	6
2595	Intuit Inc.	(NDQ)	325.55	1	3	35.4	0.7	Computer Software	2
187	Intuitive Surgical	(NDQ)	693.16	3	3	91.4	NIL	Med Supp Invasive	50
838	Jazz Pharmac. plc	(NDQ)	141.49	3	5	9.1	NIL	Biotechnology	12
123	Keysight Technologies		100.25	3	3	22.7	NIL	Precision Instrument	31
716	L3Harris Technologies		178.63	–	–	23.0	1.9	Aerospace/Defense	69
804	Laboratory Corp.		184.07	3	3	14.9	NIL	Medical Services	33
1925	Lancaster Colony	(NDQ)	183.02	3	3	35.9	1.5	Food Processing	18
1005	Lauder (Estee)		215.75	3	3	60.8	1.0	Toiletries/Cosmetics	47
1720	Lincoln Elec Hldgs.	(NDQ)	91.42	3	2	26.5	2.1	Machinery	49
1954	Loblaw Cos. Ltd.	(TSE)	70.72	3	3	26.6	1.8	Retail/Wholesale Food	21
2566	Loews Corp.		34.73	4	4	11.1	0.7	Financial Svcs. (Div.)	55
1403	Logitech Int'l	(NDQ)	74.98	2	3	29.4	1.2	Computers/Peripherals	20
1141	Lowe's Cos.		162.59	1	2	19.2	1.5	Retail Building Supply	7
2519	M&T Bank Corp.		94.22	4	4	10.3	4.7	Bank	73
536	MDU Resources		22.45	2	4	12.3	3.7	Natural Gas (Div.)	86
1723	MSC Industrial Direct		63.02	3	3	13.9	4.8	Machinery	49
765	Markel Corp.		978.37	2	3	9.9	NIL	Insurance (Prop/Cas.)	34
395	MAXIMUS Inc.		68.75	2	1	19.3	1.7	Industrial Services	39
224	McKesson Corp.		150.09	3	2	10.1	1.1	Med Supp Non-Invasive	24
1955	Metro Inc.	(TSE)	64.26	2	3	18.6	1.4	Retail/Wholesale Food	21
126	Mettler-Toledo Int'l		968.47	3	3	42.8	NIL	Precision Instrument	31
1536	Mid-America Apartment		117.14	3	5	51.6	3.4	R.E.I.T.	65
1794	Middlesex Water	(NDQ)	62.37	2	2	28.9	1.7	Water Utility	10
1929	Mondelez Int'l	(NDQ)	57.01	3	2	21.4	2.2	Food Processing	18
958	Motorola Solutions		156.63	3	5	21.1	1.7	Telecom. Equipment	32
2520	Nat'l Bank of Canada	(TSE)	67.21	3	3	15.5	4.3	Bank	73
549	New Jersey Resources		26.66	4	3	12.5	4.7	Natural Gas Utility	41
550	NiSource Inc.		21.85	3	4	16.6	3.8	Natural Gas Utility	41
344	Norfolk Southern		221.02	3	3	27.4	1.7	Railroad	28
2219	NorthWestern Corp.		49.15	4	3	14.2	5.0	Electric Utility (West)	16
913	OGE Energy		29.66	3	3	14.0	5.5	Electric Util. (Central)	43
552	ONE Gas, Inc.		68.49	3	3	19.1	3.3	Natural Gas Utility	41
1832	Open Text Corp.	(NDQ)	42.40	3	1	35.3	1.7	E-Commerce	22
914	Otter Tail Corp.	(NDQ)	36.54	4	3	16.4	4.2	Electric Util. (Central)	43
2521	PNC Financial Serv.		108.13	4	5	44.1	4.3	Bank	73
145	PPL Corp.		26.68	3	4	11.5	6.3	Electric Utility (East)	46
165	PACCAR Inc.	(NDQ)	86.55	3	2	27.3	2.7	Heavy Truck & Equip	64
2632	Paychex, Inc.	(NDQ)	79.58	3	4	28.8	3.2	IT Services	15
2571	PayPal Holdings	(NDQ)	192.02	3	3	NMF	NIL	Financial Svcs. (Div.)	55
130	PerkinElmer Inc.		121.89	1	3	22.9	0.2	Precision Instrument	31
2317	Pool Corp.	(NDQ)	325.20	2	3	44.9	0.7	Recreation	81
1538	Prologis		100.03	1	2	43.7	2.4	R.E.I.T.	65
810	Quest Diagnostics		113.88	3	3	15.5	2.0	Medical Services	33
770	RLI Corp.		84.52	2	1	32.9	1.1	Insurance (Prop/Cas.)	34
2025	RenaissanceRe Hldgs.		170.04	3	1	14.0	0.8	Reinsurance	66
409	Republic Services		94.46	3	3	29.1	1.8	Environmental	40
1647	Robert Half Int'l		53.24	3	3	23.6	2.7	Human Resources	68
1314	Rockwell Automation		219.99	3	2	33.3	1.9	Electrical Equipment	61
1777	Rogers Communications	(TSE)	53.00	3	3	18.3	4.0	Diversified Co.	60
398	Rollins, Inc.		54.66	1	3	71.0	0.6	Industrial Services	39
443	S&P Global		355.55	1	3	32.7	0.8	Information Services	9
2606	SAP SE		157.08	2	2	35.7	1.1	Computer Software	2
2633	SEI Investments	(NDQ)	51.59	3	4	17.3	1.4	IT Services	15
2223	Sempra Energy		116.71	1	3	16.3	3.7	Electric Utility (West)	16
1019	Shaw Commun. 'B'	(TSE)	24.63	3	3	18.7	4.9	Cable TV	8
1143	Sherwin-Williams		707.06	2	3	30.4	0.8	Retail Building Supply	7
1779	Siemens AG (ADS)	(PNK)	69.97	–	–	23.7	3.0	Diversified Co.	60
1939	Smucker (J.M.)		113.24	1	2	16.8	3.2	Food Processing	18
1734	Snap-on Inc.		146.71	3	3	15.7	3.4	Machinery	49
1184	Sonoco Products		51.01	3	3	16.1	3.4	Packaging & Container	42
147	Southern Co.		53.71	3	5	17.1	4.8	Electric Utility (East)	46
555	Spire Inc.		52.89	3	3	44.1	4.9	Natural Gas Utility	41
1238	Stantec Inc.	(TSE)	40.86	2	2	19.8	1.5	Engineering & Const	52
194	STERIS plc		172.96	3	4	32.9	0.9	Med Supp Invasive	50
2576	Sun Life Fin'l Svcs.	(TSE)	54.98	2	3	10.9	4.0	Financial Svcs. (Div.)	55
1345	TE Connectivity		97.09	3	3	25.6	2.0	Electronics	59
2151	Target Corp.		156.46	1	3	25.9	1.7	Retail Store	19
933	TELUS Corporation	(TSE)	24.01	2	3	23.5	5.0	Telecom. Services	17
444	Thomson Reuters	(TSE)	107.19	3	3	55.8	1.4	Information Services	9
1738	Toro Co.		84.21	2	3	26.2	1.3	Machinery	49
168	Toromont Inds.	(TSE)	78.10	2	3	25.7	1.6	Heavy Truck & Equip	64
111	Toyota Motor ADR		136.01	2	3	21.4	3.0	Automotive	45
1144	Tractor Supply	(NDQ)	142.02	1	1	22.4	1.1	Retail Building Supply	7
1208	Tri-Continental		25.83	–	–	NMF	3.9	Investment Co.	–
556	UGI Corp.		32.72	3	3	11.8	4.0	Natural Gas Utility	41
403	UniFirst Corp.		190.97	3	2	29.1	0.5	Industrial Services	39
787	U.S. Bancorp		36.10	4	5	15.3	4.7	Bank (Midwest)	84
1785	Valmont Inds.		122.32	3	3	17.6	1.5	Diversified Co.	60
199	Varian Medical Sys.		171.95	–	–	56.0	NIL	Med Supp Invasive	50
446	Verisk Analytics	(NDQ)	184.52	1	3	42.3	0.6	Information Services	9
413	Waste Connections		105.00	2	3	NMF	0.7	Environmental	40
134	Waters Corp.		193.29	3	3	21.9	NIL	Precision Instrument	31
1741	Watts Water Techn.		98.19	3	3	29.8	1.0	Machinery	49
234	West Pharmac. Svcs.		272.39	1	3	62.5	0.2	Med Supp Non-Invasive	24
1964	Weston (George)	(TSE)	99.50	2	4	12.5	2.1	Retail/Wholesale Food	21
2582	Willis Towers Wat. plc	(NDQ)	206.85	–	–	18.5	1.3	Financial Svcs. (Div.)	55
1743	Xylem Inc.		83.86	3	3	40.1	1.2	Machinery	49
201	Zimmer Biomet Hldgs.		136.31	3	2	28.4	0.7	Med Supp Invasive	50
1635	Zoetis Inc.		161.32	2	3	43.7	0.5	Drug	14

HIGHEST DIVIDEND YIELDING STOCKS (Based upon estimated year-ahead dividends per share)

Page No.	Stock Name	Recent Price	Time-liness	Safety Rank	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
628	Phillips 66 Partners	22.61	2	3	5.9	15.5	Pipeline MLPs	93
2444	Apollo Investment	8.55	4	3	8.6	14.5	Public/Private Equity	–
2185	Sunoco LP	24.70	4	3	10.0	13.4	Retail (Hardlines)	72
1027	Telefonica SA ADR	3.52	3	4	8.0	13.1	Telecom. Utility	35
331	Euronav NV	8.68	2	4	4.3	12.7	Maritime	71
1527	GEO Group (The)	11.52	4	3	11.1	11.8	R.E.I.T.	65
624	Holly Energy Part.	12.35	4	4	8.0	11.3	Pipeline MLPs	93
623	Enterprise Products	16.02	4	3	8.5	11.1	Pipeline MLPs	93
506	Delek US Holdings	11.44	–	3	NMF	10.8	Petroleum (Integrated)	92
1204	Liberty All-Star	5.97	–	3	NMF	10.7	Investment Co.	–
2448	Gladstone Capital	7.51	–	3	7.4	10.4	Public/Private Equity	–
507	Exxon Mobil Corp.	35.31	4	3	NMF	9.9	Petroleum (Integrated)	92
2400	Black Stone Minerals	6.19	4	3	NMF	9.7	Petroleum (Producing)	91
1023	CenturyLink, Inc.	10.28	3	3	7.4	9.7	Telecom. Utility	35
391	Iron Mountain	26.60	3	3	27.1	9.3	Industrial Services	39
1199	Aberdeen Asia-Pac. Fd.	3.91	–	4	NMF	9.0	Investment Co.	–
521	Total S.A. ADR	33.79	4	3	NMF	8.9	Petroleum (Integrated)	92
1991	Altria Group	38.95	3	3	8.9	8.8	Tobacco	25
522	Valero Energy	44.82	4	3	NMF	8.7	Petroleum (Integrated)	92
614	Pembina Pipeline	29.14	4	3	12.1	8.6	Oil/Gas Distribution	83
1534	Macerich Comp. (The)	7.09	5	4	39.4	8.5	R.E.I.T.	65
2537	AllianceBernstein Hldg.	27.45	3	3	12.1	8.4	Financial Svcs. (Div.)	55
1205	MFS Multimarket	5.74	–	4	NMF	8.4	Investment Co.	–
612	Kinder Morgan Inc.	12.61	4	3	26.8	8.3	Oil/Gas Distribution	83
936	Vodafone Group ADR	13.48	2	3	30.0	8.2	Telecom. Services	17
1983	Canon Inc. ADR	17.03	3	2	12.1	8.1	Foreign Electronics	37
1506	Northwest Bancshares	9.39	3	3	16.5	8.1	Thrift	63
2447	Compass Diversified	18.00	3	3	NMF	8.0	Public/Private Equity	–
610	Enbridge Inc.	40.25	3	3	14.9	8.0	Oil/Gas Distribution	83
1505	New York Community	8.53	3	3	9.8	8.0	Thrift	63
633	Suburban Propane	15.00	4	3	12.5	8.0	Pipeline MLPs	93
2546	CIT Group	17.78	5	3	71.1	7.9	Financial Svcs. (Div.)	55
619	Cheniere Energy Part.	33.52	3	3	11.5	7.9	Pipeline MLPs	93
1545	Simon Property Group	65.79	5	3	17.2	7.9	R.E.I.T.	65
1992	Brit. Am. Tobacco ADR	36.44	3	3	8.2	7.8	Tobacco	25
1503	Flushing Financial	10.71	2	3	6.4	7.8	Thrift	63
2570	Navient Corp.	8.25	4	3	3.7	7.8	Financial Svcs. (Div.)	55
616	Williams Cos.	20.40	3	4	18.7	7.8	Oil/Gas Distribution	83
512	Marathon Petroleum	29.95	–	3	NMF	7.7	Petroleum (Integrated)	92
2402	Can. Natural Res.	22.38	4	3	NMF	7.6	Petroleum (Producing)	91
917	AT&T Inc.	28.38	3	1	8.4	7.4	Telecom. Services	17
1508	Provident Fin'l Svcs.	12.42	4	3	12.3	7.4	Thrift	63
1996	Universal Corp.	41.72	2	3	11.9	7.4	Tobacco	25
776	Comerica Inc.	38.55	4	3	11.3	7.1	Bank (Midwest)	84
505	Chevron Corp.	73.93	4	3	NMF	7.0	Petroleum (Integrated)	92
1507	People's United Fin'l	10.23	3	3	10.2	7.0	Thrift	63
502	BP PLC ADR	18.18	4	3	NMF	6.9	Petroleum (Integrated)	92
509	HollyFrontier Corp.	20.89	4	3	NMF	6.9	Petroleum (Integrated)	92
518	Phillips 66	53.98	4	3	NMF	6.9	Petroleum (Integrated)	92
1563	Prudential Fin'l	64.03	4	3	6.5	6.9	Insurance (Life)	51
1533	MGM Growth Properties	28.74	4	3	23.0	6.8	R.E.I.T.	65
1903	B&G Foods	28.44	2	3	14.6	6.7	Food Processing	18
2420	Helmerich & Payne	14.86	5	3	NMF	6.7	Oilfield Svcs/Equip.	94
2562	Janus Henderson plc	21.43	3	3	10.9	6.7	Financial Svcs. (Div.)	55
1565	Unum Group	17.08	4	3	3.3	6.7	Insurance (Life)	51
2544	Block (H&R)	15.81	3	3	42.7	6.6	Financial Svcs. (Div.)	55
779	First Horizon National	9.15	4	3	8.7	6.6	Bank (Midwest)	84
782	Huntington Bancshs.	9.12	4	3	11.5	6.6	Bank (Midwest)	84
1504	Investors Bancorp	7.29	4	3	9.5	6.6	Thrift	63
921	China Mobile (ADR)	32.54	3	2	8.0	6.5	Telecom. Services	17
1605	Olin Corp.	12.25	4	3	NMF	6.5	Chemical (Basic)	77
1592	Rio Tinto plc	60.49	3	3	9.7	6.5	Metals & Mining (Div.)	76
2508	Bank of Nova Scotia	55.97	3	2	10.7	6.4	Bank	73
553	South Jersey Inds.	19.14	4	3	12.3	6.4	Natural Gas Utility	41
525	Brigham Minerals	8.96	–	4	99.6	6.3	Natural Gas (Div.)	86
1528	Gaming and Leisure	38.02	4	3	18.1	6.3	R.E.I.T.	65
145	PPL Corp.	26.68	3	2	11.5	6.3	Electric Utility (East)	46
1993	Philip Morris Int'l	76.31	3	3	15.1	6.3	Tobacco	25
1551	W.P. Carey Inc.	66.60	4	3	33.6	6.3	R.E.I.T.	65
2511	Citizens Fin'l Group	25.34	4	3	11.8	6.2	Bank	73
1600	Dow Inc.	47.48	–	2	47.0	6.2	Chemical (Basic)	77
1541	Regency Centers Corp.	38.56	4	3	25.0	6.2	R.E.I.T.	65
2531	Webster Fin'l	25.62	5	3	11.3	6.2	Bank	73
1148	Ethan Allen Interiors	13.76	3	3	45.9	6.1	Furn/Home Furnishings	78
2518	KeyCorp	12.13	4	3	13.8	6.1	Bank	73
1535	Mack-Cali R'lty	13.02	–	3	NMF	6.1	R.E.I.T.	65
1994	Schweitzer-Mauduit Int'l	28.79	3	3	9.8	6.1	Tobacco	25
1550	Vornado R'lty Trust	34.76	4	3	NMF	6.1	R.E.I.T.	65
2391	Interpublic Group	17.05	3	3	13.4	6.0	Advertising	74
766	Mercury General	41.89	3	3	9.6	6.0	Insurance (Prop/Cas.)	34
1771	National Presto Ind.	83.40	2	3	13.7	6.0	Diversified Co.	60
2440	Trinseo S.A.	26.51	4	3	NMF	6.0	Chemical (Diversified)	56
1022	BCE Inc.	41.89	3	2	18.0	5.9	Telecom. Utility	35
2564	Lazard Ltd.	32.01	3	3	19.2	5.9	Financial Svcs. (Div.)	55
580	LyondellBasell Inds.	71.21	4	3	15.2	5.9	Chemical (Specialty)	58
1560	Manulife Fin'l	14.16	2	3	6.6	5.9	Insurance (Life)	51
786	TCF Financial	23.73	–	3	11.3	5.9	Bank (Midwest)	84
1552	Washington R.E.I.T.	20.41	3	3	NMF	5.9	R.E.I.T.	65
2194	Buckle (The), Inc.	20.79	2	3	11.3	5.8	Retail (Softlines)	54
2509	Can. Imperial Bank	101.20	3	2	18.3	5.8	Bank	73
1526	Federal Rlty. Inv. Trust	74.94	4	1	49.3	5.7	R.E.I.T.	65
2514	First Commonwealth	7.74	4	3	8.1	5.7	Bank	73
578	Kronos Worldwide	12.70	3	4	34.3	5.7	Chemical (Specialty)	58
774	Assoc. Banc-Corp	12.76	4	3	11.3	5.6	Bank (Midwest)	84
143	FirstEnergy Corp.	28.45	4	3	10.9	5.6	Electric Utility (East)	46
781	Hancock Whitney Corp.	19.14	5	3	30.4	5.6	Bank (Midwest)	84
768	Old Republic	14.94	3	3	9.5	5.6	Insurance (Prop/Cas.)	34
2573	Principal Fin'l Group	40.10	4	3	7.7	5.6	Financial Svcs. (Div.)	55
913	OGE Energy	29.66	3	2	14.0	5.5	Electric Util. (Central)	43
615	TC Energy Corp.	44.23	3	3	13.1	5.5	Oil/Gas Distribution	83

STOCKS WITH HIGH 3- TO 5-YEAR PRICE APPRECIATION POTENTIAL

Some of the stocks tabulated below are very risky and appreciation potentialities tentative. Please read the full-page reports in Ratings & Reports to gain an understanding of the risks entailed. Some of these stocks may not be timely investment commitments. (See the Performance Ranks below.)

Page No.	Stock Name	Recent Price	3- to 5-year Potential	Time-liness	Safety Rank	Industry Group	Industry Rank
1151	Interface Inc. 'A'	6.38	490%	3	4	Furn/Home Furnishings	78
2623	DXC Technology	17.09	455%	5	3	IT Services	15
629	Plains All Amer. Pipe.	5.89	450%	5	4	Pipeline MLPs	93
630	Plains GP Holdings L.P.	6.11	430%	5	4	Pipeline MLPs	93
828	Alkermes plc	16.89	405%	3	3	Biotechnology	12
1421	Aurora Cannabis	4.78	400%	–	4	Cannabis	80
503	CVR Energy	12.76	390%	5	3	Petroleum (Integrated)	92
2377	Meredith Corp.	12.74	390%	5	4	Publishing	88
506	Delek US Holdings	11.44	380%	–	3	Petroleum (Integrated)	92
543	Southwestern Energy	2.50	380%	3	5	Natural Gas (Div.)	86
2146	Macy's Inc.	5.96	360%	5	4	Retail Store	19
514	Occidental Petroleum	10.34	360%	5	4	Petroleum (Integrated)	92
2344	Sirius XM Holdings	5.29	355%	3	4	Entertainment	57
545	WPX Energy	5.17	355%	–	4	Natural Gas (Div.)	86
634	Western Midstream Part.	7.71	355%	5	4	Pipeline MLPs	93
1834	Sabre Corp.	6.71	345%	5	5	E-Commerce	22
2177	Movado Group	10.39	335%	5	3	Retail (Hardlines)	72
2421	MRC Global	4.67	330%	–	5	Oilfield Svcs/Equip.	94
621	Enable Midstream Part.	3.98	325%	5	4	Pipeline MLPs	93
2362	Marcus Corp.	8.19	325%	5	4	Hotel/Gaming	87
2424	Oceaneering Int'l	3.68	320%	–	5	Oilfield Svcs/Equip.	94
520	Suncor Energy	17.26	320%	4	3	Petroleum (Integrated)	92
535	Enerplus Corp.	2.54	315%	5	4	Natural Gas (Div.)	86
631	Rattler Midstream LP	6.00	310%	–	4	Pipeline MLPs	93
2328	AMC Networks	24.72	305%	4	3	Entertainment	57
609	Clean Energy Fuels	2.46	305%	–	5	Oil/Gas Distribution	83
220	Inogen, Inc.	28.41	295%	5	3	Med Supp Non-Invasive	24
1534	Macerich Comp. (The)	7.09	290%	5	4	R.E.I.T.	65
726	Triumph Group	7.01	290%	–	5	Aerospace/Defense	69
979	Cooper-Standard	13.63	285%	5	4	Auto Parts	70
805	MEDNAX, Inc.	16.19	285%	4	3	Medical Services	33
2147	Nordstrom, Inc.	12.27	285%	5	4	Retail Store	19
627	NuStar Energy L.P.	10.40	285%	5	4	Pipeline MLPs	93
2158	Genesco Inc.	22.36	280%	5	3	Shoe	82
513	Murphy Oil Corp.	9.20	280%	5	4	Petroleum (Integrated)	92
2329	Discovery, Inc.	21.95	275%	3	3	Entertainment	57
2309	Harley-Davidson	23.91	275%	4	3	Recreation	81
2195	Cato Corp.	8.08	270%	4	3	Retail (Softlines)	54
2561	Invesco Ltd.	11.49	270%	4	3	Financial Svcs. (Div.)	55
1537	Park Hotels & Resorts	10.21	265%	5	4	R.E.I.T.	65
628	Phillips 66 Partners	22.61	265%	2	3	Pipeline MLPs	93
1338	Plantronics Inc.	12.27	265%	4	4	Electronics	59
2528	Synovus Financial	21.10	265%	5	3	Bank	73
429	Alliance Data Sys.	43.26	260%	5	4	Information Services	9
516	Par Pacific Holdings	6.49	260%	3	4	Petroleum (Integrated)	92
544	Targa Resources	14.65	260%	5	4	Natural Gas (Div.)	86
1412	ACCO Brands	6.09	255%	–	3	Office Equip/Supplies	85
974	Amer. Axle	5.60	255%	4	4	Auto Parts	70
2419	Helix Energy Solutions	2.52	255%	–	5	Oilfield Svcs/Equip.	94
151	Blue Bird Corp.	11.41	250%	4	3	Heavy Truck & Equip	64
598	GTT Communications	5.28	250%	–	5	Wireless Networking	36
2311	IMAX Corp.	12.16	250%	4	3	Recreation	81
125	MTS Systems	19.88	250%	5	4	Precision Instrument	31
2408	Marathon Oil Corp.	4.29	250%	5	3	Petroleum (Producing)	91
1772	Park-Ohio	16.47	250%	5	4	Diversified Co.	60
1008	Revlon Inc.	6.73	250%	–	4	Toiletries/Cosmetics	47
613	ONEOK Inc.	26.01	245%	5	3	Oil/Gas Distribution	83
1007	Regis Corp.	5.76	245%	–	4	Toiletries/Cosmetics	47
2307	Cinemark Hldgs.	10.31	240%	5	4	Recreation	81
1831	Nutanix, Inc.	22.01	240%	3	4	E-Commerce	22
632	Shell Midstream L.P.	9.49	240%	5	4	Pipeline MLPs	93
1737	Thermon Group	11.11	240%	4	3	Machinery	49
1798	BGC Partners	2.40	235%	–	4	Brokers & Exchanges	6
2155	Caleres Inc.	9.66	235%	–	4	Shoe	82
2448	Gladstone Capital	7.51	235%	–	3	Public/Private Equity	–
1811	Greenhill & Co.	11.18	235%	4	4	Investment Banking	53
730	Haynes International	17.82	235%	4	3	Metal Fabricating	79
612	Kinder Morgan Inc.	12.61	235%	4	3	Oil/Gas Distribution	83
1194	Newell Brands	17.22	235%	3	3	Household Products	1
768	Old Republic	14.94	235%	3	3	Insurance (Prop/Cas.)	34
502	BP PLC ADR	18.18	230%	4	3	Petroleum (Integrated)	92
540	PDC Energy	12.10	230%	5	4	Natural Gas (Div.)	86
519	Royal Dutch Shell 'B'	25.12	230%	4	3	Petroleum (Integrated)	92
735	Tenaris S.A. ADS	9.86	230%	4	3	Metal Fabricating	79
1425	Tilray, Inc.	4.82	230%	5	4	Cannabis	80
1423	Cronos Group	4.96	225%	4	4	Cannabis	80
2376	Deluxe Corp.	25.97	225%	4	3	Publishing	88
2337	MSG Networks	9.93	225%	4	3	Entertainment	57
2405	Crescent Point Energy	1.71	220%	5	5	Petroleum (Producing)	91
533	EOG Resources	37.44	220%	4	3	Natural Gas (Div.)	86
2106	G-III Apparel Group	14.15	220%	5	5	Apparel	90
2208	Tilly's, Inc.	6.42	220%	–	4	Retail (Softlines)	54
2397	WPP PLC ADR	39.14	220%	4	3	Advertising	74
1420	Aphria Inc.	4.31	215%	–	4	Cannabis	80
593	BlackBerry	4.61	215%	4	4	Wireless Networking	36
620	DCP Midstream LP	11.03	215%	5	5	Pipeline MLPs	93
986	Goodyear Tire	7.73	215%	4	4	Auto Parts	70
1992	Brit. Am. Tobacco ADR	36.44	210%	3	3	Tobacco	25
2305	Carnival Corp.	15.31	210%	5	5	Recreation	81
2404	Continental Resources	12.82	210%	5	4	Petroleum (Producing)	91
2535	AerCap Hldgs. NV	25.51	205%	3	4	Financial Svcs. (Div.)	55
525	Brigham Minerals	8.96	205%	–	4	Natural Gas (Div.)	86
608	Cheniere Energy Inc.	49.33	205%	2	3	Oil/Gas Distribution	83
1544	Service Properties	8.23	205%	5	3	R.E.I.T.	65
2539	Amer. Int'l Group	27.63	200%	4	3	Financial Svcs. (Div.)	55
2516	HSBC Holdings PLC	19.96	200%	3	4	Bank	73
2340	Nexstar Media Group	94.54	200%	2	3	Entertainment	57
759	CNA Fin'l	30.47	195%	3	2	Insurance (Prop/Cas.)	34
1983	Canon Inc. ADR	17.03	195%	3	2	Foreign Electronics	37
997	Tenneco Inc.	6.83	195%	4	4	Auto Parts	70

BIGGEST "FREE FLOW" CASH GENERATORS

Stocks of companies that have earned more "cash flow" in the last 5 years than was required to build plant and pay dividends

Page No.	Stock Name	Recent Price	Ratio "Cash Flow" To Cash Out	Time-liness	Safety Rank	Industry Group	Industry Rank
2339	Netflix, Inc.	490.65	44.80	1	3	Entertainment	57
1822	Check Point Software	121.60	34.69	2	1	E-Commerce	22
2548	Credit Acceptance	321.00	34.68	3	3	Financial Svcs. (Div.)	55
1132	NVR, Inc.	4078.55	30.30	3	3	Homebuilding	13
838	Jazz Pharmac. plc	141.49	28.08	3	2	Biotechnology	12
1819	Arista Networks	205.05	24.37	3	3	E-Commerce	22
1619	Horizon Therapeutics PLC	79.67	22.79	3	3	Drug	14
1135	Taylor Morrison Home	25.13	21.72	3	3	Homebuilding	13
1352	Ambarella, Inc.	51.97	21.24	3	3	Semiconductor	11
1611	Bausch Health	15.27	20.89	4	5	Drug	14
826	Veeva Systems	281.92	19.43	2	3	Healthcare Information	30
2586	ANSYS, Inc.	318.80	18.89	3	2	Computer Software	2
840	Myriad Genetics	12.66	17.42	5	3	Biotechnology	12
1134	TRI Pointe Group	17.74	16.43	2	3	Homebuilding	13
821	HealthEquity, Inc.	49.52	15.73	2	3	Healthcare Information	30
2556	FleetCor Technologies	241.71	15.17	3	3	Financial Svcs. (Div.)	55
2659	VeriSign Inc.	204.72	14.13	1	3	Internet	23
2642	Booking Holdings	1700.40	13.55	3	3	Internet	23
2189	WW International	18.59	13.40	4	4	Retail (Hardlines)	72
2329	Discovery, Inc.	21.95	13.31	3	3	Entertainment	57
1003	Helen of Troy Ltd.	197.23	12.96	2	3	Toiletries/Cosmetics	47
2579	Voya Financial	47.98	12.56	3	3	Financial Svcs. (Div.)	55
2630	Manhattan Assoc.	95.37	12.37	3	3	IT Services	15
725	TransDigm Group	498.60	12.18	4	3	Aerospace/Defense	69
1373	Rambus Inc.	13.75	12.11	3	3	Semiconductor	11
1978	Monster Beverage	80.51	11.72	2	3	Beverage	26
593	BlackBerry	4.61	11.70	4	4	Wireless Networking	36
1407	ScanSource	19.98	11.61	4	3	Computers/Peripherals	20
1364	MaxLinear, Inc.	22.79	11.21	3	3	Semiconductor	11
1350	Advanced Energy	61.98	11.04	2	3	Semiconductor	11
2011	Electronic Arts	132.28	10.92	1	3	Entertainment Tech	4
1616	Endo Int'l plc	3.20	10.80	3	5	Drug	14
805	MEDNAX, Inc.	16.19	10.68	4	3	Medical Services	33
949	CommScope Holding	8.67	10.45	4	3	Telecom. Equipment	32
2165	Avis Budget Group	27.52	10.26	4	4	Retail (Hardlines)	72
1724	Middleby Corp. (The)	90.90	10.20	3	3	Machinery	49
833	Exelixis, Inc.	23.73	10.06	3	4	Biotechnology	12
2613	VMware, Inc.	142.99	9.96	2	3	Computer Software	2
603	Ubiquiti Inc.	160.93	9.90	2	3	Wireless Networking	36
2652	Match Group	108.59	9.72	3	4	Internet	23
1318	WESCO Int'l	43.73	9.60	4	3	Electrical Equipment	61
605	Zebra Techn. 'A'	260.56	9.33	3	3	Wireless Networking	36
1131	Meritage Homes	107.97	9.21	2	3	Homebuilding	13
1129	Lennar Corp.	79.64	9.18	2	3	Homebuilding	13
433	CoStar Group	857.13	9.11	2	2	Information Services	9
2584	Adobe Inc.	488.51	9.05	1	2	Computer Software	2
2004	Perdoceo Education	12.22	8.89	3	4	Educational Services	48
2588	Cadence Design Sys.	105.25	8.67	1	2	Computer Software	2
2638	Alibaba Group ADS	276.01	8.66	2	3	Internet	23
1387	Axcelis Technologies	22.28	8.60	2	3	Semiconductor Equip	3
790	Amedisys, Inc.	232.91	8.55	3	3	Medical Services	33
1315	Trimble Inc.	48.70	8.32	3	3	Electrical Equipment	61
1356	Cirrus Logic	64.95	8.03	2	3	Semiconductor	11
1136	Toll Brothers	49.35	7.96	3	3	Homebuilding	13
1128	KB Home	38.64	7.95	3	3	Homebuilding	13
632	Shell Midstream L.P.	9.49	7.95	5	4	Pipeline MLPs	93
964	Synaptics	81.06	7.75	3	3	Telecom. Equipment	32
818	Allscripts Healthcare	8.21	7.74	3	3	Healthcare Information	30
801	ICON plc	186.04	7.70	2	2	Medical Services	33
793	Cigna Corp.	164.29	7.53	2	3	Medical Services	33
846	United Therapeutics	101.51	7.51	3	3	Biotechnology	12
1612	Biogen	282.04	7.44	1	3	Drug	14
2619	CACI Int'l	217.68	7.35	2	3	IT Services	15
952	F5 Networks	123.37	7.30	3	3	Telecom. Equipment	32
1624	Mylan N.V.	14.64	7.28	–	3	Drug	14
1394	Onto Innovation	29.76	7.27	2	3	Semiconductor Equip	3
1638	ASGN Inc.	65.27	7.17	3	3	Human Resources	68
123	Keysight Technologies	100.25	6.99	3	2	Precision Instrument	31
226	Natus Medical	16.96	6.92	4	3	Med Supp Non-Invasive	24
1369	NXP Semiconductors NV	124.00	6.85	3	3	Semiconductor	11
432	CoreLogic	67.74	6.79	–	3	Information Services	9
128	Novanta Inc.	106.39	6.79	3	3	Precision Instrument	31
220	Inogen, Inc.	28.41	6.77	5	3	Med Supp Non-Invasive	24
217	Hologic, Inc.	65.77	6.74	3	3	Med Supp Non-Invasive	24
2610	Synopsys, Inc.	212.64	6.71	1	1	Computer Software	2
2328	AMC Networks	24.72	6.64	4	3	Entertainment	57
937	Vonage Holdings	10.25	6.57	3	3	Telecom. Services	17
712	HEICO Corp.	105.44	6.56	3	3	Aerospace/Defense	69
2626	Fair Isaac	427.52	6.50	3	3	IT Services	15
379	CBRE Group	47.34	6.47	4	3	Industrial Services	39
742	Gibraltar Inds.	64.51	6.40	2	3	Steel	67
1112	HD Supply Holdings	40.87	6.30	3	3	Building Materials	38
175	Boston Scientific	38.00	6.29	3	3	Med Supp Invasive	50
1943	USANA Health Sciences	74.24	6.07	2	3	Food Processing	18
2589	Citrix Sys.	138.32	6.04	1	3	Computer Software	2
2615	ACI Worldwide	25.70	6.02	2	3	IT Services	15
2174	Insight Enterprises	56.44	6.02	3	3	Retail (Hardlines)	72
2607	SS&C Techn. Hldgs	61.42	6.00	3	3	Computer Software	2
2623	DXC Technology	17.09	5.99	5	3	IT Services	15
2157	Deckers Outdoor	219.27	5.98	2	3	Shoe	82
812	Syneos Health	53.39	5.98	3	4	Medical Services	33
199	Varian Medical Sys.	171.95	5.97	–	2	Med Supp Invasive	50
1228	AECOM	40.91	5.89	–	3	Engineering & Const	52
1374	Semtech Corp.	53.19	5.89	2	3	Semiconductor	11
1731	Roper Tech.	400.60	5.87	3	1	Machinery	49
130	PerkinElmer Inc.	121.89	5.81	1	2	Precision Instrument	31
726	Triumph Group	7.01	5.79	–	5	Aerospace/Defense	69
1630	Perrigo Co. plc	45.63	5.72	1	3	Drug	14
134	Waters Corp.	193.29	5.70	3	2	Precision Instrument	31
187	Intuitive Surgical	693.16	5.65	3	2	Med Supp Invasive	50

BEST PERFORMING STOCKS

(Measured by Price Change in the Last 13 Weeks)

Page No.	Stock Name	Ticker	Recent Price	Percent Change In Price	Time-liness	Safety Rank
538	New Fortress Energy LLC	NFE	40.74	227.2%	–	3
834	Immunomedics, Inc.	IMMU	85.52	149.8%	–	4
2367	Penn Nat'l Gaming	PENN	72.92	144.9%	3	4
2369	Scientific Games	SGMS	36.69	140.9%	4	5
1417	Pitney Bowes	PBI	5.52	114.0%	–	5
110	Tesla, Inc.	TSLA	421.20	108.6%	3	3
2202	L Brands	LB	31.53	108.5%	3	4
2164	At Home Group	HOME	14.23	105.0%	–	4
938	Zoom Video Communic.	ZM	487.66	96.2%	–	4
308	FedEx Corp.	FDX	254.44	89.1%	2	2
228	NovoCure Limited	NVCR	108.32	87.7%	2	4
2654	Pinterest, Inc.	PINS	40.98	85.9%	–	4
2173	Hibbett Sports	HIBB	38.62	82.6%	3	4
2182	Signet Jewelers Ltd.	SIG	19.39	82.1%	5	4
351	Brinker Int'l	EAT	45.43	81.4%	4	3
2124	Carvana Co.	CVNA	218.02	81.1%	3	5
2005	Rosetta Stone	RST	29.90	77.1%	3	4
2662	Zillow Group 'C'	Z	101.16	77.1%	3	3
2353	DraftKings Inc.	DKNG	56.89	69.6%	–	4
2314	Peloton Interactive	PTON	96.91	69.4%	–	3
193	Silk Road Medical	SILK	66.50	68.4%	–	3
1215	Enphase Energy	ENPH	78.14	64.7%	3	3
1967	Boston Beer 'A'	SAM	899.91	64.3%	2	3
1572	Hecla Mining	HL	5.01	63.2%	2	4
2368	Red Rock Resorts	RRR	17.53	62.6%	5	4
2341	Roku, Inc.	ROKU	186.29	61.9%	3	4
1217	Generac Holdings	GNRC	190.18	60.0%	2	3
1222	SolarEdge Tech.	SEDG	218.29	59.3%	2	3
1351	Advanced Micro Dev.	AMD	79.48	58.1%	1	4
1108	Builders FirstSource	BLDR	32.30	57.9%	2	4
1136	Toll Brothers	TOL	49.35	57.2%	3	3
2198	Citi Trends	CTRN	24.96	56.9%	3	4
1223	SunPower Corp.	SPWR	11.70	56.6%	–	5
1142	Lumber Liquidators	LL	21.76	56.3%	3	5
361	Fiesta Restaurant	FRGI	9.95	55.7%	–	4
2609	Square, Inc.	SQ	160.76	55.1%	2	4
1576	Pretium Resources	PVG	12.56	54.3%	2	5
316	United Parcel Serv.	UPS	168.90	54.3%	3	1
305	Atlas Air Worldwide	AAWW	62.36	54.0%	2	3
163	Navistar Int'l	NAV	43.00	53.4%	–	5
213	Cutera, Inc.	CUTR	18.34	51.9%	5	4

WORST PERFORMING STOCKS

(Measured by Price Change in the Last 13 Weeks)

Page No.	Stock Name	Ticker	Recent Price	Percent Change In Price	Time-liness	Safety Rank
1421	Aurora Cannabis	ACB	4.78	–61.3%	–	4
969	Rite Aid Corp.	RAD	9.78	–43.5%	2	5
514	Occidental Petroleum	OXY	10.34	–42.1%	5	4
1001	Coty Inc.	COTY	2.75	–42.0%	–	5
2424	Oceaneering Int'l	OII	3.68	–39.2%	–	5
2362	Marcus Corp.	MCS	8.19	–38.6%	5	4
2006	Strategic Education	STRA	94.88	–38.3%	–	3
1425	Tilray, Inc.	TLRY	4.82	–37.5%	5	4
515	PBF Energy	PBF	6.02	–37.4%	5	4
628	Phillips 66 Partners	PSXP	22.61	–36.5%	2	3
832	BioMarin Pharmac.	BMRN	77.99	–36.2%	2	3
598	GTT Communications	GTT	5.28	–36.1%	–	5
631	Rattler Midstream LP	RTLR	6.00	–35.3%	–	4
1008	Revlon Inc.	REV	6.73	–33.9%	–	4
503	CVR Energy	CVI	12.76	–33.8%	5	3
506	Delek US Holdings	DK	11.44	–31.6%	–	3
535	Enerplus Corp.	ERF.TO	2.54	–31.5%	5	4
1007	Regis Corp.	RGS	5.76	–31.0%	–	4
334	Kirby Corp.	KEX	37.08	–30.7%	4	3
2379	Scholastic Corp.	SCHL	20.81	–30.7%	4	3
1931	Phibro Animal Health	PAHC	17.84	–30.4%	4	3
513	Murphy Oil Corp.	MUR	9.20	–30.0%	5	4
510	Husky Energy	HSE.TO	3.19	–29.9%	5	3
629	Plains All Amer. Pipe.	PAA	5.89	–29.8%	5	4
1346	3D Systems	DDD	4.79	–29.8%	4	5
726	Triumph Group	TGI	7.01	–29.6%	–	5
2585	Alteryx, Inc.	AYX	113.69	–29.2%	2	3
710	Embraer SA	ERJ	4.44	–28.6%	–	4
2419	Helix Energy Solutions	HLX	2.52	–28.6%	–	5
630	Plains GP Holdings L.P.	PAGP	6.11	–28.3%	5	4
2408	Marathon Oil Corp.	MRO	4.29	–28.0%	5	3
1027	Telefonica SA ADR	TEF	3.52	–27.9%	3	4
1634	Teva Pharmac. ADR	TEVA	8.80	–27.8%	3	4
974	Amer. Axle	AXL	5.60	–27.6%	4	4
1588	Kaiser Aluminum	KALU	53.47	–27.2%	4	3
1009	Sally Beauty	SBH	9.06	–27.1%	4	3
2437	Hexcel Corp.	HXL	34.35	–26.9%	4	3
509	HollyFrontier Corp.	HFC	20.89	–26.6%	4	3
2129	Monro, Inc.	MNRO	40.71	–26.2%	4	3
516	Par Pacific Holdings	PARR	6.49	–26.1%	3	4
704	Astronics Corp.	ATRO	7.99	–26.0%	5	5

WIDEST DISCOUNTS FROM BOOK VALUE

Stocks whose ratios of recent price to book value are lowest

Page No.	Stock Name	Ticker	Recent Price	Book Value Per sh.*	Percent Price-to-Book Value	Time-liness	Safety Rank	Beta	P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
1557	Genworth Fin'l	GNW	3.27	28.14	12%	–	5	1.40	32.7	NIL	Insurance (Life)	51
524	Antero Resources	AR	2.96	23.55	13%	3	5	1.30	NMF	NIL	Natural Gas (Div.)	86
2405	Crescent Point Energy	CPG.TO	1.71	10.09	17%	5	5	1.75	NMF	0.6	Petroleum (Producing)	91
510	Husky Energy	HSE.TO	3.19	16.32	20%	5	3	1.30	NMF	1.6	Petroleum (Integrated)	92
2426	Patterson-UTI Energy	PTEN	3.00	14.76	20%	–	5	1.55	NMF	2.7	Oilfield Svcs/Equip.	94
2419	Helix Energy Solutions	HLX	2.52	11.42	22%	–	5	2.15	63.0	NIL	Oilfield Svcs/Equip.	94
710	Embraer SA	ERJ	4.44	19.12	23%	–	4	1.40	NMF	NIL	Aerospace/Defense	69
539	Ovintiv Inc.	OVV	8.79	38.22	23%	4	4	1.75	NMF	4.3	Natural Gas (Div.)	86
515	PBF Energy	PBF	6.02	25.37	24%	5	4	1.90	1.8	NIL	Petroleum (Integrated)	92
621	Enable Midstream Part.	ENBL	3.98	16.11	25%	5	4	1.80	9.0	16.6	Pipeline MLPs	93
513	Murphy Oil Corp.	MUR	9.20	35.75	26%	5	4	1.80	NMF	5.4	Petroleum (Integrated)	92
979	Cooper-Standard	CPS	13.63	50.83	27%	5	4	1.25	NMF	NIL	Auto Parts	70
2408	Marathon Oil Corp.	MRO	4.29	15.27	28%	5	3	1.65	NMF	NIL	Petroleum (Producing)	91
2546	CIT Group	CIT	17.78	61.37	29%	5	3	1.70	71.1	7.9	Financial Svcs. (Div.)	55
2146	Macy's Inc.	M	5.96	20.64	29%	5	4	1.55	NMF	NIL	Retail Store	19
2020	Assured Guaranty	AGO	21.02	71.18	30%	3	3	1.45	8.7	3.8	Reinsurance	66
540	PDC Energy	PDCE	12.10	37.90	32%	5	4	1.40	NMF	NIL	Natural Gas (Div.)	86
750	U.S. Steel Corp.	X	7.58	24.06	32%	4	5	1.50	NMF	0.5	Steel	67
2424	Oceaneering Int'l	OII	3.68	10.81	34%	–	5	1.85	NMF	NIL	Oilfield Svcs/Equip.	94
738	ArcelorMittal	MT	13.37	38.06	35%	4	4	1.55	NMF	NIL	Steel	67
1565	Unum Group	UNM	17.08	49.10	35%	4	3	1.60	3.3	6.7	Insurance (Life)	51
2535	AerCap Hldgs. NV	AER	25.51	70.79	36%	3	4	1.90	3.9	NIL	Financial Svcs. (Div.)	55
504	Cenovus Energy	CVE.TO	5.55	15.63	36%	5	5	1.50	NMF	NIL	Petroleum (Integrated)	92
108	Nissan Motor ADR	NSANY	7.05	19.42	36%	3	3	0.90	NMF	NIL	Automotive	45
2539	Amer. Int'l Group	AIG	27.63	74.93	37%	4	3	1.45	6.7	4.6	Financial Svcs. (Div.)	55
2406	Diamondback Energy	FANG	31.49	83.33	38%	5	3	1.50	NMF	4.8	Petroleum (Producing)	91
535	Enerplus Corp.	ERF.TO	2.54	6.64	38%	5	4	1.60	NMF	4.7	Natural Gas (Div.)	86
514	Occidental Petroleum	OXY	10.34	27.37	38%	5	4	1.55	NMF	0.4	Petroleum (Integrated)	92
620	DCP Midstream LP	DCP	11.03	28.06	39%	5	5	1.65	11.5	14.1	Pipeline MLPs	93
997	Tenneco Inc.	TEN	6.83	17.61	39%	4	4	1.90	NMF	NIL	Auto Parts	70
333	Golar LNG Ltd.	GLNG	6.06	15.09	40%	4	5	1.40	NMF	NIL	Maritime	71
2420	Helmerich & Payne	HP	14.86	37.00	40%	5	3	1.55	NMF	6.7	Oilfield Svcs/Equip.	94
629	Plains All Amer. Pipe.	PAA	5.89	14.79	40%	5	4	1.55	6.0	12.2	Pipeline MLPs	93
2305	Carnival Corp.	CCL	15.31	37.08	41%	5	5	1.50	NMF	NIL	Recreation	81
986	Goodyear Tire	GT	7.73	18.70	41%	4	4	1.40	NMF	NIL	Auto Parts	70
2362	Marcus Corp.	MCS	8.19	20.08	41%	5	4	1.35	NMF	NIL	Hotel/Gaming	87
1239	Tutor Perini	TPC	11.71	28.64	41%	3	4	1.30	5.8	NIL	Engineering & Const	52
2427	ProPetro Holding	PUMP	4.08	9.63	42%	–	5	1.90	NMF	NIL	Oilfield Svcs/Equip.	94
543	Southwestern Energy	SWN	2.50	6.00	42%	3	5	0.80	11.4	NIL	Natural Gas (Div.)	86
2516	HSBC Holdings PLC	HSBC	19.96	45.52	44%	3	4	0.85	NMF	NIL	Bank	73
1001	Coty Inc.	COTY	2.75	6.08	45%	–	5	1.25	NMF	NIL	Toiletries/Cosmetics	47
2177	Movado Group	MOV	10.39	22.87	45%	5	3	1.30	12.1	NIL	Retail (Hardlines)	72
1591	Natural Resource	NRP	12.31	27.65	45%	4	4	1.05	NMF	14.6	Metals & Mining (Div.)	76
1416	ODP Corp.	ODP	18.45	40.60	45%	4	5	1.25	10.0	NIL	Office Equip/Supplies	85
526	CNX Resources	CNX	10.22	22.29	46%	3	4	1.00	NMF	NIL	Natural Gas (Div.)	86
162	Manitowoc Co.	MTW	8.40	18.26	46%	4	4	1.15	NMF	NIL	Heavy Truck & Equip	64
2026	Third Point Reinsurance	TPRE	6.97	15.01	46%	–	3	1.10	6.7	NIL	Reinsurance	66
2141	Dillard's, Inc.	DDS	31.29	67.11	47%	3	4	1.15	NMF	1.9	Retail Store	19
932	Telephone & Data	TDS	19.01	40.46	47%	2	3	1.00	13.5	3.6	Telecom. Services	17
781	Hancock Whitney Corp.	HWC	19.14	39.62	48%	5	3	1.45	30.4	5.6	Bank (Midwest)	84
927	Liberty Latin Amer.	LILA	8.33	17.28	48%	4	3	1.05	NMF	NIL	Telecom. Services	17
1594	Teck Resources 'B'	TECKB.TO	18.69	38.93	48%	4	3	1.15	NMF	1.1	Metals & Mining (Div.)	76
545	WPX Energy	WPX	5.17	10.83	48%	–	4	1.75	12.0	NIL	Natural Gas (Div.)	86
2168	Conn's, Inc.	CONN	10.78	21.90	49%	–	4	1.55	30.8	NIL	Retail (Hardlines)	72
2423	National Oilwell Varco	NOV	9.80	20.18	49%	5	4	1.25	NMF	NIL	Oilfield Svcs/Equip.	94
365	Red Robin Gourmet	RRGB	13.60	27.90	49%	5	5	1.40	NMF	NIL	Restaurant	75
735	Tenaris S.A. ADS	TS	9.86	20.31	49%	4	3	1.20	NMF	NIL	Metal Fabricating	79
531	Concho Resources	CXO	44.94	89.95	50%	4	3	1.40	15.3	1.8	Natural Gas (Div.)	86
506	Delek US Holdings	DK	11.44	22.68	50%	–	3	1.35	NMF	10.8	Petroleum (Integrated)	92
511	Imperial Oil Ltd.	IMO	12.48	25.19	50%	4	3	1.45	NMF	5.1	Petroleum (Integrated)	92
2409	Noble Energy	NBL	8.75	17.34	50%	–	3	1.85	NMF	0.9	Petroleum (Producing)	91
314	Spirit Airlines	SAVE	16.53	33.03	50%	5	4	1.75	NMF	NIL	Air Transport	89
780	First Midwest Bancorp	FMBI	11.07	21.56	51%	4	3	1.15	13.5	5.1	Bank (Midwest)	84
2024	Greenlight Capital Re	GLRE	6.58	12.90	51%	4	4	1.00	NMF	NIL	Reinsurance	66
2510	Citigroup Inc.	C	43.34	82.90	52%	4	3	1.40	12.5	4.7	Bank	73
611	EnLink Midstream LLC	ENLC	2.28	4.36	52%	5	5	1.70	NMF	16.7	Oil/Gas Distribution	83
1503	Flushing Financial	FFIC	10.71	20.59	52%	2	3	1.10	6.4	7.8	Thrift	63
1643	Kelly Services 'A'	KELYA	16.89	32.34	52%	4	3	1.15	11.6	NIL	Human Resources	68
1561	MetLife Inc.	MET	37.25	72.26	52%	3	3	1.40	7.0	4.9	Insurance (Life)	51
630	Plains GP Holdings L.P.	PAGP	6.11	11.83	52%	5	4	1.50	6.6	11.8	Pipeline MLPs	93
1776	Realogy Holdings	RLGY	9.53	18.29	52%	3	4	1.55	17.3	NIL	Diversified Co.	60
2021	Athene Holding Ltd.	ATH	34.87	65.48	53%	3	3	1.85	4.8	NIL	Reinsurance	66
2511	Citizens Fin'l Group	CFG	25.34	47.63	53%	4	3	1.40	11.8	6.2	Bank	73
2106	G-III Apparel Group	GIII	14.15	26.88	53%	5	5	2.00	13.9	NIL	Apparel	90
2158	Genesco Inc.	GCO	22.36	42.07	53%	5	3	1.65	10.4	NIL	Shoe	82
2561	Invesco Ltd.	IVZ	11.49	21.73	53%	4	3	1.45	10.7	5.4	Financial Svcs. (Div.)	55
2566	Loews Corp.	L	34.73	65.70	53%	4	2	1.10	11.1	0.7	Financial Svcs. (Div.)	55
2570	Navient Corp.	NAVI	8.25	15.48	53%	4	3	1.55	3.7	7.8	Financial Svcs. (Div.)	55
516	Par Pacific Holdings	PARR	6.49	12.17	53%	3	4	1.25	NMF	NIL	Petroleum (Integrated)	92
2410	Parsley Energy	PE	9.69	18.18	53%	4	4	1.40	NMF	2.1	Petroleum (Producing)	91
519	Royal Dutch Shell 'B'	RDSB	25.12	47.32	53%	4	3	1.30	NMF	5.1	Petroleum (Integrated)	92
2444	Apollo Investment	AINV	8.55	15.70	54%	4	3	1.35	8.6	14.5	Public/Private Equity	–
1977	Molson Coors Beverage	TAP	33.58	62.04	54%	3	3	1.00	10.7	NIL	Beverage	26
936	Vodafone Group ADR	VOD	13.48	24.81	54%	2	3	0.95	30.0	8.2	Telecom. Services	17
1581	Alcoa Corp.	AA	12.24	22.16	55%	4	4	1.50	NMF	NIL	Metals & Mining (Div.)	76
774	Assoc. Banc-Corp	ASB	12.76	23.27	55%	4	3	1.15	11.3	5.6	Bank (Midwest)	84
2199	Designer Brands	DBI	5.49	10.01	55%	–	4	1.55	NMF	NIL	Retail (Softlines)	54
107	Honda Motor ADR	HMC	23.66	43.37	55%	3	2	1.00	14.8	2.3	Automotive	45
2313	Norwegian Cruise Line	NCLH	16.68	30.58	55%	5	5	1.65	NMF	NIL	Recreation	81
1582	Allegheny Techn.	ATI	9.29	16.58	56%	5	5	2.10	NMF	NIL	Metals & Mining (Div.)	76
1765	Jefferies Fin'l Group	JEF	18.48	32.85	56%	2	3	1.20	10.4	3.2	Diversified Co.	60
2145	Kohl's Corp.	KSS	19.48	34.94	56%	5	4	1.65	NMF	NIL	Retail Store	19
309	Hawaiian Hldgs.	HA	13.38	23.46	57%	5	3	1.55	NMF	NIL	Air Transport	89
509	HollyFrontier Corp.	HFC	20.89	36.94	57%	4	3	1.35	NMF	6.9	Petroleum (Integrated)	92
1344	Stratasys Ltd.	SSYS	12.14	21.26	57%	4	4	0.85	NMF	NIL	Electronics	59
739	Carpenter Technology	CRS	18.65	32.02	58%	5	3	1.50	NMF	4.3	Steel	67
512	Marathon Petroleum	MPC	29.95	51.92	58%	–	3	1.75	NMF	7.7	Petroleum (Integrated)	92
1508	Provident Fin'l Svcs.	PFS	12.42	21.49	58%	4	3	1.15	12.3	7.4	Thrift	63
2421	MRC Global	MRC	4.67	7.89	59%	–	5	1.35	NMF	NIL	Oilfield Svcs/Equip.	94
2377	Meredith Corp.	MDP	12.74	21.56	59%	5	4	1.25	5.0	NIL	Publishing	88

***If fiscal 2020 Book Value not available, estimate used.**

LOWEST P/Es

Stocks with the lowest estimated current P/E ratios

Page No.	Stock Name	Recent Price	Current P/E Ratio	Time-liness	Safety Rank	Industry Group	Industry Rank
515	PBF Energy	6.02	1.8	5	4	Petroleum (Integrated)	92
2623	DXC Technology	17.09	2.6	5	3	IT Services	15
332	Frontline Ltd.	6.37	3.2	3	5	Maritime	71
1565	Unum Group	17.08	3.3	4	3	Insurance (Life)	51
2570	Navient Corp.	8.25	3.7	4	3	Financial Svcs. (Div.)	55
1634	Teva Pharmac. ADR	8.80	3.8	3	4	Drug	14
2535	AerCap Hldgs. NV	25.51	3.9	3	4	Financial Svcs. (Div.)	55
1798	BGC Partners	2.40	3.9	–	4	Brokers & Exchanges	6
2328	AMC Networks	24.72	4.1	4	3	Entertainment	57
2551	Equitable Holdings	18.61	4.1	–	3	Financial Svcs. (Div.)	55
1611	Bausch Health	15.27	4.2	4	5	Drug	14
634	Western Midstream Part.	7.71	4.2	5	4	Pipeline MLPs	93
331	Euronav NV	8.68	4.3	2	4	Maritime	71
2337	MSG Networks	9.93	4.4	4	3	Entertainment	57
2567	MGIC Investment	9.04	4.5	4	3	Financial Svcs. (Div.)	55
2021	Athene Holding Ltd.	34.87	4.8	3	3	Reinsurance	66
2377	Meredith Corp.	12.74	5.0	5	4	Publishing	88
1532	Kimco Realty	11.56	5.1	4	3	R.E.I.T.	65
305	Atlas Air Worldwide	62.36	5.2	2	3	Air Transport	89
429	Alliance Data Sys.	43.26	5.4	5	4	Information Services	9
1151	Interface Inc. 'A'	6.38	5.6	3	4	Furn/Home Furnishings	78
1239	Tutor Perini	11.71	5.8	3	4	Engineering & Const	52
628	Phillips 66 Partners	22.61	5.9	2	3	Pipeline MLPs	93
629	Plains All Amer. Pipe.	5.89	6.0	5	4	Pipeline MLPs	93
949	CommScope Holding	8.67	6.3	4	3	Telecom. Equipment	32
1559	Lincoln Nat'l Corp.	32.05	6.3	3	3	Insurance (Life)	51
1338	Plantronics Inc.	12.27	6.3	4	4	Electronics	59
1503	Flushing Financial	10.71	6.4	2	3	Thrift	63
2340	Nexstar Media Group	94.54	6.5	2	3	Entertainment	57
1563	Prudential Fin'l	64.03	6.5	4	3	Insurance (Life)	51
1560	Manulife Fin'l	14.16	6.6	2	3	Insurance (Life)	51
630	Plains GP Holdings L.P.	6.11	6.6	5	4	Pipeline MLPs	93
2539	Amer. Int'l Group	27.63	6.7	4	3	Financial Svcs. (Div.)	55
2026	Third Point Reinsurance	6.97	6.7	–	3	Reinsurance	66
2176	Michaels Cos. (The)	9.58	6.8	3	5	Retail (Hardlines)	72
2522	Popular Inc.	36.71	6.8	4	3	Bank	73
625	MPLX LP	16.65	6.9	4	3	Pipeline MLPs	93
1025	Consol. Communic.	5.84	7.0	3	4	Telecom. Utility	35
1561	MetLife Inc.	37.25	7.0	3	3	Insurance (Life)	51
2181	Qurate Retail	7.39	7.0	–	3	Retail (Hardlines)	72
1513	Annaly Capital Mgmt.	7.44	7.2	4	4	R.E.I.T.	65
1518	CoreCivic, Inc.	8.25	7.2	–	4	R.E.I.T.	65
1413	Diebold Nixdorf	7.44	7.2	–	5	Office Equip/Supplies	85
622	Energy Transfer LP	5.55	7.2	5	4	Pipeline MLPs	93
1401	Hewlett Packard Ent.	9.48	7.3	4	3	Computers/Peripherals	20
1556	Aflac Inc.	36.33	7.4	3	2	Insurance (Life)	51
2446	Carlyle Group	24.74	7.4	–	3	Public/Private Equity	–
1023	CenturyLink, Inc.	10.28	7.4	3	3	Telecom. Utility	35
2448	Gladstone Capital	7.51	7.4	–	3	Public/Private Equity	–
632	Shell Midstream L.P.	9.49	7.4	5	4	Pipeline MLPs	93

Page No.	Stock Name	Recent Price	Current P/E Ratio	Time-liness	Safety Rank	Industry Group	Industry Rank
1135	Taylor Morrison Home	25.13	7.4	3	3	Homebuilding	13
2346	TEGNA Inc.	11.94	7.4	4	4	Entertainment	57
2333	Gray Television	14.15	7.6	4	4	Entertainment	57
1952	Ingles Markets	37.43	7.6	2	3	Retail/Wholesale Food	21
607	Antero Midstream Corp.	5.50	7.7	–	4	Oil/Gas Distribution	83
2137	Big Lots Inc.	47.76	7.7	2	3	Retail Store	19
2560	Hartford Fin'l Svcs.	36.88	7.7	4	2	Financial Svcs. (Div.)	55
2573	Principal Fin'l Group	40.10	7.7	4	3	Financial Svcs. (Div.)	55
1134	TRI Pointe Group	17.74	7.7	2	3	Homebuilding	13
754	Allstate Corp.	93.22	7.8	1	1	Insurance (Prop/Cas.)	34
1327	Celestica Inc.	6.99	7.9	2	3	Electronics	59
2347	ViacomCBS Inc.	29.84	7.9	4	3	Entertainment	57
1607	AbbVie Inc.	87.28	8.0	1	3	Drug	14
921	China Mobile (ADR)	32.54	8.0	3	2	Telecom. Services	17
624	Holly Energy Part.	12.35	8.0	4	4	Pipeline MLPs	93
1027	Telefonica SA ADR	3.52	8.0	3	4	Telecom. Utility	35
967	CVS Health	57.94	8.1	1	2	Retail Store	19
2514	First Commonwealth	7.74	8.1	4	3	Bank	73
1219	NRG Energy	29.52	8.1	3	3	Power	27
2502	Ally Financial	24.94	8.2	4	3	Bank	73
1992	Brit. Am. Tobacco ADR	36.44	8.2	3	3	Tobacco	25
1616	Endo Int'l plc	3.20	8.2	3	5	Drug	14
813	Tenet Healthcare	23.64	8.2	4	4	Medical Services	33
846	United Therapeutics	101.51	8.2	3	3	Biotechnology	12
2004	Perdoceo Education	12.22	8.3	3	4	Educational Services	48
631	Rattler Midstream LP	6.00	8.3	–	4	Pipeline MLPs	93
336	SFL Corp. Ltd	7.55	8.3	4	4	Maritime	71
2343	Sinclair Broadcast	20.28	8.3	2	3	Entertainment	57
917	AT&T Inc.	28.38	8.4	3	1	Telecom. Services	17
1612	Biogen	282.04	8.4	1	3	Drug	14
2575	Santander Consumer USA	17.22	8.4	4	3	Financial Svcs. (Div.)	55
623	Enterprise Products	16.02	8.5	4	3	Pipeline MLPs	93
970	Walgreens Boots	36.07	8.5	3	3	Retail Store	19
2444	Apollo Investment	8.55	8.6	4	3	Public/Private Equity	–
1233	MasTec	43.13	8.6	4	3	Engineering & Const	52
2020	Assured Guaranty	21.02	8.7	3	3	Reinsurance	66
793	Cigna Corp.	164.29	8.7	2	3	Medical Services	33
2513	East West Bancorp	32.64	8.7	3	3	Bank	73
779	First Horizon National	9.15	8.7	4	3	Bank (Midwest)	84
1412	ACCO Brands	6.09	8.8	–	3	Office Equip/Supplies	85
2507	Bank of New York Mellon	34.29	8.8	3	2	Bank	73
2526	Signature Bank	85.54	8.8	4	3	Bank	73
1991	Altria Group	38.95	8.9	3	3	Tobacco	25
151	Blue Bird Corp.	11.41	8.9	4	3	Heavy Truck & Equip	64
210	Cardinal Health	47.55	8.9	3	3	Med Supp Non-Invasive	24
1813	Morgan Stanley	48.38	8.9	2	3	Investment Banking	53
621	Enable Midstream Part.	3.98	9.0	5	4	Pipeline MLPs	93
613	ONEOK Inc.	26.01	9.0	5	3	Oil/Gas Distribution	83
1342	Sanmina Corp.	27.13	9.0	3	3	Electronics	59
1961	United Natural Foods	19.18	9.0	3	4	Retail/Wholesale Food	21

HIGHEST P/Es

Stocks with the highest estimated current P/E ratios

Page No.	Stock Name	Recent Price	Current P/E Ratio	Time-liness	Safety Rank	Industry Group	Industry Rank
525	Brigham Minerals	8.96	99.6	–	4	Natural Gas (Div.)	86
2587	Autodesk, Inc.	232.15	98.8	1	3	Computer Software	2
708	CAE Inc.	19.66	98.3	4	3	Aerospace/Defense	69
992	Meritor, Inc.	21.32	96.9	3	4	Auto Parts	70
1167	Rayonier Inc.	26.89	96.0	3	3	Paper/Forest Products	62
2355	Extended Stay America	12.31	94.7	3	3	Hotel/Gaming	87
176	Catalent, Inc.	84.11	94.5	2	3	Med Supp Invasive	50
205	Align Techn.	322.86	92.2	3	3	Med Supp Non-Invasive	24
187	Intuitive Surgical	693.16	91.4	3	2	Med Supp Invasive	50
405	Advanced Disposal	30.21	88.9	–	3	Environmental	40
1981	Primo Water Corp.	14.19	88.7	3	3	Beverage	26
433	CoStar Group	857.13	88.3	2	2	Information Services	9
975	Aptiv PLC	90.03	86.6	4	3	Auto Parts	70
1967	Boston Beer 'A'	899.91	85.6	2	3	Beverage	26
2209	Urban Outfitters	22.09	85.0	4	3	Retail (Softlines)	54
2414	Baker Hughes	13.47	84.2	–	4	Oilfield Svcs/Equip.	94
2640	Amazon.com	3174.05	83.9	1	2	Internet	23
533	EOG Resources	37.44	83.2	4	3	Natural Gas (Div.)	86
1316	Universal Display	174.60	83.1	3	3	Electrical Equipment	61
2602	PTC Inc.	82.90	82.9	2	3	Computer Software	2
2201	Gap (The), Inc.	17.20	81.9	3	4	Retail (Softlines)	54
406	Casella Waste Sys.	55.55	81.7	2	3	Environmental	40
157	Enerpac Tool Group	19.55	81.5	3	3	Heavy Truck & Equip	64
226	Natus Medical	16.96	80.8	4	3	Med Supp Non-Invasive	24
564	Axalta Coating	22.54	80.5	3	3	Chemical (Specialty)	58
1368	NVIDIA Corp.	521.40	80.1	1	3	Semiconductor	11
600	Itron Inc.	59.20	80.0	4	3	Wireless Networking	36
2630	Manhattan Assoc.	95.37	79.5	3	3	IT Services	15
368	Starbucks Corp.	86.07	79.0	3	1	Restaurant	75
171	ABIOMED Inc.	273.55	78.2	3	3	Med Supp Invasive	50
2604	Paycom Software	290.83	78.2	2	3	Computer Software	2
1351	Advanced Micro Dev.	79.48	77.9	1	4	Semiconductor	11
394	Macquarie Infra.	25.99	76.4	4	3	Industrial Services	39
725	TransDigm Group	498.60	75.3	4	3	Aerospace/Defense	69
596	Crown Castle Int'l	163.59	74.7	3	3	Wireless Networking	36
1517	Camden Property Trust	90.97	74.6	3	2	R.E.I.T.	65
2108	Guess?, Inc.	11.93	74.6	5	4	Apparel	90
2339	Netflix, Inc.	490.65	72.9	1	3	Entertainment	57
2357	Hilton Worldwide Hldgs.	89.06	72.4	3	3	Hotel/Gaming	87
1383	Xperi Holding	11.51	71.9	–	4	Semiconductor	11
1646	ManpowerGroup Inc.	72.63	71.2	3	3	Human Resources	68
2546	CIT Group	17.78	71.1	5	3	Financial Svcs. (Div.)	55
1959	Sysco Corp.	61.85	71.1	4	3	Retail/Wholesale Food	21
398	Rollins, Inc.	54.66	71.0	1	2	Industrial Services	39
2356	Hilton Grand Vacations	21.98	70.9	4	3	Hotel/Gaming	87
2111	Oxford Inds.	40.07	70.3	4	3	Apparel	90
712	HEICO Corp.	105.44	69.8	3	3	Aerospace/Defense	69
1835	salesforce.com	246.67	69.7	1	3	E-Commerce	22
2315	Planet Fitness	61.32	68.9	4	3	Recreation	81
980	Dana Inc.	12.38	68.8	4	4	Auto Parts	70

Page No.	Stock Name	Recent Price	Current P/E Ratio	Time-liness	Safety Rank	Industry Group	Industry Rank
937	Vonage Holdings	10.25	68.3	3	3	Telecom. Services	17
918	ATN International	50.79	66.8	2	3	Telecom. Services	17
223	Masimo Corp.	230.76	66.5	2	3	Med Supp Non-Invasive	24
2183	SiteOne Landscape	120.46	66.2	2	3	Retail (Hardlines)	72
2203	lululemon athletica	318.73	66.0	3	3	Retail (Softlines)	54
1521	Duke Realty Corp.	36.93	65.9	3	3	R.E.I.T.	65
218	IDEXX Labs.	386.37	65.5	1	3	Med Supp Non-Invasive	24
127	National Instruments	35.38	65.5	3	3	Precision Instrument	31
2624	EPAM Systems	328.96	65.4	2	3	IT Services	15
2411	Pioneer Natural Res.	88.31	65.4	4	3	Petroleum (Producing)	91
227	Neogen Corp.	77.59	65.2	2	3	Med Supp Non-Invasive	24
2642	Booking Holdings	1700.40	64.8	3	3	Internet	23
116	Cognex Corp.	63.47	64.8	3	3	Precision Instrument	31
2116	V.F. Corp.	71.19	64.7	4	3	Apparel	90
220	Inogen, Inc.	28.41	64.6	5	3	Med Supp Non-Invasive	24
1354	Broadcom Inc.	367.30	64.4	3	3	Semiconductor	11
2635	Tyler Technologies	346.69	64.2	2	3	IT Services	15
734	Proto Labs, Inc.	131.78	63.4	3	3	Metal Fabricating	79
2419	Helix Energy Solutions	2.52	63.0	–	5	Oilfield Svcs/Equip.	94
1614	Elanco Animal Health	27.06	62.9	–	3	Drug	14
234	West Pharmac. Svcs.	272.39	62.5	1	2	Med Supp Non-Invasive	24
1805	MarketAxess Holdings	476.05	62.3	1	3	Brokers & Exchanges	6
1109	CEMEX ADS	3.72	62.0	3	4	Building Materials	38
208	Bio-Rad Labs. 'A'	513.92	61.6	2	2	Med Supp Non-Invasive	24
312	SkyWest	31.21	61.2	5	3	Air Transport	89
1005	Lauder (Estee)	215.75	60.8	3	2	Toiletries/Cosmetics	47
2364	Marriott Vacations	94.19	60.8	4	3	Hotel/Gaming	87
2000	Chegg, Inc.	70.79	60.0	2	3	Educational Services	48
1222	SolarEdge Tech.	218.29	60.0	2	3	Power	27
407	Clean Harbors	56.13	59.7	4	3	Environmental	40
1139	Floor & Decor Hldgs.	73.78	59.5	3	3	Retail Building Supply	7
1367	Monolithic Power Sys.	274.88	59.2	2	3	Semiconductor	11
2626	Fair Isaac	427.52	59.1	3	3	IT Services	15
1328	Cubic Corp.	60.98	58.6	4	3	Electronics	59
1645	Korn Ferry	29.27	58.5	4	3	Human Resources	68
831	Bio-Techne Corp.	243.74	58.3	2	2	Biotechnology	12
2584	Adobe Inc.	488.51	58.2	1	2	Computer Software	2
592	Amer. Tower 'A'	240.00	57.6	1	2	Wireless Networking	36
1583	Arconic Corp.	20.06	57.3	–	3	Metals & Mining (Div.)	76
963	Switch, Inc.	15.48	57.3	2	4	Telecom. Equipment	32
1826	GoDaddy Inc.	74.93	57.2	2	3	E-Commerce	22
942	ADTRAN, Inc.	10.21	56.7	3	3	Telecom. Equipment	32
103	Ferrari N.V.	183.28	56.6	2	3	Automotive	45
2002	Laureate Education	12.99	56.5	–	3	Educational Services	48
2015	Take-Two Interactive	167.46	56.4	1	3	Entertainment Tech	4
199	Varian Medical Sys.	171.95	56.0	–	2	Med Supp Invasive	50
329	XPO Logistics	86.27	56.0	3	3	Trucking	29
444	Thomson Reuters	107.19	55.8	3	2	Information Services	9
2202	L Brands	31.53	55.3	3	4	Retail (Softlines)	54
1951	Grocery Outlet	38.03	55.1	–	3	Retail/Wholesale Food	21

STOCKS WITH HIGHEST ANNUAL TOTAL RETURNS (NEXT 3 TO 5 YEARS)

(Estimated compound annual stock price appreciation plus estimated annual dividend income.)

Page No.	Stock Name	Recent Price	Est'd Total Return	Time-liness	Safety Rank	Industry Group	Industry Rank
704	Astronics Corp.	7.99	66%	5	5	Aerospace/Defense	69
1001	Coty Inc.	2.75	65%	–	5	Toiletries/Cosmetics	47
707	Bombardier Inc. 'B'	0.35	63%	–	5	Aerospace/Defense	69
515	PBF Energy	6.02	62%	5	4	Petroleum (Integrated)	92
629	Plains All Amer. Pipe.	5.89	60%	5	4	Pipeline MLPs	93
630	Plains GP Holdings L.P.	6.11	59%	5	4	Pipeline MLPs	93
1151	Interface Inc. 'A'	6.38	56%	3	4	Furn/Home Furnishings	78
2623	DXC Technology	17.09	54%	5	3	IT Services	15
634	Western Midstream Part.	7.71	54%	5	4	Pipeline MLPs	93
621	Enable Midstream Part.	3.98	52%	5	4	Pipeline MLPs	93
506	Delek US Holdings	11.44	51%	–	3	Petroleum (Integrated)	92
828	Alkermes plc	16.89	50%	3	3	Biotechnology	12
1421	Aurora Cannabis	4.78	50%	–	4	Cannabis	80
503	CVR Energy	12.76	50%	5	3	Petroleum (Integrated)	92
2377	Meredith Corp.	12.74	50%	5	4	Publishing	88
514	Occidental Petroleum	10.34	50%	5	4	Petroleum (Integrated)	92
631	Rattler Midstream LP	6.00	50%	–	4	Pipeline MLPs	93
2146	Macy's Inc.	5.96	49%	5	4	Retail Store	19
543	Southwestern Energy	2.50	48%	3	5	Natural Gas (Div.)	86
1534	Macerich Comp. (The)	7.09	47%	5	4	R.E.I.T.	65
627	NuStar Energy L.P.	10.40	47%	5	4	Pipeline MLPs	93
545	WPX Energy	5.17	47%	–	4	Natural Gas (Div.)	86
2177	Movado Group	10.39	46%	5	3	Retail (Hardlines)	72
2344	Sirius XM Holdings	5.29	46%	3	4	Entertainment	57
520	Suncor Energy	17.26	46%	4	3	Petroleum (Integrated)	92
2362	Marcus Corp.	8.19	45%	5	4	Hotel/Gaming	87
628	Phillips 66 Partners	22.61	45%	2	3	Pipeline MLPs	93
1834	Sabre Corp.	6.71	45%	5	5	E-Commerce	22
535	Enerplus Corp.	2.54	44%	5	4	Natural Gas (Div.)	86
2421	MRC Global	4.67	44%	–	5	Oilfield Svcs/Equip.	94
513	Murphy Oil Corp.	9.20	43%	5	4	Petroleum (Integrated)	92
2424	Oceaneering Int'l	3.68	43%	–	5	Oilfield Svcs/Equip.	94
632	Shell Midstream L.P.	9.49	43%	5	4	Pipeline MLPs	93
2328	AMC Networks	24.72	42%	4	3	Entertainment	57
609	Clean Energy Fuels	2.46	42%	–	5	Oil/Gas Distribution	83
613	ONEOK Inc.	26.01	42%	5	3	Oil/Gas Distribution	83
544	Targa Resources	14.65	42%	5	4	Natural Gas (Div.)	86
2195	Cato Corp.	8.08	41%	4	3	Retail (Softlines)	54
620	DCP Midstream LP	11.03	41%	5	5	Pipeline MLPs	93
2309	Harley-Davidson	23.91	41%	4	3	Recreation	81
220	Inogen, Inc.	28.41	41%	5	3	Med Supp Non-Invasive	24
2561	Invesco Ltd.	11.49	41%	4	3	Financial Svcs. (Div.)	55
1537	Park Hotels & Resorts	10.21	41%	5	4	R.E.I.T.	65
2528	Synovus Financial	21.10	41%	5	3	Bank	73
726	Triumph Group	7.01	41%	–	5	Aerospace/Defense	69
979	Cooper-Standard	13.63	40%	5	4	Auto Parts	70
2158	Genesco Inc.	22.36	40%	5	4	Shoe	82
805	MEDNAX, Inc.	16.19	40%	4	3	Medical Services	33
2147	Nordstrom, Inc.	12.27	40%	5	4	Retail Store	19
1412	ACCO Brands	6.09	39%	–	3	Office Equip/Supplies	85
429	Alliance Data Sys.	43.26	39%	5	4	Information Services	9
2329	Discovery, Inc.	21.95	39%	3	3	Entertainment	57
2448	Gladstone Capital	7.51	39%	–	3	Public/Private Equity	–
612	Kinder Morgan Inc.	12.61	39%	4	3	Oil/Gas Distribution	83
1338	Plantronics Inc.	12.27	39%	4	4	Electronics	59
607	Antero Midstream Corp.	5.50	38%	–	4	Oil/Gas Distribution	83
502	BP PLC ADR	18.18	38%	4	3	Petroleum (Integrated)	92
2307	Cinemark Hldgs.	10.31	38%	5	4	Recreation	81
622	Energy Transfer LP	5.55	38%	5	4	Pipeline MLPs	93
730	Haynes International	17.82	38%	4	3	Metal Fabricating	79
125	MTS Systems	19.88	38%	5	4	Precision Instrument	31
2408	Marathon Oil Corp.	4.29	38%	5	3	Petroleum (Producing)	91
768	Old Republic	14.94	38%	3	3	Insurance (Prop/Cas.)	34
516	Par Pacific Holdings	6.49	38%	3	4	Petroleum (Integrated)	92
519	Royal Dutch Shell 'B'	25.12	38%	4	3	Petroleum (Integrated)	92
974	Amer. Axle	5.60	37%	4	4	Auto Parts	70
1798	BGC Partners	2.40	37%	–	4	Brokers & Exchanges	6
151	Blue Bird Corp.	11.41	37%	4	3	Heavy Truck & Equip	64
525	Brigham Minerals	8.96	37%	–	4	Natural Gas (Div.)	86
2155	Caleres Inc.	9.66	37%	–	4	Shoe	82
2376	Deluxe Corp.	25.97	37%	4	3	Publishing	88
598	GTT Communications	5.28	37%	–	5	Wireless Networking	36
2419	Helix Energy Solutions	2.52	37%	–	5	Oilfield Svcs/Equip.	94
2311	IMAX Corp.	12.16	37%	4	3	Recreation	81
1194	Newell Brands	17.22	37%	3	3	Household Products	1
1772	Park-Ohio	16.47	37%	5	4	Diversified Co.	60
1007	Regis Corp.	5.76	37%	–	4	Toiletries/Cosmetics	47
1008	Revlon Inc.	6.73	37%	–	4	Toiletries/Cosmetics	47
1544	Service Properties	8.23	37%	5	3	R.E.I.T.	65
1992	Brit. Am. Tobacco ADR	36.44	36%	3	3	Tobacco	25
533	EOG Resources	37.44	36%	4	3	Natural Gas (Div.)	86
623	Enterprise Products	16.02	36%	4	3	Pipeline MLPs	93
1811	Greenhill & Co.	11.18	36%	4	4	Investment Banking	53
1831	Nutanix, Inc.	22.01	36%	3	4	E-Commerce	22
735	Tenaris S.A. ADS	9.86	36%	4	3	Metal Fabricating	79
1737	Thermon Group	11.11	36%	4	3	Machinery	49
2397	WPP PLC ADR	39.14	36%	4	3	Advertising	74
1983	Canon Inc. ADR	17.03	35%	3	2	Foreign Electronics	37
2405	Crescent Point Energy	1.71	35%	5	5	Petroleum (Producing)	91
1527	GEO Group (The)	11.52	35%	4	3	R.E.I.T.	65
986	Goodyear Tire	7.73	35%	4	4	Auto Parts	70
2516	HSBC Holdings PLC	19.96	35%	3	4	Bank	73
2337	MSG Networks	9.93	35%	4	3	Entertainment	57
540	PDC Energy	12.10	35%	5	4	Natural Gas (Div.)	86
1425	Tilray, Inc.	4.82	35%	5	4	Cannabis	80
2539	Amer. Int'l Group	27.63	34%	4	3	Financial Svcs. (Div.)	55
1423	Cronos Group	4.96	34%	4	4	Cannabis	80
2199	Designer Brands	5.49	34%	–	4	Retail (Softlines)	54
2106	G-III Apparel Group	14.15	34%	5	5	Apparel	90
625	MPLX LP	16.65	34%	4	3	Pipeline MLPs	93

STOCKS WITH HIGHEST PROJECTED 3- TO 5-YEAR DIVIDEND YIELD

Based upon the projected dividend per share 3 to 5 years hence divided by the recent price

Page No.	Stock Name	Recent Price	Est'd Future Yield	Time-liness	Safety Rank	Industry Group	Industry Rank
1534	Macerich Comp. (The)	7.09	34%	5	4	R.E.I.T.	65
1544	Service Properties	8.23	24%	5	3	R.E.I.T.	65
628	Phillips 66 Partners	22.61	22%	2	3	Pipeline MLPs	93
2444	Apollo Investment	8.55	21%	4	3	Public/Private Equity	–
514	Occidental Petroleum	10.34	21%	5	4	Petroleum (Integrated)	92
544	Targa Resources	14.65	20%	5	4	Natural Gas (Div.)	86
623	Enterprise Products	16.02	17%	4	3	Pipeline MLPs	93
525	Brigham Minerals	8.96	14%	–	4	Natural Gas (Div.)	86
1027	Telefonica SA ADR	3.52	14%	3	4	Telecom. Utility	35
1527	GEO Group (The)	11.52	13%	4	3	R.E.I.T.	65
1532	Kimco Realty	11.56	13%	4	3	R.E.I.T.	65
2185	Sunoco LP	24.70	13%	4	3	Retail (Hardlines)	72
2537	AllianceBernstein Hldg.	27.45	12%	3	3	Financial Svcs. (Div.)	55
612	Kinder Morgan Inc.	12.61	12%	4	3	Oil/Gas Distribution	83
520	Suncor Energy	17.26	12%	4	3	Petroleum (Integrated)	92
1991	Altria Group	38.95	11%	3	3	Tobacco	25
1983	Canon Inc. ADR	17.03	11%	3	2	Foreign Electronics	37
506	Delek US Holdings	11.44	11%	–	3	Petroleum (Integrated)	92
624	Holly Energy Part.	12.35	11%	4	4	Pipeline MLPs	93
391	Iron Mountain	26.60	11%	3	3	Industrial Services	39
513	Murphy Oil Corp.	9.20	11%	5	4	Petroleum (Integrated)	92
614	Pembina Pipeline	29.14	11%	4	3	Oil/Gas Distribution	83
519	Royal Dutch Shell 'B'	25.12	11%	4	3	Petroleum (Integrated)	92
936	Vodafone Group ADR	13.48	11%	2	3	Telecom. Services	17
502	BP PLC ADR	18.18	10%	4	3	Petroleum (Integrated)	92
2400	Black Stone Minerals	6.19	10%	4	3	Petroleum (Producing)	91
1992	Brit. Am. Tobacco ADR	36.44	10%	3	3	Tobacco	25
1023	CenturyLink, Inc.	10.28	10%	3	3	Telecom. Utility	35
619	Cheniere Energy Part.	33.52	10%	3	3	Pipeline MLPs	93
507	Exxon Mobil Corp.	35.31	10%	4	3	Petroleum (Integrated)	92
2448	Gladstone Capital	7.51	10%	–	3	Public/Private Equity	–
521	Total S.A. ADR	33.79	10%	4	3	Petroleum (Integrated)	92
1553	Weingarten Realty	17.10	10%	4	3	R.E.I.T.	65
2532	Wells Fargo	23.82	10%	4	3	Bank	73
616	Williams Cos.	20.40	10%	3	4	Oil/Gas Distribution	83
917	AT&T Inc.	28.38	9%	3	1	Telecom. Services	17
2544	Block (H&R)	15.81	9%	3	3	Financial Svcs. (Div.)	55
2402	Can. Natural Res.	22.38	9%	4	3	Petroleum (Producing)	91
610	Enbridge Inc.	40.25	9%	3	3	Oil/Gas Distribution	83
2355	Extended Stay America	12.31	9%	3	3	Hotel/Gaming	87
1503	Flushing Financial	10.71	9%	2	3	Thrift	63
509	HollyFrontier Corp.	20.89	9%	4	3	Petroleum (Integrated)	92
2561	Invesco Ltd.	11.49	9%	4	3	Financial Svcs. (Div.)	55
1535	Mack-Cali R'lty	13.02	9%	–	3	R.E.I.T.	65
1506	Northwest Bancshares	9.39	9%	3	3	Thrift	63
518	Phillips 66	53.98	9%	4	3	Petroleum (Integrated)	92
1563	Prudential Fin'l	64.03	9%	4	3	Insurance (Life)	51
1545	Simon Property Group	65.79	9%	5	3	R.E.I.T.	65
2440	Trinseo S.A.	26.51	9%	4	3	Chemical (Diversified)	56
1565	Unum Group	17.08	9%	4	3	Insurance (Life)	51
522	Valero Energy	44.82	9%	4	3	Petroleum (Integrated)	92
2397	WPP PLC ADR	39.14	9%	4	3	Advertising	74
2445	Blackstone Group	52.66	8%	–	3	Public/Private Equity	–
2546	CIT Group	17.78	8%	5	3	Financial Svcs. (Div.)	55
2447	Compass Diversified	18.00	8%	3	3	Public/Private Equity	–
1600	Dow Inc.	47.48	8%	–	2	Chemical (Basic)	77
2514	First Commonwealth	7.74	8%	4	3	Bank	73
779	First Horizon National	9.15	8%	4	3	Bank (Midwest)	84
1528	Gaming and Leisure	38.02	8%	4	3	R.E.I.T.	65
2391	Interpublic Group	17.05	8%	3	3	Advertising	74
1504	Investors Bancorp	7.29	8%	4	3	Thrift	63
2562	Janus Henderson plc	21.43	8%	3	3	Financial Svcs. (Div.)	55
1533	MGM Growth Properties	28.74	8%	4	3	R.E.I.T.	65
1560	Manulife Fin'l	14.16	8%	2	3	Insurance (Life)	51
512	Marathon Petroleum	29.95	8%	–	3	Petroleum (Integrated)	92
1771	National Presto Ind.	83.40	8%	2	3	Diversified Co.	60
2570	Navient Corp.	8.25	8%	4	3	Financial Svcs. (Div.)	55
1505	New York Community	8.53	8%	3	3	Thrift	63
2394	Omnicom Group	49.64	8%	3	3	Advertising	74
745	POSCO ADR	42.07	8%	3	3	Steel	67
1508	Provident Fin'l Svcs.	12.42	8%	4	3	Thrift	63
1541	Regency Centers Corp.	38.56	8%	4	3	R.E.I.T.	65
1592	Rio Tinto plc	60.49	8%	3	3	Metals & Mining (Div.)	76
1543	SL Green Realty	48.27	8%	4	3	R.E.I.T.	65
633	Suburban Propane	15.00	8%	4	3	Pipeline MLPs	93
1996	Universal Corp.	41.72	8%	2	3	Tobacco	25
1550	Vornado R'lty Trust	34.76	8%	4	3	R.E.I.T.	65
1607	AbbVie Inc.	87.28	7%	1	3	Drug	14
2539	Amer. Int'l Group	27.63	7%	4	3	Financial Svcs. (Div.)	55
2443	Apollo Global Mgmt	46.30	7%	–	3	Public/Private Equity	–
774	Assoc. Banc-Corp	12.76	7%	4	3	Bank (Midwest)	84
1903	B&G Foods	28.44	7%	2	3	Food Processing	18
1022	BCE Inc.	41.89	7%	3	2	Telecom. Utility	35
1798	BGC Partners	2.40	7%	–	4	Brokers & Exchanges	6
2506	Bank of Montreal	79.59	7%	3	2	Bank	73
2508	Bank of Nova Scotia	55.97	7%	3	2	Bank	73
2446	Carlyle Group	24.74	7%	–	3	Public/Private Equity	–
505	Chevron Corp.	73.93	7%	4	3	Petroleum (Integrated)	92
921	China Mobile (ADR)	32.54	7%	3	2	Telecom. Services	17
2510	Citigroup Inc.	43.34	7%	4	3	Bank	73
2511	Citizens Fin'l Group	25.34	7%	4	3	Bank	73
776	Comerica Inc.	38.55	7%	4	3	Bank (Midwest)	84
1792	Consolidated Water	10.74	7%	4	3	Water Utility	10
102	Daimler AG	53.30	7%	3	3	Automotive	45
532	Devon Energy	9.80	7%	–	3	Natural Gas (Div.)	86
1148	Ethan Allen Interiors	13.76	7%	3	3	Furn/Home Furnishings	78
143	FirstEnergy Corp.	28.45	7%	4	3	Electric Utility (East)	46
2557	Franklin Resources	20.47	7%	3	2	Financial Svcs. (Div.)	55
1618	GlaxoSmithKline ADR	37.86	7%	2	1	Drug	14
2309	Harley-Davidson	23.91	7%	4	3	Recreation	81

HIGH RETURNS EARNED ON TOTAL CAPITAL

Stocks with high average returns on capital in last 5 years ranked by earnings retained to common equity

Page No.	Stock Name	Ticker	Recent Price	Avg. Retained to Com. Eq.	Avg. Return On Cap.	Time-liness	Safety Rank	Beta	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
706	Boeing	BA	166.08	882%	54%	5	3	1.65	NMF	NIL	Aerospace/Defense	69
1190	Colgate-Palmolive	CL	76.61	644%	35%	1	1	0.70	25.8	2.3	Household Products	1
1642	Insperity Inc.	NSP	65.97	541%	46%	4	4	1.35	19.0	2.4	Human Resources	68
1719	Lennox Int'l	LII	271.80	439%	52%	3	3	1.00	30.2	1.1	Machinery	49
443	S&P Global	SPGI	355.55	289%	45%	1	2	1.05	32.7	0.8	Information Services	9
218	IDEXX Labs.	IDXX	386.37	241%	52%	1	3	1.00	65.5	NIL	Med Supp Non-Invasive	24
316	United Parcel Serv.	UPS	168.90	233%	32%	3	1	0.80	23.0	2.4	Air Transport	89
441	Moody's Corp.	MCO	285.16	218%	34%	1	3	1.15	32.9	0.8	Information Services	9
1916	Herbalife Nutrition	HLF	47.41	213%	34%	2	3	1.00	18.0	NIL	Food Processing	18
2130	O'Reilly Automotive	ORLY	457.34	202%	32%	3	3	0.95	27.7	NIL	Retail Automotive	44
364	Papa John's Int'l	PZZA	83.42	201%	87%	2	3	0.65	50.6	1.1	Restaurant	75
2138	Burlington Stores	BURL	206.95	195%	28%	3	3	1.10	NMF	NIL	Retail Store	19
1140	Home Depot	HD	272.33	161%	38%	3	1	1.05	22.9	2.3	Retail Building Supply	7
1193	Kimberly-Clark	KMB	147.56	124%	34%	1	1	0.75	18.0	2.9	Household Products	1
717	Lockheed Martin	LMT	390.51	119%	33%	1	1	0.95	16.5	2.7	Aerospace/Defense	69
2613	VMware, Inc.	VMW	142.99	117%	28%	2	3	0.90	23.5	NIL	Computer Software	2
603	Ubiquiti Inc.	UI	160.93	96%	39%	2	3	0.75	27.5	1.0	Wireless Networking	36
1607	AbbVie Inc.	ABBV	87.28	94%	29%	1	3	1.00	8.0	5.4	Drug	14
126	Mettler-Toledo Int'l	MTD	968.47	90%	32%	3	2	0.95	42.8	NIL	Precision Instrument	31
992	Meritor, Inc.	MTOR	21.32	83%	32%	3	4	1.35	96.9	NIL	Auto Parts	70
2569	MasterCard Inc.	MA	338.39	80%	48%	3	1	1.05	40.2	0.5	Financial Svcs. (Div.)	55
372	Yum! Brands	YUM	91.88	75%	49%	3	3	1.05	28.7	2.0	Restaurant	75
2589	Citrix Sys.	CTXS	138.32	69%	38%	1	3	0.75	25.5	1.0	Computer Software	2
2630	Manhattan Assoc.	MANH	95.37	65%	65%	3	3	1.25	79.5	NIL	IT Services	15
1405	NetApp, Inc.	NTAP	43.60	64%	33%	2	3	1.10	12.8	4.6	Computers/Peripherals	20
1189	Clorox Co.	CLX	211.97	59%	32%	1	1	0.50	28.0	2.1	Household Products	1
368	Starbucks Corp.	SBUX	86.07	55%	40%	3	1	1.00	79.0	2.1	Restaurant	75
2363	Marriott Int'l	MAR	96.00	51%	98%	4	3	1.25	48.0	NIL	Hotel/Gaming	87
1314	Rockwell Automation	ROK	219.99	47%	30%	3	2	1.15	33.3	1.9	Electrical Equipment	61
1917	Hershey Co.	HSY	140.41	46%	31%	3	2	0.85	24.0	2.3	Food Processing	18
2595	Intuit Inc.	INTU	325.55	43%	50%	1	2	1.05	35.4	0.7	Computer Software	2
2184	Sleep Number Corp.	SNBR	48.34	43%	43%	3	3	1.15	25.4	NIL	Retail (Hardlines)	72
1122	Trex Co.	TREX	71.06	41%	41%	2	3	1.15	49.0	NIL	Building Materials	38
2604	Paycom Software	PAYC	290.83	39%	34%	2	3	1.15	78.2	NIL	Computer Software	2
2207	TJX Companies	TJX	55.60	39%	37%	3	3	1.10	32.7	NIL	Retail (Softlines)	54
1979	National Beverage	FIZZ	69.38	38%	38%	2	3	0.75	26.2	NIL	Beverage	26
1628	Novo Nordisk ADR	NVO	69.17	38%	75%	2	1	0.80	26.0	1.9	Drug	14
1398	Apple Inc.	AAPL	114.96	35%	28%	3	1	0.90	32.8	0.7	Computers/Peripherals	20
2206	Ross Stores	ROST	92.26	35%	40%	3	3	1.25	39.8	NIL	Retail (Softlines)	54
436	FactSet Research	FDS	333.29	34%	30%	2	2	1.05	32.3	0.9	Information Services	9
1943	USANA Health Sciences	USNA	74.24	31%	31%	2	3	0.95	14.1	NIL	Food Processing	18
952	F5 Networks	FFIV	123.37	30%	30%	3	3	0.90	23.4	NIL	Telecom. Equipment	32
2188	Ulta Beauty	ULTA	225.74	30%	30%	4	3	1.25	26.4	NIL	Retail (Hardlines)	72
846	United Therapeutics	UTHR	101.51	29%	28%	3	3	0.85	8.2	NIL	Biotechnology	12
2203	lululemon athletica	LULU	318.73	28%	28%	3	3	1.00	66.0	NIL	Retail (Softlines)	54
2616	Accenture Plc	ACN	222.78	25%	42%	2	1	0.95	29.3	1.6	IT Services	15
2160	NIKE, Inc. 'B'	NKE	124.32	25%	28%	3	1	1.10	NMF	0.8	Shoe	82
1639	Barrett Business Serv.	BBSI	50.62	24%	32%	4	3	1.30	13.0	2.4	Human Resources	68
1647	Robert Half Int'l	RHI	53.24	24%	35%	3	2	1.20	23.6	2.7	Human Resources	68
1376	Skyworks Solutions	SWKS	143.97	23%	28%	3	3	1.10	23.3	1.4	Semiconductor	11

BARGAIN BASEMENT STOCKS

Stocks with current price-earnings multiples and price-to-"net" working capital ratios that are in the bottom quartile of the Value Line universe

("Net" working capital equals current assets less all liabilities including long-term debt and preferred)

Page No.	Stock Name	Ticker	Recent Price	Percent Price-to "Net" Wkg. Capital	Current P/E Ratio	Percent Price-to Book Value	Time-liness	Safety Rank	Beta	% Est'd Yield	Industry Group	Industry Rank
1324	Avnet, Inc.	AVT	26.29	112%	16.5	66%	4	2	1.05	3.2	Electronics	59
1239	Tutor Perini	TPC	11.71	127%	5.8	41%	3	4	1.30	NIL	Engineering & Const	52
1134	TRI Pointe Group	TPH	17.74	131%	7.7	110%	2	3	1.50	NIL	Homebuilding	13
1996	Universal Corp.	UVV	41.72	151%	11.9	82%	2	3	0.75	7.4	Tobacco	25
1135	Taylor Morrison Home	TMHC	25.13	154%	7.4	105%	3	3	1.60	NIL	Homebuilding	13
1810	Goldman Sachs	GS	199.07	157%	9.1	87%	3	2	1.15	2.5	Investment Banking	53
2177	Movado Group	MOV	10.39	166%	12.1	45%	5	3	1.30	NIL	Retail (Hardlines)	72
2557	Franklin Resources	BEN	20.47	169%	14.4	103%	3	2	1.15	5.4	Financial Svcs. (Div.)	55
1136	Toll Brothers	TOL	49.35	169%	14.1	137%	3	3	1.65	0.9	Homebuilding	13
1126	Beazer Homes USA	BZH	13.51	175%	12.7	78%	–	5	1.65	NIL	Homebuilding	13
1128	KB Home	KBH	38.64	176%	13.9	145%	3	3	1.75	0.9	Homebuilding	13
1327	Celestica Inc.	CLS	6.99	182%	7.9	66%	2	3	1.35	NIL	Electronics	59
1771	National Presto Ind.	NPK	83.40	198%	13.7	159%	2	3	0.65	6.0	Diversified Co.	60
1130	M.D.C. Holdings	MDC	47.04	207%	9.3	165%	2	3	1.30	2.8	Homebuilding	13
1131	Meritage Homes	MTH	107.97	229%	11.8	209%	2	3	1.40	NIL	Homebuilding	13
2180	PC Connection	CNXN	41.33	250%	14.0	182%	3	3	0.85	NIL	Retail (Hardlines)	72
1342	Sanmina Corp.	SANM	27.13	287%	9.0	115%	3	3	1.00	NIL	Electronics	59
1133	PulteGroup, Inc.	PHM	45.76	302%	10.8	227%	2	3	1.40	1.1	Homebuilding	13
1643	Kelly Services 'A'	KELYA	16.89	348%	11.6	52%	4	3	1.15	NIL	Human Resources	68
1814	Piper Sandler Cos.	PIPR	72.00	359%	13.9	135%	2	3	1.30	2.7	Investment Banking	53
1127	Horton D.R.	DHI	74.49	367%	12.2	274%	2	3	1.20	1.0	Homebuilding	13
2175	MarineMax	HZO	26.40	367%	11.6	153%	2	4	1.40	NIL	Retail (Hardlines)	72
1129	Lennar Corp.	LEN	79.64	373%	13.1	158%	2	3	1.35	0.6	Homebuilding	13
2004	Perdoceo Education	PRDO	12.22	445%	8.3	199%	3	4	1.15	NIL	Educational Services	48
1339	Plexus Corp.	PLXS	71.67	516%	16.3	240%	2	3	1.05	NIL	Electronics	59
978	Cooper Tire & Rubber	CTB	31.26	583%	16.6	124%	3	3	1.05	1.3	Auto Parts	70
846	United Therapeutics	UTHR	101.51	609%	8.2	160%	3	3	0.85	NIL	Biotechnology	12
1323	Arrow Electronics	ARW	79.60	685%	11.6	133%	3	3	1.20	NIL	Electronics	59
995	Standard Motor Prod.	SMP	43.97	701%	16.4	196%	3	3	0.80	NIL	Auto Parts	70
2106	G-III Apparel Group	GIII	14.15	721%	13.9	53%	5	5	2.00	NIL	Apparel	90
1123	UFP Industries	UFPI	56.38	774%	16.3	278%	2	3	1.10	0.9	Building Materials	38
1395	Photronics Inc.	PLAB	10.08	840%	13.6	86%	2	3	0.85	NIL	Semiconductor Equip	3

UNTIMELY STOCKS

Stocks ranked 5 (Lowest) for Relative Price Performance in the next 12 months

Page No.	Stock Name	Recent Price	Rank Safety	Rank Technical	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
702	AAR Corp.	19.86	4	4	NMF	NIL	Aerospace/Defense	69
1582	Allegheny Techn.	9.29	5	5	NMF	NIL	Metals & Mining (Div.)	76
429	Alliance Data Sys.	43.26	4	4	5.4	1.9	Information Services	9
304	Amer. Airlines	12.76	5	4	NMF	NIL	Air Transport	89
2399	Apache Corp.	10.27	5	3	NMF	1.0	Petroleum (Producing)	91
1748	ARAMARK Holdings ■	27.14	3	4	NMF	1.6	Diversified Co.	60
704	Astronics Corp.	7.99	5	3	NMF	NIL	Aerospace/Defense	69
350	Bloomin' Brands	15.66	4	5	NMF	NIL	Restaurant	75
706	Boeing	166.08	3	4	NMF	NIL	Aerospace/Defense	69
2154	Boot Barn Holdings	27.48	4	5	26.2	NIL	Shoe	82
2546	CIT Group	17.78	3	3	71.1	7.9	Financial Svcs. (Div.)	55
503	CVR Energy	12.76	3	3	NMF	NIL	Petroleum (Integrated)	92
2103	Capri Holdings Ltd.	18.92	4	4	27.0	NIL	Apparel	90
2305	Carnival Corp.	15.31	5	4	NMF	NIL	Recreation	81
739	Carpenter Technology	18.65	3	4	NMF	4.3	Steel	67
504	Cenovus Energy	5.55	5	3	NMF	NIL	Petroleum (Integrated)	92
1948	Chefs' Warehouse	14.36	4	4	NMF	NIL	Retail/Wholesale Food	21
2197	Children's Place	28.78	3	5	9.3	NIL	Retail (Softlines)	54
530	Cimarex Energy	25.01	3	4	NMF	3.5	Natural Gas (Div.)	86
2307	Cinemark Hldgs.	10.31	4	3	NMF	NIL	Recreation	81
950	Comtech Telecom.	14.03	4	3	34.2	2.9	Telecom. Equipment	32
2404	Continental Resources	12.82	4	3	NMF	NIL	Petroleum (Producing)	91
979	Cooper-Standard	13.63	4	4	NMF	NIL	Auto Parts	70
306	Copa Holdings, S.A.	53.72	4	5	NMF	NIL	Air Transport	89
2416	Core Laboratories	16.00	4	3	30.2	0.3	Oilfield Svcs/Equip.	94
2405	Crescent Point Energy	1.71	5	1	NMF	0.6	Petroleum (Producing)	91
213	Cutera, Inc.	18.34	4	4	NMF	NIL	Med Supp Non-Invasive	24
620	DCP Midstream LP	11.03	5	3	11.5	14.1	Pipeline MLPs	93
2623	DXC Technology	17.09	3	3	2.6	NIL	IT Services	15
356	Dave & Buster's Ent.	16.37	5	5	NMF	NIL	Restaurant	75
307	Delta Air Lines	31.34	3	5	NMF	NIL	Air Transport	89
2406	Diamondback Energy	31.49	3	3	NMF	4.8	Petroleum (Producing)	91
358	Dine Brands Global	56.97	4	4	47.9	NIL	Restaurant	75
621	Enable Midstream Part.	3.98	4	1	9.0	16.6	Pipeline MLPs	93
622	Energy Transfer LP ■	5.55	4	3	7.2	22.0	Pipeline MLPs	93
535	Enerplus Corp.	2.54	4	1	NMF	4.7	Natural Gas (Div.)	86
611	EnLink Midstream LLC	2.28	5	2	NMF	16.7	Oil/Gas Distribution	83
2106	G-III Apparel Group	14.15	5	5	13.9	NIL	Apparel	90
2158	Genesco Inc.	22.36	3	5	10.4	NIL	Shoe	82
2649	Groupon, Inc.	23.82	5	3	NMF	NIL	Internet	23
2108	Guess?, Inc.	11.93	4	4	74.6	3.8	Apparel	90
781	Hancock Whitney Corp.	19.14	3	3	30.4	5.6	Bank (Midwest)	84
309	Hawaiian Hldgs.	13.38	3	4	NMF	NIL	Air Transport	89
2420	Helmerich & Payne	14.86	3	3	NMF	6.7	Oilfield Svcs/Equip.	94
389	Howard Hughes Corp.	58.20	3	4	NMF	NIL	Industrial Services	39
510	Husky Energy	3.19	3	1	NMF	1.6	Petroleum (Integrated)	92
220	Inogen, Inc.	28.41	3	4	64.6	NIL	Med Supp Non-Invasive	24
2145	Kohl's Corp.	19.48	4	5	NMF	NIL	Retail Store	19
125	MTS Systems	19.88	4	3	12.0	NIL	Precision Instrument	31
1534	Macerich Comp. (The)	7.09	4	3	39.4	8.5	R.E.I.T.	65
2146	Macy's Inc.	5.96	4	4	NMF	NIL	Retail Store	19
2408	Marathon Oil Corp.	4.29	3	2	NMF	NIL	Petroleum (Producing)	91
2362	Marcus Corp.	8.19	4	3	NMF	NIL	Hotel/Gaming	87
2377	Meredith Corp.	12.74	4	4	5.0	NIL	Publishing	88
2177	Movado Group	10.39	3	4	12.1	NIL	Retail (Hardlines)	72
513	Murphy Oil Corp.	9.20	4	3	NMF	5.4	Petroleum (Integrated)	92
840	Myriad Genetics	12.66	3	3	NMF	NIL	Biotechnology	12
1337	NCR Corp.	20.03	3	4	12.2	NIL	Electronics	59
2423	National Oilwell Varco	9.80	4	3	NMF	NIL	Oilfield Svcs/Equip.	94
2147	Nordstrom, Inc.	12.27	4	3	NMF	NIL	Retail Store	19
2313	Norwegian Cruise Line	16.68	5	4	NMF	NIL	Recreation	81
627	NuStar Energy L.P.	10.40	4	3	23.1	15.4	Pipeline MLPs	93
514	Occidental Petroleum	10.34	4	3	NMF	0.4	Petroleum (Integrated)	92
613	ONEOK Inc.	26.01	3	4	9.0	14.7	Oil/Gas Distribution	83
2395	OUTFRONT Media	15.01	4	4	NMF	NIL	Advertising	74
515	PBF Energy	6.02	4	3	1.8	NIL	Petroleum (Integrated)	92
540	PDC Energy	12.10	4	4	NMF	NIL	Natural Gas (Div.)	86
2112	PVH Corp.	61.89	3	4	38.0	NIL	Apparel	90
1537	Park Hotels & Resorts	10.21	4	5	NMF	NIL	R.E.I.T.	65
1772	Park-Ohio	16.47	4	4	NMF	NIL	Diversified Co.	60
517	Petroleo Brasileiro ADR	7.20	5	3	NMF	NIL	Petroleum (Integrated)	92
629	Plains All Amer. Pipe.	5.89	4	3	6.0	12.2	Pipeline MLPs	93
630	Plains GP Holdings L.P.	6.11	4	3	6.6	11.8	Pipeline MLPs	93
365	Red Robin Gourmet	13.60	5	5	NMF	NIL	Restaurant	75
2368	Red Rock Resorts	17.53	4	4	NMF	NIL	Hotel/Gaming	87
2318	Royal Caribbean	66.09	5	5	NMF	NIL	Recreation	81
1542	Ryman Hospitality	37.60	3	4	NMF	NIL	R.E.I.T.	65
1834	Sabre Corp.	6.71	5	4	NMF	NIL	E-Commerce	22
2429	Schlumberger Ltd.	16.45	3	3	NMF	3.0	Oilfield Svcs/Equip.	94
1544	Service Properties	8.23	3	4	NMF	0.5	R.E.I.T.	65
632	Shell Midstream L.P.	9.49	4	3	7.4	19.4	Pipeline MLPs	93
2182	Signet Jewelers Ltd.	19.39	4	5	NMF	NIL	Retail (Hardlines)	72
1545	Simon Property Group	65.79	3	4	17.2	7.9	R.E.I.T.	65
1546	SITE Centers	7.26	4	4	NMF	NIL	R.E.I.T.	65
2320	Six Flags Entertainment	21.53	4	4	NMF	NIL	Recreation	81
312	SkyWest	31.21	3	4	61.2	NIL	Air Transport	89
723	Spirit AeroSystems	19.98	3	4	NMF	0.2	Aerospace/Defense	69
314	Spirit Airlines	16.53	4	4	NMF	NIL	Air Transport	89
2528	Synovus Financial	21.10	3	4	10.6	6.3	Bank	73
2186	Tapestry Inc.	16.58	3	4	26.7	NIL	Retail (Hardlines)	72
544	Targa Resources	14.65	4	3	NMF	2.7	Natural Gas (Div.)	86
1425	Tilray, Inc.	4.82	4	1	NMF	NIL	Cannabis	80
2114	Under Armour 'A'	11.43	4	5	NMF	NIL	Apparel	90
2115	Unifi, Inc.	12.57	3	4	NMF	NIL	Apparel	90
315	United Airlines Hldgs.	35.94	4	4	NMF	NIL	Air Transport	89
1786	Viad Corp.	21.35	4	4	NMF	NIL	Diversified Co.	60
2531	Webster Fin'l ■	25.62	3	3	11.3	6.2	Bank	73
1742	Welbilt, Inc.	6.29	5	3	NMF	NIL	Machinery	49
634	Western Midstream Part.	7.71	4	3	4.2	16.1	Pipeline MLPs	93
2373	Wynn Resorts ■	73.62	5	3	NMF	NIL	Hotel/Gaming	87

■ Newly added this week.

HIGHEST DIVIDEND YIELDING NON-UTILITY STOCKS

Based upon estimated year-ahead dividends per share

Page No.	Stock Name	Recent Price	Timeliness	Safety Rank	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
332	Frontline Ltd.	6.37	3	5	3.2	31.4†	Maritime	71
607	Antero Midstream Corp.	5.50	–	4	7.7	22.4†	Oil/Gas Distribution	83
622	Energy Transfer LP	5.55	5	4	7.2	22.0†	Pipeline MLPs	93
632	Shell Midstream L.P.	9.49	5	4	7.4	19.4†	Pipeline MLPs	93
631	Rattler Midstream LP	6.00	–	4	8.3	19.3†	Pipeline MLPs	93
611	EnLink Midstream LLC	2.28	5	5	NMF	16.7†	Oil/Gas Distribution	83
621	Enable Midstream Part.	3.98	5	4	9.0	16.6†	Pipeline MLPs	93
625	MPLX LP	16.65	4	3	6.9	16.5†	Pipeline MLPs	93
634	Western Midstream Part.	7.71	5	4	4.2	16.1†	Pipeline MLPs	93
628	Phillips 66 Partners	22.61	2	3	5.9	15.5	Pipeline MLPs	93
627	NuStar Energy L.P.	10.40	5	4	23.1	15.4†	Pipeline MLPs	93
613	ONEOK Inc.	26.01	5	3	9.0	14.7†	Oil/Gas Distribution	83
1591	Natural Resource	12.31	4	4	NMF	14.6†	Metals & Mining (Div.)	76
2444	Apollo Investment	8.55	4	3	8.6	14.5	Public/Private Equity	–
620	DCP Midstream LP	11.03	5	5	11.5	14.1†	Pipeline MLPs	93
2185	Sunoco LP	24.70	4	3	10.0	13.4	Retail (Hardlines)	72
336	SFL Corp. Ltd	7.55	4	4	8.3	13.2†	Maritime	71
331	Euronav NV	8.68	2	4	4.3	12.7	Maritime	71
629	Plains All Amer. Pipe.	5.89	5	4	6.0	12.2†	Pipeline MLPs	93
626	Magellan Midstream	35.01	4	4	10.7	11.9†	Pipeline MLPs	93
1513	Annaly Capital Mgmt.	7.44	4	4	7.2	11.8†	R.E.I.T.	65
1527	GEO Group (The)	11.52	4	3	11.1	11.8	R.E.I.T.	65
630	Plains GP Holdings L.P.	6.11	5	4	6.6	11.8†	Pipeline MLPs	93
624	Holly Energy Part.	12.35	4	4	8.0	11.3	Pipeline MLPs	93
623	Enterprise Products	16.02	4	3	8.5	11.1	Pipeline MLPs	93
506	Delek US Holdings	11.44	–	3	NMF	10.8	Petroleum (Integrated)	92
1204	Liberty All-Star	5.97	–	3	NMF	10.7	Investment Co.	–
2448	Gladstone Capital	7.51	–	3	7.4	10.4	Public/Private Equity	–
507	Exxon Mobil Corp.	35.31	4	3	NMF	9.9	Petroleum (Integrated)	92
2400	Black Stone Minerals	6.19	4	3	NMF	9.7	Petroleum (Producing)	91
391	Iron Mountain	26.60	3	3	27.1	9.3	Industrial Services	39
1199	Aberdeen Asia-Pac. Fd.	3.91	–	4	NMF	9.0	Investment Co.	–
521	Total S.A. ADR	33.79	4	3	NMF	8.9	Petroleum (Integrated)	92
1991	Altria Group	38.95	3	3	8.9	8.8	Tobacco	25
522	Valero Energy	44.82	4	3	NMF	8.7	Petroleum (Integrated)	92
614	Pembina Pipeline	29.14	4	3	12.1	8.6	Oil/Gas Distribution	83
1534	Macerich Comp. (The)	7.09	5	4	39.4	8.5	R.E.I.T.	65
2537	AllianceBernstein Hldg.	27.45	3	3	12.1	8.4	Financial Svcs. (Div.)	55
1205	MFS Multimarket	5.74	–	4	NMF	8.4	Investment Co.	–
747	Russel Metals	18.09	3	3	24.8	8.4†	Steel	67
612	Kinder Morgan Inc.	12.61	4	3	26.8	8.3	Oil/Gas Distribution	83
936	Vodafone Group ADR	13.48	2	3	30.0	8.2	Telecom. Services	17
1983	Canon Inc. ADR	17.03	3	2	12.1	8.1	Foreign Electronics	37
1506	Northwest Bancshares	9.39	3	3	16.5	8.1	Thrift	63
2447	Compass Diversified	18.00	3	3	NMF	8.0	Public/Private Equity	–
610	Enbridge Inc.	40.25	3	3	14.9	8.0	Oil/Gas Distribution	83
1505	New York Community	8.53	3	3	9.8	8.0	Thrift	63
633	Suburban Propane	15.00	4	3	12.5	8.0	Pipeline MLPs	93
2546	CIT Group	17.78	5	3	71.1	7.9	Financial Svcs. (Div.)	55
619	Cheniere Energy Part.	33.52	3	3	11.5	7.9	Pipeline MLPs	93
1545	Simon Property Group	65.79	5	3	17.2	7.9	R.E.I.T.	65
1992	Brit. Am. Tobacco ADR	36.44	3	3	8.2	7.8	Tobacco	25
1503	Flushing Financial	10.71	2	3	6.4	7.8	Thrift	63
2570	Navient Corp.	8.25	4	3	3.7	7.8	Financial Svcs. (Div.)	55
616	Williams Cos.	20.40	3	4	18.7	7.8	Oil/Gas Distribution	83
512	Marathon Petroleum	29.95	–	3	NMF	7.7	Petroleum (Integrated)	92
2402	Can. Natural Res.	22.38	4	3	NMF	7.6	Petroleum (Producing)	91
917	AT&T Inc.	28.38	3	1	8.4	7.4	Telecom. Services	17
1508	Provident Fin'l Svcs.	12.42	4	3	12.3	7.4	Thrift	63
1996	Universal Corp.	41.72	2	3	11.9	7.4	Tobacco	25
776	Comerica Inc.	38.55	4	3	11.3	7.1	Bank (Midwest)	84
505	Chevron Corp.	73.93	4	3	NMF	7.0	Petroleum (Integrated)	92
1507	People's United Fin'l	10.23	3	3	10.2	7.0	Thrift	63
502	BP PLC ADR	18.18	4	3	NMF	6.9	Petroleum (Integrated)	92
509	HollyFrontier Corp.	20.89	4	3	NMF	6.9	Petroleum (Integrated)	92
518	Phillips 66	53.98	4	3	NMF	6.9	Petroleum (Integrated)	92
1563	Prudential Fin'l	64.03	4	3	6.5	6.9	Insurance (Life)	51
1533	MGM Growth Properties	28.74	4	3	23.0	6.8	R.E.I.T.	65
1903	B&G Foods	28.44	2	3	14.6	6.7	Food Processing	18
2420	Helmerich & Payne	14.86	5	3	NMF	6.7	Oilfield Svcs/Equip.	94
2562	Janus Henderson plc	21.43	3	3	10.9	6.7	Financial Svcs. (Div.)	55
1565	Unum Group	17.08	4	3	3.3	6.7	Insurance (Life)	51
2544	Block (H&R)	15.81	3	3	42.7	6.6	Financial Svcs. (Div.)	55
779	First Horizon National	9.15	4	3	8.7	6.6	Bank (Midwest)	84
782	Huntington Bancshs.	9.12	4	3	11.5	6.6	Bank (Midwest)	84
1504	Investors Bancorp	7.29	4	3	9.5	6.6	Thrift	63
921	China Mobile (ADR)	32.54	3	2	8.0	6.5	Telecom. Services	17
1605	Olin Corp.	12.25	4	3	NMF	6.5	Chemical (Basic)	77
1592	Rio Tinto plc	60.49	3	3	9.7	6.5	Metals & Mining (Div.)	76
2508	Bank of Nova Scotia	55.97	3	2	10.7	6.4	Bank	73
525	Brigham Minerals	8.96	–	4	99.6	6.3	Natural Gas (Div.)	86
1528	Gaming and Leisure	38.02	4	3	18.1	6.3	R.E.I.T.	65
1993	Philip Morris Int'l	76.31	3	3	15.1	6.3	Tobacco	25
2528	Synovus Financial	21.10	5	3	10.6	6.3†	Bank	73
1551	W.P. Carey Inc.	66.60	4	3	33.6	6.3	R.E.I.T.	65
2511	Citizens Fin'l Group	25.34	4	3	11.8	6.2	Bank	73
1600	Dow Inc.	47.48	–	2	47.0	6.2	Chemical (Basic)	77
1541	Regency Centers Corp.	38.56	4	3	25.0	6.2	R.E.I.T.	65
2531	Webster Fin'l	25.62	5	3	11.3	6.2	Bank	73
1148	Ethan Allen Interiors	13.76	3	3	45.9	6.1	Furn/Home Furnishings	78
2518	KeyCorp	12.13	4	3	13.8	6.1	Bank	73
1535	Mack-Cali R'lty	13.02	–	3	NMF	6.1	R.E.I.T.	65
1994	Schweitzer-Mauduit Int'l	28.79	3	3	9.8	6.1	Tobacco	25
1550	Vornado R'lty Trust	34.76	4	3	NMF	6.1	R.E.I.T.	65
2391	Interpublic Group	17.05	3	3	13.4	6.0	Advertising	74

† Dividend cut possible

HIGHEST GROWTH STOCKS

(To be included, a company's annual growth of sales, cash flow, earnings, dividends and book value must together have averaged 9% or more over the past 10 years and be expected to average at least 9% in the coming 3-5 years.)

Page No.	Stock Name	Ticker	Recent Price	Growth Past 10 Years	Est'd Growth 3-5 Years	Time-liness	Safety Rank	Beta	Current P/E Ratio	% Est'd Yield	Estimated 3-5 Year Price Appreciation	Industry Group	Industry Rank
1702	AAON, Inc.	AAON	58.40	9%	14%	2	3	0.90	40.8	0.7	N- 10%	Machinery	49
2615	ACI Worldwide	ACIW	25.70	11%	11%	2	3	1.00	25.7	NIL	15- 75%	IT Services	15
2584	Adobe Inc.	ADBE	488.51	13%	19%	1	2	0.80	58.2	NIL	5- 40%	Computer Software	2
1818	Akamai Technologies	AKAM	110.97	12%	10%	1	3	0.75	30.4	NIL	15- 65%	E-Commerce	22
1703	Alamo Group	ALG	105.15	10%	10%	3	3	1.00	22.9	0.5	30- 90%	Machinery	49
205	Align Techn.	ALGN	322.86	22%	19%	3	3	1.30	92.2	NIL	N- 30%	Med Supp Non-Invasive	24
1946	Ali. Couche-Tard	ATDB.TO	46.58	25%	12%	3	3	0.75	19.0	0.6	40-105%	Retail/Wholesale Food	21
2639	Alphabet Inc.	GOOG	1464.52	19%	15%	1	1	0.90	26.9	NIL	55- 90%	Internet	23
2640	Amazon.com	AMZN	3174.05	28%	24%	1	2	0.80	83.9	NIL	N- 30%	Internet	23
2540	Ameriprise Fin'l	AMP	151.48	13%	10%	3	3	1.40	9.4	2.7	25- 85%	Financial Svcs. (Div.)	55
1747	AMETEK, Inc.	AME	99.49	13%	10%	3	2	1.15	28.6	0.7	N- 35%	Diversified Co.	60
2586	ANSYS, Inc.	ANSS	318.80	12%	10%	3	2	0.90	51.3	NIL	N- N%	Computer Software	2
791	Anthem, Inc.	ANTM	257.06	12%	12%	2	3	1.15	10.9	1.6	55-135%	Medical Services	33
1398	Apple Inc.	AAPL	114.96	29%	15%	3	1	0.90	32.8	0.7	N- 25%	Computers/Peripherals	20
705	Axon Enterprise	AAXN	87.91	18%	18%	3	4	0.95	NMF	NIL	N- N%	Aerospace/Defense	69
2641	Baidu, Inc.	BIDU	126.04	37%	11%	3	3	1.05	18.3	NIL	75-160%	Internet	23
565	Balchem Corp.	BCPC	96.70	15%	11%	2	3	0.75	35.3	0.5	25- 85%	Chemical (Specialty)	58
1967	Boston Beer 'A'	SAM	899.91	16%	17%	2	3	0.70	85.6	NIL	N- N%	Beverage	26
115	Bruker Corp.	BRKR	39.49	10%	14%	3	3	1.10	28.6	0.4	65-155%	Precision Instrument	31
2619	CACI Int'l	CACI	217.68	11%	11%	2	3	0.95	15.9	NIL	25- 90%	IT Services	15
209	Cantel Medical Corp.	CMD	45.06	14%	12%	4	3	1.65	30.2	NIL	90-175%	Med Supp Non-Invasive	24
1752	Carlisle Cos.	CSL	121.22	10%	10%	3	2	1.10	22.2	1.7	35- 85%	Diversified Co.	60
792	Centene Corp.	CNC	55.52	24%	11%	1	3	1.05	10.2	NIL	55-135%	Medical Services	33
1753	Chemed Corp.	CHE	480.36	12%	11%	2	2	0.85	28.8	0.3	N- 25%	Diversified Co.	60
353	Chipotle Mex. Grill	CMG	1263.35	14%	11%	3	3	0.90	NMF	NIL	N- N%	Restaurant	75
793	Cigna Corp.	CI	164.29	14%	14%	2	3	1.20	8.7	NIL	70-155%	Medical Services	33
381	Cintas Corp.	CTAS	336.00	13%	11%	3	2	1.15	43.1	0.9	N- N%	Industrial Services	39
2589	Citrix Sys.	CTXS	138.32	14%	10%	1	3	0.75	25.5	1.0	30- 95%	Computer Software	2
116	Cognex Corp.	CGNX	63.47	16%	12%	3	3	1.05	64.8	0.3	N- 10%	Precision Instrument	31
2125	Copart, Inc.	CPRT	106.16	14%	10%	3	2	1.05	45.8	NIL	N- 5%	Retail Automotive	44
433	CoStar Group	CSGP	857.13	19%	15%	2	2	0.95	88.3	NIL	N- 25%	Information Services	9
2548	Credit Acceptance	CACC	321.00	25%	12%	3	3	1.25	12.5	NIL	95-190%	Financial Svcs. (Div.)	55
794	DaVita Inc.	DVA	84.50	10%	10%	1	3	1.00	12.4	NIL	20- 80%	Medical Services	33
2329	Discovery, Inc.	DISCA	21.95	13%	9%	3	3	1.10	10.2	NIL	195-355%	Entertainment	57
2142	Dollar General	DG	209.80	15%	10%	1	3	0.70	26.8	0.7	N- 30%	Retail Store	19
180	Edwards Lifesciences	EW	77.71	17%	10%	3	2	1.00	43.2	NIL	10- 50%	Med Supp Invasive	50
1615	Emergent BioSolutions	EBS	103.64	10%	19%	2	4	0.85	17.2	NIL	5- 75%	Drug	14
435	Exponent, Inc.	EXPO	73.08	11%	9%	3	3	0.85	50.1	1.0	N- 35%	Information Services	9
1602	FMC Corp.	FMC	106.32	10%	12%	3	3	1.25	16.1	1.8	10- 60%	Chemical (Basic)	77
436	FactSet Research	FDS	333.29	11%	9%	2	2	1.05	32.3	0.9	N- N%	Information Services	9
2626	Fair Isaac	FICO	427.52	10%	13%	3	3	1.15	59.1	NIL	N- 20%	IT Services	15
2627	Fiserv Inc.	FISV	104.07	15%	13%	1	2	1.00	21.0	NIL	N- 40%	IT Services	15
386	Genpact Limited	G	38.98	12%	12%	2	2	1.05	18.0	1.0	40- 80%	Industrial Services	39
984	Gentherm Inc.	THRM	41.05	25%	10%	3	3	1.15	46.1	NIL	35- 95%	Auto Parts	70
2559	Global Payments	GPN	178.56	12%	13%	–	3	1.20	NMF	0.4	N- 45%	Financial Svcs. (Div.)	55
712	HEICO Corp.	HEI	105.44	17%	9%	3	3	1.05	69.8	0.2	N- 45%	Aerospace/Defense	69
800	Humana Inc.	HUM	400.00	11%	10%	2	3	1.20	21.2	0.7	N- 45%	Medical Services	33
801	ICON plc	ICLR	186.04	14%	9%	2	2	0.90	29.3	NIL	10- 45%	Medical Services	33
121	II-VI Inc.	IIVI	41.21	13%	13%	2	3	1.00	25.6	NIL	45-120%	Precision Instrument	31
219	Illumina Inc.	ILMN	305.46	21%	11%	3	3	0.85	50.7	NIL	20- 75%	Med Supp Non-Invasive	24
2174	Insight Enterprises	NSIT	56.44	10%	11%	3	3	1.10	13.4	NIL	35-105%	Retail (Hardlines)	72
2595	Intuit Inc.	INTU	325.55	11%	12%	1	2	1.05	35.4	0.7	N- 35%	Computer Software	2
187	Intuitive Surgical	ISRG	693.16	19%	12%	3	2	1.15	91.4	NIL	N- 35%	Med Supp Invasive	50
122	KLA Corp.	KLAC	193.25	11%	15%	1	3	1.10	16.7	1.9	10- 65%	Precision Instrument	31
987	LCI Industries	LCII	105.32	18%	10%	3	3	1.20	17.8	2.8	40-105%	Auto Parts	70
1392	Lam Research	LRCX	336.61	20%	11%	2	3	1.30	16.6	1.5	N- 45%	Semiconductor Equip	3
1005	Lauder (Estee)	EL	215.75	14%	9%	3	2	0.90	60.8	1.0	N- 15%	Toiletries/Cosmetics	47
1141	Lowe's Cos.	LOW	162.59	11%	10%	1	2	1.15	19.2	1.5	N- 25%	Retail Building Supply	7
2203	lululemon athletica	LULU	318.73	27%	15%	3	3	1.00	66.0	NIL	N- 15%	Retail (Softlines)	54
1805	MarketAxess Holdings	MKTX	476.05	21%	16%	1	3	0.80	62.3	0.5	N- 15%	Brokers & Exchanges	6
2569	MasterCard Inc.	MA	338.39	19%	12%	3	1	1.05	40.2	0.5	N- N%	Financial Svcs. (Div.)	55
395	MAXIMUS Inc.	MMS	68.75	18%	10%	2	2	0.80	19.3	1.7	45-105%	Industrial Services	39
1928	Medifast, Inc.	MED	165.51	19%	14%	2	3	1.05	22.5	2.7	N- 30%	Food Processing	18
2597	Microsoft Corp.	MSFT	209.44	11%	14%	1	1	0.90	33.8	1.0	5- 25%	Computer Software	2
807	Molina Healthcare	MOH	163.07	16%	10%	2	3	1.05	13.2	NIL	25- 85%	Medical Services	33
1367	Monolithic Power Sys.	MPWR	274.88	13%	15%	2	3	1.00	59.2	0.7	N- N%	Semiconductor	11
1978	Monster Beverage	MNST	80.51	20%	10%	2	3	0.85	39.3	NIL	N- 45%	Beverage	26
2339	Netflix, Inc.	NFLX	490.65	31%	18%	1	3	0.80	72.9	NIL	N- 45%	Entertainment	57
2003	New Orient. Ed. ADS	EDU	149.66	22%	14%	3	3	0.95	43.8	NIL	N- 30%	Educational Services	48
2160	NIKE, Inc. 'B'	NKE	124.32	11%	11%	3	1	1.10	NMF	0.8	N- 5%	Shoe	82
720	Northrop Grumman	NOC	329.52	9%	10%	1	1	0.85	14.2	1.8	45- 80%	Aerospace/Defense	69
1368	NVIDIA Corp.	NVDA	521.40	16%	11%	1	3	1.10	80.1	0.1	N- N%	Semiconductor	11
229	Omnicell, Inc.	OMCL	71.65	12%	11%	3	3	0.95	34.3	NIL	40-110%	Med Supp Non-Invasive	24
1832	Open Text Corp.	OTEX	42.40	13%	12%	3	2	0.95	35.3	1.7	20- 55%	E-Commerce	22
2601	Oracle Corp.	ORCL	59.58	10%	10%	1	1	0.85	14.4	1.6	45- 70%	Computer Software	2
2411	Pioneer Natural Res.	PXD	88.31	9%	9%	4	3	1.35	65.4	2.5	85-185%	Petroleum (Producing)	91
2316	Polaris Inc.	PII	92.08	14%	9%	3	3	1.35	23.4	2.7	65-140%	Recreation	81
1235	Quanta Services	PWR	52.89	14%	10%	3	3	1.25	14.0	0.4	25- 90%	Engineering & Const	52
231	Quidel Corp.	QDEL	198.64	10%	21%	3	3	0.75	32.2	NIL	25- 90%	Med Supp Non-Invasive	24
232	ResMed Inc.	RMD	172.00	12%	12%	1	3	0.95	38.3	0.9	N- N%	Med Supp Non-Invasive	24
398	Rollins, Inc.	ROL	54.66	11%	10%	1	2	0.85	71.0	0.6	N- 30%	Industrial Services	39
1577	Royal Gold	RGLD	119.20	13%	10%	2	3	0.75	38.0	1.0	40-105%	Precious Metals	5
1835	salesforce.com	CRM	246.67	26%	15%	1	3	0.85	69.7	NIL	N- 40%	E-Commerce	22
1143	Sherwin-Williams	SHW	707.06	12%	10%	2	2	1.00	30.4	0.8	N- 15%	Retail Building Supply	7
2161	Skechers U.S.A.	SKX	29.67	14%	10%	3	3	1.25	26.5	NIL	85-170%	Shoe	82
1376	Skyworks Solutions	SWKS	143.97	21%	12%	3	3	1.10	23.3	1.4	N- 55%	Semiconductor	11
195	Stryker Corp.	SYK	207.25	9%	10%	3	1	1.10	33.9	1.1	10- 40%	Med Supp Invasive	50
2322	Sturm, Ruger & Co.	RGR	62.08	14%	9%	2	3	0.70	16.9	2.5	N- 35%	Recreation	81
2610	Synopsys, Inc.	SNPS	212.64	10%	9%	1	1	1.00	38.2	NIL	N- N%	Computer Software	2
2207	TJX Companies	TJX	55.60	14%	11%	3	3	1.10	32.7	NIL	35-100%	Retail (Softlines)	54
1160	Tempur Sealy Int'l	TPX	90.30	11%	11%	3	4	1.50	26.0	NIL	N- 50%	Furn/Home Furnishings	78
1396	Teradyne Inc.	TER	79.20	13%	12%	3	3	1.10	21.1	0.5	N- 25%	Semiconductor Equip	3
369	Texas Roadhouse	TXRH	62.01	12%	10%	3	3	0.90	NMF	NIL	35-100%	Restaurant	75
2635	Tyler Technologies	TYL	346.69	22%	10%	2	3	0.75	64.2	NIL	N- 35%	IT Services	15
1123	UFP Industries	UFPI	56.38	13%	10%	2	3	1.10	16.3	0.9	15- 75%	Building Materials	38
815	UnitedHealth Group	UNH	303.23	14%	11%	2	1	1.05	17.4	1.6	20- 45%	Medical Services	33
816	Universal Health 'B'	UHS	104.41	13%	10%	4	3	1.25	9.8	NIL	80-175%	Medical Services	33
2613	VMware, Inc.	VMW	142.99	20%	10%	2	3	0.90	23.5	NIL	10- 70%	Computer Software	2
347	Wabtec Corp.	WAB	62.96	14%	10%	3	3	1.25	16.9	0.8	60-140%	Railroad	28
1578	Wheaton Precious Met.	WPM	48.29	9%	12%	2	3	0.65	38.9	0.8	N- 25%	Precious Metals	5

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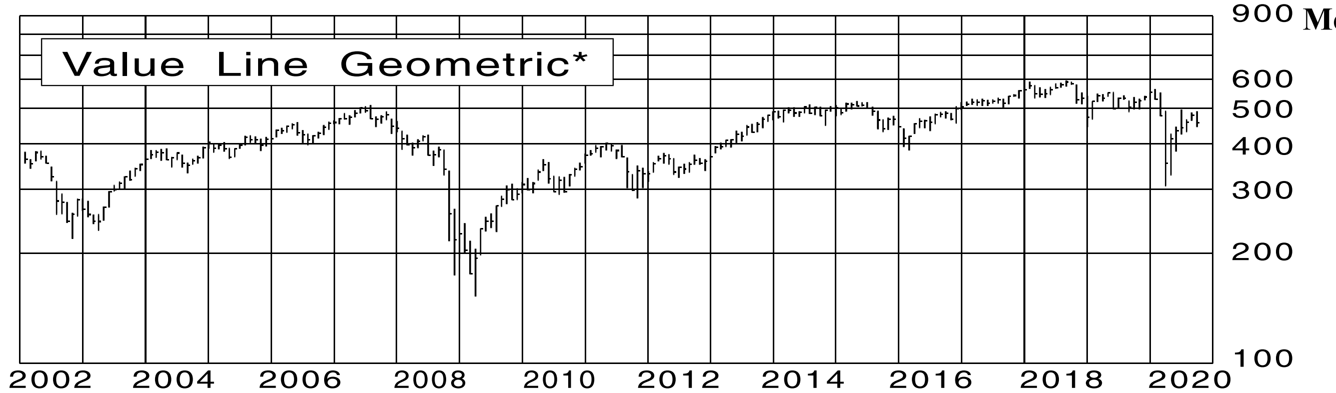
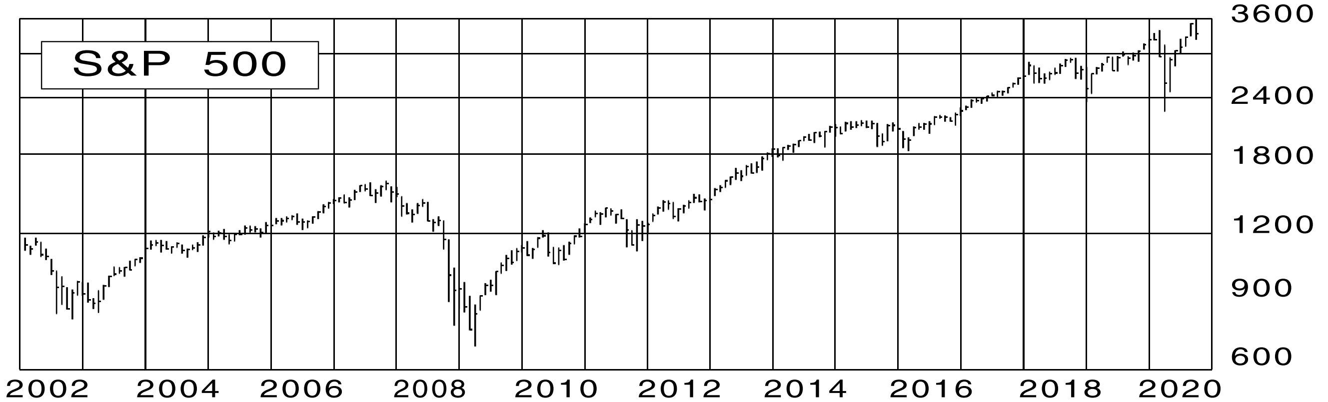
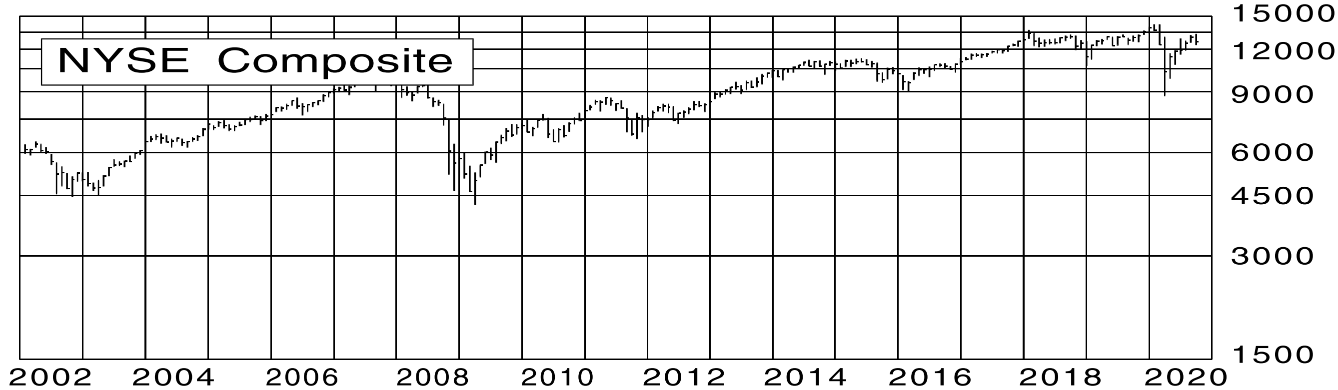
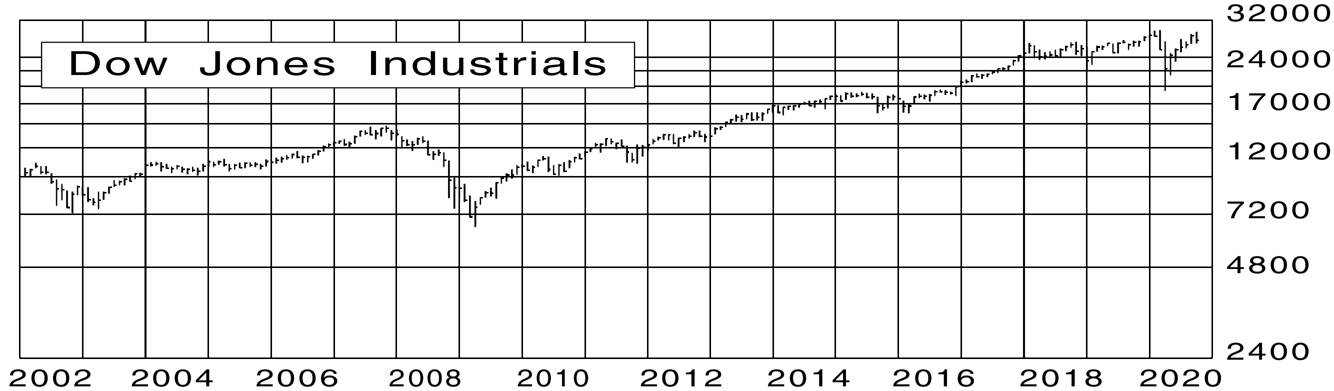
McKenzie









AVISTA CORP. NYSE-AVA

RECENT PRICE	35.67	P/E RATIO	19.3 (Trailing: 18.5 Median: 17.0)	RELATIVE P/E RATIO	0.94	DIV'D YLD	4.6%	VALUE LINE

TIMELINESS 3 New 12/14/18
SAFETY 2 Raised 5/7/10
TECHNICAL 3 Lowered 6/12/20
BETA .95 (1.00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$27-$66 $47 (30%)

2023-25 PROJECTIONS

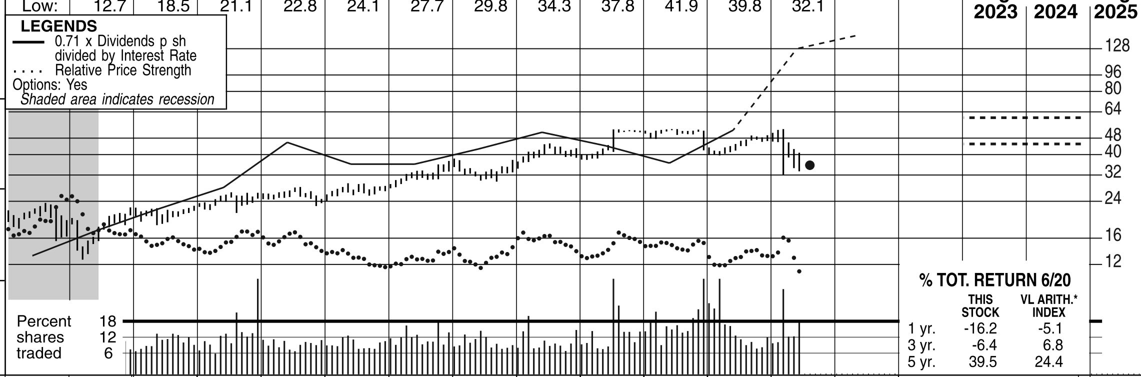
	Price	Gain	Ann'l Total Return
High	60	(+70%)	17%
Low	45	(+25%)	10%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	121	121	122
to Sell	103	120	128
Hld's(000)	53961	54694	53448

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	22.4	22.8	26.5	28.0	29.3	37.4	38.3	45.2	52.8	52.9	49.5	53.0
Low:	12.7	18.5	21.1	22.8	24.1	27.7	29.8	34.3	37.8	41.9	39.8	32.1

LEGENDS
— 0.71 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range 2023 2024 2025

% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-16.2	-5.1
3 yr.	-6.4	6.8
5 yr.	39.5	24.4

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
23.76	27.98	28.68	26.80	30.77	27.58	27.29	27.73	25.86	26.94	23.66	23.83	22.47	22.08	21.27	20.03	*18.85*	*19.30*	Revenues per sh	*20.50*
2.35	2.72	4.27	2.93	3.98	4.45	3.62	3.78	3.70	4.36	4.36	4.92	5.30	4.87	5.01	6.06	*5.00*	*5.35*	"Cash Flow" per sh	*6.00*
.73	.92	1.47	.72	1.36	1.58	1.65	1.72	1.32	1.85	1.84	1.89	2.15	1.95	2.07	2.97	*1.85*	*2.05*	Earnings per sh A	*2.50*
.52	.55	.57	.60	.69	.81	1.00	1.10	1.16	1.22	1.27	1.32	1.37	1.43	1.49	1.55	*1.62*	*1.68*	Div'd Decl'd per sh B ■	*1.90*
2.47	3.23	3.14	4.04	4.09	3.86	3.64	4.20	4.61	5.05	5.47	6.46	6.34	6.30	6.46	6.59	*6.20*	*6.15*	Cap'l Spending per sh	*6.00*
15.54	15.87	17.46	17.27	18.30	19.17	19.71	20.30	21.06	21.61	23.84	24.53	25.69	26.41	26.99	28.87	*29.35*	*29.85*	Book Value per sh C	*31.75*
48.47	48.59	52.51	52.91	54.49	54.84	57.12	58.42	59.81	60.08	62.24	62.31	64.19	65.49	65.69	67.18	*69.00*	*70.00*	Common Shs Outst'g D	*73.00*
24.4	19.4	15.4	30.9	15.0	11.4	12.7	14.1	19.3	14.6	17.3	17.6	18.8	23.4	24.5	15.0	*Bold figures are*		Avg Ann'l P/E Ratio	*20.0*
1.29	1.03	.83	1.64	.90	.76	.81	.88	1.23	.82	.91	.89	.99	1.18	1.32	.81	*Value Line*		Relative P/E Ratio	*1.10*
2.9%	3.0%	2.5%	2.7%	3.4%	4.5%	4.8%	4.5%	4.6%	4.5%	4.0%	4.0%	3.4%	3.1%	2.9%	3.5%	*estimates*		Avg Ann'l Div'd Yield	*3.8%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $2132.5 mill. **Due in 5 Yrs** $515.5 mill.
LT Debt $1895.5 mill. **LT Interest** $86.9 mill.
Incl. $51.5 mill. debt to affiliated trusts; $54.5 mill. capitalized leases.
(LT interest earned: 2.6x)
Leases, Uncapitalized Annual Rentals $4.4 mill.
Pension Assets-12/19 $642.1 mill. **Oblig** $742.4 mill.
Pfd Stock None

Common Stock 67,293,360 shs.
as of 5/1/20
MARKET CAP: $2.4 billion (Mid Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1558.7	1619.8	1547.0	1618.5	1472.6	1484.8	1442.5	1445.9	1396.9	1345.6	*1300*	*1350*	Revenues ($mill)	*1500*
92.4	100.2	78.2	111.1	114.2	118.1	137.2	126.1	136.4	197.0	*125*	*145*	Net Profit ($mill)	*175*
35.0%	35.4%	34.4%	36.0%	37.6%	36.3%	36.3%	36.5%	16.0%	13.8%	*7.5%*	*16.5%*	Income Tax Rate	*16.5%*
4.0%	5.2%	8.3%	8.8%	11.1%	10.1%	8.1%	7.9%	7.7%	5.5%	*9.0%*	*8.0%*	AFUDC % to Net Profit	*6.0%*
51.6%	51.4%	50.8%	51.4%	51.0%	50.0%	51.2%	47.2%	50.5%	49.4%	*50.5%*	*49.5%*	Long-Term Debt Ratio	*51.0%*
48.4%	48.6%	49.2%	48.6%	49.0%	50.0%	48.8%	52.8%	49.5%	50.6%	*49.5%*	*50.5%*	Common Equity Ratio	*49.0%*
2325.3	2439.9	2561.2	2669.7	3027.3	3060.3	3379.0	3273.2	3580.3	3834.6	*4085*	*4130*	Total Capital ($mill)	*4750*
2714.2	2860.8	3023.7	3202.4	3620.0	3898.6	4147.5	4398.8	4648.9	4797.0	*5005*	*5205*	Net Plant ($mill)	*5725*
5.4%	5.5%	4.3%	5.4%	4.9%	5.1%	5.3%	5.0%	4.8%	6.2%	*4.0%*	*4.5%*	Return on Total Cap'l	*5.0%*
8.2%	8.5%	6.2%	8.6%	7.7%	7.7%	8.3%	7.3%	7.7%	10.2%	*6.0%*	*7.0%*	Return on Shr. Equity	*7.5%*
8.2%	8.5%	6.2%	8.6%	7.7%	7.7%	8.3%	7.3%	7.7%	10.2%	*6.0%*	*7.0%*	Return on Com Equity E	*7.5%*
3.3%	3.1%	.8%	2.9%	2.4%	2.3%	3.0%	1.9%	2.2%	4.9%	*.5%*	*1.0%*	Retained to Com Eq	*1.5%*
60%	64%	88%	66%	69%	70%	64%	73%	72%	52%	*88%*	*82%*	All Div'ds to Net Prof	*78%*

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+4.7	-3.7	+.2
Avg. Indust. Use (MWH)	1367	1344	1296
Avg. Indust. Revs. per KWH (¢)	6.11	6.20	6.26
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw) F	1681	1716	1656
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.2	+1.4	+1.3
Fixed Charge Cov. (%)	296	259	202

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-3.0%	-3.5%	*-.5%*
"Cash Flow"	3.5%	5.0%	*2.0%*
Earnings	6.5%	7.0%	*1.0%*
Dividends	8.0%	4.0%	*4.0%*
Book Value	4.0%	4.5%	*2.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	436.5	314.5	297.1	397.8	1445.9
2018	409.4	319.3	296.0	372.2	1396.9
2019	396.5	300.8	283.8	364.5	1345.6
2020	390.2	*284.8*	*270*	*355*	*1300*
2021	*400*	*300*	*280*	*370*	*1350*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.96	.34	.07	.58	1.95
2018	.83	.39	.15	.70	2.07
2019	1.76	.38	.08	.76	2.97
2020	.72	*.33*	*.10*	*.70*	*1.85*
2021	*.80*	*.40*	*.10*	*.75*	*2.05*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.3425	.3425	.3425	.3425	1.37
2017	.3575	.3575	.3575	.3575	1.43
2018	.3725	.3725	.3725	.3725	1.49
2019	.3875	.3875	.3875	.3875	1.55
2020	.405	.405			

BUSINESS: Avista Corporation (formerly The Washington Water Power Company) supplies electricity & gas in eastern Washington & northern Idaho. Supplies electricity to part of Alaska & gas to part of Oregon. Customers: 410,000 electric, 361,000 gas. Acq'd Alaska Electric Light and Power 7/14. Sold Ecova energy-management sub. 6/14. Electric rev. breakdown: residential, 39%; commercial, 33%; industrial, 11%; wholesale, 8%; other, 9%. Generating sources: gas & coal, 34%; hydro, 30%; purch., 36%. Fuel costs: 33% of revs. '19 reported depr. rate (Avista Utilities): 3.3%. Has 1,900 employees. Chairman: Scott L. Morris. Pres. & CEO: Dennis Vermillion. Inc.: WA. Address: 1411 E. Mission Ave., Spokane, WA 99202-2600. Tel.: 509-489-0500. Internet: www.avistacorp.com.

We have cut our 2020 and 2021 earnings estimates for Avista. Management lowered its targeted range for this year from $1.95-$2.15 a share to $1.75-$1.95 a share. The effects of the coronavirus pandemic have hurt Avista's utility and nonutility businesses. About 10% of the company's utility volume is not protected by regulatory mechanisms that decouple revenues and sales, and some industrial customers had their operations shut for several weeks. In addition, the effects of the weak economy prompted the company to postpone planned rate filings in Washington and Idaho by a few months, to the fourth quarter of 2020. This delay in obtaining rate relief will affect Avista's earning power in 2021. Rate orders are due in Washington 11 months after the filing date and in Idaho seven months after the filing date, so any rate relief Avista obtains from these applications won't have much effect on income until 2022. All told, we reduced our 2020 and 2021 share-net estimates by $0.15 and $0.10, respectively. The stock price is down 26% in 2020, more than most utility issues. We also cut the Financial Strength rating from A to B++.

Earnings were going to decline this year, anyway. The comparison is difficult because Avista booked a $1.01-a-share breakup fee in the first quarter of 2019 after a proposed takeover of the company failed to win regulatory approval. We include merger-related costs and benefits in our earnings presentation.

The company has a gas rate case pending in Oregon. Avista had filed for an increase of $6.8 million (9.8%), based on a 9.9% return on equity and a 50% common-equity ratio. The utility reached a partial settlement calling for a 9.4% ROE (the same as is currently allowed).

Avista is making some financing moves. This year, the company plans to add $165 million of long-term debt and up to $70 million of common equity. The latter will be done though an at-the-market issuance program.

The dividend yield of this stock is above the utility average. Total return potential over the 18-month span is above average, as well. Prospects for the 3- to 5-year period are unspectacular, but superior to those of most utility equities.

Paul E. Debbas, CFA *July 24, 2020*

(A) Diluted EPS. Excl. nonrec. gain (loss): '14, 9¢; '17, (16¢); gains on disc. ops.: '14, $1.17; '15, 8¢. '19 EPS don't sum due to rounding. Next earnings report due early Aug. (B) Div'ds paid in mid-Mar., June, Sept. & Dec. ■ Div'd reinvestment plan avail. (C) Incl. deferred chgs. In '19: $10.77/sh. (D) In mill. (E) Rate base: Net orig. cost. Rate all'd on com. eq. in WA in '20: 9.4%; in ID in '17: 9.5%; in OR in '17: 9.4%; earned on avg. com. eq., '19: 10.6%. Regulatory Climate: WA, Below Average; ID, Above Average. (F) Winter peak in '17.

Company's Financial Strength	B++
Stock's Price Stability	70
Price Growth Persistence	70
Earnings Predictability	65

BLACK HILLS CORP. NYSE-BKH

RECENT PRICE 60.02 | P/E RATIO 16.9 (Trailing: 18.1, Median: 19.0) | RELATIVE P/E RATIO 0.82 | DIV'D YLD 3.7% | VALUE LINE

TIMELINESS 3 Lowered 9/20/19
SAFETY 2 Raised 5/1/15
TECHNICAL 4 Lowered 7/24/20
BETA 1.00 (1.00 = Market)

18-Month Target Price Range
Low-High **Midpoint (% to Mid)**
$46-$114 $80 (35%)

2023-25 PROJECTIONS

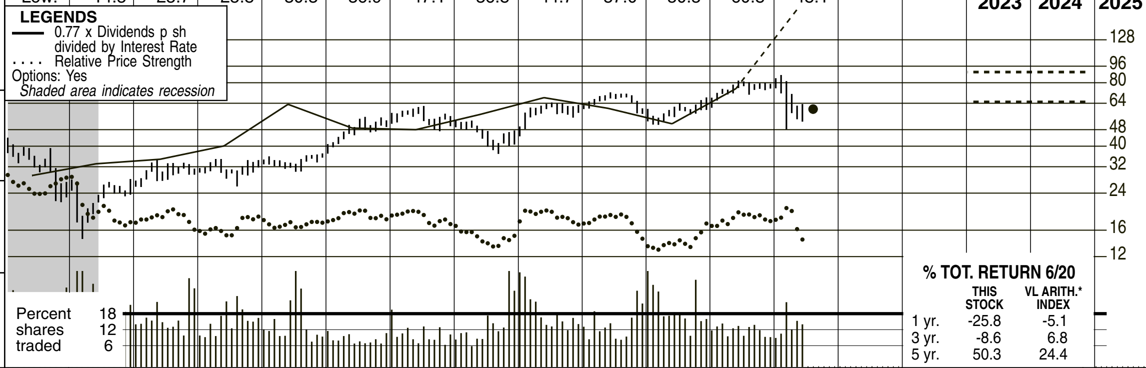
	Price	Gain	Ann'l Total Return
High	90	(+50%)	*14%*
Low	65	(+10%)	*6%*

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	145	144	139
to Sell	133	137	143
Hld's(000)	53817	53772	54065

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	28.0	34.5	34.8	37.0	55.1	62.1	53.4	64.6	72.0	68.2	82.0	87.1
Low:	14.5	25.7	25.8	30.3	36.9	47.1	36.8	44.7	57.0	50.5	60.8	48.1

LEGENDS
— 0.77 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-25.8	-5.1
3 yr.	-8.6	6.8
5 yr.	50.3	24.4

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
34.54	41.97	19.69	18.41	26.03	32.58	33.29	28.96	26.55	28.67	31.20	25.48	29.47	31.38	29.24	28.22	*25.50*	*26.55*	Revenues per sh	*29.00*
4.46	4.81	5.04	5.29	2.95	5.41	4.88	4.01	5.59	5.93	6.25	5.67	6.28	7.15	6.61	7.02	*7.15*	*7.50*	"Cash Flow" per sh	*8.75*
1.74	2.11	2.21	2.68	.18	2.32	1.66	1.01	1.97	2.61	2.89	2.83	2.63	3.38	3.47	3.53	*3.55*	*3.70*	Earnings per sh A	*4.25*
1.24	1.28	1.32	1.37	1.40	1.42	1.44	1.46	1.48	1.52	1.56	1.62	1.68	1.81	1.93	2.05	*2.17*	*2.31*	Div'd Decl'd per sh B ■	*2.75*
2.80	4.18	9.24	6.92	8.51	8.90	12.04	10.03	7.90	7.97	8.92	8.90	8.89	6.09	7.62	13.31	*10.65*	*8.65*	Cap'l Spending per sh	*7.25*
22.43	22.29	23.68	25.66	27.19	27.84	28.02	27.53	27.88	29.39	30.80	28.63	30.25	31.92	36.36	38.42	*40.60*	*42.35*	Book Value per sh C	*46.75*
32.48	33.16	33.37	37.80	38.64	38.97	39.27	43.92	44.21	44.50	44.67	51.19	53.38	53.54	60.00	61.48	*62.75*	*64.00*	Common Shs Outst'g D	*64.00*
17.1	17.3	15.8	15.0	NMF	9.9	18.1	31.1	17.1	18.2	19.0	16.1	22.3	19.5	16.8	21.2	*Bold figures are*		Avg Ann'l P/E Ratio	*18.5*
.90	.92	.85	.80	NMF	.66	1.15	1.95	1.09	1.02	1.00	.81	1.17	.98	.91	1.13	*Value Line*		Relative P/E Ratio	*1.05*
4.2%	3.5%	3.8%	3.4%	4.2%	6.2%	4.8%	4.6%	4.4%	3.2%	2.8%	3.5%	2.9%	2.7%	3.3%	2.7%	*estimates*		Avg Ann'l Div'd Yield	*3.5%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $3461.8 mill. **Due in 5 Yrs** $861.1 mill.
LT Debt $3136.9 mill. **LT Interest** $131.7 mill.
(LT interest earned: 3.1x)
Leases, Uncapitalized Annual rentals $1.0 mill.

Pension Assets-12/19 $434.3 mill. **Oblig** $485.4 mill.

Pfd Stock None

Common Stock 62,749,727 shs. **as of 4/30/20**

MARKET CAP: $3.8 billion (Mid Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1307.3	1272.2	1173.9	1275.9	1393.6	1304.6	1573.0	1680.3	1754.3	1734.9	*1600*	*1700*	Revenues ($mill)	*1850*
64.6	40.4	86.9	115.8	128.8	128.3	140.3	186.5	192.5	214.5	*220*	*235*	Net Profit ($mill)	*265*
26.4%	31.1%	35.5%	34.7%	33.7%	35.8%	25.1%	28.7%	19.2%	13.0%	*13.0%*	*13.0%*	Income Tax Rate	*13.0%*
28.0%	65.0%	5.4%	2.4%	2.4%	2.7%	5.3%	2.7%	1.4%	3.3%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*2.0%*
51.9%	51.4%	43.2%	51.6%	47.9%	56.0%	66.5%	64.5%	57.5%	57.1%	*55.0%*	*53.5%*	Long-Term Debt Ratio	*52.0%*
48.1%	48.6%	56.8%	48.4%	52.1%	44.0%	33.5%	35.5%	42.5%	42.9%	*45.0%*	*46.5%*	Common Equity Ratio	*48.0%*
2286.3	2489.7	2171.4	2704.7	2643.6	3332.7	4825.8	4818.4	5132.4	5502.2	*5690*	*5850*	Total Capital ($mill)	*6200*
2495.4	2789.6	2742.7	2990.3	3239.4	3259.1	4469.0	4541.4	4854.9	5503.2	*5940*	*6255*	Net Plant ($mill)	*6875*
4.4%	3.3%	5.5%	5.5%	6.1%	4.9%	4.0%	5.2%	5.0%	4.9%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.5%*
5.9%	3.3%	7.1%	8.9%	9.4%	8.8%	8.7%	10.9%	8.8%	9.1%	*8.5%*	*8.5%*	Return on Shr. Equity	*9.0%*
5.9%	3.3%	7.1%	8.9%	9.4%	8.8%	8.7%	10.9%	8.8%	9.1%	*8.5%*	*8.5%*	Return on Com Equity E	*9.0%*
.7%	NMF	1.8%	3.7%	4.3%	3.8%	3.3%	5.3%	3.9%	3.8%	*3.5%*	*3.5%*	Retained to Com Eq	*3.0%*
87%	NMF	75%	58%	54%	57%	62%	52%	55%	58%	*61%*	*62%*	All Div'ds to Net Prof	*66%*

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+.9	+2.7	+2.1
Avg. Indust. Use (MWH)	18376	19789	21406
Avg. Indust. Revs. per KWH (¢)	7.69	7.41	7.38
Capacity at Yearend (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	1094	1104	1022
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.8	+.8	+1.1
Fixed Charge Cov. (%)	296	276	278

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	1.5%	.5%	*-.5%*
"Cash Flow"	4.5%	3.0%	*4.0%*
Earnings	7.0%	7.0%	*3.5%*
Dividends	3.5%	5.0%	*6.0%*
Book Value	3.0%	4.0%	*4.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	547.5	341.9	335.6	455.3	1680.3
2018	575.4	355.7	322.0	501.2	1754.3
2019	597.8	333.9	325.5	477.7	1734.9
2020	537.1	*300*	*300*	*462.9*	*1600*
2021	*565*	*330*	*315*	*490*	*1700*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.42	.41	.52	1.03	3.38
2018	1.59	.45	.32	1.11	3.47
2019	1.73	.24	.44	1.13	3.53
2020	1.73	*.35*	*.42*	*1.05*	*3.55*
2021	*1.75*	*.40*	*.45*	*1.10*	*3.70*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.42	.42	.42	.42	1.68
2017	.445	.445	.445	.475	1.81
2018	.475	.475	.475	.505	1.93
2019	.505	.505	.505	.535	2.05
2020	.535	.535			

BUSINESS: Black Hills Corporation is a holding company for Black Hills Energy, which serves 214,000 electric customers in CO, SD, WY and MT, and 1.1 million gas customers in NE, IA, KS, CO, WY, and AR. Has coal mining sub. Acq'd Cheyenne Light 1/05; utility ops. from Aquila 7/08; SourceGas 2/16. Discont. telecom in '05; oil marketing in '06; gas marketing in '11; gas & oil E&P in '17. Electric rev. breakdown: res'l, 30%; comm'l, 35%; ind'l, 18%; other, 17%. Generating sources: coal, 30%; other, 12%; purch., 58%. Fuel costs: 33% of revs. '19 deprec. rate: 3.2%. Has 2,900 employees. Chairman: David R. Emery. Pres. & CEO: Linn Evans. Inc.: SD. Address: 7001 Mount Rushmore Rd., P.O. Box 1400, Rapid City, SD 57709-1400. Tel.: 605-721-1700. Internet: www.blackhillscorp.com.

Upon issuing first-quarter results in early May, Black Hills Corporation trimmed its earnings guidance for 2020. The company reduced its targeted range by a dime a share, from $3.55-$3.75 to $3.45-$3.65. This was largely due to the expected net effects of the coronavirus problem, which was expected to reduce share net by $0.05-$0.10. We are sticking with our 2020 estimate of $3.55, which is now at the midpoint of Black Hills' targeted range.

We lowered our 2021 share-profit estimate by a dime, to $3.70. We figure the economy will be in better shape next year. However, any growth from Black Hills' utility operations will come off a lower base.

The company filed a gas rate case in Nebraska. This followed the consolidation of Black Hills' two utilities in the state into one entity. The request was for an increase of $17.3 million, based on a 10% return on equity and a 50% common-equity ratio. An order is expected no later than the first quarter of 2021. This might come too late for some of the seasonally strong first period.

Other rate applications are probably coming. Black Hills has asked for reconsideration or a rehearing for an unfavorable gas rate decision in Colorado that had a modest negative effect on earnings. Another rate case there might be coming. Black Hills hired a head of regulatory affairs for Colorado, which might help. A gas rate filing is probably upcoming in Arkansas, but the timing has not yet been determined.

Black Hills has probably completed its major financing moves for 2020. In February, before the market turmoil began, the company raised $100 million through the sale of 1.2 million common shares. In June, the parent issued $400 million of 10-year notes at an attractive rate of 2.5%.

This stock has an average dividend yield for a utility. The stock price has declined 24% this year, which is understandable in view of the reduction in earnings guidance. Total return potential is strong for the next 18 months, but not nearly as impressive for the 3- to 5-year period.

Paul E. Debbas, CFA *July 24, 2020*

(A) Dil. EPS. Excl. nonrec. gains (losses): '08, ($1.55); '09, (28¢); '10, 10¢; '15, ($3.54); '16, ($1.26); '17, 14¢; '18, $1.31; '19, (25¢); gains (losses) on disc. ops.: '08, $4.12; '09, 7¢; '11, 23¢; '12, (16¢); '17, (31¢); '18, (12¢). '19 EPS don't sum due to rounding. Next egs. due early Aug. **(B)** Div'ds pd. early Mar., Jun., Sept., & Dec. ■ Div'd reinv. plan avail. **(C)** Incl. def'd chgs. In '19: $25.06/sh. **(D)** In mill. **(E)** Rate base: Net orig. cost. Rate all'd on com. eq. in SD in '15: none; in CO in '17: 9.37%; earn. on avg. com. eq., '19: 9.4%. Reg. Climate: Avg.

Company's Financial Strength	A
Stock's Price Stability	75
Price Growth Persistence	65
Earnings Predictability	75

NORTHWESTERN NYSE-NWE

RECENT PRICE 53.13 | P/E RATIO 16.1 (Trailing: 17.2, Median: 17.0) | RELATIVE P/E RATIO 0.78 | DIV'D YLD 4.6% | VALUE LINE

TIMELINESS 3 Lowered 5/8/20
SAFETY 2 Raised 7/27/18
TECHNICAL 3 Raised 7/24/20
BETA .90 (1.00 = Market)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	26.8	30.6	36.6	38.0	47.2	58.7	59.7	63.8	64.5	65.7	76.7	80.5
Low:	18.5	23.8	27.4	33.0	35.1	42.6	48.4	52.2	55.7	50.0	57.3	45.1

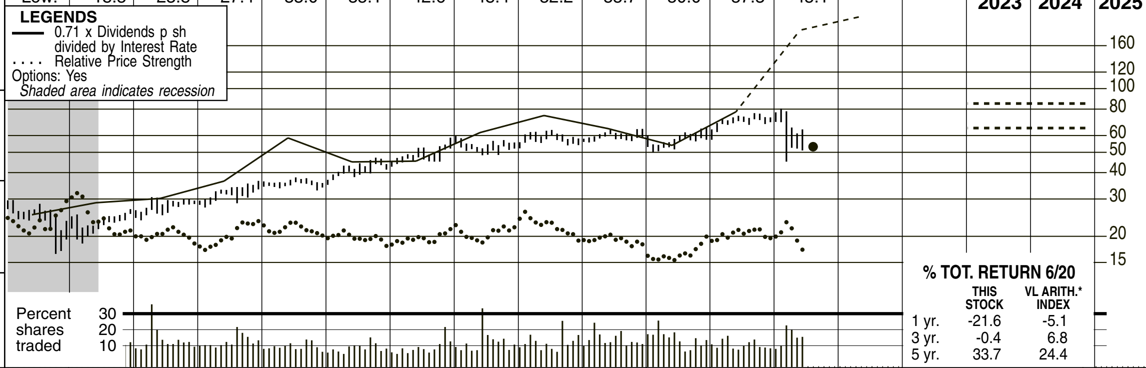
18-Month Target Price Range
Low-High Midpoint (% to Mid)
$44-$101 $73 (35%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	85	(+60%)	16%
Low	65	(+20%)	9%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	113	127	127
to Sell	150	133	144
Hld's(000)	49607	49394	48390



% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-21.6	-5.1
3 yr.	-0.4	6.8
5 yr.	33.7	24.4

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
29.18	32.57	31.49	30.79	35.09	31.72	30.66	30.80	28.76	29.80	25.68	25.21	26.01	26.45	23.81	24.93	23.75	24.25	Revenues per sh	26.50
3.20	4.00	3.62	3.70	4.40	4.62	4.76	5.42	5.18	5.45	5.39	5.92	6.74	6.76	6.96	7.07	6.85	7.15	"Cash Flow" per sh	8.00
d14.32	1.71	1.31	1.44	1.77	2.02	2.14	2.53	2.26	2.46	2.99	2.90	3.39	3.34	3.40	3.53	3.30	3.50	Earnings per sh A	3.75
- -	1.00	1.24	1.28	1.32	1.34	1.36	1.44	1.48	1.52	1.60	1.92	2.00	2.10	2.20	2.30	2.40	2.50	Div'd Decl'd per sh B ■ †	2.80
2.25	2.26	2.81	3.00	3.47	5.26	6.30	5.20	5.89	5.95	5.76	5.89	5.96	5.60	5.64	6.26	7.90	7.85	Cap'l Spending per sh	6.00
19.92	20.60	20.65	21.12	21.25	21.86	22.64	23.68	25.09	26.60	31.50	33.22	34.68	36.44	38.60	40.42	41.80	43.00	Book Value per sh C	45.75
35.60	35.79	35.97	38.97	35.93	36.00	36.23	36.28	37.22	38.75	46.91	48.17	48.33	49.37	50.32	50.45	50.50	51.50	Common Shs Outst'g D	53.00
- -	17.1	26.0	21.7	13.9	11.5	12.9	12.6	15.7	16.9	16.2	18.4	17.2	17.8	16.8	19.9	Bold figures are		Avg Ann'l P/E Ratio	19.5
- -	.91	1.40	1.15	.84	.77	.82	.79	1.00	.95	.85	.93	.90	.90	.91	1.08	Value Line		Relative P/E Ratio	1.10
- -	3.4%	3.6%	4.1%	5.4%	5.7%	4.9%	4.5%	4.2%	3.7%	3.3%	3.6%	3.4%	3.5%	3.9%	3.3%	estimates		Avg Ann'l Div'd Yield	3.8%

CAPITAL STRUCTURE as of 3/31/20
Total Debt $2258.7 mill. **Due in 5 Yrs** $448.1 mill.
LT Debt $2256.2 mill. **LT Interest** $83.7 mill.
Incl. $16.8 mill. capitalized leases.
(LT interest earned: 2.8x)

Pension Assets-12/19 $609.0 mill. **Oblig** $735.6 mill.

Pfd Stock None

Common Stock 50,568,881 shs. as of 4/17/20

MARKET CAP: $2.7 billion (Mid Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1110.7	1117.3	1070.3	1154.5	1204.9	1214.3	1257.2	1305.7	1198.1	1257.9	1200	1250	Revenues ($mill)	1400
77.4	92.6	83.7	94.0	120.7	138.4	164.2	162.7	171.1	179.3	170	180	Net Profit ($mill)	200
25.0%	9.8%	9.6%	13.2%	- -	13.7%	- -	7.6%	7.6%	1.6%	NMF	Nil	Income Tax Rate	10.0%
14.2%	3.3%	9.4%	8.7%	8.9%	9.8%	4.3%	5.2%	3.4%	4.6%	6.0%	6.0%	AFUDC % to Net Profit	4.0%
57.2%	52.2%	53.8%	53.5%	53.4%	53.1%	52.0%	50.2%	52.2%	52.5%	49.0%	51.0%	Long-Term Debt Ratio	50.0%
42.8%	47.8%	46.2%	46.5%	46.6%	46.9%	48.0%	49.8%	47.8%	47.5%	51.0%	49.0%	Common Equity Ratio	50.0%
1916.4	1797.1	2020.7	2215.7	3168.0	3408.6	3493.9	3614.5	4064.6	4289.8	4120	4520	Total Capital ($mill)	4825
2118.0	2213.3	2435.6	2690.1	3758.0	4059.5	4214.9	4358.3	4521.3	4700.9	4920	5140	Net Plant ($mill)	5500
5.9%	7.0%	5.5%	5.5%	4.8%	5.2%	5.9%	5.6%	5.2%	5.2%	5.0%	5.0%	Return on Total Cap'l	5.0%
9.4%	10.8%	9.0%	9.1%	8.2%	8.6%	9.8%	9.0%	8.8%	8.8%	8.0%	8.0%	Return on Shr. Equity	8.5%
9.4%	10.8%	9.0%	9.1%	8.2%	8.6%	9.8%	9.0%	8.8%	8.8%	8.0%	8.0%	Return on Com Equity E	8.5%
3.5%	4.7%	3.2%	3.5%	3.8%	3.0%	4.1%	3.4%	3.2%	3.1%	2.0%	2.5%	Retained to Com Eq	2.0%
63%	56%	65%	61%	54%	65%	58%	62%	64%	64%	72%	71%	All Div'ds to Net Prof	73%

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+3.8	+2.9	+4.6
Avg. Indust. Use (MWH)	30987	34573	37808
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Winter (Mw)	2133	2173	2237
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.3	+1.2	+1.2
Fixed Charge Cov. (%)	275	275	284

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-2.5%	-2.0%	1.0%
"Cash Flow"	5.0%	5.5%	2.5%
Earnings	7.0%	6.0%	1.5%
Dividends	5.5%	7.5%	4.0%
Book Value	6.0%	7.0%	3.0%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	367.3	283.9	309.9	344.6	1305.7
2018	341.5	261.8	279.9	314.9	1198.1
2019	384.2	270.7	274.8	328.2	1257.9
2020	335.3	254.7	290	320	1200
2021	355	270	295	330	1250

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.17	.44	.75	.98	3.34
2018	1.18	.61	.56	1.06	3.40
2019	1.44	.49	.42	1.18	3.53
2020	1.00	.45	.65	1.20	3.30
2021	1.15	.50	.65	1.20	3.50

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.50	.50	.50	.50	2.00
2017	.525	.525	.525	.525	2.10
2018	.55	.55	.55	.55	2.20
2019	.575	.575	.575	.575	2.30
2020	.60	.60			

BUSINESS: NorthWestern Corporation (doing business as NorthWestern Energy) supplies electricity & gas in the Upper Midwest and Northwest, serving 443,000 electric customers in Montana and South Dakota and 292,000 gas customers in Montana (85% of gross margin), South Dakota (14%), and Nebraska (1%). Electric revenue breakdown: residential, 39%; commercial, 47%; industrial, 4%; other, 10%. Generating sources: hydro, 34%; coal, 28%; wind, 5%; other, 3%; purchased, 30%. Fuel costs: 25% of revenues. '19 reported deprec. rate: 2.8%. Has 1,500 employees. Chairman: Stephen P. Adik. President & CEO: Robert C. Rowe. Inc.: Delaware. Address: 3010 West 69th Street, Sioux Falls, South Dakota 57108. Tel.: 605-978-2900. Internet: www.northwesternenergy.com.

Upon reporting first-quarter earnings in late April, NorthWestern cut its guidance for 2020. Previously, the company expected share net to wind up in a range of $3.45-$3.60. Now, management's target is $3.30-$3.45. This is only partly due to the economic weakness caused by the coronavirus, which was felt most noticeably in the second quarter. First-period profits fell short of management's expectation due to some unusual costs. NorthWestern bases its guidance on normal weather, but we note that a mild winter reduced share earnings by $0.06. Putting it all together, we lowered our 2020 earnings estimate from $3.45 a share to $3.30. Because growth in 2021 will come off a lower base, we trimmed our estimate from $3.55 a share to $3.50.

The utility needs additional generating capacity. NorthWestern has more exposure to the purchased-power markets than other electric companies in the region. The utility intends to build a gas-fired facility in South Dakota, which will add about 60 megawatts of capacity in late 2021 at an expected cost of $80 million. NorthWestern also agreed to pay 50 cents to Puget Sound Energy for a 12.5% stake (92.5 mw) in Unit 4 of the Colstrip coal-fired plant. NorthWestern would sell 45 mw back to Puget Sound Energy and use the remainder to serve its customers. (This deal was originally twice the size, but was halved after another company exercised its purchase option.) The transaction requires the approval of the Montana commission. NorthWestern issued a request for proposals for up to 280 mw of peaking and intermediate capacity for commercial operation in early 2023. The successful project(s) are expected to be selected by early 2021.

The company added some debt in April, and plans to add some equity as well. In the second quarter, NorthWestern issued a $100 million term loan and $150 million of long-term debt. The company plans to issue common equity, possibly in late 2020 but more likely in 2021.

The stock's yield is above the utility average. The price has fallen 26% in 2020, affected by the cut in earnings guidance. Total return potential is strong for the 18-month span, but not as impressive for the 3- to 5-year period.

Paul E. Debbas, CFA *July 24, 2020*

(A) Diluted EPS. Excl. gain (loss) on disc. ops.: '05, (6¢); '06, 1¢; nonrec. gains: '12, 39¢ net; '15, 27¢; '18, 52¢; '19, 45¢. '18 EPS don't sum due to rounding. Next earnings report due late July. (B) Div'ds historically paid in late Mar., June, Sept. & Dec. ■ Div'd reinvestment plan avail. (C) Incl. def'd charges. In '19: $16.68/sh. (D) In mill. (E) Rate base: Net orig. cost. Rate allowed on com. eq. in MT in '19 (elec.): 9.65%; in '17 (gas): 9.55%; in SD in '15: none spec.; in NE in '07: 10.4%; earned on avg. com. eq., '19: 9.0%. Reg. Climate: Below Avg.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	75
Earnings Predictability	85

SEMPRA ENERGY NYSE-SRE

RECENT PRICE	120.17	P/E RATIO	16.7 (Trailing: 17.9 / Median: 20.0)	RELATIVE P/E RATIO	0.81	DIV'D YLD	3.6%	VALUE LINE

TIMELINESS 1 Raised 7/24/20
SAFETY 2 Raised 7/29/16
TECHNICAL 3 Raised 6/5/20
BETA .95 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$96-$219	$158 (30%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	190	(+60%)	*15%*
Low	140	(+15%)	*8%*

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	368	424	331
to Sell	293	276	425
Hld's(000)	253080	248880	245315

High:	57.2	57.2	56.0	72.9	93.0	116.3	116.2	114.7	123.0	127.2	154.5	161.9
Low:	36.4	43.9	44.8	54.7	70.6	86.7	89.4	86.7	99.7	100.5	106.1	88.0

Target Price Range 2023 | 2024 | 2025

% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-11.3	-5.1
3 yr.	15.0	6.8
5 yr.	37.9	24.4

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
40.18	45.64	44.89	43.79	44.21	32.88	37.44	41.83	39.80	43.18	44.80	41.20	40.71	44.59	42.69	37.12	***38.00***	***36.90***	**Revenues per sh**	***41.25***
6.58	5.96	6.74	6.93	7.40	7.94	7.76	8.58	8.92	8.87	9.41	10.32	9.50	10.57	11.07	11.14	***12.65***	***12.95***	**"Cash Flow" per sh**	***15.75***
3.93	3.52	4.23	4.26	4.43	4.78	4.02	4.47	4.35	4.22	4.63	5.23	4.24	4.63	5.48	5.97	***7.20***	***7.75***	**Earnings per sh A**	***9.50***
1.00	1.16	1.20	1.24	1.37	1.56	1.56	1.92	2.40	2.52	2.64	2.80	3.02	3.29	3.58	3.87	***4.18***	***4.50***	**Div'd Decl'd per sh B ■**	***5.60***
4.62	5.46	7.28	7.70	8.47	7.76	8.58	11.85	12.20	10.52	12.68	12.71	16.85	15.71	13.82	12.71	***18.10***	***16.00***	**Cap'l Spending per sh**	***12.00***
20.78	23.95	28.66	31.87	32.75	36.54	37.54	41.00	42.42	45.03	45.98	47.56	51.77	50.41	54.35	60.58	***72.40***	***77.00***	**Book Value per sh C**	***88.75***
234.18	257.19	262.01	261.21	243.32	246.51	240.45	239.93	242.37	244.46	246.33	248.30	250.15	251.36	273.77	291.71	***300.00***	***325.00***	**Common Shs Outst'g D**	***340.00***
8.6	11.8	11.5	14.0	11.8	10.1	12.6	11.8	14.9	19.7	21.9	19.7	24.4	24.3	20.4	22.5	***Bold figures are***		**Avg Ann'l P/E Ratio**	***17.5***
.45	.63	.62	.74	.71	.67	.80	.74	.95	1.11	1.15	.99	1.28	1.22	1.10	1.21	***Value Line***		**Relative P/E Ratio**	***.95***
2.9%	2.8%	2.5%	2.1%	2.6%	3.2%	3.1%	3.6%	3.7%	3.0%	2.6%	2.7%	2.9%	2.9%	3.2%	2.9%	***estimates***		**Avg Ann'l Div'd Yield**	***3.4%***
						9003.0	10036	9647.0	10557	11035	10231	10183	11207	11687	10829	***11400***	***12000***	**Revenues ($mill)**	***14000***
						1008.0	1088.0	1079.0	1060.0	1162.0	1314.0	1065.0	1169.0	1607.0	1825.0	***2400***	***2590***	**Net Profit ($mill)**	***3410***
						26.5%	25.3%	18.2%	26.5%	19.7%	19.2%	14.4%	24.5%	20.1%	17.9%	***18.0%***	***18.0%***	**Income Tax Rate**	***18.0%***
						11.3%	15.2%	17.2%	11.2%	14.4%	15.3%	22.2%	21.9%	12.6%	10.0%	***8.0%***	***7.0%***	**AFUDC % to Net Profit**	***6.0%***
						49.4%	50.4%	52.8%	50.5%	51.7%	52.6%	52.7%	56.4%	55.7%	51.0%	***48.0%***	***48.5%***	**Long-Term Debt Ratio**	***48.5%***
						49.6%	49.2%	46.7%	49.4%	48.2%	47.3%	47.3%	43.5%	38.4%	43.4%	***47.0%***	***51.5%***	**Common Equity Ratio**	***51.5%***
						18186	20015	22002	22281	23513	24963	27400	29135	38769	40734	***46175***	***48675***	**Total Capital ($mill)**	***58500***
						19876	23572	25191	25460	25902	28039	32931	36503	36796	36452	***40200***	***43625***	**Net Plant ($mill)**	***49900***
						6.8%	6.7%	6.1%	6.0%	6.1%	6.4%	5.0%	5.1%	5.1%	5.5%	***6.0%***	***6.5%***	**Return on Total Cap'l**	***7.0%***
						10.9%	10.9%	10.4%	9.6%	10.2%	11.1%	8.2%	9.2%	9.4%	9.1%	***9.5%***	***10.0%***	**Return on Shr. Equity**	***10.5%***
						11.1%	11.0%	10.4%	9.6%	10.3%	11.1%	8.2%	9.2%	10.0%	9.5%	***10.0%***	***10.0%***	**Return on Com Equity E**	***10.5%***
						7.0%	6.5%	5.1%	4.1%	5.0%	5.8%	2.9%	3.3%	4.1%	3.9%	***4.0%***	***4.0%***	**Retained to Com Eq**	***4.5%***
						37%	41%	52%	58%	52%	48%	65%	65%	62%	62%	***61%***	***58%***	**All Div'ds to Net Prof**	***58%***

CAPITAL STRUCTURE as of 3/31/20
Total Debt $28019 mill. **Due in 5 Yrs** $12723 mill.
LT Debt $20198 mill. **LT Interest** $798 mill.
Incl. $1275 mill. capitalized leases.
(LT interest earned: 3.3x)
Leases, Uncapitalized Annual rentals $75 mill.
Pension Assets-12/19 $2662 mill. **Oblig** $3768 mill.
Pfd Stock $2278 mill. **Pfd Div'd** $142 mill.
17.25 mill. shs. 6% mandatorily convertible pfd.;
5.75 mill. shs. 6.75% mandatorily convertible pfd.;
811,073 shs. 6% cum., $25 par.
Common Stock 292,533,413 shs. **as of 4/29/20**
MARKET CAP: $35 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-.2	-3.2	-4.3
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NMF	NMF	NMF
Peak Load, Summer (Mw)	NMF	NMF	NMF
Annual Load Factor (%)	NMF	NMF	NMF
% Change Customers (yr-end)	+.8	+.9	+.8
Fixed Charge Cov. (%)	264	186	181

ANNUAL RATES of change (per sh)	**Past 10 Yrs.**	**Past 5 Yrs.**	**Est'd '17-'19 to '23-'25**
Revenues	.5%	-.5%	*Nil*
"Cash Flow"	4.0%	4.0%	*6.5%*
Earnings	2.0%	4.0%	*10.0%*
Dividends	10.0%	7.5%	*7.5%*
Book Value	5.0%	4.5%	*8.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	3031	2533	2679	2964	11207
2018	2962	2564	2940	3221	11687
2019	2898	2230	2758	2943	10829
2020	3029	***2371***	***2900***	***3100***	***11400***
2021	***3200***	***2500***	***3050***	***3250***	***12000***

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.75	1.20	.22	1.46	4.63
2018	1.43	1.27	1.23	1.55	5.48
2019	1.78	.85	2.00	1.34	5.97
2020	2.30	***1.55***	***1.60***	***1.75***	***7.20***
2021	***2.25***	***1.75***	***1.80***	***1.95***	***7.75***

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.70	.755	.755	.755	2.97
2017	.755	.8225	.8225	.8225	3.22
2018	.8225	.895	.895	.895	3.51
2019	.895	.9675	.9675	.9675	3.80
2020	.9675	1.045	1.045		

BUSINESS: Sempra Energy is a holding co. for San Diego Gas & Electric Company, which sells electricity & gas mainly in San Diego County, & Southern California Gas Company, which distributes gas to most of Southern California. Owns 80% of Oncor (acq'd 3/18), which distributes electricity in Texas. Customers: 5.2 million electric, 6.9 million gas. Electric revenue breakdown not available. Purchases most of its power; the rest is gas. Has nonutility subsidiaries, incl. IEnova (67% owned) in Mexico. Sold commodities business in '10. Power costs: 25% of revenues. '19 reported deprec. rates: 2.5%-6.6%. Has 14,000 employees. Chairman, President & CEO: Jeffrey W. Martin. Inc.: CA. Address: 488 8th Ave., San Diego, CA 92101. Tel.: 619-696-2000. Internet: www.sempra.com.

Sempra Energy has completed the sales of its South American utilities. For the past two years, the company has been selling assets in order to narrow its operational and geographic focus, concentrating on the United States and Mexico. The divestitures of the utilities in Chile and Peru completed this process. The two sales raised $5.8 billion, which will be used for debt reduction at the parent level and capital spending. The aftertax gain on the sales is estimated at $1.7 billion-$1.8 billion. This will be excluded from our earnings presentation as income from discontinued operations. The profits from these utilities while Sempra still owned them is also included in discontinued operations, but the company is including this in its 2020 earnings guidance of $6.70-$7.50 a share. This will probably contribute $0.25 a share, give or take a few cents. Management is guiding Wall Street toward the upper end of the range. Note that the weak economy does not have a major effect on Sempra's results because utilities in California operate under a regulatory mechansim that decouples sales and volume.

The Cameron liquefied natural gas facility on the Gulf Coast is close to completion. The first two trains are up and running, and the third should begin operating in the current quarter. This is expected to provide net profit of $400 million-$450 million annually, beginning in 2021. In this segment, Sempra does not take commodity or volumetric risk, and has long-term contracts with creditworthy counterparties.

Earnings will likely advance solidly this year and next. Sempra's utilities in California and Texas are benefiting from rate relief. As mentioned above, the Cameron facility will make a significant contribution next year. Our 2021 earnings estimate of $7.75 a share is within the company's targeted range of $7.50-$8.10. The share count will likely rise in 2021.

This timely stock has a dividend yield that is about average for a utility. The share price has fallen 21% this year, more than most utility issues. Total return potential is above average for the 18-month span but unspectacular for the 3- to 5-year period.

Paul E. Debbas, CFA *July 24, 2020*

(A) Diluted EPS. Excl. nonrec. gains (losses): '09, (26¢); '10, ($1.05); '11, $1.15; '12, (98¢); '13, (30¢); '15, 14¢; '16, $1.23; '17, (17¢); '18, ($2.06); '19, 16¢; gain (losses) from disc. ops.: '06, $1.21; '07, (10¢); '19, 95¢; '20, *$6.65*. Next earnings report due early Aug. **(B)** Div'ds paid mid-Jan., Apr., July, Oct. ■ Div'd reinvestment plan avail. **(C)** Incl. intang. In '19: $13.37/sh. **(D)** In mill. **(E)** Rate base: Net orig. cost. Rate all'd on com. eq.: SDG&E in '20: 10.2%; SoCalGas in '20: 10.05%; earned on avg. com. eq., '19: 10.4%. Regulatory Climate: Average.

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	75
Earnings Predictability	70

XCEL ENERGY NDQ-XEL

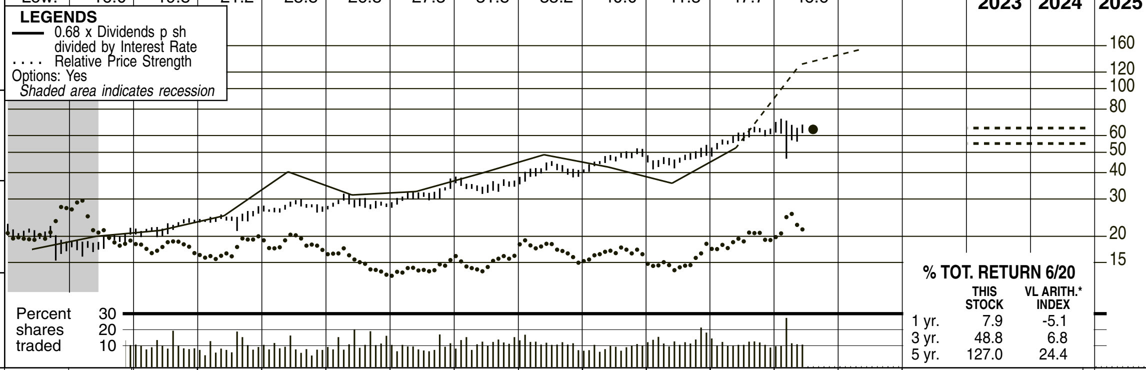
RECENT PRICE 64.17 | P/E RATIO 23.3 (Trailing: 24.8 Median: 16.0) | RELATIVE P/E RATIO 1.13 | DIV'D YLD 2.8% | VALUE LINE

TIMELINESS 3 Lowered 9/20/19
SAFETY 1 Raised 5/1/15
TECHNICAL 1 Raised 7/24/20
BETA .75 (1.00 = Market)

High:	21.9	24.4	27.8	29.9	31.8	37.6	38.3	45.4	52.2	54.1	66.1	72.1
Low:	16.0	19.8	21.2	25.8	26.8	27.3	31.8	35.2	40.0	41.5	47.7	46.6

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 0.68 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$47-$99	$73 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	65	(Nil)	4%
Low	55	(-15%)	Nil

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	347	395	365
to Sell	333	320	378
Hld's(000)	407757	409339	407479

Percent shares traded 30 20 10

% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	7.9	-5.1
3 yr.	48.8	6.8
5 yr.	127.0	24.4

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
20.84	23.86	24.16	23.40	24.69	21.08	21.38	21.90	20.76	21.92	23.11	21.72	21.90	22.46	22.44	21.98	*19.10*	*20.30*	Revenues per sh	*22.75*
3.27	3.28	3.61	3.45	3.50	3.48	3.51	3.79	4.00	4.10	4.28	4.56	5.04	5.47	5.92	6.25	*6.50*	*7.05*	"Cash Flow" per sh	*8.50*
1.27	1.20	1.35	1.35	1.46	1.49	1.56	1.72	1.85	1.91	2.03	2.10	2.21	2.30	2.47	2.64	*2.75*	*2.90*	Earnings per sh A	*3.50*
.81	.85	.88	.91	.94	.97	1.00	1.03	1.07	1.11	1.20	1.28	1.36	1.44	1.52	1.62	*1.72*	*1.82*	Div'd Decl'd per sh B ■	*2.15*
3.19	3.25	4.00	4.89	4.66	3.91	4.60	4.53	5.27	6.82	6.33	7.26	6.42	6.54	7.70	8.05	*6.70*	*7.05*	Cap'l Spending per sh	*8.50*
12.99	13.37	14.28	14.70	15.35	15.92	16.76	17.44	18.19	19.21	20.20	20.89	21.73	22.56	23.78	25.24	*27.20*	*28.45*	Book Value per sh C	*32.25*
400.46	403.39	407.30	428.78	453.79	457.51	482.33	486.49	487.96	497.97	505.73	507.54	507.22	507.76	514.04	524.54	*539.00*	*542.00*	Common Shs Outst'g D	*548.00*
13.6	15.4	14.8	16.7	13.7	12.7	14.1	14.2	14.8	15.0	15.4	16.5	18.5	20.2	18.9	22.3	*Bold figures are*		Avg Ann'l P/E Ratio	*17.0*
.72	.82	.80	.89	.82	.85	.90	.89	.94	.84	.81	.83	.97	1.02	1.02	1.21	*Value Line*		Relative P/E Ratio	*.95*
4.7%	4.6%	4.4%	4.0%	4.7%	5.1%	4.5%	4.2%	3.9%	3.9%	3.8%	3.7%	3.3%	3.1%	3.3%	2.7%	*estimates*		Avg Ann'l Div'd Yield	*3.6%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $19877 mill. **Due in 5 Yrs** $4990 mill.
LT Debt $17010 mill. **LT Interest** $721 mill.
Incl. $77 mill. capitalized leases.
(LT interest earned: 2.9x)

Leases, Uncapitalized Annual rentals $262 mill.
Pension Assets-12/19 $3184 mill. **Oblig** $3701 mill.
Pfd Stock None

Common Stock 525,170,820 shs.
as of 4/30/20
MARKET CAP: $34 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
10311	10655	10128	10915	11686	11024	11107	11404	11537	11529	*10300*	*11000*	Revenues ($mill)	*12500*
727.0	841.4	905.2	948.2	1021.3	1063.6	1123.4	1171.0	1261.0	1372.0	*1445*	*1570*	Net Profit ($mill)	*1865*
37.5%	35.8%	33.2%	33.8%	33.9%	35.8%	34.1%	30.7%	12.6%	8.5%	*Nil*	*Nil*	Income Tax Rate	*Nil*
11.7%	9.4%	10.8%	13.4%	12.5%	7.7%	7.8%	9.4%	12.4%	8.3%	*10.0%*	*8.0%*	AFUDC % to Net Profit	*8.0%*
53.1%	51.1%	53.3%	53.3%	53.0%	54.1%	56.3%	55.9%	56.4%	56.8%	*57.0%*	*57.0%*	Long-Term Debt Ratio	*57.5%*
46.3%	48.9%	46.7%	46.7%	47.0%	45.9%	43.7%	44.1%	43.6%	43.2%	*43.0%*	*43.0%*	Common Equity Ratio	*42.5%*
17452	17331	19018	20477	21714	23092	25216	25975	28025	30646	*34175*	*35950*	Total Capital ($mill)	*41700*
20663	22353	23809	26122	28757	31206	32842	34329	36944	39483	*41025*	*42600*	Net Plant ($mill)	*48300*
5.7%	6.5%	6.1%	6.0%	6.0%	5.8%	5.7%	5.8%	5.7%	5.6%	*5.5%*	*5.5%*	Return on Total Cap'l	*5.5%*
8.9%	9.9%	10.2%	9.9%	10.0%	10.0%	10.2%	10.2%	10.3%	10.4%	*10.0%*	*10.0%*	Return on Shr. Equity	*10.5%*
8.9%	9.9%	10.2%	9.9%	10.0%	10.0%	10.2%	10.2%	10.3%	10.4%	*10.0%*	*10.0%*	Return on Com Equity E	*10.5%*
3.6%	4.3%	4.7%	4.5%	4.5%	4.3%	4.0%	3.9%	4.3%	4.4%	*3.5%*	*4.0%*	Retained to Com Eq	*4.0%*
59%	56%	54%	54%	55%	57%	61%	62%	58%	58%	*63%*	*63%*	All Div'ds to Net Prof	*63%*

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-.7	+3.2	-1.2
Large C & I Use (MWH)	22642	23004	NA
Large C & I Revs. per KWH (¢)	6.36	5.91	5.96
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	19591	20293	20146
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.9	+1.1	+1.0
Fixed Charge Cov. (%)	330	281	272

BUSINESS: Xcel Energy Inc. is the parent of Northern States Power, which supplies electricity to Minnesota, Wisconsin, North Dakota, South Dakota & Michigan & gas to Minnesota, Wisconsin, North Dakota & Michigan; P.S. of Colorado, which supplies electricity & gas to Colorado; & Southwestern Public Service, which supplies electricity to Texas & New Mexico. Customers: 3.7 mill. elec., 2.1 mill. gas. Elec. rev. breakdown: res'l, 31%; sm. comm'l & ind'l, 36%; lg. comm'l & ind'l, 18%; other, 15%. Generating sources not avail. Fuel costs: 39% of revs. '19 reported depr. rate: 3.3%. Has 11,300 empls. Chairman & CEO: Ben Fowke. President & COO: Bob Frenzel. Inc.: MN. Address: 414 Nicollet Mall, Minneapolis, MN 55401. Tel.: 612-330-5500. Internet: www.xcelenergy.com.

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-.5%	.5%	*.5%*
"Cash Flow"	5.5%	7.5%	*6.5%*
Earnings	5.5%	5.0%	*6.0%*
Dividends	5.0%	6.5%	*6.0%*
Book Value	4.5%	4.5%	*5.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	2946	2645	3017	2796	11404
2018	2951	2658	3048	2880	11537
2019	3141	2577	3013	2798	11529
2020	2811	*2189*	*2700*	*2600*	*10300*
2021	*3000*	*2400*	*2850*	*2750*	*11000*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.47	.45	.97	.42	2.30
2018	.57	.52	.96	.42	2.47
2019	.61	.46	1.01	.56	2.64
2020	.56	*.54*	*1.10*	*.55*	*2.75*
2021	*.65*	*.55*	*1.15*	*.55*	*2.90*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.32	.34	.34	.34	1.34
2017	.34	.36	.36	.36	1.42
2018	.36	.38	.38	.38	1.50
2019	.38	.405	.405	.405	1.60
2020	.405	.43	.43		

Xcel Energy's utilities have reached settlements on pending rate cases. The New Mexico commission approved a settlement calling for a $31 million electric increase for Southwestern Public Service, based on a 9.45% return on equity and a 54.8% common-equity ratio. New tariffs took effect on May 28th. In Texas, SPS reached a "black box" agreement calling for an $88 million hike without specifying an allowed ROE or common-equity ratio. A ruling from the state regulators is expected in the current quarter, with the increase retroactive to September of 2019. Public Service of Colorado, the state commission's staff, and intervenors have reached a settlement calling for a gas rate increase of $76.9 million, based on a 9.2% ROE and a 55.6% common-equity ratio. If the regulators approve the agreement, new tariffs will be implemented on April 1, 2021, retroactive to November of 2020.

Xcel believes it can reduce expenses enough to offset the effects of the recession on kilowatt-hour sales. Cost cuts should enable operating and maintenance expenses to decline 4%-5% in 2020. Accordingly, management did not adjust its earnings guidance of $2.73-$2.83 a share for this year. Our estimate of $2.75 a share is unchanged. We have also stuck with our 2021 estimate of $2.90 a share. This would produce profit growth of 5%, which is within the company's annual goal of 5%-7%.

At least one rate case is upcoming. P.S. of Colorado plans to put forth an electric application later this summer. Northern States Power is considering filing for new electric and gas tariffs in Minnesota in November, but might well postpone its case if it can reach an agreement with the commission that compensates the utility for the decline in volume.

This high-quality stock has been one of the top performers in the electric utility industry in 2020. While the prices of most electric equities have fallen more than 10%, Xcel is almost unchanged from yearend 2019, thanks in part to its maintaining profit guidance. The dividend yield is a percentage point below the industry average, and with the recent quotation near the top of our 2023-2025 Target Price Range, total return potential is low.

Paul E. Debbas, CFA *July 24, 2020*

(A) Diluted EPS. Excl. nonrecurring gain (losses): '10, 5¢; '15, (16¢); '17, (5¢); gains (losses) on discontinued ops.: '04, (30¢); '05, 3¢; '06, 1¢; '09, (1¢); '10, 1¢. '17 EPS don't sum due to rounding. Next earnings report due late July. (B) Div'ds historically paid mid-Jan., Apr., July, and Oct. ■ Div'd reinvestment plan available. (C) Incl. intangibles. In '19: $5.60/sh. (D) In mill. (E) Rate base: Varies. Rate allowed on com. eq. (blended): 9.6%; earned on avg. com. eq., '19: 10.8%. Regulatory Climate: Average.

Company's Financial Strength	A+
Stock's Price Stability	95
Price Growth Persistence	60
Earnings Predictability	100

AVANGRID, INC. NYSE-AGR

RECENT PRICE	P/E RATIO	(Trailing: 21.7 / Median: NMF)	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
48.99	24.6	Trailing: 21.7, Median: NMF	1.15	3.6%	

TIMELINESS 3 Lowered 3/22/19
SAFETY 2 Raised 2/17/17
TECHNICAL 5 Lowered 8/14/20
BETA .80 (1.00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$35-$78 $57 (15%)

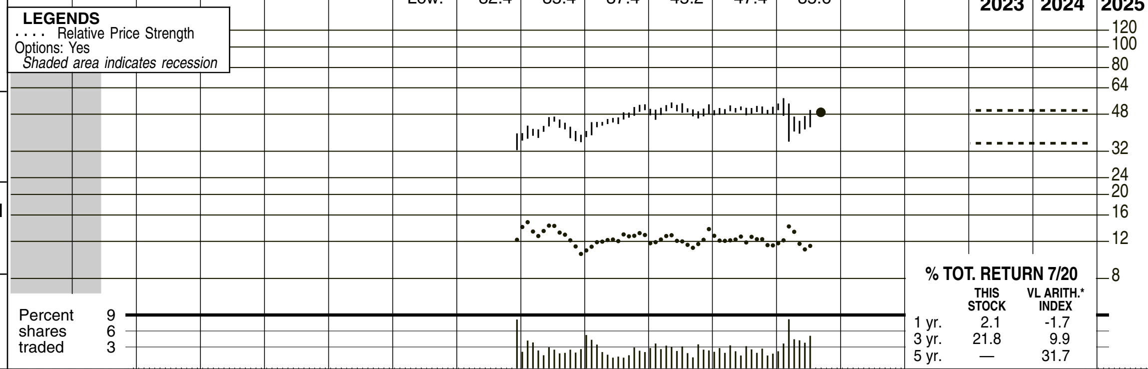
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	50	(Nil)	4%
Low	35	(-30%)	-3%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	118	142	123
to Sell	111	101	136
Hld's(000)	45639	46257	45979

	2015	2016	2017	2018	2019	2020
High:	38.9	46.7	53.5	54.6	52.9	57.2
Low:	32.4	35.4	37.4	45.2	47.4	35.6



% TOT. RETURN 7/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	2.1	-1.7
3 yr.	21.8	9.9
5 yr.	—	31.7

AVANGRID, Inc. was formed through a merger between Iberdrola USA, Inc. and UIL Holdings Corporation in December of 2015. Iberdrola S.A., a worldwide leader in the energy industry, owns 81.5% of AVANGRID. The predecessor company was founded in 1852 and is headquartered in New Gloucester, Maine. It was incorportated in 1997 in New York under the name NGE Resources, Inc. AVANGRID began trading on the NYSE on December 17, 2015.

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
--	--	--	--	--	14.14	19.48	19.30	20.96	20.51	*20.40*	*21.05*	Revenues per sh	*23.25*
--	--	--	--	--	3.44	4.74	4.49	4.89	5.50	*5.30*	*5.70*	"Cash Flow" per sh	*6.50*
--	--	--	--	--	1.05	1.98	1.67	1.92	2.26	*1.95*	*2.20*	Earnings per sh A	*2.50*
--	--	--	--	--	--	1.73	1.73	1.74	1.76	*1.76*	*1.76*	Div'd Decl'd per sh B ■	*1.80*
--	--	--	--	--	3.50	5.52	7.82	5.78	8.87	*10.05*	*10.35*	Cap'l Spending per sh	*9.75*
--	--	--	--	--	48.74	48.90	48.79	48.88	49.31	*49.50*	*49.95*	Book Value per sh C	*51.75*
--	--	--	--	--	308.86	308.99	309.01	309.01	309.01	*309.00*	*309.00*	Common Shs Outst'g D	*309.00*
--	--	--	--	--	33.5	20.5	27.3	26.1	22.1	*Bold figures are*		Avg Ann'l P/E Ratio	*17.5*
--	--	--	--	--	1.69	1.08	1.37	1.41	1.19	*Value Line*		Relative P/E Ratio	*.95*
--	--	--	--	--	--	4.3%	3.8%	3.5%	3.5%	*estimates*		Avg Ann'l Div'd Yield	*4.1%*
--	--	--	--	4594.0	4367.0	6018.0	5963.0	6478.0	6338.0	*6300*	*6500*	Revenues ($mill)	*7150*
--	--	--	--	424.0	267.0	611.0	516.0	595.0	700.0	*600*	*680*	Net Profit ($mill)	*785*
--	--	--	--	39.9%	11.3%	37.4%	32.4%	22.1%	17.5%	*2.0%*	*7.0%*	Income Tax Rate	*7.0%*
--	--	--	--	6.8%	12.7%	7.5%	12.4%	9.4%	14.4%	*17.0%*	*15.0%*	AFUDC % to Net Profit	*13.0%*
--	--	--	--	16.8%	23.1%	23.0%	25.6%	26.2%	30.6%	*34.0%*	*36.5%*	Long-Term Debt Ratio	*42.5%*
--	--	--	--	83.2%	76.9%	77.0%	74.4%	73.8%	69.4%	*66.0%*	*63.5%*	Common Equity Ratio	*57.5%*
--	--	--	--	14956	19583	19619	20273	20472	21953	*23100*	*24250*	Total Capital ($mill)	*27800*
--	--	--	--	17099	20711	21548	22669	23459	25218	*27275*	*29400*	Net Plant ($mill)	*34800*
--	--	--	--	3.7%	2.1%	3.8%	3.1%	3.5%	3.8%	*3.5%*	*3.5%*	Return on Total Cap'l	*4.0%*
--	--	--	--	3.4%	1.8%	4.0%	3.4%	3.9%	4.6%	*4.0%*	*4.5%*	Return on Shr. Equity	*5.0%*
--	--	--	--	3.4%	1.8%	4.0%	3.4%	3.9%	4.6%	*4.0%*	*4.5%*	Return on Com Equity E	*5.0%*
--	--	--	--	3.4%	1.8%	1.4%	NMF	.4%	1.0%	*.5%*	*1.0%*	Retained to Com Eq	*1.5%*
--	--	--	--	--	--	66%	104%	90%	78%	*91%*	*80%*	All Div'ds to Net Prof	*71%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $8310 mill. **Due in 5 Yrs** $4323 mill.
LT Debt $7159 mill. **LT Interest** $280 mill.
Incl. $63 mill. capitalized leases.
(LT interest earned: 3.5x)
Leases, Uncapitalized Annual rentals $14 mill.

Pension Assets-12/19 $2848 mill.
Oblig $3669 mill.
Pfd Stock None

Common Stock 309,005,485 shs.
as of 7/30/20
MARKET CAP: $15 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	NA	NA	NA
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.6	+.5	NA
Fixed Charge Cov. (%)	333	343	278

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	--	--	2.5%
"Cash Flow"	--	--	4.5%
Earnings	--	--	4.0%
Dividends	--	--	.5%
Book Value	--	--	1.0%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1758	1331	1341	1533	5963.0
2018	1865	1402	1546	1665	6478.0
2019	1842	1400	1487	1609	6338.0
2020	1782	1392	*1500*	*1626*	*6300*
2021	*1900*	*1400*	*1550*	*1650*	*6500*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.77	.39	.32	.19	1.67
2018	.79	.34	.40	.38	1.92
2019	.70	.36	.48	.72	2.26
2020	.78	.28	*.44*	*.47*	*1.95*
2021	*.80*	*.40*	*.50*	*.50*	*2.20*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	--	.432	.432	.432	1.30
2017	.432	.432	.432	.432	1.73
2018	.432	.432	.432	.44	1.74
2019	.44	.44	.44	.44	1.76
2020	.44	.44	.44		

BUSINESS: AVANGRID, Inc. (formerly Iberdrola USA, Inc.), is a diversified energy and utility company that serves 2.2 million electric customers in New York, Connecticut, and Maine and 1 million gas customers in New York, Connecticut, Massachusetts & Maine. Has a nonregulated generating subsidiary focused on wind power, with 7.2 gigawatts of capacity. Revenue breakdown by customer class not available. Generating sources not available. Fuel costs: 24% of revenues. '19 reported depr. rate (utility): 2.9%. Iberdrola owns 81.5% of stock. Has 6,600 employees. Chairman: José Ignacio Sanchez Galan. CEO: Dennis V. Arriola. Deputy CEO & President: Robert Kump. Inc.: NY. Address: 180 Marsh Hill Road, Orange, CT 06477. Tel.: 207-629-1200. Web: www.avangrid.com.

We cut our 2020 earnings estimate for AVANGRID by $0.20 a share, to $1.95. Second-quarter earnings fell short of our $0.40-a-share estimate, due in part to a decline in prices at the renewable-energy business. Also, we *include* coronavirus-related expenses ($0.03 a share) in our earnings presentation even though the company excludes them from its definition of operating earnings. The rest of the year should be better, although the fourth-period comparison will be tough. In 2019, AVANGRID booked a gain of $0.32 a share on sales of renewable-energy projects.

For the time being, the company is reviewing earnings guidance for 2020 and expectations for growth beyond this year. AVANGRID's new chief executive officer, Dennis Arriola, is taking a "deep dive" into the company's financial prospects. Management expects to provide updated expectations by November, when an analyst meeting is planned. This is especially important because AVANGRID's results have disappointed Wall Street at times in the past several quarters.

We expect better results in 2021. We figure coronavirus-related costs will be lower. AVANGRID's utilities in New York should also benefit from rate relief, as they have reached a settlement (subject to commission approval) that would provide $439 million over three years, based on an 8.8% return on equity and a 48% common-equity ratio. The renewable energy division is adding projects. However, we cut our estimate by $0.10 a share, to $2.20.

Some large capital projects are in various stages of development. Central Maine Power intends to spend $950 million on a transmission line. However, a ballot measure proposed by opponents to the project might thwart this. AVANGRID also has joint ventures in three offshore wind projects. Investors should note that offshore wind entails significant construction risk. There have already been some permitting delays.

We think more-attractive selections are available elsewhere. The stock's dividend yield is not much different from the utility mean, and dividend growth prospects are subpar. The utilities operate in difficult regulatory climates. Total return potential to 2023-2025 is low.

Paul E. Debbas, CFA *August 14, 2020*

(A) Diluted EPS. Excl. nonrecurring gain (loss): '16, 6¢; '17, (44¢). '18 EPS don't sum due to rounding. Next earnings report due late Oct. (B) Div'ds paid in early Jan., April, July, and Oct. ■ Dividend reinvestment plan available. (C) Incl. intangibles. In '19: $6.0 bill., $19.42/sh. (D) In millions. (E) Rate base: net original cost. Rate allowed on com. eq. in NY in '16: 9.0%; in CT in '17: 9.1% elec.; in CT in '19: 9.3% gas; in ME in '20: 8.25%; earned on avg. common eq., '19: 4.6%. Regulatory Climate: Below Average.

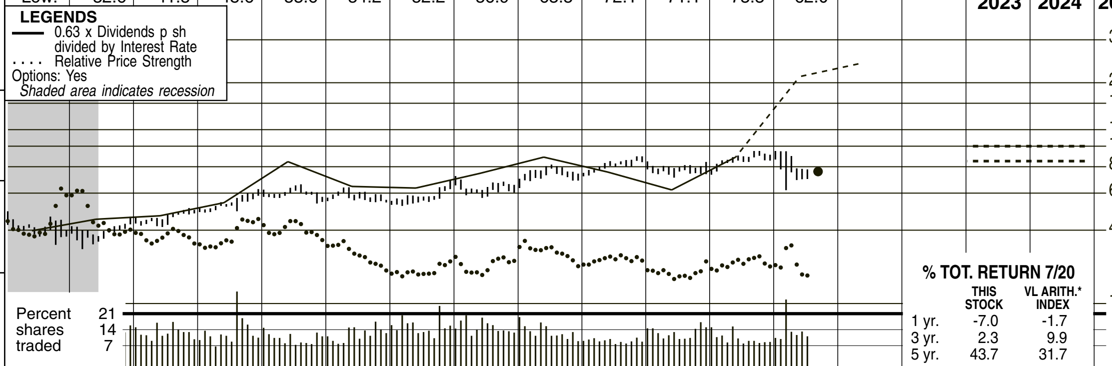
Company's Financial Strength	B++
Stock's Price Stability	85
Price Growth Persistence	100
Earnings Predictability	60

CON. EDISON NYSE-ED

RECENT PRICE	75.91	P/E RATIO	17.8 (Trailing: 19.5, Median: 16.0)	RELATIVE P/E RATIO	0.83	DIV'D YLD	4.1%	VALUE LINE

TIMELINESS 3 Lowered 3/8/19
SAFETY 1 New 7/27/90
TECHNICAL 4 Lowered 8/14/20
BETA .75 (1.00 = Market)

High:	46.3	51.0	62.7	66.0	64.0	68.9	72.3	81.9	89.7	84.9	95.0	95.1
Low:	32.6	41.5	48.6	53.6	54.2	52.2	56.9	63.5	72.1	71.1	73.3	62.0



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$57-$129	$93 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	100	(+30%)	10%
Low	85	(+10%)	7%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	408	413	372
to Sell	342	368	464
Hld's(000)	200721	200729	200493

% TOT. RETURN 7/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-7.0	-1.7
3 yr.	2.3	9.9
5 yr.	43.7	31.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
40.24	47.66	47.14	48.23	49.62	46.36	45.69	44.17	41.62	42.27	44.11	42.85	39.59	38.82	38.43	37.76	*33.25*	*35.35*	Revenues per sh	*37.25*
4.54	5.27	5.28	5.77	5.99	5.86	6.24	6.61	7.15	7.45	7.30	7.93	7.89	8.41	8.92	9.09	*8.90*	*9.65*	"Cash Flow" per sh	*11.00*
2.32	2.99	2.95	3.48	3.36	3.14	3.47	3.57	3.86	3.93	3.62	4.05	3.94	4.10	4.55	4.08	*3.95*	*4.50*	Earnings per sh A	*5.00*
2.26	2.28	2.30	2.32	2.34	2.36	2.38	2.40	2.42	2.46	2.52	2.60	2.68	2.76	2.86	2.96	*3.06*	*3.16*	Div'd Decl'd per sh B ■	*3.50*
5.60	6.59	7.17	7.09	8.50	7.80	6.96	6.72	7.06	8.67	8.26	10.42	12.07	11.11	10.89	10.47	*11.50*	*11.20*	Cap'l Spending per sh	*11.00*
29.09	29.80	31.09	32.58	35.43	36.46	37.93	39.05	40.53	41.81	42.94	44.55	46.88	49.74	52.11	54.12	*55.55*	*57.40*	Book Value per sh C	*62.50*
242.51	245.29	257.46	272.02	273.72	281.12	291.62	292.89	292.87	292.87	292.88	293.00	305.00	310.00	321.00	333.00	*343.00*	*351.00*	Common Shs Outst'g D	*365.00*
18.2	15.1	15.5	13.8	12.3	12.5	13.3	15.1	15.4	14.7	15.9	15.6	18.8	19.8	17.1	21.1	*Bold figures are*		Avg Ann'l P/E Ratio	*18.5*
.96	.80	.84	.73	.74	.83	.85	.95	.98	.83	.84	.79	.99	1.00	.92	1.13	*Value Line*		Relative P/E Ratio	*1.05*
5.3%	5.0%	5.0%	4.8%	5.7%	6.0%	5.2%	4.5%	4.1%	4.3%	4.4%	4.1%	3.6%	3.4%	3.7%	3.4%	*estimates*		Avg Ann'l Div'd Yield	*3.8%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $22724 mill. **Due in 5 Yrs** $5759 mill.
LT Debt $19423 mill. **LT Interest** $862 mill.
(LT interest earned: 2.8x)

Leases, Uncapitalized Annual rentals $78 mill.

Pension Assets-12/19 $15608 mill. **Oblig** $16792 mill.

Pfd Stock None

Common Stock 334,102,042 shs. as of 4/30/20
MARKET CAP: $25 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
13325	12938	12188	12381	12919	12554	12075	12033	12337	12574	*11400*	*12400*	Revenues ($mill)	*13600*
992.0	1062.0	1141.0	1157.0	1066.0	1193.0	1189.0	1266.0	1424.0	1343.0	*1340*	*1575*	Net Profit ($mill)	*1825*
36.0%	36.1%	34.5%	31.8%	34.0%	33.6%	35.3%	36.6%	20.1%	17.1%	*19.5%*	*17.0%*	Income Tax Rate	*17.0%*
2.4%	1.6%	.5%	.5%	.3%	.7%	1.3%	1.5%	1.5%	2.0%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*2.0%*
48.6%	46.5%	45.9%	46.1%	48.0%	47.9%	50.8%	48.9%	51.1%	50.7%	*49.5%*	*50.0%*	Long-Term Debt Ratio	*50.0%*
50.4%	52.5%	54.1%	53.9%	52.0%	52.1%	49.2%	51.1%	48.9%	49.3%	*50.5%*	*50.0%*	Common Equity Ratio	*50.0%*
21952	21794	21933	22735	24207	25058	29033	30149	34221	36549	*37600*	*40175*	Total Capital ($mill)	*45500*
23863	25093	26939	28436	29827	32209	35216	37600	41749	43889	*46125*	*48225*	Net Plant ($mill)	*53800*
5.9%	6.2%	6.5%	6.4%	5.6%	6.0%	5.3%	5.4%	5.3%	4.9%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.5%*
8.8%	9.1%	9.6%	9.4%	8.5%	9.1%	8.3%	8.2%	8.5%	7.5%	*7.0%*	*8.0%*	Return on Shr. Equity	*8.0%*
8.9%	9.2%	9.6%	9.4%	8.5%	9.1%	8.3%	8.2%	8.5%	7.5%	*7.0%*	*8.0%*	Return on Com Equity E	*8.0%*
3.2%	3.1%	3.6%	3.6%	2.6%	3.5%	3.0%	3.0%	3.5%	2.3%	*1.5%*	*2.5%*	Retained to Com Eq	*2.5%*
65%	66%	62%	62%	69%	61%	64%	63%	59%	69%	*72%*	*66%*	All Div'ds to Net Prof	*66%*

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-2.8	+2.8	-2.9
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	13731	14156	13835
Annual Load Factor (%)	NMF	NMF	NMF
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	354	306	267

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-2.0%	-2.0%	*Nil*
"Cash Flow"	4.0%	4.0%	*4.0%*
Earnings	2.5%	2.0%	*3.0%*
Dividends	2.0%	3.0%	*3.5%*
Book Value	4.0%	4.5%	*3.0%*

QUARTERLY REVENUES ($ mill.)

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	3228	2633	3211	2961	12033
2018	3364	2696	3328	2949	12337
2019	3514	2744	3365	2951	12574
2020	3234	*2366*	*3100*	*2700*	*11400*
2021	*3450*	*2700*	*3350*	*2900*	*12400*

EARNINGS PER SHARE A

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.27	.57	1.48	.78	4.10
2018	1.37	.60	1.52	1.06	4.55
2019	1.31	.46	1.42	.88	4.08
2020	1.13	*.52*	*1.55*	*.75*	*3.95*
2021	*1.45*	*.60*	*1.60*	*.85*	*4.50*

QUARTERLY DIVIDENDS PAID B ■

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.67	.67	.67	.67	2.68
2017	.69	.69	.69	.69	2.76
2018	.715	.715	.715	.715	2.86
2019	.74	.74	.74	.74	2.96
2020	.765	.765			

BUSINESS: Consolidated Edison, Inc. is a holding company for Consolidated Edison Company of New York, Inc. (CECONY), which sells electricity, gas, and steam in most of New York City and Westchester County. Also owns Orange and Rockland Utilities (O&R), which operates in New York and New Jersey. Has 3.7 million electric, 1.2 million gas customers. Pursues competitive energy opportunities through three wholly owned subsidiaries. Entered into midstream gas joint venture 6/16. Purchases most of its power. Fuel costs: 21% of revenues. '19 reported depreciation rates: 3.0%-3.2%. Has 14,900 employees. Chairman, President & CEO: John McAvoy. Inc.: New York. Address: 4 Irving Place, New York, New York 10003. Tel.: 212-460-4600. Internet: www.conedison.com.

Consolidated Edison reduced its earnings guidance for 2020 upon reporting first-quarter results. Mild winter weather hurt the company's steam business, in which revenues and volume are not decoupled. In addition, the company is incurring costs associated with the coronavirus. Accordingly, ConEd cut its targeted range for profits from $4.30-$4.50 a share to $4.15-$4.35. We slashed our 2020 estimate from $4.25 a share to $3.95. This is below management's guidance because our presentation includes expected charges of $0.19 a share related to accounting for tax-equity investments in certain renewable-energy projects, even though ConEd excludes this. We also include mark-to-market accounting gains or losses because these are an ongoing part of the company's results. This hurt share net by $0.18 in the first quarter.

We expect solid profit growth in 2021. We assume no mark-to-market items in our estimate, since these are impossible to predict. ConEd's primary utility subsidiary, Consolidated Edison Company of New York, will benefit from increases in electric and gas rates of $370 million and $122 million, respectively. (Electric and gas hikes of $322 million and $167 million will occur at the start of 2022.) We believe the company's renewable-energy operation will increase its contribution as it adds projects. As of the end of the first quarter, this business had 3,289 megawatts in operation and 613 mw under construction.

The next few years will be active for financing. In 2020, ConEd plans to issue $600 million of common equity, over and above what it will issue for its dividend-reinvestment, employee stock purchase, and long-term incentive plans. New equity is expected to total $1.1 billion in 2021 and 2022. The company intends to issue as much as $2.0 billion of long-term debt this year, followed by a total of $1.8 billion in 2021 and 2022, in addition to what is needed to refinance maturing debt. ConEd's balance sheet should remain sound (Financial Strength rating: A+.)

The dividend yield of this high-quality stock is slightly above the utility average. Total return potential is appealing for the 18-month span, but is unexciting for the 3- to 5-year period.

Paul E. Debbas, CFA *August 14, 2020*

(A) Diluted EPS. Excl. nonrec. gains (losses): '13, (32¢); '14, 9¢; '16, 15¢; '17, 84¢; '18, (13¢); gain on discontinued operations: '08, $1.01. '19 EPS don't sum due to rounding. Next earnings report due early Nov. (B) Div'ds historically paid in mid-Mar., June, Sept., and Dec. ■ Div'd reinvestment plan avail. (C) Incl. intangibles. In '19: $21.01/sh. (D) In mill. (E) Rate base: net orig. cost. Rate allowed on com. eq. for CECONY in '20: 8.8%; O&R in '19: 9.0%; earned on avg. com. eq., '19: 8.2%. Regulatory Climate: Below Average.

Company's Financial Strength	A+
Stock's Price Stability	85
Price Growth Persistence	55
Earnings Predictability	95

DUKE ENERGY NYSE-DUK

RECENT PRICE 83.81 | P/E RATIO 16.1 (Trailing: 16.5, Median: 18.0) | RELATIVE P/E RATIO 0.75 | DIV'D YLD 4.6% | VALUE LINE

TIMELINESS 3 Lowered 3/13/20
SAFETY 2 New 6/1/07
TECHNICAL 3 Raised 8/14/20
BETA .85 (1.00 = Market)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	53.8	55.8	66.4	71.1	75.5	87.3	90.0	87.8	91.8	91.4	97.4	103.8
Low:	35.2	46.4	50.6	59.6	64.2	67.1	65.5	70.2	76.1	72.0	82.5	62.1

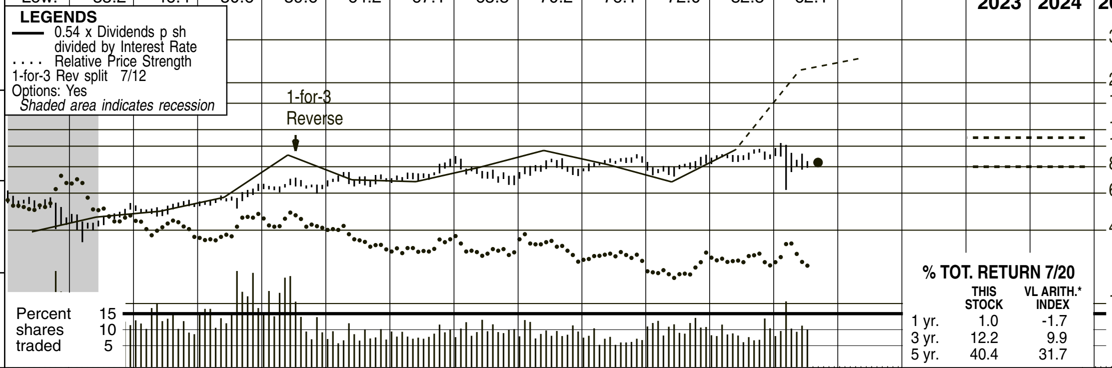
18-Month Target Price Range
Low-High: $62-$138 | Midpoint (% to Mid): $100 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	110	(+30%)	11%
Low	80	(-5%)	4%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	711	806	682
to Sell	582	557	723
Hld's(000)	445072	476731	473369



% TOT. RETURN 7/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	1.0	-1.7
3 yr.	12.2	9.9
5 yr.	40.4	31.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
--	--	25.32	30.24	31.15	29.18	32.22	32.63	27.88	34.84	33.84	34.10	32.49	33.66	33.73	34.21	*30.95*	*32.15*	Revenues per sh	*34.50*
--	--	7.86	8.11	7.34	7.58	8.49	8.68	6.80	8.56	9.11	9.40	9.20	10.01	10.49	12.13	*12.10*	*12.75*	"Cash Flow" per sh	*14.50*
--	--	2.76	3.60	3.03	3.39	4.02	4.14	3.71	3.98	4.13	4.10	3.71	4.22	4.13	5.07	*5.10*	*5.30*	Earnings per sh A	*6.00*
--	--	--	2.58	2.70	2.82	2.91	2.97	3.03	3.09	3.15	3.24	3.36	3.49	3.64	3.75	*3.82*	*3.90*	Div'd Decl'd per sh B ■	*4.15*
--	--	8.07	7.43	10.35	9.85	10.84	9.80	7.81	7.83	7.62	9.83	11.29	11.50	12.91	15.17	*15.50*	*14.70*	Cap'l Spending per sh	*13.75*
--	--	62.30	50.40	49.51	49.85	50.84	51.14	58.04	58.54	57.81	57.74	58.62	59.63	60.27	61.20	*63.80*	*65.35*	Book Value per sh C	*71.00*
--	--	418.96	420.62	423.96	436.29	442.96	445.29	704.00	706.00	707.00	688.00	700.00	700.00	727.00	733.00	*764.00*	*770.00*	Common Shs Outst'g D	*785.00*
--	--	--	16.1	17.3	13.3	12.7	13.8	17.5	17.4	17.9	18.2	21.3	19.9	19.4	17.7	*Bold figures are*		Avg Ann'l P/E Ratio	*15.5*
--	--	--	.85	1.04	.89	.81	.87	1.11	.98	.94	.92	1.12	1.00	1.05	.95	*Value Line*		Relative P/E Ratio	*.85*
--	--	--	4.4%	5.2%	6.2%	5.7%	5.2%	4.7%	4.4%	4.3%	4.3%	4.3%	4.2%	4.5%	4.2%	*estimates*		Avg Ann'l Div'd Yield	*4.4%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $64421 mill. **Due in 5 Yrs** $20638 mill.
LT Debt $56311 mill. **LT Interest** $2191 mill.
Incl. $969 mill. capitalized leases.
(LT interest earned: 2.8x)
Leases, Uncapitalized Annual rentals $268 mill.
Pension Assets-12/19 $8910 mill. **Oblig** $8231 mill.
Pfd Stock $1962 mill. **Pfd Div'd** $58 mill.
40 mill. shs. 5.75%, cum., $25 liq. value, redeemable at $25.50 prior to 6/15/24; 1 mill. shs. 4.875%, cum., $1000 liq. value.
Common Stock 734,852,532 shs. **as of 4/30/20**
MARKET CAP: $62 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
14272	14529	19624	24598	23925	23459	22743	23565	24521	25079	*23650*	*24750*	Revenues ($mill)	*27000*
1765.0	1839.0	2136.0	2813.0	2934.0	2854.0	2560.0	2963.0	2928.0	3755.0	*3865*	*4175*	Net Profit ($mill)	*4750*
32.6%	31.3%	30.2%	32.6%	30.6%	32.2%	31.0%	30.4%	14.2%	12.7%	*12.0%*	*12.0%*	Income Tax Rate	*12.0%*
22.7%	23.2%	22.3%	8.8%	7.2%	9.2%	11.7%	12.3%	13.0%	7.9%	*9.0%*	*8.0%*	AFUDC % to Net Profit	*8.0%*
44.3%	45.1%	47.0%	48.0%	47.7%	48.6%	52.6%	54.0%	53.8%	54.0%	*52.5%*	*53.0%*	Long-Term Debt Ratio	*53.5%*
55.7%	54.9%	52.9%	52.0%	52.3%	51.4%	47.4%	46.0%	46.2%	44.1%	*45.5%*	*45.5%*	Common Equity Ratio	*45.0%*
40457	41451	77307	79482	78088	77222	86609	90774	94940	101807	*106650*	*110725*	Total Capital ($mill)	*123600*
40344	42661	68558	69490	70046	75709	82520	86391	91694	102127	*108475*	*114050*	Net Plant ($mill)	*128400*
5.5%	5.6%	3.6%	4.6%	4.8%	4.8%	4.0%	4.3%	4.2%	4.8%	*4.5%*	*5.0%*	Return on Total Cap'l	*5.0%*
7.8%	8.1%	5.2%	6.8%	7.2%	7.2%	6.2%	7.1%	6.7%	8.0%	*7.5%*	*8.0%*	Return on Shr. Equity	*8.0%*
7.8%	8.1%	5.2%	6.8%	7.2%	7.2%	6.2%	7.1%	6.7%	8.3%	*7.5%*	*8.0%*	Return on Com Equity E	*8.5%*
2.1%	2.2%	.9%	1.5%	1.7%	1.5%	.6%	1.2%	1.0%	2.4%	*2.0%*	*2.0%*	Retained to Com Eq	*2.5%*
73%	72%	82%	78%	76%	79%	91%	83%	84%	71%	*77%*	*74%*	All Div'ds to Net Prof	*71%*

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-2.0	+3.9	-.9
Avg. Indust. Use (MWH)	2914	2953	2934
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (avg.)	+1.3	+1.4	+1.5
Fixed Charge Cov. (%)	272	218	233

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	1.0%	1.0%	.5%
"Cash Flow"	3.5%	6.0%	5.0%
Earnings	3.0%	2.5%	5.0%
Dividends	3.0%	3.0%	2.5%
Book Value	2.0%	1.0%	2.5%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	5729	5555	6482	5799	23565
2018	6135	5643	6628	6115	24521
2019	6163	5873	6940	6103	25079
2020	5949	*5300*	*6600*	*5801*	*23650*
2021	*6200*	*5650*	*6850*	*6050*	*24750*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.02	.98	1.36	.86	4.22
2018	1.17	.71	1.63	.61	4.13
2019	1.24	1.12	1.82	.89	5.07
2020	1.24	*1.05*	*1.86*	*.95*	*5.10*
2021	*1.35*	*1.10*	*1.90*	*.95*	*5.30*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.825	.825	.855	.855	3.36
2017	.855	.855	.89	.89	3.49
2018	.89	.89	.927	.928	3.64
2019	.927	.928	.945	.945	3.75
2020	.945	.945	.965		

BUSINESS: Duke Energy Corporation is a holding company for utilities with 7.6 mill. elec. customers in NC, FL, IN, SC, OH, & KY, and 1.6 mill. gas customers in OH, KY, NC, SC, and TN. Owns independent power plants & has 25% stake in National Methanol in Saudi Arabia. Acq'd Progress Energy 7/12; Piedmont Natural Gas 10/16; discontinued most int'l ops. in '16. Elec. rev. breakdown: residential, 44%; commercial, 28%; industrial, 14%; other, 14%. Generating sources: gas, 29%; nuclear, 29%; coal, 22%; other, 1%; purchased, 19%. Fuel costs: 30% of revs. '19 reported deprec. rate: 3.1%. Has 28,800 employees. Chairman, President & CEO: Lynn J. Good. Inc.: DE. Address: 550 South Tryon St., Charlotte, NC 28202-1803. Tel.: 704-382-3853. Internet: www.duke-energy.com.

The Atlantic Coast Pipeline project, 47%-owned by Duke Energy, has been canceled. The project was plagued by delays and cost overruns stemming from litigation. This wasn't expected to be completed until early 2022, more than three years after the original target. The total cost had risen to an expected $8.0 billion, from $4.5 billion-$5.0 billion initially. Two unfavorable rulings from U.S. courts convinced Duke and its partner, Dominion Energy, to pull the plug. As a result, the company will take a nonrecurring, noncash pretax charge of $2.0 billion-$2.5 billion, most of which will be recorded against June-quarter results. However, the cancelation will also affect ongoing earnings because Duke will no longer record the Allowance for Funds Used During Construction, a noncash credit to earnings. Accordingly, management is now guiding analysts toward the low end of its 2020 earnings target of $5.05-$5.45 a share. The project was expected to contribute $0.30-$0.35 a share to profits in 2021. However, we did not change our expectations because our 2020 estimate of $5.10 a share was already near the low end of the range.

Duke received a rate increase in Indiana and reached partial settlements in North Carolina. The commission granted the utility an increase of $146 million, based on a return on equity of 9.7% and a common-equity ratio of 53%. About 75% of the increase took effect last month, with the remainder set to take effect in the first quarter of 2021. The company's two utilities in North Carolina reached partial settlements of their rate cases, subject to approval by the state commission. When new tariffs will take effect is unknown.

The board of directors raised the dividend this quarter. The quarterly increase was two cents a share (2.1%). This growth rate is less than half the utility average, which is a result of Duke's high payout ratio.

Duke stock has an above-average dividend yield for a utility. The write-off of the pipeline project did not surprise Wall Street, and the stock price has fallen at a low double-digit percentage this year—less than many utility equities. Total return potential is attractive for the 18-month span, but not for the 3- to 5-year period.

Paul E. Debbas, CFA *August 14, 2020*

(A) Diluted EPS. Excl. nonrec. losses: '12, 70¢; '13, 24¢; '14, 67¢; '17, 15¢; '18, 41¢; losses on disc. ops.: '14, 80¢; '16, 60¢; '18 EPS don't sum due to rounding. Next earnings report due early Nov. (B) Div'ds paid mid-Mar., June, Sept., & Dec. ■ Div'd reinv. plan avail. (C) Incl. intang. In '19: $44.37/sh. (D) In mill., adj. for rev. split. (E) Rate base: Net orig. cost. Rates all'd on com. eq. in '18 in NC: 9.9%; in '19 in SC: 9.5%; in '20 in FL: 9.5%-11.5%; in '04 in IN: 10.5%; earned on avg. com. eq., '19: 8.3%. Reg. Clim.: NC Avg.; SC, OH, IN Above Avg.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	50
Earnings Predictability	90

EVERSOURCE ENERGY NYSE-ES

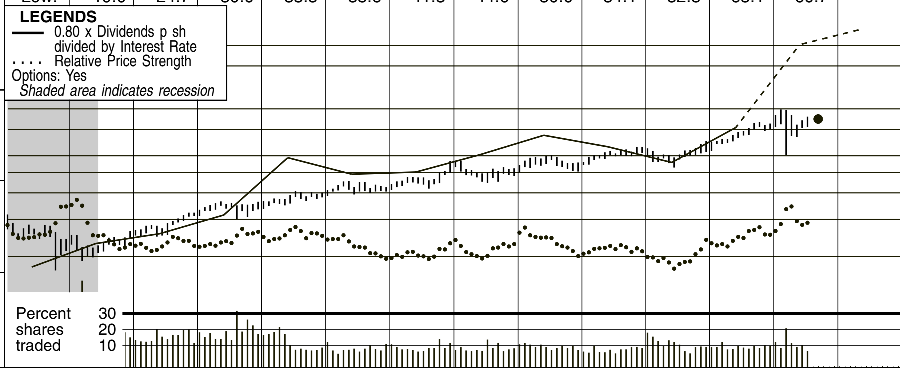
RECENT PRICE	P/E RATIO		RELATIVE P/E RATIO	DIV'D YLD
89.49	24.6	Trailing: 25.5, Median: 18.0	1.15	2.6%

VALUE LINE

TIMELINESS 2 Raised 8/14/20
SAFETY 1 Raised 5/22/15
TECHNICAL 2 Lowered 6/19/20
BETA .90 (1.00 = Market)

High:	26.5	32.2	36.5	40.9	45.7	56.7	56.8	60.4	66.1	70.5	86.6	99.4
Low:	19.0	24.7	30.0	33.5	38.6	41.3	44.6	50.0	54.1	52.8	63.1	60.7

LEGENDS
—— 0.80 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range
2023 | 2024 | 2025
200 160 100 80 60 50 40 30 20

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$57-$137 $97 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	90	(Nil)	3%
Low	75	(-15%)	-1%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	357	390	327
to Sell	268	260	357
Hld's(000)	265386	272541	263197

Percent shares traded 30 20 10

% TOT. RETURN 7/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	21.9	-1.7
3 yr.	62.0	9.9
5 yr.	111.6	31.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
51.82	41.85	44.64	37.27	37.22	30.97	27.76	25.21	19.98	23.16	24.42	25.08	24.11	24.46	26.66	25.85	*24.65*	*25.20*	Revenues per sh	*27.25*
5.00	5.46	3.69	4.82	6.16	4.96	5.68	4.88	4.03	5.22	4.56	4.94	5.46	5.84	6.64	6.65	*6.80*	*7.20*	"Cash Flow" per sh	*8.25*
.91	.98	.82	1.59	1.86	1.91	2.10	2.22	1.89	2.49	2.58	2.76	2.96	3.11	3.25	3.45	*3.60*	*3.75*	Earnings per sh A	*4.50*
.63	.68	.73	.78	.83	.95	1.03	1.10	1.32	1.47	1.57	1.67	1.78	1.90	2.02	2.14	*2.27*	*2.40*	Div'd Decl'd per sh B ■	*2.85*
4.85	5.89	5.49	7.14	8.06	5.17	5.41	6.08	4.69	4.62	5.06	5.44	6.24	7.41	7.96	8.83	*8.90*	*8.10*	Cap'l Spending per sh	*7.75*
17.80	18.46	18.14	18.65	19.38	20.37	21.60	22.65	29.41	30.49	31.47	32.64	33.80	34.99	36.25	38.29	*41.55*	*43.55*	Book Value per sh C	*49.00*
129.03	131.59	154.23	156.22	155.83	175.62	176.45	177.16	314.05	315.27	316.98	317.19	316.89	316.89	316.89	329.88	*345.00*	*349.00*	Common Shs Outst'g D	*361.00*
20.8	19.8	27.1	18.7	13.7	12.0	13.4	15.4	19.9	16.9	17.9	18.1	18.7	19.5	18.7	22.1	*Bold figures are*		Avg Ann'l P/E Ratio	*18.0*
1.10	1.05	1.46	.99	.82	.80	.85	.97	1.27	.95	.94	.91	.98	.98	1.01	1.19	*Value Line*		Relative P/E Ratio	*1.00*
3.3%	3.5%	3.3%	2.6%	3.2%	4.2%	3.6%	3.2%	3.5%	3.5%	3.4%	3.3%	3.2%	3.1%	3.3%	2.8%	*estimates*		Avg Ann'l Div'd Yield	*3.5%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $15654 mill. **Due in 5 Yrs** $5969.5 mill.
LT Debt $14417 mill. **LT Interest** $569.5 mill.
(LT interest earned: 3.5x)
Leases, Uncapitalized Annual rentals $10.2 mill.
Pension Assets-12/19 $4968.6 mill.
Oblig $6321.7 mill.
Pfd Stock $155.6 mill. **Pfd Div'd** $7.6 mill.
Incl. 2,324,000 shs $1.90-$3.28 rates ($50 par) not subject to mandatory redemption, call. at $50.50-$54.00; 430,000 shs 4.25%-4.78% not subject to mandatory redemption, call. at $102.80-$103.63.
Common Stock 336,442,541 shs. **as of 4/30/20**
MARKET CAP: $30 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
4898.2	4465.7	6273.8	7301.2	7741.9	7954.8	7639.1	7752.0	8448.2	8526.5	*8500*	*8800*	Revenues ($mill)	*9800*
377.8	400.3	533.0	793.7	827.1	886.0	949.8	995.5	1040.5	1121.0	*1225*	*1320*	Net Profit ($mill)	*1600*
36.6%	29.9%	34.0%	35.0%	36.2%	37.9%	36.9%	36.8%	21.7%	19.7%	*20.0%*	*20.0%*	Income Tax Rate	*20.0%*
7.1%	8.6%	2.3%	1.4%	2.4%	2.9%	3.9%	4.7%	6.1%	6.3%	*6.0%*	*5.0%*	AFUDC % to Net Profit	*4.0%*
55.1%	53.4%	43.7%	44.3%	45.9%	45.6%	44.8%	51.2%	52.4%	52.8%	*51.5%*	*52.0%*	Long-Term Debt Ratio	*53.0%*
43.6%	45.3%	55.4%	54.8%	53.2%	53.6%	54.4%	48.2%	46.9%	46.6%	*48.0%*	*47.5%*	Common Equity Ratio	*46.5%*
8741.8	8856.0	16675	17544	18738	19313	19697	23018	24474	27097	*29800*	*31700*	Total Capital ($mill)	*38200*
9567.7	10403	16605	17576	18647	19892	21351	23617	25610	27585	*29675*	*31450*	Net Plant ($mill)	*36200*
5.8%	5.9%	4.2%	5.5%	5.3%	5.5%	5.8%	5.2%	5.2%	5.1%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.5%*
9.6%	9.7%	5.7%	8.1%	8.2%	8.4%	8.7%	8.9%	8.9%	8.8%	*8.5%*	*8.5%*	Return on Shr. Equity	*9.0%*
9.8%	9.8%	5.7%	8.2%	8.2%	8.5%	8.8%	8.9%	9.0%	8.8%	*8.5%*	*8.5%*	Return on Com Equity E	*9.0%*
5.0%	5.0%	1.6%	3.4%	3.5%	3.4%	3.5%	3.5%	3.4%	3.6%	*3.0%*	*3.0%*	Retained to Com Eq	*3.0%*
49%	50%	72%	59%	58%	61%	60%	61%	62%	60%	*63%*	*64%*	All Div'ds to Net Prof	*65%*

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-2.6	+2.2	-3.3
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Winter (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.6	+.5	+.7
Fixed Charge Cov. (%)	427	319	319

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-3.0%	2.5%	*1.0%*
"Cash Flow"	2.0%	6.5%	*4.5%*
Earnings	6.0%	7.0%	*5.5%*
Dividends	9.0%	7.0%	*6.0%*
Book Value	6.5%	3.5%	*5.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	2105	1762	1988	1895	7752.0
2018	2288	1853	2271	2034	8448.1
2019	2415	1884	2175	2050	8526.5
2020	2374	1953	*2173*	*2000*	*8500*
2021	*2450*	*2000*	*2250*	*2100*	*8800*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.82	.72	.82	.75	3.11
2018	.85	.76	.91	.73	3.25
2019	.97	.74	.98	.76	3.45
2020	1.01	.75	*.99*	*.85*	*3.60*
2021	*1.05*	*.80*	*1.02*	*.88*	*3.75*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.445	.445	.445	.445	1.78
2017	.475	.475	.475	.475	1.90
2018	.505	.505	.505	.505	2.02
2019	.535	.535	.535	.535	2.14
2020	.5675	.5675			

BUSINESS: Eversource Energy (formerly Northeast Utilities) is the parent of utilities that have 3.2 mill. electric, 540,000 gas, 229,000 water customers. Supplies power to most of Connecticut and gas to part of Connecticut; supplies power to 3/4 of New Hampshire's population; supplies power to western Massachusetts and parts of eastern Massachusetts & gas to central & eastern Massachusetts; supplies water to CT, MA, & NH. Acq'd NSTAR 4/12; Aquarion 12/17. Electric rev. breakdown: residential, 54%; commercial, 37%; industrial, 5%; other, 4%. Fuel costs: 36% of revs. '19 reported deprec. rate: 3.0%. Has 8,200 empls. Chairman, Pres. & CEO: James J. Judge. Inc.: MA. Address: 300 Cadwell Drive, Springfield, MA 01104. Tel.: 413-785-5871. Internet: www.eversource.com.

Eversource reached a regulatory settlement regarding its proposed acquisition of a gas utility in Massachusetts. The company agreed to pay $1.1 billion in cash to NiSource for a utility with some 330,000 customers. Eversource raised over $500 million through the sale of six million common shares, and will finance the remainder of the purchase with debt. This is expected to be accretive to earnings in the first 12 months after completion. The settlement, if approved by the state commission, would raise rates by $13 million in November of 2021 and $11 million in November of 2022. The allowed return on equity would be 9.7%, and the common-equity ratio would be 53.25%. Eversource has asked for an order by September 30th. Note that NiSource would be responsible for any liabilities resulting from an explosion in September of 2018.

Our 2020 and 2021 earnings estimates require an explanation. These include the dilutive effect of the shares that were issued for the gas utility acquisition, but won't include that utility's operations until the transaction is completed. Thus, we have reduced our 2020 and 2021 share-net estimates by $0.05 and $0.10, respectively. The weak economy has had little effect on Eversource's results because most of its utilities operate under regulatory mechanisms that decouple revenues and volume.

Rate cases are pending in New Hampshire and Massachusetts. P.S. of New Hampshire is seeking an electric hike of $70.4 million, based on a 10.4% ROE and a 54.85% common-equity ratio. A ruling is expected in November, retroactive to July 1, 2019 (when an interim hike of $28.3 million took effect). NSTAR Gas filed for $38 million, based on a 10.45% ROE and a 54.85% equity ratio. New tariffs are expected to take effect on November 1st.

Offshore wind projects offer long-term profit potential. Eversource plans to add 1,714 megawatts of capacity from 2022 through 2024. Note, though, that offshore wind entails construction risk.

The price of this timely stock is up 5% this year. This is unusual in what is shaping up as a bad year for utility issues. The dividend yield is well below the utility mean, and 3- to 5-year total return potential is low.

Paul E. Debbas, CFA *August 14, 2020*

(A) Diluted EPS. Excl. nonrecurring gains (losses): '04, (7¢); '05, ($1.36); '08, (19¢); '10, 9¢; '19, (64¢). Next earnings report due early Nov. (B) Div'ds historically paid late Mar., June, Sept., & Dec. ■ Div'd reinvestment plan avail. (C) Incl. deferred charges. In '19: $28.16/sh. (D) In mill. (E) Rate allowed on com. eq. in MA: (elec.) '18, 10.0%; (gas) '16, 9.8%; in CT: (elec.) '18, 9.25%; (gas) '18, 9.3%; in NH: '10, 9.67%; earned on avg. com. eq., '19: 9.2%. Regulatory Climate: CT, Below Average; NH, Average; MA, Above Average.

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	80
Earnings Predictability	100

P.S. ENTERPRISE GP. NYSE-PEG

RECENT PRICE 54.47 | P/E RATIO 14.8 (Trailing: 15.9 Median: 14.0) | RELATIVE P/E RATIO 0.69 | DIV'D YLD 3.7% | VALUE LINE

TIMELINESS 3 Lowered 5/29/20
SAFETY 1 Raised 11/23/12
TECHNICAL 5 Lowered 8/14/20
BETA .90 (1.00 = Market)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	34.1	34.9	35.5	34.1	37.0	43.8	44.4	47.4	53.3	56.7	63.9	62.1
Low:	23.7	29.0	28.0	28.9	29.7	31.3	36.8	37.8	41.7	46.2	50.0	34.8

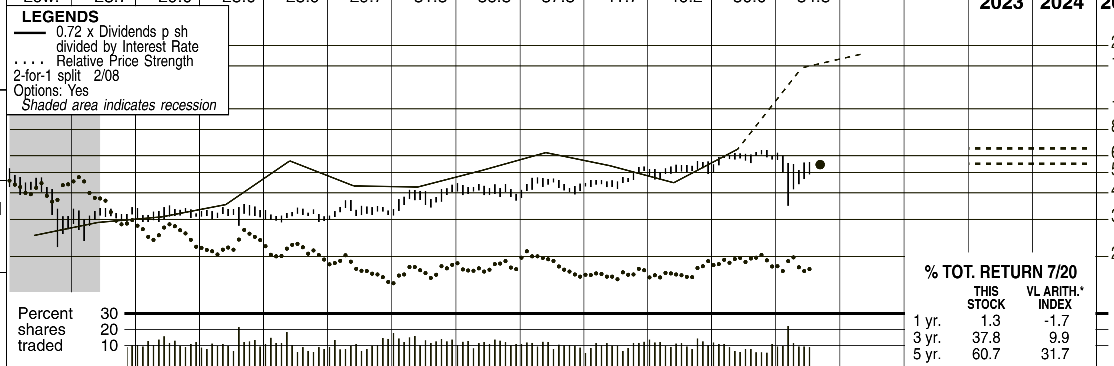
18-Month Target Price Range
Low-High: $39-$82 | Midpoint (% to Mid): $61 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	65	(+20%)	8%
Low	55	(Nil)	4%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	336	415	352
to Sell	365	315	423
Hld's(000)	353397	351159	339220



% TOT. RETURN 7/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	1.3	-1.7
3 yr.	37.8	9.9
5 yr.	60.7	31.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
23.09	24.74	24.07	25.28	27.94	24.57	23.31	22.42	19.33	19.71	21.52	20.61	18.22	18.14	19.24	19.99	***18.60***	***19.40***	Revenues per sh	***22.00***
3.02	3.42	3.91	4.36	4.68	4.98	5.27	5.36	4.87	5.17	5.82	6.15	5.07	5.30	5.44	6.76	***6.35***	***6.65***	"Cash Flow" per sh	***7.50***
1.52	1.79	1.85	2.59	2.90	3.08	3.07	3.11	2.44	2.45	2.99	3.30	2.83	2.82	2.76	3.90	***3.40***	***3.60***	Earnings per sh A	***4.25***
1.10	1.12	1.14	1.17	1.29	1.33	1.37	1.37	1.42	1.44	1.48	1.56	1.64	1.72	1.80	1.88	***1.96***	***2.04***	Div'd Decl'd per sh B ■†	***2.30***
2.64	2.04	2.01	2.65	3.50	3.55	4.27	4.12	5.09	5.56	5.58	7.65	8.32	8.30	7.76	6.28	***5.65***	***5.25***	Cap'l Spending per sh	***5.25***
12.05	11.99	13.35	14.35	15.36	17.37	19.04	20.30	21.31	22.95	24.09	25.86	26.01	27.42	28.53	29.94	***31.35***	***32.90***	Book Value per sh C	***38.50***
476.20	502.33	505.29	508.52	506.02	505.99	505.97	505.95	505.89	505.86	505.84	505.28	504.87	505.00	504.00	504.00	***505.00***	***505.00***	Common Shs Outst'g D	***505.00***
14.3	16.5	17.8	16.5	13.6	10.0	10.4	10.4	12.8	13.5	12.6	12.4	15.3	16.3	18.7	15.1	*Bold figures are*	*Value Line estimates*	Avg Ann'l P/E Ratio	***14.0***
.76	.88	.96	.88	.82	.67	.66	.65	.81	.76	.66	.62	.80	.82	1.01	.81			Relative P/E Ratio	***.80***
5.1%	3.8%	3.5%	2.7%	3.3%	4.3%	4.3%	4.2%	4.6%	4.4%	3.9%	3.8%	3.8%	3.7%	3.5%	3.2%			Avg Ann'l Div'd Yield	***3.8%***

CAPITAL STRUCTURE as of 6/30/20
Total Debt $16838 mill. **Due in 5 Yrs** $8233 mill.
LT Debt $13580 mill. **LT Interest** $505 mill.
(LT interest earned: 5.1x)

Leases, Uncapitalized Annual rentals $44 mill.

Pension Assets-12/19 $5929 mill. **Oblig** $6892 mill.

Pfd Stock None

Common Stock 505,755,584 shs.
as of 7/21/20
MARKET CAP: $28 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
11793	11343	9781.0	9968.0	10886	10415	9198.0	9161.0	9696.0	10076	***9400***	***9800***	Revenues ($mill)	***11150***
1557.0	1577.0	1239.0	1243.0	1518.0	1679.0	1436.0	1431.0	1399.0	1979.0	***1730***	***1825***	Net Profit ($mill)	***2145***
40.5%	40.4%	36.2%	39.5%	38.2%	37.4%	31.7%	37.3%	22.3%	15.9%	***14.5%***	***14.5%***	Income Tax Rate	***9.0%***
5.5%	2.7%	4.8%	4.6%	4.5%	5.5%	8.4%	10.6%	9.8%	5.5%	***8.0%***	***7.0%***	AFUDC % to Net Profit	***6.0%***
44.8%	42.1%	38.3%	40.4%	40.4%	40.3%	45.3%	46.6%	47.8%	47.7%	***48.0%***	***48.5%***	Long-Term Debt Ratio	***50.0%***
55.2%	57.9%	61.7%	59.6%	59.6%	59.7%	54.7%	53.4%	52.2%	52.3%	***52.0%***	***51.5%***	Common Equity Ratio	***50.0%***
17452	17731	17467	19470	20446	21900	24025	25915	27545	28832	***30475***	***32275***	Total Capital ($mill)	***38700***
16390	17849	19736	21645	23589	26539	29286	31797	34363	35844	***37300***	***38475***	Net Plant ($mill)	***41700***
10.4%	10.2%	8.1%	7.5%	8.4%	8.6%	6.8%	6.4%	6.0%	7.8%	***6.5%***	***6.5%***	Return on Total Cap'l	***6.5%***
16.2%	15.4%	11.5%	10.7%	12.5%	12.9%	10.9%	10.3%	9.7%	13.1%	***11.0%***	***11.0%***	Return on Shr. Equity	***11.0%***
16.2%	15.4%	11.5%	10.7%	12.5%	12.9%	10.9%	10.3%	9.7%	13.1%	***11.0%***	***11.0%***	Return on Com Equity E	***11.0%***
9.0%	8.6%	4.8%	4.4%	6.3%	6.8%	4.6%	4.1%	3.4%	6.8%	***4.5%***	***5.0%***	Retained to Com Eq	***5.0%***
45%	44%	58%	59%	49%	47%	58%	61%	65%	48%	***57%***	***56%***	All Div'ds to Net Prof	***54%***

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-2.0	+2.8	-2.9
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH(¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	9567	9978	9753
Annual Load Factor (%)	NA	NA	NA
% Change Customers (avg.)	NA	NA	NA
Fixed Charge Cov. (%)	503	413	361

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-3.0%	-1.0%	*2.5%*
"Cash Flow"	2.0%	2.0%	*4.5%*
Earnings	1.0%	4.0%	*5.0%*
Dividends	3.5%	4.5%	*4.0%*
Book Value	6.0%	4.5%	*5.0%*

QUARTERLY REVENUES ($ mill.)

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	2647	2155	2263	2096	9161.0
2018	2818	2016	2394	2468	9696.0
2019	2980	2316	2302	2478	10076
2020	2781	2050	***2200***	***2369***	***9400***
2021	***2900***	***2100***	***2300***	***2500***	***9800***

EARNINGS PER SHARE A

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.94	.69	.78	.42	2.82
2018	1.10	.53	.81	.32	2.76
2019	1.38	.86	.80	.86	3.90
2020	.88	.89	***.98***	***.65***	***3.40***
2021	***1.15***	***.80***	***1.00***	***.65***	***3.60***

QUARTERLY DIVIDENDS PAID B ■ †

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.41	.41	.41	.41	1.64
2017	.43	.43	.43	.43	1.72
2018	.45	.45	.45	.45	1.80
2019	.47	.47	.47	.47	1.88
2020	.49	.49			

BUSINESS: Public Service Enterprise Group Incorporated is a holding company for Public Service Electric and Gas Company (PSE&G), which serves 2.3 million electric and 1.8 million gas customers in New Jersey, and PSEG Power LLC, a nonregulated power generator with nuclear, gas, and coal-fired plants in the Northeast. PSEG Energy Holdings is involved in renewable energy. The company no longer breaks out data on electric and gas operating statistics. Fuel costs: 33% of revenues. '19 reported depreciation rates (utility): 1.9%-2.5%. Has 13,000 employees. Chairman, President & Chief Executive Officer: Dr. Ralph Izzo. Inc.: New Jersey. Address: 80 Park Plaza, P.O. Box 1171, Newark, New Jersey 07101-1171. Telephone: 973-430-7000. Internet: www.pseg.com.

Public Service Enterprise Group is exploring strategic alternatives for the non-nuclear generating assets of its PSEG Power nonutility subsidiary. This includes more than 6,750 megawatts of fossil-fueled (mainly gas) plants and a 467 mw solar portfolio. PSEG Power is expected to produce roughly 20% of corporate profits this year. How much of this amount comes from the non-nuclear plants is unknown. A sale of these assets would be appealing to management because this would reduce the company's business risk and earnings volatility. PSEG expects the process to be completed in 2021, and that it would use the sale proceeds to retire debt at PSEG Power. PSEG does not expect the move to affect its dividend policy.

Public Service Electric and Gas, the regulated utility, has good prospects. Although lockdowns and economic slump have hurt kilowatt-hour sales, the utility has cut costs to offset this. PSE&G is deferring for future recovery coronavirus-related expenses. Much of the utility's capital expenditures are recoverable contemporaneously through regulatory mechanisms, instead of by filing a general rate case. These stem from programs to harden the electric and gas system and modernize the gas operations. Increased spending on electric transmission is also benefiting the company's earning power. Unrealized gains on PSEG's nuclear decommissioning trusts made June-quarter results better than we expected, so we raised our earnings estimate by $0.20 a share, to $3.40. We look for a 6% profit increase in 2021, as continued growth at PSE&G should outweigh the effects of difficult market conditions at PSEG Power. Note that our estimates include the assets that PSEG wants to sell.

Finances are strong. The common-equity ratio is healthy, and PSEG has no need to issue equity over the 3- to 5-year period. The fixed-charge coverage is well above the norm for utilities. The company's Financial Strength rating is A++, our highest.

This high-quality equity has a dividend yield that is average for a utility. Total return potential is about average for the next 18 months, but unexciting for the 3- to 5-year period.

Paul E. Debbas, CFA *August 14, 2020*

(A) Diluted EPS. Excl. nonrecur. gains (losses): '06, (35¢); '08, (96¢); '09, 6¢; '11, (34¢); '12, 7¢; '16, (30¢); '17, 28¢ (net); '18, 8¢; '19, (62¢); gains (loss) from disc. ops.: '05, (33¢); '06, 12¢; '07, 3¢; '08, 40¢; '11, 13¢. '17 EPS don't sum due to rounding. Next egs. report due late Oct. (B) Div'ds histor. paid in late Mar., June, Sept., & Dec. ■ Div'd reinv. plan avail. (C) Incl. intang. In '19: $7.59/sh. (D) In mill., adj. for split. (E) Rate base: Net orig. cost. Rate all'd on com. eq. in '18: 9.6%; earned on avg. com. eq., '19: 13.2%. Regul. Climate: Avg.

Company's Financial Strength	A++
Stock's Price Stability	95
Price Growth Persistence	45
Earnings Predictability	70

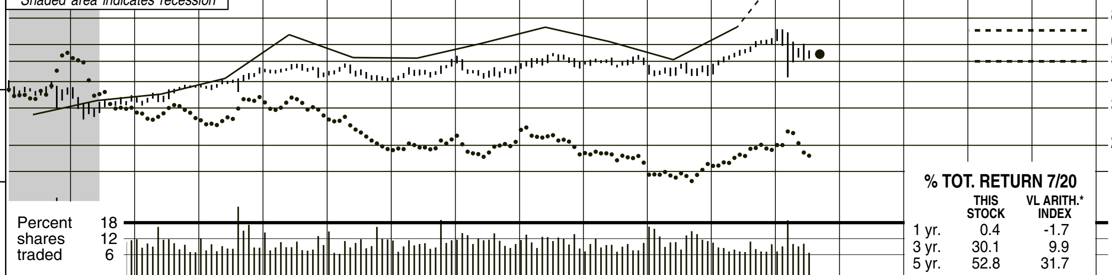
SOUTHERN COMPANY NYSE-SO

RECENT PRICE 54.01 | P/E RATIO 17.2 (Trailing: 17.3, Median: 16.0) | RELATIVE P/E RATIO 0.80 | DIV'D YLD 4.8% | VALUE LINE

TIMELINESS 3 Raised 3/2/18
SAFETY 2 Lowered 2/21/14
TECHNICAL 4 Lowered 8/14/20
BETA .90 (1.00 = Market)

High:	37.6	38.6	46.7	48.6	48.7	51.3	53.2	54.6	53.5	49.4	64.3	71.1
Low:	26.5	30.8	35.7	41.8	40.0	40.3	41.4	46.0	46.7	42.4	43.3	42.0

LEGENDS
—— 0.62 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$40-$92	$66 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(+30%)	11%
Low	50	(-5%)	3%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	592	661	565
to Sell	531	564	730
Hld's(000)	623889	633480	626906

% TOT. RETURN 7/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	0.4	-1.7
3 yr.	30.1	9.9
5 yr.	52.8	31.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
16.05	18.28	19.24	20.12	22.04	19.21	20.70	20.41	19.06	19.26	20.34	19.18	20.09	22.86	22.73	20.34	*18.95*	*19.80*	Revenues per sh	*22.25*
3.65	4.03	4.01	4.22	4.43	4.43	4.51	4.91	5.18	5.27	5.28	5.47	5.69	6.64	6.41	6.33	*6.45*	*6.70*	"Cash Flow" per sh	*7.75*
2.06	2.13	2.10	2.28	2.25	2.32	2.36	2.55	2.67	2.70	2.77	2.84	2.83	3.21	3.00	3.17	*3.10*	*3.25*	Earnings per sh A	*3.75*
1.42	1.48	1.54	1.60	1.66	1.73	1.80	1.87	1.94	2.01	2.08	2.15	2.22	2.30	2.38	2.46	*2.54*	*2.62*	Div'd Decl'd per sh B ■	*2.86*
2.85	3.20	4.01	4.65	5.10	5.70	4.85	5.23	5.54	6.16	6.58	6.22	7.38	7.37	7.74	7.17	*8.70*	*7.45*	Cap'l Spending per sh	*6.50*
13.86	14.42	15.24	16.23	17.08	18.15	19.21	20.32	21.09	21.43	21.98	22.59	25.00	23.98	23.92	26.11	*26.45*	*27.15*	Book Value per sh C	*30.50*
741.50	741.45	746.27	763.10	777.19	819.65	843.34	865.13	867.77	887.09	907.78	911.72	990.39	1007.6	1033.8	1053.3	*1060.0*	*1060.0*	Common Shs Outst'g D	*1090.0*
14.7	15.9	16.2	16.0	16.1	13.5	14.9	15.8	17.0	16.2	16.0	15.8	17.8	15.5	15.1	17.6	*Bold figures are*		Avg Ann'l P/E Ratio	*16.0*
.78	.85	.87	.85	.97	.90	.95	.99	1.08	.91	.84	.80	.93	.78	.82	.95	*Value Line*		Relative P/E Ratio	*.90*
4.7%	4.4%	4.5%	4.4%	4.6%	5.5%	5.1%	4.6%	4.3%	4.6%	4.7%	4.8%	4.4%	4.6%	5.3%	4.4%	*estimates*		Avg Ann'l Div'd Yield	*4.7%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $47919 mill. **Due in 5 Yrs** $12296 mill.
LT Debt $45138 mill. **LT Interest** $1711 mill.
(LT interest earned: 3.3x)
Leases, Uncapitalized Annual rentals $289 mill.
Pension Assets-12/19 $14057 mill. **Oblig** $14788 mill.
Pfd Stock $291 mill. **Pfd Div'd** $15 mill.
Incl. 10 mill. shs. 5.83% cum. pfd. ($25 stated value); 475,115 shs. 4.2%-5.44% cum. pfd. ($100 par).

Common Stock 1,056,130,748 shs.
MARKET CAP: $57 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
17456	17657	16537	17087	18467	17489	19896	23031	23495	21419	*20100*	*21000*	Revenues ($mill)	*24300*
2040.0	2268.0	2415.0	2439.0	2567.0	2647.0	2757.0	3269.0	3096.0	3354.0	*3325*	*3485*	Net Profit ($mill)	*4200*
33.5%	35.0%	35.6%	34.8%	33.8%	33.4%	28.5%	25.2%	21.3%	15.9%	*15.5%*	*15.5%*	Income Tax Rate	*15.5%*
13.7%	10.2%	9.4%	11.6%	13.9%	13.2%	11.9%	7.6%	6.8%	6.0%	*8.0%*	*6.0%*	AFUDC % to Net Profit	*5.0%*
51.2%	50.0%	49.9%	51.5%	49.5%	52.8%	61.5%	64.5%	62.0%	60.1%	*61.0%*	*61.5%*	Long-Term Debt Ratio	*60.0%*
45.7%	47.1%	47.3%	45.8%	47.3%	44.0%	35.7%	35.0%	37.6%	39.5%	*38.5%*	*38.0%*	Common Equity Ratio	*39.5%*
35438	37307	38653	41483	42142	46788	69359	68953	65750	69594	*73075*	*75800*	Total Capital ($mill)	*84000*
42002	45010	48390	51208	54868	61114	78446	79872	80797	83080	*88775*	*93025*	Net Plant ($mill)	*103500*
7.0%	7.2%	7.3%	6.8%	7.1%	6.6%	4.9%	5.9%	5.9%	6.0%	*5.5%*	*6.0%*	Return on Total Cap'l	*6.0%*
11.8%	12.2%	12.5%	12.1%	12.1%	12.0%	10.3%	13.3%	12.4%	12.1%	*11.5%*	*12.0%*	Return on Shr. Equity	*12.5%*
12.2%	12.5%	12.8%	12.5%	12.5%	12.6%	11.0%	13.4%	12.5%	12.1%	*12.0%*	*12.0%*	Return on Com Equity E	*12.5%*
3.0%	3.4%	3.6%	3.2%	3.2%	3.1%	2.5%	3.9%	2.6%	2.8%	*2.5%*	*2.5%*	Retained to Com Eq	*3.0%*
77%	73%	73%	75%	75%	76%	78%	72%	79%	77%	*81%*	*80%*	All Div'ds to Net Prof	*75%*

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-2.6	+3.6	-8.5
Avg. Indust. Use (MWH)	3016	3048	2947
Avg. Indust. Revs. per KWH (¢)	6.18	6.04	6.03
Capacity at Yearend (Mw)	46936	45824	41940
Peak Load, Summer (Mw) F	34874	36429	34209
Annual Load Factor (%)	61.4	61.2	60.3
% Change Customers (yr-end)	+1.0	+1.0	-8.9
Fixed Charge Cov. (%)	318	280	281

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	.5%	2.5%	*Nil*
"Cash Flow"	4.0%	4.5%	*3.0%*
Earnings	3.0%	3.0%	*3.0%*
Dividends	3.5%	3.5%	*3.0%*
Book Value	3.5%	3.0%	*3.5%*

Cal-endar	QUARTERLY REVENUES (mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	5771	5430	6201	5629	23031
2018	6372	5627	6159	5337	23495
2019	5412	5098	5995	4914	21419
2020	5018	4620	*5500*	*4962*	*20100*
2021	*5200*	*4800*	*5800*	*5200*	*21000*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.73	.73	1.08	.67	3.21
2018	.99	.71	1.13	.17	3.00
2019	.75	.85	1.25	.32	3.17
2020	.81	.75	*1.15*	*.39*	*3.10*
2021	*.85*	*.75*	*1.25*	*.40*	*3.25*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.5425	.56	.56	.56	2.22
2017	.56	.58	.58	.58	2.30
2018	.58	.60	.60	.60	2.38
2019	.60	.62	.62	.62	2.46
2020	.62	.64			

BUSINESS: The Southern Company, through its subs., supplies electricity to 4.3 mill. customers in GA, AL, and MS. Also has a competitive generation business. Acq'd AGL Resources (renamed Southern Company Gas, 4.3 mill. customers in GA, NJ, IL, VA, & TN) 7/16. Sold Gulf Power 1/19. Electric rev. breakdown: residential, 37%; commercial, 30%; industrial, 19%; other, 14%. Retail revs. by state: GA, 56%; AL, 38%; MS, 6%. Generating sources: gas, 47%; coal, 20%; nuclear, 15%; other, 9%; purchased, 9%. Fuel costs: 34% of revs. '19 reported depr. rates (util.): 2.6%-3.7%. Has 27,900 empls. Chairman, Pres. and CEO: Thomas A. Fanning. Inc.: DE. Address: 30 Ivan Allen Jr. Blvd., N.W., Atlanta, GA 30308. Tel.: 404-506-0747. Internet: www.southerncompany.com.

Southern Company's Georgia Power subsidiary still believes it can complete the construction of two nuclear units to meet the regulatory schedule, but costs have risen. The utility is adding two units at the site of the Vogtle station, which are scheduled to come on line by November of 2021 and 2022. However, the coronavirus has disrupted construction, so Georgia Power exceeded the contingency that was included in the budget. Because this will not be recoverable in rates, the company took an aftertax charge of $111 million ($0.10 a share) against June-period results, which we *excluded* from our earnings presentation as a nonrecurring item. All told, Georgia Power raised its estimate of the cost of its 45.7% stake by $150 million, to $8.5 billion. Of this amount, about $2 billion remains. This excludes $3.0 billion of financing costs, of which $2.4 billion has been spent.
We think earnings in 2020 will fall a bit short of the 2019 tally. On the positive side, some of Southern Company's utilities are benefiting from rate relief. However, weather patterns were milder than normal in the first six months of 2020. As for the effects of the coronavirus on kilowatt-hour sales, management still expects a revenue loss of $250 million-$400 million, but expects to offset this through cost-cutting measures. Our estimate is at the low end of the company's $3.10-$3.22 guidance, issued in February.
We look for an earnings recovery in 2021. We figure that the economy will be in better shape. Georgia Power will also get $181 million of rate relief in the second phase of a three-year rate plan. Also . . .
Two gas rate cases are pending. Virginia Natural Gas filed for $49.6 million, based on a 10.35% return on equity and a 54% common-equity ratio. A ruling is expected in the second period of 2021, retroactive to this November. Atlanta Gas Light sought $37.6 million. New tariffs are expected to take effect at the start of 2021.
This stock's dividend yield is a percentage point above the utility average. However, investors must be willing to accept the risks associated with the nuclear construction project. Total return potential is attractive for the 18-month span, but not for the 3- to 5-year period.
Paul E. Debbas, CFA *August 14, 2020*

(A) Diluted EPS. Excl. nonrec. gain (losses): '09, (25¢); '13, (83¢); '14, (59¢); '15, (25¢); '16, (28¢); '17, ($2.37); '18, (78¢); '19, $1.30; '20, (17¢). Next earnings report due late Oct.
(B) Div'ds paid in early Mar., June, Sept., and Dec. ■ Div'd reinvest. plan avail. (C) Incl. def'd charges. In '19: $17.64/sh. (D) In mill. (E) Rate base: AL, MS, fair value; FL, GA, orig. cost. Allowed return on common equity (blended): 12.5%; earned on avg. com. eq., '19: 13.0%. Regulatory Climate: GA, AL Above Average; MS, FL Average. (F) Winter peak in '18.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	25
Earnings Predictability	85

ALLETE NYSE-ALE

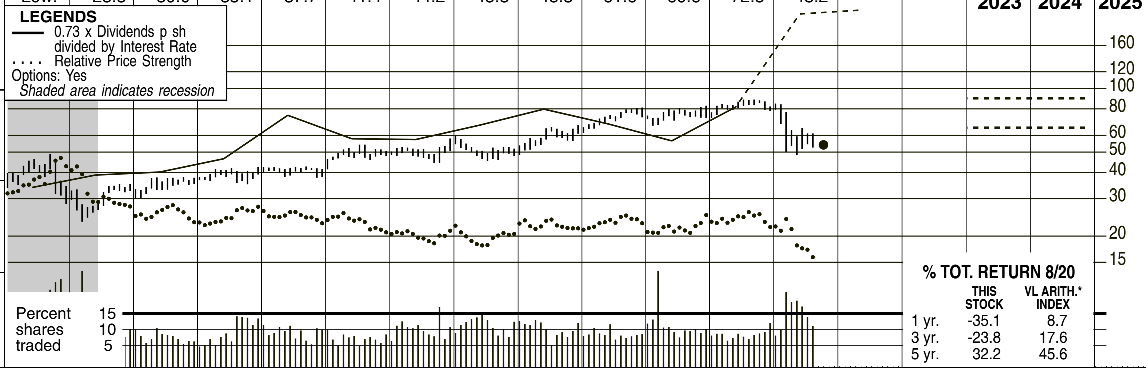
RECENT PRICE **53.96** | P/E RATIO **17.9** (Trailing: 16.9 Median: 18.0) | RELATIVE P/E RATIO **0.84** | DIV'D YLD **4.7%** | VALUE LINE

TIMELINESS **3** Lowered 4/5/19
SAFETY **2** New 10/1/04
TECHNICAL **3** Raised 9/11/20
BETA .85 (1.00 = Market)

High:	35.3	37.9	42.5	42.7	54.1	58.0	59.7	66.9	81.2	82.8	88.6	84.7		
Low:	23.3	30.0	35.1	37.7	41.4	44.2	45.3	48.3	61.6	66.6	72.5	48.2		

Target Price Range 2023 | 2024 | 2025

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$47-$104 $76 (40%)



2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	90	(+65%)	*17%*
Low	65	(+20%)	*9%*

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	158	124	141
to Sell	120	154	136
Hld's(000)	38235	38410	37540

% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-35.1	8.7
3 yr.	-23.8	17.6
5 yr.	32.2	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
25.30	24.50	25.23	27.33	24.57	21.57	25.34	24.75	24.40	24.60	24.77	30.27	27.01	27.78	29.10	23.99	*21.05*	*22.35*	Revenues per sh	*25.00*
2.97	3.85	4.14	4.42	4.23	3.57	4.35	4.91	5.01	5.35	5.68	6.79	7.08	6.59	7.37	7.24	*7.10*	*7.70*	"Cash Flow" per sh	*9.25*
1.35	2.48	2.77	3.08	2.82	1.89	2.19	2.65	2.58	2.63	2.90	3.38	3.14	3.13	3.38	3.33	*3.10*	*3.50*	Earnings per sh A	*4.25*
.30	1.25	1.45	1.64	1.72	1.76	1.76	1.78	1.84	1.90	1.96	2.02	2.08	2.14	2.24	2.35	*2.47*	*2.58*	Div'd Decl'd per sh B ■ †	*2.90*
2.12	1.95	3.37	6.82	9.24	9.05	6.95	6.38	10.30	7.93	12.48	5.84	5.35	4.08	6.07	11.55	*14.80*	*11.20*	Cap'l Spending per sh	*3.25*
21.23	20.03	21.90	24.11	25.37	26.41	27.26	28.78	30.48	32.44	35.06	37.07	38.17	40.47	41.86	43.17	*46.35*	*47.75*	Book Value per sh C	*51.75*
29.70	30.10	30.40	30.80	32.60	35.20	35.80	37.50	39.40	41.40	45.90	49.10	49.60	51.10	51.50	51.70	*52.75*	*53.50*	Common Shs Outst'g D	*54.25*
25.2	17.9	16.5	14.8	13.9	16.1	16.0	14.7	15.9	18.6	17.2	15.1	18.6	23.0	22.2	24.7	*Bold figures are*		Avg Ann'l P/E Ratio	*18.5*
1.33	.95	.89	.79	.84	1.07	1.02	.92	1.01	1.05	.91	.76	.98	1.16	1.20	1.32	*Value Line*		Relative P/E Ratio	*1.05*
.9%	2.8%	3.2%	3.6%	4.4%	5.8%	5.0%	4.6%	4.5%	3.9%	3.9%	4.0%	3.6%	3.0%	3.0%	2.9%	*estimates*		Avg Ann'l Div'd Yield	*3.7%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $1890.7 mill. **Due in 5 Yrs** $562.6 mill.
LT Debt $1381.0 mill. **LT Interest** $60.1 mill.
(LT interest earned: 3.4x)

Leases, Uncapitalized Annual rentals $6.6 mill.

Pension Assets-12/19 $699.6 mill. **Oblig** $854.0 mill.

Pfd Stock None

Common Stock 51,880,664 shs.

MARKET CAP: $2.8 billion (Mid Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
907.0	928.2	961.2	1018.4	1136.8	1486.4	1339.7	1419.3	1498.6	1240.5	*1110*	*1195*	Revenues ($mill)	*1350*
75.3	93.8	97.1	104.7	124.8	163.4	155.3	159.2	174.1	172.4	*165*	*190*	Net Profit ($mill)	*230*
37.2%	27.6%	28.1%	21.5%	22.6%	19.4%	11.3%	14.8%	14.8%	NMF	*NMF*	*NMF*	Income Tax Rate	*NMF*
8.9%	2.7%	5.3%	4.4%	6.3%	2.0%	1.4%	.8%	.7%	1.3%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*1.0%*
44.2%	44.3%	43.7%	44.6%	44.2%	46.3%	42.0%	41.0%	39.9%	38.6%	*41.0%*	*40.0%*	Long-Term Debt Ratio	*41.0%*
55.8%	55.7%	56.3%	55.4%	55.8%	53.7%	58.0%	59.0%	60.1%	61.4%	*59.0%*	*60.0%*	Common Equity Ratio	*59.0%*
1747.6	1937.2	2134.6	2425.9	2882.2	3388.9	3263.4	3507.4	3584.3	3632.8	*4145*	*4255*	Total Capital ($mill)	*4775*
1805.6	1982.7	2347.6	2576.5	3286.4	3669.1	3741.2	3822.4	3904.4	4377.0	*4945*	*5320*	Net Plant ($mill)	*5575*
5.4%	6.0%	5.6%	5.3%	5.2%	5.8%	5.8%	5.5%	5.8%	5.6%	*4.5%*	*5.5%*	Return on Total Cap'l	*6.0%*
7.7%	8.7%	8.1%	7.8%	7.8%	9.0%	8.2%	7.7%	8.1%	7.7%	*6.5%*	*7.5%*	Return on Shr. Equity	*8.0%*
7.7%	8.7%	8.1%	7.8%	7.8%	9.0%	8.2%	7.7%	8.1%	7.7%	*6.5%*	*7.5%*	Return on Com Equity E	*8.0%*
1.5%	2.9%	2.3%	2.2%	2.5%	3.6%	2.8%	2.4%	2.7%	2.3%	*1.5%*	*2.0%*	Retained to Com Eq	*2.5%*
81%	66%	71%	72%	67%	60%	66%	68%	66%	70%	*79%*	*73%*	All Div'ds to Net Prof	*68%*

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+8.4	-.2	-1.5
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Winter (Mw)	1599	1589	1573
Annual Load Factor (%)	NA	NA	NA
% Change Customers (avg.)	NA	NA	NA
Fixed Charge Cov. (%)	339	296	277

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	1.0%	2.0%	*-1.5%*
"Cash Flow"	5.5%	6.0%	*4.5%*
Earnings	2.5%	4.0%	*4.5%*
Dividends	3.0%	3.5%	*4.5%*
Book Value	5.0%	5.0%	*3.5%*

QUARTERLY REVENUES ($ mill.)

Cal-endar	Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	365.6	353.3	362.5	337.9	1419.3
2018	358.2	344.1	348.0	448.3	1498.6
2019	357.2	290.4	288.3	304.6	1240.5
2020	311.6	243.2	*275*	*280.2*	*1110*
2021	*325*	*285*	*285*	*300*	*1195*

EARNINGS PER SHARE A

Cal-endar	Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.97	.72	.88	.56	3.13
2018	.99	.61	.59	1.18	3.38
2019	1.18	.64	.60	.92	3.33
2020	1.28	.39	*.57*	*.86*	*3.10*
2021	*1.20*	*.70*	*.65*	*.95*	*3.50*

QUARTERLY DIVIDENDS PAID B ■ †

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.52	.52	.52	.52	2.08
2017	.535	.535	.535	.535	2.14
2018	.56	.56	.56	.56	2.24
2019	.5875	.5875	.5875	.5875	2.35
2020	.6175	.6175	.6175		

BUSINESS: ALLETE, Inc. is the parent of Minnesota Power, which supplies electricity to 146,000 customers in northeastern MN, & Superior Water, Light & Power in northwestern WI. Electric rev. breakdown: taconite mining/processing, 26%; paper/wood products, 9%; other industrial, 8%; residential, 12%; commercial, 13%; wholesale, 16% other, 16%. ALLETE Clean Energy (ACE) owns renewable energy projects. Acq'd U.S. Water Services 2/15; sold it 3/19. Generating sources: coal & lignite, 30%; wind, 11%; other, 5%; purchased, 54%. Fuel costs: 31% of revs. '19 deprec. rate: 3.3%. Has 1,400 employees. Chairman: Alan R. Hodnik. President & CEO: Bethany M. Owen. Inc.: MN. Address: 30 West Superior St., Duluth, MN 55802-2093. Tel.: 218-279-5000. Internet: www.allete.com.

We expect an earnings decline for ALLETE in 2020. In the second quarter, the company took an aftertax charge of $8.3 million ($0.16 a share) for a refund to customers of previously collected revenues. This was part of an order that allowed the company's primary utility subsidiary, Minnesota Power, to effect a $25.5 million rate hike, effective May 1st. The utility may not file a rate application until November 1, 2021, unless specified conditions occur that permit it to file as early as March 1, 2021. (If and when Minnesota Power will file next year remains to be determined.) We *include* the $0.16-a-share charge in our earnings presentation. ALLETE's 2020 earnings guidance (on a GAAP basis) is $3.09-$3.29 a share. Note that management has cut expenses to offset the costs associated with the coronavirus.

There is mixed news on the state of the economy in the utility's service area. Most of Minnesota Power's large industrial customers expect to operate at full capacity for the remainder of 2020 (and will pay demand charges in accordance with this expectation). However, two plants (one taconite, one paper) remain shut indefinitely.

We think earnings will recover next year. The absence of the charge should be a key factor. We figure the economy will be in better condition in 2021, as well, although there is more uncertainty than usual in this regard.

ALLETE Clean Energy is building a large wind project in Oklahoma. The 300-megawatt, $450 million facility is expected to be completed by yearend. A similar project is planned for 2021. Note that ALLETE has a negative tax rate thanks to significant tax credits arising from this subsidiary's investments in renewable energy.

The price of ALLETE stock has fallen 34% this year. Investors are worried about the effects of the weak economy on Minnesota Power's heavily industrial service territory. This might well persist into 2021. The dividend yield is almost a percentage point above the utility mean. Total return potential is attractive for the next 18 months. For the 3- to 5-year period, total return potential is modest, but still better than that of most utility equities.

Paul E. Debbas, CFA September 11, 2020

(A) Diluted EPS. Excl. nonrec. gains (losses): '04, (25¢); '05, ($1.84); '15, (46¢); '17, 25¢; '19, 26¢; gain (losses) on disc. ops.: '04, $2.57, '05, (16¢); '06, (2¢). '18 & '19 EPS don't sum due to rounding. Next earnings report due early Nov. (B) Div'ds historically paid in early Mar., June, Sept. and Dec. ■ Div'd reinvest. plan avail. † Shareholder invest. plan avail. (C) Incl. deferred charges. In '19: $8.15/sh. (D) In mill. (E) Rate base: Orig. cost depr. Rate allowed in MN on com. eq. in '18: 9.25%; earned on avg. com. eq., '19: 7.9%. Regulatory Climate: Avg.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	85

ALLIANT ENERGY NDQ-LNT

RECENT PRICE 54.15 | P/E RATIO 23.2 (Trailing: 20.4 Median: 17.0) | RELATIVE P/E RATIO 1.08 | DIV'D YLD 2.8% | VALUE LINE

TIMELINESS 3 Lowered 9/11/20
SAFETY 2 Raised 9/28/07
TECHNICAL 3 Lowered 6/19/20
BETA .85 (1.00 = Market)

18-Month Target Price Range
Low-High: $41-$89 | Midpoint (% to Mid): $65 (20%)

2023-25 PROJECTIONS

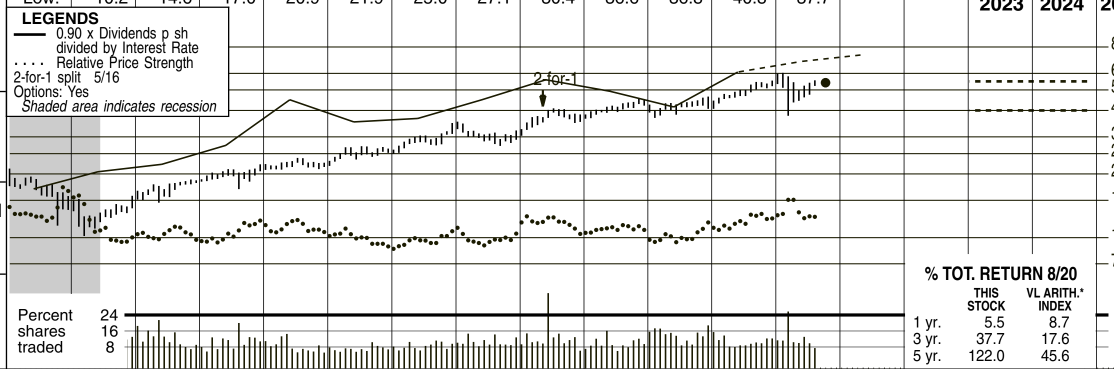
	Price	Gain	Ann'l Total Return
High	55	(Nil)	4%
Low	40	(-25%)	-3%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	272	236	227
to Sell	209	272	258
Hld's(000)	188011	182284	186056

High:	15.8	18.8	22.2	23.8	27.1	34.9	35.4	41.0	45.6	46.6	55.4	60.3
Low:	10.2	14.6	17.0	20.9	21.9	25.0	27.1	30.4	36.6	36.8	40.8	37.7

Target Price Range 2023 | 2024 | 2025



% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	5.5	8.7
3 yr.	37.7	17.6
5 yr.	122.0	45.6

Alliant Energy, formerly called Interstate Energy Corporation, was formed on April 21, 1998 through the merger of WPL Holdings, IES Industries, and Interstate Power. WPL stockholders received one share of Interstate Energy stock for each WPL share, IES stockholders received 1.14 Interstate Energy shares for each IES share, and Interstate Power stockholders received 1.11 Interstate Energy shares for each Interstate Power share.

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
15.40	16.51	13.94	14.77	15.10	14.34	14.58	14.62	14.97	14.89	*14.70*	*15.10*	Revenues per sh	*15.85*
2.60	2.75	2.95	3.34	3.44	3.45	3.45	3.10	4.32	4.59	*4.75*	*4.90*	"Cash Flow" per sh	*5.25*
1.38	1.38	1.53	1.65	1.74	1.69	1.65	1.99	2.19	2.33	*2.45*	*2.55*	Earnings per sh A	*3.00*
.79	.85	.90	.94	1.02	1.10	1.18	1.26	1.34	1.42	*1.52*	*1.64*	Div'd Decl'd per sh B ■ †	*2.00*
3.91	3.03	5.22	3.32	3.78	4.25	5.26	6.34	6.34	6.28	*5.65*	*5.90*	Cap'l Spending per sh	*6.15*
13.05	13.57	14.12	14.79	15.54	16.41	16.96	17.21	19.43	21.24	*22.75*	*24.10*	Book Value per sh C	*28.25*
221.79	222.04	221.97	221.89	221.87	226.92	227.67	231.35	236.06	245.02	*250.00*	*255.00*	Common Shs Outst'g D	*265.00*
12.5	14.5	14.5	15.3	16.6	18.1	22.3	20.6	19.1	21.2	*Bold figures are*		Avg Ann'l P/E Ratio	*16.0*
.80	.91	.92	.86	.87	.91	1.17	1.04	1.03	1.19	*Value Line*		Relative P/E Ratio	*.90*
4.6%	4.3%	4.1%	3.7%	3.5%	3.6%	3.2%	3.1%	3.2%	2.9%	*estimates*		Avg Ann'l Div'd Yield	*4.2%*
3416.1	3665.3	3094.5	3276.8	3350.3	3253.6	3320.0	3382.2	3534.5	3647.7	*3675*	*3850*	Revenues ($mill)	*4205*
303.9	304.4	337.8	382.1	385.5	380.7	373.8	455.9	512.1	557.2	*610*	*630*	Net Profit ($mill)	*790*
30.1%	19.0%	21.5%	12.4%	10.1%	15.3%	13.4%	12.5%	8.4%	10.8%	*NMF*	*11.0%*	Income Tax Rate	*11.0%*
--	--	--	--	--	6.5%	7.0%	7.6%	7.8%	7.6%	*7.5%*	*7.5%*	AFUDC % to Net Profit	*7.5%*
46.3%	45.7%	48.4%	46.1%	49.7%	48.6%	52.8%	49.0%	53.4%	51.5%	*52.0%*	*52.0%*	Long-Term Debt Ratio	*52.0%*
49.5%	50.9%	48.4%	50.8%	47.5%	51.4%	47.2%	48.6%	46.6%	48.5%	*48.0%*	*48.0%*	Common Equity Ratio	*48.0%*
5840.8	5921.2	6476.6	6461.0	7257.2	7246.3	8177.6	8192.8	9832.0	10226	*10000*	*10500*	Total Capital ($mill)	*12000*
6730.6	7037.1	7838.0	7147.3	6442.0	8970.2	9809.9	10798	12031	13527	*14000*	*15000*	Net Plant ($mill)	*18000*
6.6%	6.4%	6.3%	7.0%	6.3%	6.3%	5.6%	6.8%	6.3%	4.1%	*4.0%*	*6.0%*	Return on Total Cap'l	*6.5%*
9.7%	9.5%	10.1%	11.0%	10.6%	10.2%	9.7%	10.9%	11.2%	10.7%	*10.5%*	*10.0%*	Return on Shr. Equity	*10.5%*
9.9%	9.5%	10.3%	11.3%	10.9%	10.2%	9.7%	6.4%	11.2%	10.7%	*10.5%*	*10.0%*	Return on Com Equity E	*10.5%*
3.8%	3.3%	3.9%	4.9%	4.3%	3.6%	2.8%	4.0%	4.4%	4.2%	*4.0%*	*3.5%*	Retained to Com Eq	*3.5%*
64%	67%	64%	57%	61%	65%	71%	63%	61%	61%	*62%*	*64%*	All Div'ds to Net Prof	*67%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $6765.2 mill. **Due in 5 Yrs** $1000.0 mill.
LT Debt $6572.4 mill. **LT Interest** $240.0 mill.
(LT interest earned: 2.9x)

Pension Assets-12/19 $930.4 mill. **Oblig.** $1279.7 mill.
Pfd Stock $400.0 mill. **Pfd Div'd** $10.2 mill.
16,000,000 shs.

Common Stock 249,644,352 shs.

MARKET CAP: $13.5 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-1.0	+2.0	-2.2
Avg. Indust. Use (MWH)	11769	11830	11448
Avg. Indust. Revs. per KWH (¢)	7.16	7.25	6.98
Capacity at Peak (Mw)	5375	5459	5626
Peak Load, Summer (Mw)	5375	5459	5626
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.4	+.4	+.6
Fixed Charge Cov. (%)	319	322	324

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-.5%	-.5%	*1.0%*
"Cash Flow"	4.5%	3.5%	*4.5%*
Earnings	5.0%	5.0%	*5.5%*
Dividends	7.0%	7.0%	*7.0%*
Book Value	4.0%	5.0%	*6.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	853.9	765.3	906.9	856.1	3382.2
2018	916.3	816.1	928.6	873.5	3534.5
2019	987.2	790.2	990.2	880.1	3647.7
2020	915.7	763.1	*1000*	*996.2*	*3675*
2021	*1000*	*880*	*1040*	*930*	*3850*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.44	.41	.73	.41	1.99
2018	.52	.43	.87	.37	2.19
2019	.53	.40	.94	.46	2.33
2020	.72	.54	*.85*	*.34*	*2.45*
2021	*.60*	*.50*	*1.00*	*.45*	*2.55*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■† Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.295	.295	.295	.295	1.18
2017	.315	.315	.315	.315	1.26
2018	.335	.335	.335	.335	1.34
2019	.355	.355	.355	.355	1.42
2020	.38	.38	.38		

BUSINESS: Alliant Energy Corp., formerly named Interstate Energy, is a holding company formed through the merger of WPL Holdings, IES Industries, and Interstate Power. Supplies electricity, gas, and other services in Wisconsin, Iowa, and Minnesota. Elect. revs. by state: WI, 42%; IA, 57%; MN, 1%. Elect. rev.: residential, 34%; commercial, 29%; industrial, 28%; wholesale, 7%; other, 2%. Fuel sources, 2019: coal, 27%; gas, 34%; other, 39%. Fuel costs: 41% of revs. 2019 depreciation rate: 5.9%. Estimated plant age: 17 years. Has approximately 3,597 employees. Chairman & Chief Executive Officer: John O. Larsen. Incorporated: Wisconsin. Address: 4902 N. Biltmore Lane, Madison, Wisconsin 53718. Telephone: 608-458-3311. Internet: www.alliantenergy.com.

We estimate that Alliant Energy's earnings will advance 4%-5% in both 2020 and 2021. The utility's largest subsidiary, Interstate Power and Light, as well as Wisconsin Power and Light, should benefit from an increasing rate base, higher electric margins, and continued cost-control efforts. In terms of rate relief, the Iowa Utilities Board approved tariff increases worth $139 million earlier this year for Interstate Power and Light. Wisconsin Power and Light has submitted a revised plan that would allow it to use tax and fuel savings in lieu of rate hikes to cover expenses associated with two major energy investments. If granted, the utility would delay all pending rate cases until mid-2021. A decision by the Public Service Commission of Wisconsin is expected soon.

Alliant continues to invest heavily in renewables. In Wisconsin, the company announced plans to acquire and advance 675 megawatts (mw) of solar energy in mostly rural areas across six counties. The projects are the next step in the utility's Clean Energy Blueprint, which calls for the elimination and replacement of all coal-generating capacity by 2040. Alliant is also on track to install an additional 280 mw of wind power this year through the Richland and Kossuth wind farm projects.

Leadership recently announced that 30% of its energy mix now comes from renewable resources. That puts Alliant on track to achieve its stated 2030 goal of reducing carbon emissions by 50% and water supply by 75% from 2005 levels.

The West Riverside Energy Center is finally in service. The 730-megawatt combined-cycle natural gas-generating station cost $660 million and took three years to build. The plant can produce enough power for more than 550,000 homes. The next step for the project includes constructing an integrated solar facility adjacent to the natural gas station. Construction is expected to break ground soon.

This stock is now ranked 3 (Average) for year-ahead price performance, having slipped a notch on our Timeliness scale since June. Like many utility issues, the recent quotation is well within our 2023-2025 Target Price Range, resulting in lackluster 3- to 5-year appeal. The dividend yield is also subpar for a utility.

Daniel Henigson, CFA September 11, 2020

(A) Diluted EPS. Excl. nonrecur. gains (losses): '10, (8¢); '11, (1¢); '12, (8¢). Next earnings rpt. due early November. (B) Dividends historically paid in mid-Feb., May, Aug., and Nov. ■ Div'd reinvest. plan avail. † Shareholder invest. plan avail. (C) Incl. deferred chgs. In '19: $72.0 mill., $0.29/sh. (D) In millions, adjusted for split. (E) Rate base: Orig. cost. Rates all'd on com. eq. in IA in '19: 10.0%; in WI in '19 Regul. Clim.: WI, Above Avg.; IA, Avg.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	95
Earnings Predictability	90

AMEREN NYSE-AEE

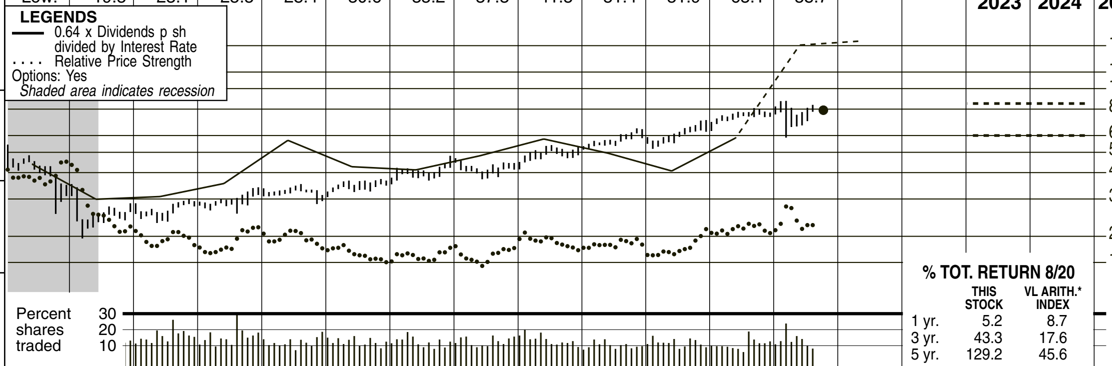
RECENT PRICE 79.11 | P/E RATIO 22.2 (Trailing: 23.1 Median: 17.0) | RELATIVE P/E RATIO 1.04 | DIV'D YLD 2.6% | VALUE LINE

TIMELINESS 2 Raised 9/11/20
SAFETY 2 Raised 6/20/14
TECHNICAL 2 Lowered 6/19/20
BETA .80 (1.00 = Market)

High:	35.3	29.9	34.1	35.3	37.3	48.1	46.8	54.1	64.9	70.9	80.9	87.7	
Low:	19.5	23.1	25.5	28.4	30.6	35.2	37.3	41.5	51.4	51.9	63.1	58.7	

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 0.64 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High Midpoint (% to Mid)
$61-$123 $92 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	85	(+5%)	5%
Low	60	(-25%)	-3%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	266	242	220
to Sell	265	273	301
Hld's(000)	186367	187833	196379

Percent shares traded 30 20 10

% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	5.2	8.7
3 yr.	43.3	17.6
5 yr.	129.2	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
26.43	33.12	33.30	36.23	36.92	29.87	31.77	31.04	28.14	24.06	24.95	25.13	25.04	25.46	25.73	24.00	*22.85*	*23.65*	Revenues per sh	*25.50*
5.57	6.10	6.02	6.76	6.44	6.06	6.33	5.87	5.87	5.25	5.77	6.08	6.59	6.80	7.64	7.83	*8.20*	*8.75*	"Cash Flow" per sh	*10.75*
2.82	3.13	2.66	2.98	2.88	2.78	2.77	2.47	2.41	2.10	2.40	2.38	2.68	2.77	3.32	3.35	*3.50*	*3.70*	Earnings per sh A	*4.50*
2.54	2.54	2.54	2.54	2.54	1.54	1.54	1.56	1.60	1.60	1.61	1.66	1.72	1.78	1.85	1.92	*2.01*	*2.11*	Div'd Decl'd per sh B ■	*2.45*
4.13	4.63	4.99	6.96	9.75	7.51	4.66	4.50	5.49	5.87	7.66	8.12	8.78	9.05	9.56	9.92	*15.85*	*11.65*	Cap'l Spending per sh	*11.00*
29.71	31.09	31.86	32.41	32.80	33.08	32.15	32.64	27.27	26.97	27.67	28.63	29.27	29.61	31.21	32.73	*35.75*	*37.75*	Book Value per sh C	*44.50*
195.20	204.70	206.60	208.30	212.30	237.40	240.40	242.60	242.63	242.63	242.63	242.63	242.63	242.63	244.50	246.20	*254.00*	*258.00*	Common Shs Outst'g D	*270.00*
16.3	16.7	19.4	17.4	14.2	9.3	9.7	11.9	13.4	16.5	16.7	17.5	18.3	20.6	18.3	22.1	*Bold figures are*		Avg Ann'l P/E Ratio	*16.0*
.86	.89	1.05	.92	.85	.62	.62	.75	.85	.93	.88	.88	.96	1.04	.99	1.18	*Value Line*		Relative P/E Ratio	*.90*
5.5%	4.9%	4.9%	4.9%	6.2%	6.0%	5.8%	5.3%	5.0%	4.6%	4.0%	4.0%	3.5%	3.1%	3.0%	2.6%	*estimates*		Avg Ann'l Div'd Yield	*3.4%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $10648 mill. **Due in 5 Yrs** $2165 mill.
LT Debt $10171 mill. **LT Interest** $456 mill.
(LT interest earned: 3.5x)
Leases, Uncapitalized Annual rentals $8 mill.
Pension Assets-12/19 $4564 mill. **Oblig** $4967 mill.
Pfd Stock $142 mill. **Pfd Div'd** $6 mill.
807,595 sh. $3.50 to $5.50 cum. (no par), $100 stated val., redeem. $102.176-$110/sh.; 616,323 sh. 4.00% to 6.625%, $100 par, redeem. $100-$104/sh.
Common Stock 247,079,529 shs. **as of 7/31/20**
MARKET CAP: $20 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
7638.0	7531.0	6828.0	5838.0	6053.0	6098.0	6076.0	6177.0	6291.0	5910.0	*5800*	*6100*	Revenues ($mill)	*6900*
669.0	602.0	589.0	518.0	593.0	585.0	659.0	683.0	821.0	834.0	*875*	*960*	Net Profit ($mill)	*1225*
36.8%	37.3%	36.9%	37.5%	38.9%	38.3%	36.7%	38.2%	22.4%	17.9%	*15.5%*	*12.5%*	Income Tax Rate	*12.5%*
7.8%	5.6%	6.1%	7.1%	5.7%	5.1%	4.1%	5.6%	6.9%	5.8%	*6.0%*	*5.0%*	AFUDC % to Net Profit	*4.0%*
48.2%	45.3%	49.5%	45.2%	47.2%	49.3%	47.7%	49.2%	50.3%	52.1%	*54.0%*	*52.0%*	Long-Term Debt Ratio	*50.0%*
50.9%	53.7%	49.4%	53.7%	51.7%	49.7%	51.3%	49.8%	48.8%	47.1%	*45.5%*	*47.0%*	Common Equity Ratio	*49.0%*
15185	14738	13384	12190	12975	13968	13840	14420	15632	17116	*20000*	*20675*	Total Capital ($mill)	*24500*
17853	18127	16096	16205	17424	18799	20113	21466	22810	24376	*27200*	*28900*	Net Plant ($mill)	*33300*
6.0%	5.6%	6.0%	5.6%	5.8%	5.3%	6.0%	6.0%	6.4%	6.0%	*5.5%*	*6.0%*	Return on Total Cap'l	*6.0%*
8.5%	7.5%	8.7%	7.7%	8.7%	8.3%	9.1%	9.3%	10.6%	10.2%	*9.5%*	*9.5%*	Return on Shr. Equity	*10.0%*
8.6%	7.5%	8.8%	7.8%	8.7%	8.3%	9.2%	9.4%	10.7%	10.3%	*9.5%*	*10.0%*	Return on Com Equity E	*10.0%*
3.8%	2.8%	3.0%	1.9%	2.9%	2.5%	3.3%	3.4%	4.8%	4.4%	*4.0%*	*4.0%*	Retained to Com Eq	*4.5%*
56%	63%	66%	76%	67%	70%	64%	64%	56%	57%	*57%*	*57%*	All Div'ds to Net Prof	*54%*

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-3.4	+5.6	-3.5
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	350	313	307

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-3.0%	-.5%	*.5%*
"Cash Flow"	1.5%	5.5%	*6.5%*
Earnings	1.0%	6.5%	*6.0%*
Dividends	-2.0%	3.0%	*5.0%*
Book Value	-.5%	2.5%	*6.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1514	1538	1723	1402	6177.0
2018	1585	1563	1724	1419	6291.0
2019	1556	1379	1659	1316	5910.0
2020	1440	1398	*1650*	*1312*	*5800*
2021	*1600*	*1450*	*1700*	*1350*	*6100*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.42	.79	1.18	.39	2.77
2018	.62	.97	1.45	.28	3.32
2019	.78	.72	1.47	.38	3.35
2020	.59	.98	*1.53*	*.40*	*3.50*
2021	*.65*	*.85*	*1.70*	*.45*	*3.70*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.425	.425	.425	.44	1.72
2017	.44	.44	.44	.4575	1.78
2018	.4575	.4575	.4575	.475	1.85
2019	.475	.475	.475	.495	1.92
2020	.495	.495	.495		

BUSINESS: Ameren Corporation is a holding company formed through the merger of Union Electric and CIPSCO. Has 1.2 million electric and 127,000 gas customers in Missouri; 1.2 million electric and 813,000 gas customers in Illinois. Discontinued nonregulated power-generation operation in '13. Electric revenue breakdown: residential, 43%; commercial, 32%; industrial, 8%; other, 17%. Generating sources: coal, 63%; nuclear, 23%; hydro & other, 6%; purchased, 8%. Fuel costs: 24% of revenues. '19 reported deprec. rates: 3%-4%. Has 9,300 employees. Chairman, President & CEO: Warner L. Baxter. Inc.: Missouri. Address: One Ameren Plaza, 1901 Chouteau Ave., P.O. Box 66149, St. Louis, Missouri 63166-6149. Tel.: 314-621-3222. Internet: www.ameren.com.

We have boosted our 2020 and 2021 earnings estimates for Ameren by a nickel a share each year. Second-quarter earnings were better than our estimate of $0.80 a share because Ameren was able to cut expenses more than we expected in order to offset the effects of the slump in kilowatt-hour sales resulting from the weak economy. Our revised 2020 share-net estimate is at the midpoint of Ameren's targeted range of $3.40-$3.60. Our 2021 estimate would produce profit growth of 6%, within the company's targeted range of 6%-8% annually.

A gas rate case is pending in Illinois. The utility is seeking a base rate increase of $96 million (including $46 million that would otherwise be recovered through riders in 2021), based on a 10.5% return on equity and a 54.1% common-equity ratio. The staff of the Illinois Commerce Commission is recommending a hike of $67 million, based on a 9.32% ROE and a 50.43% common-equity ratio. Various intervenors are proposing an increase of $66 million, based on a 9.2% ROE and a 50% common-equity ratio. A ruling is required by January, with new tariffs taking effect in February. This is one source of the profit growth that is likely in 2021.

Ameren is building a wind project. The utility is spending $1.2 billion to add 700 megawatts of capacity. Most of this will be in service by yearend, but about $100 million of this spending is expected to slip into 2021. This will not affect the production tax credits associated with the project, however.

We expect a dividend increase in the fourth quarter. This is the usual timing. We estimate an increase of $0.025 a share (5.1%) in the quarterly disbursement, but wouldn't be surprised by a larger hike, given that the payout ratio is near the lower end of Ameren's target of 55%-70%.

Ameren stock is timely, but has a high valuation. The stock price has risen 3% in what has been a bad year for most utility issues, as the market likes the company's status as a fully regulated utility. The dividend yield is a percentage point below the utility mean. Total return potential for the 18-month span is only about average. The recent quotation is near the upper end of our 3- to 5-year Target Price Range.

Paul E. Debbas, CFA *September 11, 2020*

(A) Dil. EPS. Excl. nonrec. gain (losses): '05, (11¢); '10, ($2.19); '11, (32¢); '12, ($6.42); '17, (63¢); gain (loss) from disc. ops.: '13, (92¢); '15, 21¢. '17 EPS don't sum due to rounding. Next egs. report due early Aug. (B) Div'ds pd. late Mar., June, Sept., & Dec. ■ Div'd reinv. plan avail. (C) Incl. intang. In '19: $5.70/sh. (D) In mill. (E) Rate base: Orig. cost depr. Rate all'd on com. eq. in MO in '20: elec., none; in '11: gas, none; in IL in '14: elec., 8.7%, in '18: gas, 9.87%; earned on avg. com. eq., '19: 10.5%. Reg. Climate: MO, Avg.; IL, Below Avg.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	90

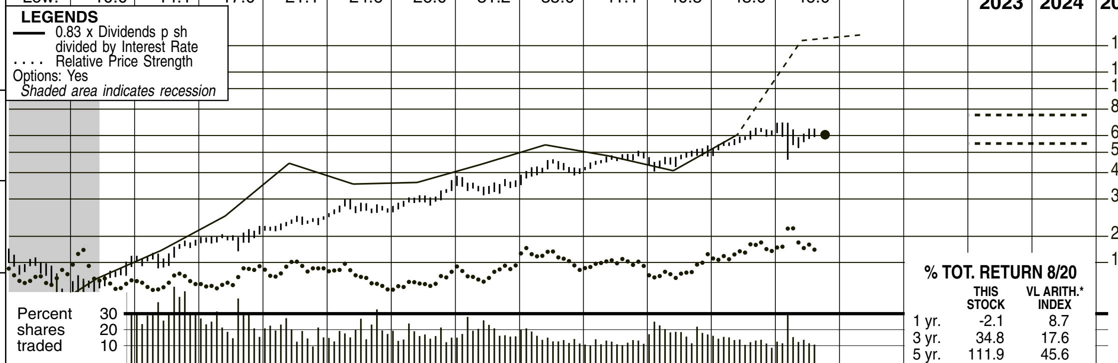
CMS ENERGY CORP. NYSE-CMS

RECENT PRICE	60.49	P/E RATIO	23.3 (Trailing: 22.9 / Median: 18.0)	RELATIVE P/E RATIO	1.09	DIV'D YLD	2.8%	VALUE LINE

TIMELINESS 3 Lowered 1/11/19
SAFETY 2 Raised 3/21/14
TECHNICAL 1 Raised 9/11/20
BETA .80 (1.00 = Market)

High:	16.1	19.3	22.4	25.0	30.0	36.9	38.7	46.3	50.8	53.8	65.3	69.2
Low:	10.0	14.1	17.0	21.1	24.6	26.0	31.2	35.0	41.1	40.5	48.0	46.0

Target Price Range 2023 | 2024 | 2025



18-Month Target Price Range
Low-High Midpoint (% to Mid)
$48-$101 $75 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	75	(+25%)	9%
Low	55	(-10%)	1%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	295	252	238
to Sell	247	301	291
Hld's(000)	264207	265297	267271

% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-2.1	8.7
3 yr.	34.8	17.6
5 yr.	111.9	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
28.06	28.52	30.57	28.95	30.13	27.23	25.77	25.59	23.90	24.68	26.09	23.29	22.92	23.37	24.25	24.11	*22.65*	*23.45*	Revenues per sh	25.25
2.87	3.43	3.22	3.08	3.88	3.47	3.70	3.65	3.82	4.06	4.22	4.59	4.88	5.29	5.61	5.89	*6.25*	*6.60*	"Cash Flow" per sh	7.75
.74	1.10	.64	.64	1.23	.93	1.33	1.45	1.53	1.66	1.74	1.89	1.98	2.17	2.32	2.39	*2.60*	*2.75*	Earnings per sh A	3.50
--	--	--	.20	.36	.50	.66	.84	.96	1.02	1.08	1.16	1.24	1.33	1.43	1.53	*1.63*	*1.74*	Div'd Decl'd per sh B ■	2.15
2.69	2.69	3.01	5.61	3.50	3.59	3.29	3.47	4.65	4.98	5.73	5.64	5.99	5.91	7.32	7.41	*8.20*	*9.85*	Cap'l Spending per sh	8.75
10.63	10.53	10.03	9.46	10.88	11.42	11.19	11.92	12.09	12.98	13.34	14.21	15.23	15.77	16.78	17.68	*19.35*	*20.75*	Book Value per sh C	25.50
195.00	220.50	222.78	225.15	226.41	227.89	249.60	254.10	264.10	266.10	275.20	277.16	279.21	281.65	283.37	283.86	*287.00*	*290.00*	Common Shs Outst'g D	300.00
12.4	12.6	22.2	26.8	10.9	13.6	12.5	13.6	15.1	16.3	17.3	18.3	20.9	21.3	20.3	24.3	*Bold figures are*		Avg Ann'l P/E Ratio	18.0
.66	.67	1.20	1.42	.66	.91	.80	.85	.96	.92	.91	.92	1.10	1.07	1.10	1.30	*Value Line*		Relative P/E Ratio	1.00
--	--	--	1.2%	2.7%	4.0%	4.0%	4.3%	4.2%	3.8%	3.6%	3.4%	3.0%	2.9%	3.0%	2.6%	*estimates*		Avg Ann'l Div'd Yield	3.4%

CAPITAL STRUCTURE as of 6/30/20
Total Debt $15225 mill. **Due in 5 Yrs** $4549 mill.
LT Debt $13481 mill. **LT Interest** $571 mill.
Incl. $67 mill. capitalized leases.
(LT interest earned: 2.9x)
Leases, Uncapitalized Annual rentals $11 mill.
Pension Assets-12/19 $2546 mill. **Oblig** $2973 mill.
Pfd Stock $37 mill. **Pfd Div'd** $2 mill.
Incl. 373,148 shs. $4.50 $100 par, cum., callable at $110.00.
Common Stock 286,280,694 shs.
as of 7/7/20
MARKET CAP: $17 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
6432.0	6503.0	6312.0	6566.0	7179.0	6456.0	6399.0	6583.0	6873.0	6845.0	*6500*	*6800*	Revenues ($mill)	7550
356.0	384.0	413.0	454.0	479.0	525.0	553.0	610.0	659.0	682.0	*760*	*810*	Net Profit ($mill)	1050
38.1%	36.8%	39.4%	39.9%	34.3%	34.0%	33.1%	31.2%	14.9%	17.7%	*16.0%*	*16.0%*	Income Tax Rate	16.0%
2.2%	2.6%	2.9%	2.0%	2.3%	2.7%	3.1%	1.1%	1.4%	2.1%	*2.0%*	*2.0%*	AFUDC % to Net Profit	1.0%
70.1%	66.9%	67.9%	67.5%	68.7%	68.3%	67.1%	67.3%	69.0%	70.4%	*70.5%*	*70.0%*	Long-Term Debt Ratio	68.0%
29.5%	32.6%	31.6%	32.2%	31.0%	31.4%	32.6%	32.4%	30.7%	29.4%	*29.5%*	*30.0%*	Common Equity Ratio	32.0%
9473.0	9279.0	10101	10730	11846	12534	13040	13692	15476	17082	*18900*	*20050*	Total Capital ($mill)	24100
10069	10633	11551	12246	13412	14705	15715	16761	18126	18926	*20225*	*21975*	Net Plant ($mill)	26000
5.8%	6.3%	5.9%	6.0%	5.7%	5.7%	5.8%	5.9%	5.6%	5.3%	*5.5%*	*5.5%*	Return on Total Cap'l	6.0%
12.5%	12.5%	12.8%	13.0%	12.9%	13.2%	12.9%	13.6%	13.8%	13.5%	*13.5%*	*13.5%*	Return on Shr. Equity	13.5%
12.5%	12.6%	12.9%	13.1%	13.0%	13.3%	13.0%	13.7%	13.8%	13.6%	*13.5%*	*13.5%*	Return on Com Equity E	13.5%
6.9%	5.6%	5.0%	5.2%	5.0%	5.2%	4.8%	5.2%	5.3%	4.9%	*5.0%*	*5.0%*	Retained to Com Eq	5.5%
46%	55%	61%	60%	62%	61%	63%	62%	62%	64%	*62%*	*62%*	All Div'ds to Net Prof	61%

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-1.4	+2.2	-3.7
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	8.26	7.63	7.94
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	7634	8084	8039
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.2	+.3	+.9
Fixed Charge Cov. (%)	301	250	235

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-2.0%	-1.0%	1.0%
"Cash Flow"	5.0%	7.0%	5.5%
Earnings	9.5%	7.0%	7.5%
Dividends	15.0%	7.0%	7.0%
Book Value	4.5%	5.5%	7.5%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1829	1449	1527	1778	6583.0
2018	1953	1492	1599	1829	6873.0
2019	2059	1445	1546	1795	6845.0
2020	1864	1443	*1550*	*1643*	*6500*
2021	*1950*	*1550*	*1600*	*1700*	*6800*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.71	.33	.61	.52	2.17
2018	.86	.49	.59	.38	2.32
2019	.75	.33	.73	.58	2.39
2020	.85	.48	*.77*	*.50*	*2.60*
2021	*.85*	*.55*	*.80*	*.55*	*2.75*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec. 31	Full Year
2016	.31	.31	.31	.31	1.24
2017	.3325	.3325	.3325	.3325	1.33
2018	.3575	.3575	.3575	.3575	1.43
2019	.3825	.3825	.3825	.3825	1.53
2020	.4075	.4075	.4075		

BUSINESS: CMS Energy Corporation is a holding company for Consumers Energy, which supplies electricity and gas to lower Michigan (excluding Detroit). Has 1.8 million electric, 1.8 million gas customers. Has 1,234 megawatts of nonregulated generating capacity. Owns EnerBank. Sold Palisades nuclear plant in '07. Electric revenue breakdown: residential, 45%; commercial, 34%; industrial, 15%; other, 6%. Generating sources: coal, 27%; gas, 18%; other, 3%; purchased, 52%. Fuel costs: 41% of revenues. '19 reported deprec. rates: 3.9% electric, 2.9% gas, 10.0% other. Has 8,100 full-time employees. Chairman: John G. Russell. President & CEO: Patricia K. Poppe. Inc.: MI. Address: One Energy Plaza, Jackson, MI 49201. Tel.: 517-788-0550. Internet: www.cmsenergy.com.

CMS Energy's utility subsidiary should receive orders on its rate cases in the fourth quarter. Consumers Energy is seeking a gas rate increase of $229 million, based on a 10.5% return on equity. The utility is also asking for a regulatory mechanism that decouples revenues and volume. The staff of the Michigan Public Service Commission (MPSC) is recommending a hike of $160 million, based on a 9.6% ROE. An order is due by October 16th. The utility is requesting an electric tariff increase of $230 million, based on a 10.5% ROE. The MPSC's staff is proposing a hike of $149 million, based on a 9.75% ROE. A decision is due by December 28th. Consumers Energy files rate cases frequently because it has a large, aged electric and gas system that requires extensive capital spending. In fact, the utility plans to file another gas rate application in December, with a ruling expected in October of 2021. It helps that Michigan has a good regulatory climate.

We expect continued steady earnings growth this year and next. Consumers Energy is benefiting from rate relief. Although the utility was hurt by mild weather in the first quarter and a decline in electric volume in the second period, management has cut costs effectively to offset this. Our 2020 earnings estimate is slightly below CMS Energy's targeted range of $2.64-$2.68 a share because the company's guidance excludes some costs that we are including. These amounted to two cents a share in the first six months.

CMS Energy acquired a 51% stake in a wind project. The cost was undisclosed. The 525-megawatt project, in Texas, will sell its output to two large customers under long-term contracts. The company will finance the deal with tax equity and cash on hand. The project will be owned by CMS Enterprises, a nonutility subsidiary, and will likely produce returns at least equal to those of a regulated utility. This also expanded the company's presence in contracted renewables, which was 196 mw before this deal.

The dividend yield of this equity is about a percentage point below the average for electric utilities. Total return potential is appealing for the next 18 months, but not for the 2023-2025 period.

Paul E. Debbas, CFA *September 11, 2020*

(A) Diluted EPS. Excl. nonrec. gains (losses): '05, ($1.61); '06, ($1.08); '07, ($1.26); '09, (7¢); '10, 3¢; '11, 12¢; '12, (14¢); '17, (53¢); gains (losses) on discont. ops.: '05, 7¢; '06, 3¢; '07, (40¢); '09, 8¢; '10, (8¢); '11, 1¢; '12, 3¢. Next earnings report due early Nov. (B) Div'ds historically paid late Feb., May, Aug., & Nov. ■ Div'd reinvestment plan avail. (C) Incl. intang. In '19: $8.77/sh. (D) In mill. (E) Rate base: Net orig. cost. Rate allowed on com. eq. in '18: 10% elec.; in '19: 9.9% gas; earned on avg. com. eq., '19: 13.9%. Regul. Clim.: Above Avg.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	95
Earnings Predictability	85

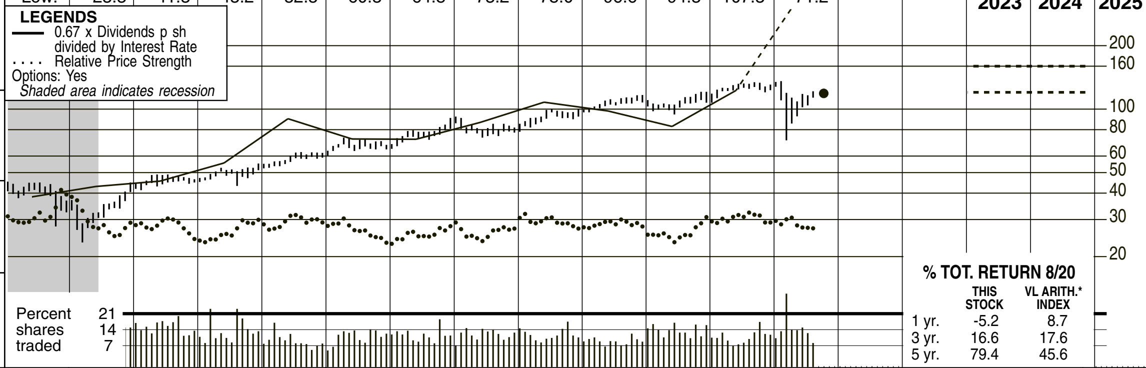
DTE ENERGY CO. NYSE-DTE

RECENT PRICE 118.67 | P/E RATIO 17.1 (Trailing: 18.7 Median: 17.0) | RELATIVE P/E RATIO 0.80 | DIV'D YLD 3.7% | VALUE LINE

TIMELINESS 3 Lowered 6/14/19
SAFETY 2 Raised 12/21/12
TECHNICAL 4 Lowered 6/12/20
BETA .90 (1.00 = Market)

High:	45.0	49.1	55.3	62.6	73.3	90.8	92.3	100.4	116.7	121.0	134.4	135.7
Low:	23.3	41.3	43.2	52.5	60.3	64.8	73.2	78.0	96.6	94.3	107.3	71.2

Target Price Range 2023 | 2024 | 2025



18-Month Target Price Range
Low-High Midpoint (% to Mid)
$82-$187 $135 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	160	(+35%)	11%
Low	120	(Nil)	4%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	355	279	261
to Sell	245	345	318
Hld's(000)	140654	140354	141501

% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-5.2	8.7
3 yr.	16.6	17.6
5 yr.	79.4	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
40.84	50.74	50.93	54.28	57.23	48.45	50.51	52.57	51.01	54.56	69.50	57.60	59.24	70.28	78.12	65.91	**60.10**	**62.55**	Revenues per sh	**68.25**
6.81	8.14	8.19	8.48	8.26	9.38	9.78	9.57	9.77	10.13	11.85	9.44	10.60	11.77	12.58	12.97	**14.45**	**15.30**	"Cash Flow" per sh	**18.00**
2.55	3.27	2.45	2.66	2.73	3.24	3.74	3.67	3.88	3.76	5.10	4.44	4.83	5.73	6.17	6.31	**6.70**	**7.15**	Earnings per sh A	**8.50**
2.06	2.06	2.08	2.12	2.12	2.12	2.18	2.32	2.42	2.59	2.69	2.84	3.06	3.36	3.59	3.85	**4.12**	**4.42**	Div'd Decl'd per sh B ■	**5.20**
5.19	5.99	7.92	7.96	8.42	6.26	6.49	8.77	10.56	10.59	11.58	11.26	11.40	12.54	14.91	15.59	**19.95**	**18.45**	Cap'l Spending per sh	**13.50**
31.85	32.44	33.02	35.86	36.77	37.96	39.67	41.41	42.78	44.73	47.05	48.88	50.22	53.03	56.27	60.73	**63.60**	**66.95**	Book Value per sh C	**79.25**
174.21	177.81	177.14	163.23	163.02	165.40	169.43	169.25	172.35	177.09	176.99	179.47	179.43	179.39	181.93	192.21	**193.00**	**195.00**	Common Shs Outst'g D	**205.00**
16.0	13.8	17.4	18.3	14.8	10.4	12.3	13.5	14.9	17.9	14.9	18.1	19.0	18.6	17.4	19.9	*Bold figures are*		Avg Ann'l P/E Ratio	**16.5**
.85	.73	.94	.97	.89	.69	.78	.85	.95	1.01	.78	.91	1.00	.94	.94	1.06	*Value Line*		Relative P/E Ratio	**.90**
5.0%	4.6%	4.9%	4.4%	5.2%	6.3%	4.8%	4.7%	4.2%	3.8%	3.5%	3.5%	3.3%	3.2%	3.3%	3.1%	*estimates*		Avg Ann'l Div'd Yield	**3.7%**

CAPITAL STRUCTURE as of 6/30/20
Total Debt $18925 mill. **Due in 5 Yrs** $7387 mill.
LT Debt $17341 mill. **LT Interest** $685 mill.

(LT interest earned: 3.0x)

Leases, Uncapitalized Annual rentals $38 mill.

Pension Assets-12/19 $4993 mill.
Oblig $5810 mill.

Pfd Stock None
Common Stock 192,650,741 shs.

MARKET CAP: $23 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
8557.0	8897.0	8791.0	9661.0	12301	10337	10630	12607	14212	12669	**11600**	**12200**	Revenues ($mill)	**14000**
630.0	624.0	666.0	661.0	905.0	796.0	868.0	1029.0	1120.0	1169.0	**1295**	**1390**	Net Profit ($mill)	**1755**
32.7%	35.9%	29.8%	27.5%	28.5%	25.6%	24.5%	21.8%	8.1%	11.5%	**8.0%**	**8.0%**	Income Tax Rate	**8.0%**
1.6%	1.6%	3.0%	3.5%	4.1%	4.3%	3.6%	3.5%	3.8%	3.3%	**3.0%**	**3.0%**	AFUDC % to Net Profit	**2.0%**
51.3%	50.6%	48.8%	47.7%	50.0%	50.2%	55.6%	56.2%	54.2%	57.7%	**60.0%**	**60.0%**	Long-Term Debt Ratio	**58.5%**
48.7%	49.4%	51.2%	52.3%	50.0%	49.8%	44.4%	43.8%	45.8%	42.3%	**40.0%**	**40.0%**	Common Equity Ratio	**41.5%**
13811	14196	14387	15135	16670	17607	20280	21697	22371	27607	**30750**	**32525**	Total Capital ($mill)	**39000**
12992	13746	14684	15800	16820	18034	19730	20721	21650	25317	**28275**	**30275**	Net Plant ($mill)	**33500**
6.3%	5.9%	6.1%	5.7%	6.6%	5.7%	5.3%	5.9%	6.1%	5.3%	**5.5%**	**5.5%**	Return on Total Cap'l	**5.5%**
9.4%	8.9%	9.0%	8.3%	10.9%	9.1%	9.6%	10.8%	10.9%	10.0%	**10.5%**	**10.5%**	Return on Shr. Equity	**11.0%**
9.4%	8.9%	9.0%	8.3%	10.9%	9.1%	9.6%	10.8%	10.9%	10.0%	**10.5%**	**10.5%**	Return on Com Equity E	**11.0%**
4.0%	3.4%	3.5%	2.7%	5.2%	3.4%	3.7%	4.6%	4.9%	4.1%	**4.0%**	**4.0%**	Retained to Com Eq	**4.5%**
57%	62%	61%	67%	52%	63%	61%	58%	55%	59%	**61%**	**62%**	All Div'ds to Net Prof	**61%**

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-3.1	+3.5	-3.9
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NMF	NMF	NMF
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	300	278	260

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	3.0%	4.0%	-1.0%
"Cash Flow"	3.5%	3.5%	6.5%
Earnings	8.0%	7.5%	6.0%
Dividends	5.5%	7.0%	6.5%
Book Value	4.5%	5.0%	5.5%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	3236	2855	3245	3271	12607
2018	3753	3159	3550	3750	14212
2019	3514	2888	3119	3148	12669
2020	3022	2583	**2950**	**3045**	**11600**
2021	**3300**	**2700**	**3050**	**3150**	**12200**

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	2.23	.99	1.51	1.00	5.73
2018	2.00	1.29	1.84	1.05	6.17
2019	2.19	.99	1.73	1.40	6.31
2020	1.76	1.44	**2.00**	**1.50**	**6.70**
2021	**2.00**	**1.55**	**2.10**	**1.50**	**7.15**

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.73	.73	.73	.77	2.96
2017	.825	.825	.825	.825	3.30
2018	.8825	.8825	.8825	.8825	3.53
2019	.945	.945	.945	.945	3.78
2020	1.0125	1.0125	1.0125		

BUSINESS: DTE Energy Company is a holding company for DTE Electric (formerly Detroit Edison), which supplies electricity in Detroit and a 7,600-square-mile area in southeastern Michigan, and DTE Gas (formerly Michigan Consolidated Gas). Customers: 2.2 mill. electric, 1.3 mill. gas. Has various nonutility operations. Electric revenue breakdown: residential, 46%; commercial, 34%; industrial, 13%; other, 7%. Generating sources: coal, 67%; nuclear, 17%; gas, 1%; purchased, 15%. Fuel costs: 54% of revenues. '19 reported deprec. rates: 4.0% electric, 2.7% gas. Has 10,700 employees. Chairman: Gerard M. Anderson. President & CEO: Jerry Norcia. Inc.: MI. Address: One Energy Plaza, Detroit, MI 48226-1279. Tel.: 313-235-4000. Internet: www.dteenergy.com.

DTE Energy's gas utility received a rate order. The Michigan Public Service Commission approved a settlement for DTE Gas calling for an increase of $110 million, based on a 9.9% return on equity and a 52% common-equity ratio. Earnings will also be augmented by $20 million of accelerated amortization to income of deferred taxes. New tariffs will take effect on October 1st. Separately, DTE Electric will delay its next rate application until 2021, but will also benefit from the accelerated amortization of deferred taxes.

Earnings in 2020 are likely to end up near the upper end of DTE Energy's targeted range of $6.47-$6.75 a share. The negative effects of the weak economy have been less than the company feared, as residential kilowatt-hour sales have risen even more than expected from people working from home. Favorable weather patterns have helped, too. On the nonutility side, the Gas Pipeline and Storage segment has fared better than expected as the demand for natural gas remains healthy. A pipeline began service on August 1st, completed on schedule and below the $600 million budget. The Energy Trading business is trending at the high end of DTE Energy's expectation. Second-quarter profits exceeded our estimate, so we boosted our 2020 share-net expectation by $0.20, to $6.70. Note that we raised the Financial Strength rating a notch, to A.

Earnings will likely improve in 2021. The economy should be better by then. DTE Electric and DTE Gas will benefit from a full year's effect of rate increases obtained in 2020. DTE Gas also recovers certain capital spending through a rider on customers' bills. We expect continued growth from the nonutility operations, especially Gas Pipeline and Storage. Our estimate of $7.15 a share, which we raised by $0.25, would produce a 7% increase.

We think the board of directors will boost the dividend in the fourth quarter, effective with the January payment. DTE Energy's goal for dividend growth is 7%, and we estimate a hike of $0.29 a share (7.2%) in the annual payout.

This stock's dividend yield is average, by utility standards. Total return potential does not stand out, either for the 18-month span or the 3- to 5-year period.

Paul E. Debbas, CFA *September 11, 2020*

(A) Diluted EPS. Excl. nonrec. gains (losses): '05, (2¢); '07, $1.96; '08, 50¢; '11, 51¢; '15, (39¢); '17, 59¢; gains (losses) on disc. ops.: '04, (6¢); '05, (20¢); '06, (2¢); '07, $1.20; '08, 13¢; '12, (33¢). '17-'18 EPS don't sum due to rounding. Next earnings report due late Oct. (B) Div'ds pd. mid-Jan., Apr., July & Oct. ■ Div'd reinvest. plan avail. (C) Incl. intang. In '19: $47.33/sh. (D) In mill. (E) Rate base: Net orig. cost. Rate all'd on com. eq. in '20: 9.9% elec.; in '20: 9.9% gas; earned on avg. com. eq., '19: 10.8%. Regulat. Climate: Above Avg.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	90
Earnings Predictability	85

ENTERGY CORP. NYSE-ETR

RECENT PRICE **99.14** | P/E RATIO **19.6** (Trailing: 16.1, Median: 13.0) | RELATIVE P/E RATIO **0.92** | DIV'D YLD **3.8%** | VALUE LINE

TIMELINESS	3	Raised 10/26/18
SAFETY	2	Raised 12/13/19
TECHNICAL	3	Raised 9/11/20

BETA .95 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$74-$169	$122 (25%)

2023-25 PROJECTIONS

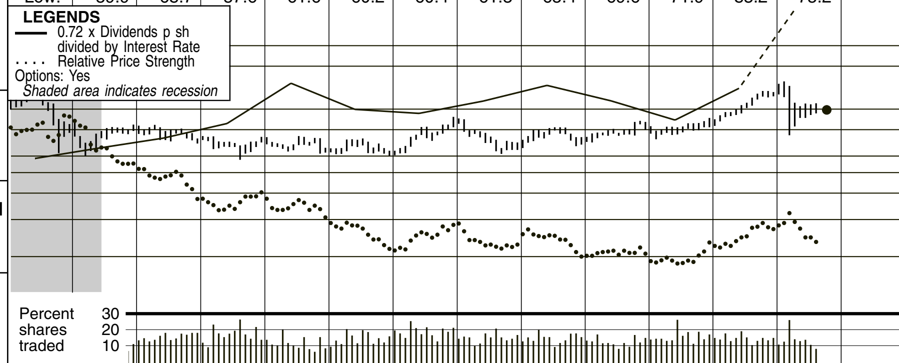
	Price	Gain	Ann'l Total Return
High	140	(+40%)	12%
Low	105	(+5%)	6%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	348	281	283
to Sell	242	349	315
Hld's(000)	176392	172217	173722

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	86.6	84.3	74.5	74.5	72.6	92.0	90.3	82.1	87.9	90.8	122.1
Low:	59.9	68.7	57.6	61.6	60.2	60.4	61.3	65.4	69.6	71.9	83.2

High:	86.6	84.3	74.5	74.5	72.6	92.0	90.3	82.1	87.9	90.8	122.1	135.5
Low:	59.9	68.7	57.6	61.6	60.2	60.4	61.3	65.4	69.6	71.9	83.2	75.2



Target Price Range

2023	2024	2025

% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-9.7	8.7
3 yr.	39.8	17.6
5 yr.	86.1	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
46.69	46.61	53.94	59.47	69.15	56.82	64.27	63.67	57.94	63.86	69.71	64.54	60.55	61.35	58.23	54.63	*51.00*	*50.50*	Revenues per sh	*50.50*
8.33	8.18	10.69	11.73	12.89	13.29	16.54	17.53	15.98	16.25	17.68	17.71	18.72	16.70	16.50	17.19	*16.50*	*18.10*	"Cash Flow" per sh	*21.25*
3.93	4.40	5.36	5.60	6.20	6.30	6.66	7.55	6.02	4.96	5.77	5.81	6.88	5.19	5.88	6.30	*5.00*	*5.95*	Earnings per sh A	*7.00*
1.89	2.16	2.16	2.58	3.00	3.00	3.24	3.32	3.32	3.32	3.32	3.34	3.42	3.50	3.58	3.66	*3.74*	*3.86*	Div'd Decl'd per sh B ■ †	*4.55*
6.51	6.72	9.44	10.29	13.92	12.99	13.33	15.21	18.18	15.73	14.82	16.79	17.28	22.07	22.45	21.72	*20.60*	*19.15*	Cap'l Spending per sh	*19.00*
38.26	35.71	40.45	40.71	42.07	45.54	47.53	50.81	51.73	54.00	55.83	51.89	45.12	44.28	46.78	51.34	*52.90*	*55.70*	Book Value per sh C	*64.00*
216.83	216.83	202.67	193.12	189.36	189.12	178.75	176.36	177.81	178.37	179.24	178.39	179.13	180.52	189.06	199.15	*201.00*	*204.00*	Common Shs Outst'g D	*210.00*
15.1	16.3	14.3	19.3	16.6	12.0	11.6	9.1	11.2	13.2	12.9	12.5	10.9	15.0	13.8	16.5	*Bold figures are*		Avg Ann'l P/E Ratio	*17.5*
.80	.87	.77	1.02	1.00	.80	.74	.57	.71	.74	.68	.63	.57	.75	.75	.88	*Value Line*		Relative P/E Ratio	*.95*
3.2%	3.0%	2.8%	2.4%	2.9%	4.0%	4.2%	4.9%	4.9%	5.1%	4.5%	4.6%	4.6%	4.5%	4.4%	3.5%	*estimates*		Avg Ann'l Div'd Yield	*3.7%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $21430 mill. **Due in 5 Yrs** $8321.8 mill.
LT Debt $18278 mill. **LT Interest** $800.0 mill.
Incl. $231.9 mill. of securitization bonds.
(LT interest earned: 1.9x)
Leases, Uncapitalized Annual rentals $62.1 mill.
Pension Assets-12/19 $6271.2 mill.
Oblig $8406.2 mill.
Pfd Stock $254.4 mill. **Pfd Div'd** $18.3 mill.
200,000 shs. 6.25%-7.5%, $100 par; 250,000 shs. 8.75%, 1.4 mill. shs. 5.375%; all cum., without sinking fund.
Common Stock 200,211,323 shs. **as of 7/31/20**
MARKET CAP: $20 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
11488	11229	10302	11391	12495	11513	10846	11074	11009	10879	*10250*	*10300*	Revenues ($mill)	*10600*
1270.3	1367.4	1091.9	904.5	1060.0	1061.2	1249.8	950.7	1092.1	1258.2	*1020*	*1230*	Net Profit ($mill)	*1490*
32.7%	17.3%	13.0%	26.7%	37.8%	2.2%	11.3%	1.8%	1.8%	NMF	*18.0%*	*21.0%*	Income Tax Rate	*22.0%*
7.4%	8.9%	11.9%	10.1%	9.3%	7.4%	8.1%	14.7%	17.5%	16.7%	*18.0%*	*14.0%*	AFUDC % to Net Profit	*13.0%*
56.3%	52.2%	55.8%	55.1%	54.9%	57.8%	63.6%	63.6%	63.2%	62.0%	*63.0%*	*63.0%*	Long-Term Debt Ratio	*59.5%*
42.1%	46.4%	42.9%	43.6%	43.8%	40.8%	35.5%	35.5%	35.9%	37.1%	*36.0%*	*36.0%*	Common Equity Ratio	*39.5%*
20166	19324	21432	22109	22842	22714	22777	22528	24602	27557	*29600*	*31425*	Total Capital ($mill)	*33800*
23848	25609	27299	27882	28723	27824	27921	29664	31974	35183	*37075*	*38550*	Net Plant ($mill)	*41700*
7.7%	8.5%	6.4%	5.4%	6.0%	6.0%	6.9%	5.7%	5.8%	5.9%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.5%*
14.4%	14.8%	11.5%	9.1%	10.3%	11.1%	15.1%	11.6%	12.0%	12.0%	*9.5%*	*10.5%*	Return on Shr. Equity	*11.0%*
14.7%	15.0%	11.6%	9.2%	10.4%	11.2%	15.2%	11.7%	12.2%	12.1%	*9.5%*	*10.5%*	Return on Com Equity E	*11.0%*
7.6%	8.4%	5.2%	3.0%	4.4%	4.8%	7.7%	3.9%	4.9%	5.2%	*2.5%*	*4.0%*	Retained to Com Eq	*4.0%*
49%	45%	56%	68%	58%	58%	50%	68%	61%	58%	*75%*	*65%*	All Div'ds to Net Prof	*65%*

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+.2	+4.1	-1.4
Avg. Indust. Use (MWH)	1034	946	1070
Avg. Indust. Revs. per KWH(¢)	5.41	5.16	5.24
Capacity at Peak (Mw)	24279	23121	23887
Peak Load, Summer (Mw)	21671	21587	21598
Annual Load Factor (%)	62	65	64
% Change Customers (yr-end)	+.6	+.6	+.8
Fixed Charge Cov. (%)	169	95	165

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-.5%	-2.0%	*-2.5%*
"Cash Flow"	3.0%	- -	*4.0%*
Earnings	-.5%	.5%	*3.0%*
Dividends	2.5%	1.5%	*4.0%*
Book Value	1.0%	-2.5%	*5.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	2588	2618	3244	2624	11074
2018	2724	2669	3104	2512	11009
2019	2610	2666	3141	2462	10879
2020	2427	2413	*3010*	*2400*	*10250*
2021	*2600*	*2500*	*2900*	*2300*	*10300*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.46	2.27	2.21	.25	5.19
2018	.73	1.34	3.42	.39	5.88
2019	1.32	1.22	1.82	1.94	6.30
2020	.59	1.79	*1.95*	*.67*	*5.00*
2021	*1.15*	*1.50*	*2.60*	*.70*	*5.95*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.85	.85	.85	.87	3.42
2017	.87	.87	.87	.89	3.50
2018	.89	.89	.89	.91	3.58
2019	.91	.91	.91	.93	3.66
2020	.93	.93	.93		

BUSINESS: Entergy Corporation supplies electricity to 2.9 million customers through subsidiaries in Arkansas, Louisiana, Mississippi, Texas, and New Orleans (regulated separately from Louisiana). Distributes gas to 202,000 customers in Louisiana. Has a nonutility subsidiary that owns four nuclear units (two no longer operating). Electric revenue breakdown: residential, 38%; commercial, 26%; industrial, 27%; other, 9%. Generating sources: gas, 40%; nuclear, 28%; coal, 6%; purchased, 26%. Fuel costs: 30% of revenues. '19 reported depreciation rate: 2.8%. Has 13,600 employees. Chairman & CEO: Leo P. Denault. Incorporated: Delaware. Address: 639 Loyola Avenue, P.O. Box 61000, New Orleans, Louisiana 70161. Telephone: 504-576-4000. Internet: www.entergy.com.

Entergy continues to exit most of its nonregulated power-generating activities. Nonregulated nuclear units have not fared well for the past several years because of unfavorable conditions in the power markets, so the company has gradually been shutting and selling these facilities. Earlier this year, Entergy shut Indian Point Unit 2 in New York, and will close Unit 3 in 2021. In 2022, the company will shut the Palisades plant in Michigan. We are *including* the results of this business in our earnings presentation, even though Entergy excludes this from its share-net targets of $5.45-$5.75 in 2020 and $5.80-$6.10 in 2021. Entergy estimates that this business will lose $0.55 a share this year, so our 2020 profit estimate is $5.00 a share. Note that the company has cut operating and maintenance expenses by $100 million to offset the effects of the weak economy on commercial and industrial kilowatt-hour sales.

Entergy faces a regulatory risk. Its System Energy subsidiary, which has ownership and leasehold interests in the Grand Gulf nuclear plant, sells power to Entergy's utilities. System Energy is facing challenges by state regulatory commissions to its allowed return on equity, which is set by the Federal Energy Regulatory Commission. Our estimates and projections are based on no change to the allowed ROE, although Entergy has already taken a reserve for a possible refund. When this matter will be resolved is unknown.

We expect a dividend increase at the board meeting in the fourth quarter. We think the directors will hike the quarterly payout two cents a share (2.2%), the same as in recent years. This is less than half the norm for utilities, but we expect growth to accelerate beginning in 2021.

Entergy's service area was hit by a hurricane in late August. As we went to press, the amount of the damage was still being tallied. It is likely that the company will defer most of the costs for future recovery.

Entergy stock's yield is about average for a utility. The equity offers solid total return potential for the next 18 months, but unspectacular prospects for the 3- to 5-year period.

Paul E. Debbas, CFA *September 11, 2020*

(A) Diluted EPS. Excl. nonrec. losses: '05, 21¢; '12, $1.26; '13, $1.14; '14, 56¢; '15, $6.99; '16, $10.14; '17, $2.91; '18, $1.25. Next earnings report due late Oct. (B) Div'ds historically paid in early Mar., June, Sept., & Dec. ■ Div'd reinvestment plan avail. † Shareholder investment plan avail. (C) Incl. def'd charges. In '19: $29.67/sh. (D) In millions. (E) Rate base: Net original cost. Allowed ROE (blended): 9.95%; earned on avg. com. eq., '19: 13.0%. Regulatory Climate: Average.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	25
Earnings Predictability	60

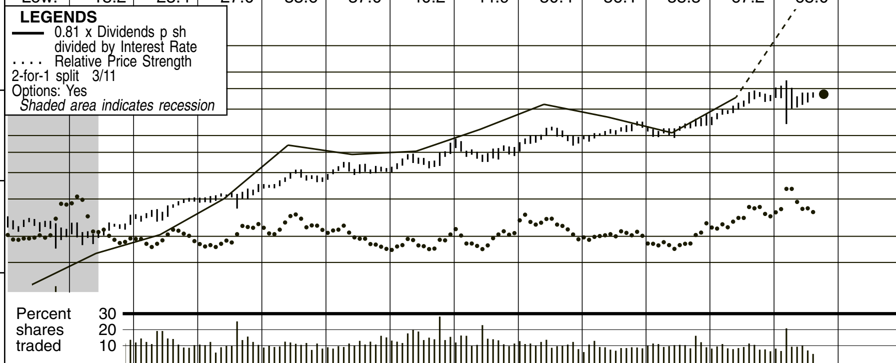
WEC ENERGY GROUP NYSE-WEC

RECENT PRICE 94.08 | P/E RATIO 24.6 (Trailing: 25.4 Median: 18.0) | RELATIVE P/E RATIO 1.15 | DIV'D YLD 2.8% | VALUE LINE

TIMELINESS 3 Lowered 8/16/19
SAFETY 1 Raised 3/23/12
TECHNICAL 3 Lowered 9/11/20
BETA .80 (1.00 = Market)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	25.3	30.5	35.4	41.5	45.0	55.4	58.0	66.1	70.1	75.5	98.2	109.5
Low:	18.2	23.4	27.0	33.6	37.0	40.2	44.9	50.4	56.1	58.5	67.2	68.0

Target Price Range 2023 | 2024 | 2025



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$68-$153	$111 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	105	(+10%)	6%
Low	85	(-10%)	1%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	403	383	334
to Sell	361	426	453
Hld's(000)	246035	234743	231336

% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	0.3	8.7
3 yr.	56.9	17.6
5 yr.	130.0	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
14.66	16.31	17.08	18.12	18.95	17.65	17.98	19.46	18.54	20.00	22.16	18.77	23.68	24.24	24.34	23.85	**22.50**	**23.45**	Revenues per sh	**27.00**
2.58	2.89	2.90	2.98	2.95	3.11	3.30	3.68	4.01	4.33	4.47	3.87	5.39	5.69	6.04	6.53	**6.85**	**7.30**	"Cash Flow" per sh	**9.00**
.93	1.28	1.32	1.42	1.52	1.60	1.92	2.18	2.35	2.51	2.59	2.34	2.96	3.14	3.34	3.58	**3.75**	**3.95**	Earnings per sh A	**4.75**
.42	.44	.46	.50	.54	.68	.80	1.04	1.20	1.45	1.56	1.74	1.98	2.08	2.21	2.36	**2.53**	**2.70**	Div'd Decl'd per sh B ■	**3.20**
2.85	3.40	4.17	5.28	4.86	3.50	3.41	3.60	3.09	3.04	3.26	4.01	4.51	6.21	6.71	7.17	**9.95**	**9.85**	Cap'l Spending per sh	**7.75**
10.65	11.46	12.35	13.25	14.27	15.26	16.26	17.20	18.05	18.73	19.60	27.42	28.29	29.98	31.02	32.06	**33.15**	**34.25**	Book Value per sh C	**38.00**
233.97	233.96	233.94	233.89	233.84	233.82	233.77	230.49	229.04	225.96	225.52	315.68	315.62	315.57	315.52	315.43	**315.50**	**315.50**	Common Shs Outst'g D	**315.50**
17.5	14.5	16.0	16.5	14.8	13.3	14.0	14.2	15.8	16.5	17.7	21.3	19.9	20.0	19.6	23.5	*Bold figures are*		Avg Ann'l P/E Ratio	**20.0**
.92	.77	.86	.88	.89	.89	.89	.89	1.01	.93	.93	1.07	1.04	1.01	1.06	1.26	*Value Line*		Relative P/E Ratio	**1.10**
2.6%	2.4%	2.2%	2.1%	2.4%	3.2%	3.0%	3.3%	3.2%	3.5%	3.4%	3.5%	3.4%	3.3%	3.4%	2.8%	*estimates*		Avg Ann'l Div'd Yield	**3.4%**
						4202.5	4486.4	4246.4	4519.0	4997.1	5926.1	7472.3	7648.5	7679.5	7523.1	**7100**	**7400**	Revenues ($mill)	**8500**
						455.6	514.0	547.5	578.6	589.5	640.3	940.2	998.2	1060.5	1134.2	**1190**	**1245**	Net Profit ($mill)	**1485**
						35.4%	33.9%	35.9%	36.9%	38.0%	40.4%	37.6%	37.2%	13.8%	9.9%	**16.5%**	**16.5%**	Income Tax Rate	**16.5%**
						18.6%	16.8%	9.4%	4.5%	1.3%	4.5%	3.8%	1.6%	2.1%	1.8%	**2.0%**	**2.0%**	AFUDC % to Net Profit	**2.0%**
						50.6%	53.6%	51.7%	50.6%	48.5%	51.2%	50.5%	48.0%	50.4%	52.5%	**50.5%**	**53.0%**	Long-Term Debt Ratio	**52.0%**
						49.0%	46.0%	48.0%	49.1%	51.2%	48.6%	49.3%	51.9%	49.4%	47.4%	**49.5%**	**47.0%**	Common Equity Ratio	**48.0%**
						7764.5	8608.0	8619.3	8626.6	8636.5	17809	18118	18238	19813	21355	**21100**	**23050**	Total Capital ($mill)	**25000**
						9601.5	10160	10572	10907	11258	19190	19916	21347	22001	23620	**25775**	**27825**	Net Plant ($mill)	**31700**
						7.5%	7.5%	7.9%	8.1%	8.1%	4.5%	6.3%	6.6%	6.5%	6.5%	**7.0%**	**6.5%**	Return on Total Cap'l	**7.0%**
						11.9%	12.9%	13.1%	13.6%	13.2%	7.4%	10.5%	10.5%	10.8%	11.2%	**11.5%**	**11.5%**	Return on Shr. Equity	**12.5%**
						12.0%	12.9%	13.2%	13.6%	13.3%	7.4%	10.5%	10.5%	10.8%	11.2%	**11.5%**	**11.5%**	Return on Com Equity E	**12.5%**
						7.0%	6.8%	6.5%	5.9%	5.3%	2.1%	3.5%	3.6%	3.7%	3.8%	**3.5%**	**3.5%**	Retained to Com Eq	**4.0%**
						41%	47%	51%	57%	60%	71%	67%	66%	66%	66%	**67%**	**68%**	All Div'ds to Net Prof	**68%**

CAPITAL STRUCTURE as of 6/30/20
Total Debt $12828 mill. **Due in 5 Yrs** $4369.2 mill.
LT Debt $10722 mill. **LT Interest** $503.1 mill.
Incl. $12.1 mill. capitalized leases.
(LT interest earned: 3.6x)
Leases, Uncapitalized Annual rentals $6.8 mill.
Pension Assets-12/19 $3007.0 mill.
Oblig $3123.7 mill.
Pfd Stock $30.4 mill. **Pfd Div'd** $1.2 mill.
260,000 shs. 3.60%, $100 par, callable. $101; 44,498 shs. 6%, $100 par.
Common Stock 315,434,531 shs.

MARKET CAP: $30 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-3.0	+2.5	-2.5
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Lg. C&I Revs. per KWH (¢)	7.13	7.05	7.25
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.7	+.7	+.6
Fixed Charge Cov. (%)	422	323	300

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	3.0%	3.5%	2.0%
"Cash Flow"	7.5%	7.5%	6.5%
Earnings	8.5%	6.0%	6.0%
Dividends	14.5%	9.5%	6.5%
Book Value	8.0%	10.5%	3.5%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	2304	1631	1657	2055	7648.5
2018	2286	1672	1643	2076	7679.5
2019	2377	1590	1608	1947	7523.1
2020	2109	1549	**1542**	**1900**	**7100**
2021	**2250**	**1600**	**1600**	**1950**	**7400**

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.12	.63	.68	.71	3.14
2018	1.23	.73	.74	.65	3.34
2019	1.33	.74	.74	.77	3.58
2020	1.43	.76	**.76**	**.80**	**3.75**
2021	**1.50**	**.80**	**.80**	**.85**	**3.95**

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.495	.495	.495	.495	1.98
2017	.52	.52	.52	.52	2.08
2018	.5525	.5525	.5525	.5525	2.21
2019	.59	.59	.59	.59	2.36
2020	.6325	.6325	.6325		

BUSINESS: WEC Energy Group, Inc. (formerly Wisconsin Energy) is a holding company for utilities that provide electric, gas & steam service in WI & gas service in IL, MN, & MI. Customers: 1.6 mill. elec., 2.9 mill. gas. Acq'd Integrys Energy 6/15. Sold Point Beach nuclear plant in '07. Electric revenue breakdown: residential, 35%; small commercial & industrial, 32%; large commercial & industrial, 21%; other, 12%. Generating sources: coal, 36%; gas, 29%; renewables, 4%; purchased, 31%. Fuel costs: 36% of revenues. '19 reported deprec. rates: 2.3%-3.2%. Has 7,500 employees. Chairman: Gale E. Klappa. President & CEO: Kevin Fletcher. Inc.: WI. Address: 231 W. Michigan St., P.O. Box 1331, Milwaukee, WI 53201. Tel.: 414-221-2345. Internet: www.wecenergygroup.com.

We estimate that WEC Energy's earnings will advance 5% in 2020 and 2021. The company's Peoples Gas subsidiary in Chicago is replacing gas mains. For now, the utility's annual capital spending of $280 million-$300 million on this program is recovered contemporaneously through a rider (surcharge) on customers' bills, but there is a risk that the law providing for this mechanism will be amended. WEC Energy has cut costs effectively to offset the effects of the decline in commercial and industrial volume stemming from the weak economy. The company's utilities have received permission from regulatory commissions to defer for future recovery most of their coronavirus-related expenses. Our 2020 earnings estimate is at the upper end of WEC Energy's typically narrow range of $3.71-$3.75 a share. We think a better economy points to higher profits in 2021. The company's goal for annual earnings growth is 5%-7%.

The company is adding renewable generating capacity at the utility and nonutility level. Wisconsin Electric and Wisconsin Public Service have two-thirds stakes (100 megawatts each) in solar projects that are coming on line in 2020, 2021, and 2022. The utilities' investment is $130 million for each facility. A nonregulated subsidiary is investing in wind projects. Three are already operating, and three are under construction for some 705 mw at a cost of $1 billion. These will begin operating in 2020 and 2021 and are expected to produce greater returns on investment than the regulated utility business.

The company has requested regulatory approval to build two liquefied natural gas facilities in Wisconsin. The expected investment is $370 million. If the commission grants approval (an order is expected in late 2020 or early 2021), construction is expected to begin next summer, with an in-service date in late 2023.

This high-quality stock has risen 2% in price this year. This makes WEC Energy unusual among utility issues. The dividend yield is below average for the group, and total return potential to 2023-2025 is negligible. The equity offers above-average total return prospects for the next 18 months, however.

Paul E. Debbas, CFA *September 11, 2020*

(A) Diluted EPS. Excl. gains on discont. ops.: '04, 77¢; '11, 6¢; nonrecurring gain: '17, 65¢. '18 EPS don't sum due to rounding. Next earnings report due early Nov. (B) Div'ds paid in early Mar., June, Sept. & Dec. ■ Div'd reinv. plan avail. (C) Incl. intang. In '19: $20.80/sh. (D) In mill., adj. for split. (E) Rate base: Net orig. cost. Rates all'd on com. eq. in WI in '15: 10.0%-10.3%; in IL in '15: 9.05%; in MN in '19: 9.7%; in MI in '16: 9.9%; earned on avg. com. eq., '19: 11.4%. Regulatory Climate: WI, Above Avg.; IL, Below Avg.; MN & MI, Avg.

Company's Financial Strength	A+
Stock's Price Stability	85
Price Growth Persistence	90
Earnings Predictability	95

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Algonquin Power & Utilities NYSE:AQN

Last Price	Day Change	Trailing P/E	Relative P/E Last FY	Dividend Yield	3 to 5-Year Target Price Range	Timeliness	Safety	Financial Strength
$15.65	$0.05 (0.32%)		--	3.98%	--			

As of 6:30 PM Oct 09, 2020. Delayed at least 15 minutes.

Industry Rank: -

CHARTING

1d 5d 3m 1y 5y Show data

QUOTES

Last Price	Day's Change	Volume
$15.65	$0.05 0.32%	1,030,728
Bid (size) **$15.00 (3)**	Ask (size) **$15.97 (2)**	**Above** 10-day avg.

As of 4:10 PM Oct 9, 2020. Delayed at least 15 minutes.

Previous close	15.60
Open	15.60
Trailing P/E	
Market cap	9.24B
Shares outstanding	585.95M
Beta	0.9
Next earnings date	--

52 Week Low & High

$9.53 3/22/2020 2/20/2020 **$16.85**

$15.65

Hist. Prices

INDUSTRY ANALYSIS

Please sign in to view more data

SEC FILINGS

Filter SEC filings

Show all filing types 2020 Go

Filing	Filing Date	Category
6-K	Sep 21, 2020	ForeignRelated
6-K	Sep 11, 2020	ForeignRelated
6-K	Aug 14, 2020	ForeignRelated
6-K	Jul 30, 2020	ForeignRelated
6-K	Jul 20, 2020	ForeignRelated
6-K	Jul 17, 2020	ForeignRelated
6-K	Jul 17, 2020	ForeignRelated
6-K	Jul 10, 2020	ForeignRelated
SUPPL	Jul 10, 2020	Excluded
SUPPL	Jul 10, 2020	Excluded
FWP	Jul 9, 2020	Excluded

PAGE 1 OF 4

SMALL & MID-CAP

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DOW 30

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Company Name	Ticker	Safety™
3M Company	MMM	1
American Express Company	AXP	1
Amgen Inc	AMGN	1
Apple Inc	AAPL	1
Boeing Co	BA	3
Caterpillar Inc	CAT	2
Chevron Corporation	CVX	3
Cisco Systems Inc	CSCO	1
Coca Cola Company	KO	1
Dow Inc.	DOW	2

View all »

INSIDER TRANSACTIONS

Options Buys & Sells

INSTITUTIONAL OWNERSHIP

Number of Transactions Show top holders

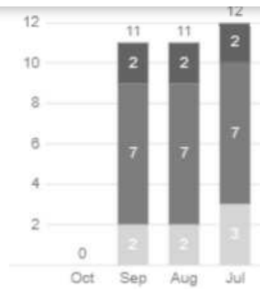
FINANCIAL STATEMENTS

Income Statement & Balance Sheet	2019	2 Year Trend
Gross Profit	710	
Total Operating Expenses	1,260	

90 Days Ago	0.14	0.21	0.66	0.77

EPS Revisions	Current Qtr. (Sep 2020)	Next Qtr. (Dec 2020)	Current Year (2020)	Next Year (2021)
Up Last 7 Days	N/A	N/A	N/A	1
Up Last 30 Days	N/A	N/A	N/A	4
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	1	1	N/A

Growth Estimates	AQN.TO	Industry	Sector(s)	S&P 500
Current Qtr.	N/A	N/A	N/A	N/A
Next Qtr.	10.00%	N/A	N/A	N/A
Current Year	1.60%	N/A	N/A	N/A
Next Year	15.60%	N/A	N/A	N/A
Next 5 Years (per annum)	5.70%	N/A	N/A	N/A
Past 5 Years (per annum)	17.39%	N/A	N/A	N/A



Recommendation Rating >

2.5

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (13) >

Average 15.47

Low 13.00 High 18.00
Current 19.63

Upgrades & Downgrades >

Maintains	Morgan Stanley: to Equal-Weight	9/18/2020
Maintains	Wells Fargo: to Equal-Weight	8/17/2020
Maintains	Morgan Stanley: to Equal-Weight	8/14/2020
Maintains	Morgan Stanley: to Equal-Weight	6/17/2020
Maintains	Morgan Stanley: to Equal-Weight	5/15/2020
Maintains	Wells Fargo: to Equal-Weight	5/11/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	1	1	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	ALE	Industry	Sector(s)	S&P 500
Current Qtr.	10.00%	N/A	N/A	N/A
Next Qtr.	-12.50%	N/A	N/A	N/A
Current Year	-7.20%	N/A	N/A	N/A
Next Year	7.80%	N/A	N/A	N/A
Next 5 Years (per annum)	7.00%	N/A	N/A	N/A
Past 5 Years (per annum)	1.25%	N/A	N/A	N/A

2.8

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (6) ›

Average 64.50

Low 55.00 High 88.00

Current 53.12

Upgrades & Downgrades ›

Maintains	Mizuho: to Neutral	8/26/2020
Maintains	JP Morgan: to Underweight	6/1/2020
Maintains	Wells Fargo: to Equal-Weight	5/7/2020
Upgrade	Mizuho: Underperform to Neutral	3/3/2020
Upgrade	Guggenheim: Neutral to Buy	1/8/2020
Downgrade	Mizuho: Neutral to Underperform	2/11/2019

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	1
Up Last 30 Days	N/A	N/A	N/A	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	LNT	Industry	Sector(s)	S&P 500
Current Qtr.	-3.20%	N/A	N/A	N/A
Next Qtr.	-37.00%	N/A	N/A	N/A
Current Year	4.30%	N/A	N/A	N/A
Next Year	6.60%	N/A	N/A	N/A
Next 5 Years (per annum)	5.30%	N/A	N/A	N/A
Past 5 Years (per annum)	8.33%	N/A	N/A	N/A

2.1

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (8) >

Average 57.00

Low 51.00 Current 53.09 High 62.00

Upgrades & Downgrades >

Downgrade	Barclays: Overweight to Equal-Weight	9/21/2020
Maintains	UBS: to Neutral	8/11/2020
Maintains	Wells Fargo: to Overweight	5/13/2020
Upgrade	Guggenheim: Neutral to Buy	3/31/2020
Maintains	Barclays: to Overweight	3/26/2020
Maintains	Mizuho: to Neutral	3/3/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	1	N/A	1	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	AEE	Industry	Sector(s)	S&P 500
Current Qtr.	3.40%	N/A	N/A	N/A
Next Qtr.	N/A	N/A	N/A	N/A
Current Year	3.60%	N/A	N/A	N/A
Next Year	8.40%	N/A	N/A	N/A
Next 5 Years (per annum)	6.00%	N/A	N/A	N/A
Past 5 Years (per annum)	8.24%	N/A	N/A	N/A

Recommendation Rating ›

2.2

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (10) ›

Average 85.20

Low 79.00 High 93.00
Current 79.81

Upgrades & Downgrades ›

Downgrade	Barclays: Equal-Weight to Underweight	9/21/2020
Maintains	Morgan Stanley: to Equal-Weight	9/18/2020
Downgrade	B of A Securities: Buy to Neutral	8/13/2020
Maintains	BMO Capital: to Outperform	8/10/2020
Maintains	B of A Securities: to Buy	7/7/2020
Maintains	Morgan Stanley: to Equal-Weight	6/17/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	2	1	2
Up Last 30 Days	N/A	2	1	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	2	N/A	N/A	N/A

Growth Estimates	AGR	Industry	Sector(s)	S&P 500
Current Qtr.	2.50%	N/A	N/A	N/A
Next Qtr.	-10.80%	N/A	N/A	N/A
Current Year	N/A	N/A	N/A	N/A
Next Year	10.60%	N/A	N/A	N/A
Next 5 Years (per annum)	4.60%	N/A	N/A	N/A
Past 5 Years (per annum)	1.74%	N/A	N/A	N/A

3.4

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	AVA	Industry	Sector(s)	S&P 500
Current Qtr.	100.00%	N/A	N/A	N/A
Next Qtr.	-2.60%	N/A	N/A	N/A
Current Year	N/A	N/A	N/A	N/A
Next Year	10.10%	N/A	N/A	N/A
Next 5 Years (per annum)	5.80%	N/A	N/A	N/A
Past 5 Years (per annum)	-5.94%	N/A	N/A	N/A

Recommendation Rating >

3

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (5) >

Average 39.60

Low 33.00 High 52.00
Current 34.61

Upgrades & Downgrades >

Downgrade	B of A Securities: Buy to Neutral	9/22/2020
Upgrade	KeyBanc: Underweight to Sector Weight	3/24/2020
Maintains	KeyBanc: to Underweight	1/17/2020
Maintains	B of A Securities: to Underperform	1/16/2020
Downgrade	Guggenheim: Neutral to Sell	1/8/2020
Maintains	KeyBanc: to Underweight	10/21/2019

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	BKH	Industry	Sector(s)	S&P 500
Current Qtr.	9.10%	N/A	N/A	N/A
Next Qtr.	N/A	N/A	N/A	N/A
Current Year	1.40%	N/A	N/A	N/A
Next Year	8.10%	N/A	N/A	N/A
Next 5 Years (per annum)	4.69%	N/A	N/A	N/A
Past 5 Years (per annum)	-7.70%	N/A	N/A	N/A

2.1

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (8) ›

Average 70.88

Low 62.00 High 77.00

Current 55.34

Upgrades & Downgrades ›

Maintains	Mizuho: to Buy	7/2/2020
Reiterates	Mizuho: to Buy	5/22/2020
Upgrade	Sidoti & Co.: Neutral to Buy	5/21/2020
Upgrade	Credit Suisse: Neutral to Outperform	5/19/2020
Maintains	Credit Suisse: to Neutral	5/1/2020
Downgrade	B of A Securities: Buy to Neutral	4/29/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	1	N/A	2	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	CMS	Industry	Sector(s)	S&P 500
Current Qtr.	-8.20%	N/A	N/A	N/A
Next Qtr.	-5.90%	N/A	N/A	N/A
Current Year	6.80%	N/A	N/A	N/A
Next Year	7.10%	N/A	N/A	N/A
Next 5 Years (per annum)	7.08%	N/A	N/A	N/A
Past 5 Years (per annum)	7.18%	N/A	N/A	N/A

2.4

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (17)

Average 64.59

Low 57.00 High 73.00
Current 61.66

Upgrades & Downgrades

Downgrade	Barclays: Overweight to Equal-Weight	9/21/2020
Maintains	Morgan Stanley: to Equal-Weight	9/18/2020
Maintains	Morgan Stanley: to Equal-Weight	9/18/2020
Maintains	Morgan Stanley: to Equal-Weight	8/14/2020
Maintains	Citigroup: to Neutral	8/4/2020
Maintains	Credit Suisse: to Neutral	8/4/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	1	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	ED	Industry	Sector(s)	S&P 500
Current Qtr.	-1.30%	N/A	N/A	N/A
Next Qtr.	-10.30%	N/A	N/A	N/A
Current Year	-3.20%	N/A	N/A	N/A
Next Year	6.40%	N/A	N/A	N/A
Next 5 Years (per annum)	2.55%	N/A	N/A	N/A
Past 5 Years (per annum)	1.62%	N/A	N/A	N/A

3.2

1 Strong Buy 2 Buy 3 Hold 4 Under-perform 5 Sell

Analyst Price Targets (15)

Average 77.53

Low 72.00 Current 79.77 High 86.00

Upgrades & Downgrades

Maintains	Morgan Stanley: to Underweight	9/18/2020
Upgrade	Guggenheim: Sell to Neutral	9/14/2020
Maintains	Morgan Stanley: to Underweight	8/14/2020
Downgrade	KeyBanc: Overweight to Sector Weight	8/11/2020
Upgrade	Credit Suisse: Underperform to Neutral	8/10/2020
Maintains	Credit Suisse: to Underperform	8/6/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	1	1	1	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	DTE	Industry	Sector(s)	S&P 500
Current Qtr.	-1.00%	N/A	N/A	N/A
Next Qtr.	21.50%	N/A	N/A	N/A
Current Year	5.70%	N/A	N/A	N/A
Next Year	6.80%	N/A	N/A	N/A
Next 5 Years (per annum)	5.95%	N/A	N/A	N/A
Past 5 Years (per annum)	7.07%	N/A	N/A	N/A

Recommendation Rating >

2.3

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (16) >

Average 128.28

Low 118.00 High 155.00

Current 114.16

Upgrades & Downgrades >

Maintains	Morgan Stanley: to Equal-Weight	9/18/2020
Maintains	Morgan Stanley: to Equal-Weight	8/14/2020
Maintains	Citigroup: to Buy	8/4/2020
Downgrade	KeyBanc: Overweight to Sector Weight	7/21/2020
Reiterates	B of A Securities: to Buy	7/13/2020
Maintains	Morgan Stanley: to Equal-Weight	6/17/2020

More Upgrades & Downgrades

Case Nos. 2020-00349 and 2020-00350
WP-29
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McKenzie

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	2	N/A	3	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	1

Growth Estimates	DUK	Industry	Sector(s)	S&P 500
Current Qtr.	1.70%	N/A	N/A	N/A
Next Qtr.	14.30%	N/A	N/A	N/A
Current Year	0.40%	N/A	N/A	N/A
Next Year	2.60%	N/A	N/A	N/A
Next 5 Years (per annum)	1.60%	N/A	N/A	N/A
Past 5 Years (per annum)	0.38%	N/A	N/A	N/A

Recommendation Rating >

2.5

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (14) >

Average 92.50

Low 85.00 | Current 91.58 | High 106.00

Upgrades & Downgrades >

Downgrade	ScotiaBank: Sector Outperform to Sector Perform	10/1/2020
Upgrade	B of A Securities: Neutral to Buy	9/9/2020
Maintains	Morgan Stanley: to Equal-Weight	6/17/2020
Maintains	Wells Fargo: to Equal-Weight	5/20/2020
Maintains	Morgan Stanley: to Equal-Weight	5/15/2020
Reiterates	B of A Securities: to Neutral	5/13/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	2	1	2
Up Last 30 Days	1	3	2	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	1	1	N/A

Growth Estimates	ETR	Industry	Sector(s)	S&P 500
Current Qtr.	-4.80%	N/A	N/A	N/A
Next Qtr.	-1.50%	N/A	N/A	N/A
Current Year	3.10%	N/A	N/A	N/A
Next Year	6.60%	N/A	N/A	N/A
Next 5 Years (per annum)	5.40%	N/A	N/A	N/A
Past 5 Years (per annum)	1.88%	N/A	N/A	N/A

Recommendation Rating ›

2.2

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (16) ›

Average 113.69

Low 100.00 High 132.00
Current 103.65

Upgrades & Downgrades ›

Maintains	Wells Fargo: to Overweight	9/25/2020
Maintains	ScotiaBank: to Sector Perform	9/25/2020
Maintains	Morgan Stanley: to Equal-Weight	9/18/2020
Maintains	KeyBanc: to Overweight	7/21/2020
Maintains	Morgan Stanley: to Equal-Weight	6/17/2020
Upgrade	UBS: Neutral to Buy	6/5/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	1	1	1	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	1	N/A	N/A

Growth Estimates	ES	Industry	Sector(s)	S&P 500
Current Qtr.	5.10%	N/A	N/A	N/A
Next Qtr.	9.20%	N/A	N/A	N/A
Current Year	7.10%	N/A	N/A	N/A
Next Year	6.90%	N/A	N/A	N/A
Next 5 Years (per annum)	6.44%	N/A	N/A	N/A
Past 5 Years (per annum)	4.45%	N/A	N/A	N/A

2.6

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (17)

Average 90.24

Low 81.00 Current 87.05 High 102.00

Upgrades & Downgrades

Maintains	Morgan Stanley: to Underweight	9/18/2020
Downgrade	Guggenheim: Buy to Neutral	8/24/2020
Downgrade	Credit Suisse: Neutral to Underperform	7/21/2020
Maintains	KeyBanc: to Overweight	7/21/2020
Maintains	Morgan Stanley: to Underweight	6/17/2020
Maintains	UBS: to Neutral	6/5/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	NWE	Industry	Sector(s)	S&P 500
Current Qtr.	26.00%	N/A	N/A	N/A
Next Qtr.	4.20%	N/A	N/A	N/A
Current Year	-2.60%	N/A	N/A	N/A
Next Year	8.70%	N/A	N/A	N/A
Next 5 Years (per annum)	3.80%	N/A	N/A	N/A
Past 5 Years (per annum)	3.94%	N/A	N/A	N/A

2.3

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (7) >

Average 62.43

Low 57.00 High 71.00

Current 50.03

Upgrades & Downgrades >

Upgrade	Barclays: Equal-Weight to Overweight	9/21/2020
Maintains	Wells Fargo: to Overweight	6/17/2020
Maintains	Wells Fargo: to Overweight	4/24/2020
Upgrade	Barclays: Underweight to Equal-Weight	4/21/2020
Upgrade	Credit Suisse: Underperform to Neutral	4/20/2020
Maintains	Barclays: to Underweight	3/26/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	1
Up Last 30 Days	1	2	3	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	PEG	Industry	Sector(s)	S&P 500
Current Qtr.	-3.10%	N/A	N/A	N/A
Next Qtr.	N/A	N/A	N/A	N/A
Current Year	3.40%	N/A	N/A	N/A
Next Year	N/A	N/A	N/A	N/A
Next 5 Years (per annum)	1.47%	N/A	N/A	N/A
Past 5 Years (per annum)	3.50%	N/A	N/A	N/A

2.3

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (15) >

Average 60.93

Low 53.00 High 68.00
Current 55.95

Upgrades & Downgrades >

Maintains	RBC Capital: to Outperform	9/28/2020
Upgrade	B of A Securities: Neutral to Buy	9/22/2020
Maintains	Morgan Stanley: to Overweight	9/18/2020
Maintains	Barclays: to Equal-Weight	8/17/2020
Maintains	Morgan Stanley: to Overweight	8/14/2020
Upgrade	KeyBanc: Sector Weight to Overweight	8/4/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	2	N/A	3	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	SRE	Industry	Sector(s)	S&P 500
Current Qtr.	-1.30%	N/A	N/A	N/A
Next Qtr.	-2.60%	N/A	N/A	N/A
Current Year	12.10%	N/A	N/A	N/A
Next Year	5.40%	N/A	N/A	N/A
Next 5 Years (per annum)	6.27%	N/A	N/A	N/A
Past 5 Years (per annum)	3.17%	N/A	N/A	N/A

Recommendation Rating ›

2.2

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (16) ›

Average 143.44

Low 119.00 | Current 120.50 | High 175.00

Upgrades & Downgrades ›

Maintains	Morgan Stanley: to Equal-Weight	9/18/2020
Maintains	Mizuho: to Neutral	9/11/2020
Downgrade	Wells Fargo: Overweight to Equal-Weight	8/17/2020
Maintains	Morgan Stanley: to Equal-Weight	8/14/2020
Maintains	Wells Fargo: to Overweight	8/6/2020
Upgrade	KeyBanc: Sector Weight to Overweight	7/21/2020

More Upgrades & Downgrades

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McKenzie

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	1	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	SO	Industry	Sector(s)	S&P 500
Current Qtr.	-8.20%	N/A	N/A	N/A
Next Qtr.	40.70%	N/A	N/A	N/A
Current Year	1.60%	N/A	N/A	N/A
Next Year	5.10%	N/A	N/A	N/A
Next 5 Years (per annum)	4.55%	N/A	N/A	N/A
Past 5 Years (per annum)	3.96%	N/A	N/A	N/A

2.9

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (15) ›

Average 59.60

Low 48.00 High 67.00

Current 56.26

Upgrades & Downgrades ›

Upgrade	Barclays: Equal-Weight to Overweight	9/21/2020
Maintains	Morgan Stanley: to Underweight	9/18/2020
Downgrade	Mizuho: Neutral to Underperform	9/10/2020
Maintains	UBS: to Neutral	9/1/2020
Maintains	Mizuho: to Neutral	7/22/2020
Maintains	KeyBanc: to Overweight	7/21/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	3	1	3	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	WEC	Industry	Sector(s)	S&P 500
Current Qtr.	1.40%	N/A	N/A	N/A
Next Qtr.	5.20%	N/A	N/A	N/A
Current Year	4.70%	N/A	N/A	N/A
Next Year	6.70%	N/A	N/A	N/A
Next 5 Years (per annum)	5.95%	N/A	N/A	N/A
Past 5 Years (per annum)	6.98%	N/A	N/A	N/A

3.1

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (12) ›

Average 93.67

Low 77.00 High 112.00

Current 97.71

Upgrades & Downgrades ›

Maintains	KeyBanc: to Overweight	9/11/2020
Maintains	KeyBanc: to Overweight	7/21/2020
Maintains	UBS: to Neutral	6/22/2020
Maintains	UBS: to Neutral	6/5/2020
Maintains	JP Morgan: to Neutral	5/27/2020
Maintains	CFRA: to Strong Sell	5/5/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	1	1	N/A
Up Last 30 Days	N/A	1	1	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	1

Growth Estimates	XEL	Industry	Sector(s)	S&P 500
Current Qtr.	7.90%	N/A	N/A	N/A
Next Qtr.	5.40%	N/A	N/A	N/A
Current Year	5.30%	N/A	N/A	N/A
Next Year	6.80%	N/A	N/A	N/A
Next 5 Years (per annum)	5.85%	N/A	N/A	N/A
Past 5 Years (per annum)	5.68%	N/A	N/A	N/A

Recommendation Rating ›

2.9

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (12) ›

Average 68.08

Low 60.00 High 74.00
Current 70.48

Upgrades & Downgrades ›

Downgrade	Argus Research: Buy to Hold	8/25/2020
Maintains	KeyBanc: to Overweight	7/21/2020
Maintains	Morgan Stanley: to Underweight	6/17/2020
Downgrade	Morgan Stanley: Equal-Weight to Underweight	5/13/2020
Downgrade	Wells Fargo: Overweight to Equal-Weight	4/24/2020
Maintains	Mizuho: to Neutral	4/15/2020

More Upgrades & Downgrades

Quote & News
Quote Overview

Quotes & News

Zacks Research

More Research

Charts

Financials

Options

Access Zacks Data Feed

Algonquin Power Utilities Corp. (AQN)
(Delayed Data from NYSE)

$14.76 USD

+0.10 (0.68%)

Updated Oct 2, 2020 04:00 PM ET

Add to portfolio | Trades from $1

Zacks Rank: 4-Sell 4

Style Scores: C Value | C Growth | B Momentum | D VGM

Industry Rank: Bottom 28% (180 out of 251)

Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity	
Open	14.48
Day Low	14.48
Day High	14.81
52 Wk Low	9.53
52 Wk High	16.85
Avg. Volume	688,588
Market Cap	8.74 B
Dividend	0.63 (4.27%)
Beta	0.46

Key Earnings Data	
Earnings ESP	0.00%
Most Accurate Est	0.14
Current Qtr Est	0.14
Current Yr Est	0.64
Exp Earnings Date	11/5/20
Prior Year EPS	0.63
Exp EPS Growth (3-5yr)	7.87%
Forward PE	23.14
PEG Ratio	2.94

Utilities » Utility - Electric Power

Research Report For AQN

Snapshot | All Zacks' Analyst Reports »

News For AQN

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$53.12 USD
+1.02 (1.96%)
Updated Oct 2, 2020 04:00 PM ET

Trades from $1

5-
Style Scores:
C Value | F Growth | D Momentum | F VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	51.67	Earnings ESP	0.00%
Day Low	51.67	Most Accurate Est	0.62
Day High	53.29	Current Qtr Est	0.62
52 Wk Low	48.22	Current Yr Est	3.31
52 Wk High	87.83	Exp Earnings Date	11/4/20
Avg. Volume	392,846	Prior Year EPS	3.59
Market Cap	2.76 B	Exp EPS Growth (3-5yr)	NA
Dividend	2.47 (4.65%)	Forward PE	16.05
Beta	0.33	PEG Ratio	NA

Utilities » Utility - Electric Power

Research Report For ALE

Snapshot All Zacks' Analyst Reports »

News For ALE

Zacks News for ALE Other News for ALE

New Strong Sell Stocks for September 16th
09/16/20-8:23AM EST Zacks

ALLETE's (ALE) Earnings & Revenues Miss Estimates in Q2
08/07/20-12:02PM EST Zacks

ALE: What are Zacks experts saying now?
Zacks Private Portfolio Services

Allete (ALE) Lags Q2 Earnings Estimates (Revised)
08/05/20-7:21AM EST Zacks

Allete (ALE) Lags Q2 Earnings Estimates
08/05/20-6:55AM EST Zacks

Analysts Estimate Allete (ALE) to Report a Decline in Earnings: What to Look Out for
07/29/20-11:33AM EST Zacks

More Zacks News for ALE»

Premium Research for ALE

Zacks Rank	Strong Sell 5
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	C Value | F Growth | D Momentum | F VGM
Earnings ESP	0.00%
Research Report for ALE	Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Allete Inc	**ALE**	
Pampa Energia SA	**PAM**	
Alliant Energy Corporation	**LNT**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

Our Research. Your Success.

Alliant Energy Corporation (LNT)

(Delayed Data from NSDQ)

$53.09 USD

+0.76 (1.45%)

Updated Oct 2, 2020 04:00 PM ET

Add to portfolio | Trades from $1

Zacks Rank: 2-Buy 2

Style Scores: D Value | C Growth | D Momentum | D VGM

Industry Rank: Bottom 28% (180 out of 251)

Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	52.06	Earnings ESP	0.00%
Day Low	52.02	Most Accurate Est	0.94
Day High	53.47	Current Qtr Est	0.94
52 Wk Low	37.66	Current Yr Est	2.43
52 Wk High	60.28	Exp Earnings Date	11/4/20
Avg. Volume	1,615,929	Prior Year EPS	2.31
Market Cap	13.25 B	Exp EPS Growth (3-5yr)	5.54%
Dividend	1.52 (2.86%)	Forward PE	21.85
Beta	0.39	PEG Ratio	3.94

Utilities » Utility - Electric Power

Research Reports For LNT

Analyst | Snapshot | All Zacks' Analyst Reports »

News For LNT

Case Nos. 2020-00349 and 2020-00350
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$79.81 USD
-0.05 (-0.06%)
Updated Oct 2, 2020 04:00 PM ET

Trades from $1

Style Scores:
C Value | C Growth | F Momentum | D VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	79.44	Earnings ESP	2.30%
Day Low	78.96	Most Accurate Est	1.56
Day High	80.72	Current Qtr Est	1.53
52 Wk Low	58.74	Current Yr Est	3.46
52 Wk High	87.66	Exp Earnings Date	11/13/20
Avg. Volume	1,069,047	Prior Year EPS	3.35
Market Cap	19.72 B	Exp EPS Growth (3-5yr)	6.89%
Dividend	1.98 (2.48%)	Forward PE	23.04
Beta	0.28	PEG Ratio	3.34

Utilities » Utility - Electric Power

Research Reports For AEE

Analyst Snapshot All Zacks' Analyst Reports »

News For AEE

Zacks News for AEE Other News for AEE

Utilities to Steadily Slash CO2 Emissions: 4 Stocks in Focus
09/30/20-6:41AM EST Zacks

Ameren (AEE) Announces Net-Zero Carbon Emission Goal by 2050
09/29/20-6:45AM EST Zacks

AEE: What are Zacks experts saying now?
Zacks Private Portfolio Services

This is Why Ameren (AEE) is a Great Dividend Stock
09/21/20-10:45AM EST Zacks

Duke Energy Florida Arm Plans to Slash Electric Rates for 2021
09/07/20-9:57AM EST Zacks

Why Is Ameren (AEE) Down 2.6% Since Last Earnings Report?
09/05/20-10:32AM EST Zacks

More Zacks News for AEE»

Premium Research for AEE

Zacks Rank	Hold 3
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	C Value | C Growth | F Momentum | D VGM
Earnings ESP	2.30%
Research Reports for AEE	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Ameren Corporation	**AEE**	
Pampa Energia SA	**PAM**	
Alliant Energy Corporation	**LNT**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$52.38 USD

+1.17 (2.28%)

Updated Oct 2, 2020 04:00 PM ET

Trades from $1

Style Scores:
C Value | C Growth | A Momentum | C VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	50.78	Earnings ESP	8.87%
Day Low	50.50	Most Accurate Est	0.45
Day High	52.63	Current Qtr Est	0.41
52 Wk Low	35.62	Current Yr Est	2.17
52 Wk High	57.24	Exp Earnings Date	*AMC 10/20/20
Avg. Volume	507,721	Prior Year EPS	2.17
Market Cap	16.19 B	Exp EPS Growth (3-5yr)	5.31%
Dividend	1.76 (3.36%)	Forward PE	24.11
Beta	0.29	PEG Ratio	4.54

Utilities » Utility - Electric Power

*BMO = Before Market Open *AMC = After Market Close

Research Report For AGR

Snapshot **All Zacks' Analyst Reports »**

News For AGR

Zacks News for AGR Other News for AGR

How to Time the Markets Like an Investing Pro - September 30, 2020
09/30/20-7:25AM EST Zacks

The Market Timing Secrets No One Talks About - September 09, 2020
09/09/20-10:01AM EST Zacks

AGR: What are Zacks experts saying now?
Zacks Private Portfolio Services

Global Offshore Wind Market Holds Promise: Stocks in Focus
09/07/20-9:21AM EST Zacks

TOTAL Joins Macquarie to Build 2GW Offshore Wind Project
09/03/20-7:50AM EST Zacks

The Keys to Successfully Timing the Markets - August 14, 2020
08/14/20-8:15AM EST Zacks

More Zacks News for AGR»

Premium Research for AGR

Zacks Rank	**Hold** 3
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	**C Value | C Growth | A Momentum | C VGM**
Earnings ESP	8.87%
Research Report for AGR	Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Avangrid Inc	**AGR**	
Pampa Energia SA	**PAM**	
Alliant Energy Corporation	**LNT**	

$34.61 USD

+0.20 (0.58%)

Updated Oct 2, 2020 04:00 PM ET

Style Scores:
B Value | D Growth | B Momentum | C VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	34.25	Earnings ESP	0.00%
Day Low	34.05	Most Accurate Est	0.17
Day High	34.89	Current Qtr Est	0.17
52 Wk Low	32.09	Current Yr Est	1.88
52 Wk High	53.00	Exp Earnings Date	11/5/20
Avg. Volume	530,398	Prior Year EPS	1.74
Market Cap	2.35 B	Exp EPS Growth (3-5yr)	5.14%
Dividend	1.62 (4.68%)	Forward PE	18.46
Beta	0.43	PEG Ratio	3.59

Utilities » Utility - Electric Power

Research Report For AVA

Snapshot   All Zacks' Analyst Reports »

News For AVA

Zacks News for AVA   Other News for AVA

Avista (AVA) Q2 Earnings and Revenues Lag Estimates
08/05/20-6:35AM EST Zacks

Earnings Preview: Avista (AVA) Q2 Earnings Expected to Decline
07/29/20-11:33AM EST Zacks

AVA: What are Zacks experts saying now?
Zacks Private Portfolio Services

Xcel Energy's (XEL) Focus on Clean Energy to Fuel Growth
06/30/20-9:54AM EST Zacks

Fortis (FTS) to Trim Emissions From Tucson Electric Power
06/29/20-11:23AM EST Zacks

Xcel Energy Proposes to Invest $3B in Adding Renewable Assets
06/22/20-10:33AM EST Zacks

More Zacks News for AVA»

Premium Research for AVA

Zacks Rank	Sell 4
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	B Value | D Growth | B Momentum | C VGM
Earnings ESP	0.00%
Research Report for AVA	Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Avista Corporation	**AVA**	
Pampa Energia SA	**PAM**	
Alliant Energy Corporation	**LNT**	

Case Nos. 2020-00349 and 2020-00350
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$55.34 USD

+1.39 (2.58%)

Updated Oct 2, 2020 04:00 PM ET

Trades from $1

Style Scores:
B Value | D Growth | B Momentum | C VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity	
Open	53.11
Day Low	53.11
Day High	55.56
52 Wk Low	48.07
52 Wk High	87.12
Avg. Volume	368,522
Market Cap	3.47 B
Dividend	2.14 (3.87%)
Beta	0.29

Key Earnings Data	
Earnings ESP	0.00%
Most Accurate Est	0.49
Current Qtr Est	0.49
Current Yr Est	3.55
Exp Earnings Date	11/2/20
Prior Year EPS	3.53
Exp EPS Growth (3-5yr)	5.76%
Forward PE	15.59
PEG Ratio	2.71

Utilities » Utility - Electric Power

Research Report For BKH

Snapshot All Zacks' Analyst Reports »

News For BKH

Zacks News for BKH Other News for BKH

Black Hills Arm's (BKH) Rate Review Plea to Recoup Investment
09/16/20-11:59AM EST Zacks

3 Top Dividend Stocks to Maximize Your Retirement Income - May 05, 2020
05/05/20-8:01AM EST Zacks

BKH: What are Zacks experts saying now?
Zacks Private Portfolio Services

Why Black Hills (BKH) is a Top Dividend Stock for Your Portfolio
05/01/20-10:45AM EST Zacks

3 Top-Ranked Dividend Stocks: A Smarter Way to Boost Your Retirement Income - April 28, 2020
04/28/20-10:22AM EST Zacks

Improve Your Retirement Income with These 3 Top-Ranked Dividend Stocks - April 22, 2020
04/22/20-9:53AM EST Zacks

More Zacks News for BKH»

Premium Research for BKH

Zacks Rank	**Hold** 3
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	B **Value** | D **Growth** | B **Momentum** | C **VGM**
Earnings ESP	0.00%
Research Report for BKH	Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Black Hills Corporation	**BKH**	
Pampa Energia SA	**PAM**	
Alliant Energy Corporation	**LNT**	

$61.66 USD

-0.02 (-0.03%)

Updated Oct 2, 2020 04:02 PM ET

Trades from $1

Style Scores:
C Value | C Growth | F Momentum | D VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity	
Open	61.32
Day Low	60.97
Day High	62.01
52 Wk Low	46.03
52 Wk High	69.17
Avg. Volume	1,708,221
Market Cap	17.65 B
Dividend	1.63 (2.64%)
Beta	0.16

Key Earnings Data	
Earnings ESP	0.00%
Most Accurate Est	0.77
Current Qtr Est	0.77
Current Yr Est	2.65
Exp Earnings Date	10/22/20
Prior Year EPS	2.49
Exp EPS Growth (3-5yr)	7.01%
Forward PE	23.28
PEG Ratio	3.32

Utilities » Utility - Electric Power

Research Reports For CMS

Analyst Snapshot **All Zacks' Analyst Reports »**

News For CMS

Zacks News for CMS Other News for CMS

CMS Energy (CMS) is a Top Dividend Stock Right Now: Should You Buy?
09/30/20-10:45AM EST Zacks

FirstEnergy's Solid Residential Demand & Investments Bode Well
09/17/20-9:53AM EST Zacks

CMS: What are Zacks experts saying now?
Zacks Private Portfolio Services

This is Why CMS Energy (CMS) is a Great Dividend Stock
09/14/20-10:45AM EST Zacks

CMS Energy (CMS) Down 4.6% Since Last Earnings Report: Can It Rebound?
09/02/20-10:30AM EST Zacks

CMS Energy (CMS) is a Top Dividend Stock Right Now: Should You Buy?
08/27/20-10:45AM EST Zacks

More Zacks News for CMS»

Premium Research for CMS

Zacks Rank	**Hold** 3
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	**C Value | C Growth | F Momentum | D VGM**
Earnings ESP	0.00%
Research Reports for CMS	Analyst | Snapshot

(▲ ▼ = Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
CMS Energy Corporation	**CMS**	
Pampa Energia SA	**PAM**	
Alliant Energy Corporation	**LNT**	

$79.77 USD

+0.73 (0.92%)

Updated Oct 2, 2020 04:02 PM ET

Style Scores:
C Value | C Growth | F Momentum | D VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	78.53	Earnings ESP	0.00%
Day Low	78.26	Most Accurate Est	1.53
Day High	80.21	Current Qtr Est	1.53
52 Wk Low	62.03	Current Yr Est	4.26
52 Wk High	95.10	Exp Earnings Date	11/2/20
Avg. Volume	2,720,469	Prior Year EPS	4.37
Market Cap	26.68 B	Exp EPS Growth (3-5yr)	2.00%
Dividend	3.06 (3.84%)	Forward PE	18.75
Beta	0.14	PEG Ratio	9.37

Utilities » Utility - Electric Power

Research Reports For ED

Analyst | Snapshot

All Zacks' Analyst Reports »

News For ED

Zacks News for ED | Other News for ED

Why Is Con Ed (ED) Down 1.2% Since Last Earnings Report?
09/05/20-10:32AM EST Zacks

Consolidated Edison (ED) Q2 Earnings Beat, Revenues Down Y/Y
08/07/20-6:30AM EST Zacks

ED: What are Zacks experts saying now?
Zacks Private Portfolio Services

Consolidated Edison (ED) Beats Q2 Earnings Estimates
08/06/20-5:45PM EST Zacks

Utility Stocks to Watch for Earnings on Aug 6: AEE, ED & More
08/05/20-1:26PM EST Zacks

What's in Store for Consolidated Edison's (ED) Q2 Earnings?
08/04/20-9:21AM EST Zacks

More Zacks News for ED»

Premium Research for ED

Zacks Rank	Hold 3
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	C Value | C Growth | F Momentum | D VGM
Earnings ESP	0.00%
Research Reports for ED	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Consolidated Edison Inc	**ED**	
Pampa Energia SA	**PAM**	
Alliant Energy Corporation	**LNT**	

Case Nos. 2020-00349 and 2020-00350
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Page 10 of 19
McKenzie

$114.16 USD
+0.72 (0.63%)
Updated Oct 2, 2020 04:04 PM ET

Trades from $1

Style Scores:
C Value | C Growth | C Momentum | C VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Enter Symbol

Quote Overview

View All Zacks #1 Ranked Stocks

Stock Activity	
Open	112.45
Day Low	111.54
Day High	114.86
52 Wk Low	71.21
52 Wk High	135.67
Avg. Volume	1,010,511
Market Cap	21.99 B
Dividend	4.05 (3.55%)
Beta	0.61

Key Earnings Data	
Earnings ESP	0.00%
Most Accurate Est	1.84
Current Qtr Est	1.84
Current Yr Est	6.68
Exp Earnings Date	10/26/20
Prior Year EPS	6.30
Exp EPS Growth (3-5yr)	5.67%
Forward PE	17.08
PEG Ratio	3.01

Utilities » Utility - Electric Power

Research Reports For DTE

Analyst Snapshot All Zacks' Analyst Reports »

News For DTE

Zacks News for DTE Other News for DTE

Alliant Energy's (LNT) Capex, Focus on Renewables Bode Well
10/02/20-10:43AM EST Zacks

National Grid Aims to Reduce 20% of Scope 3 Emissions by 2030
10/01/20-12:56PM EST Zacks

DTE: What are Zacks experts saying now?
Zacks Private Portfolio Services

NextEra Unit to Buy GridLiance, Expand Transmission Network
10/01/20-9:57AM EST Zacks

NiSource Expands Long-Term Infrastructural Investment Plan
09/30/20-11:51AM EST Zacks

Utilities to Steadily Slash CO2 Emissions: 4 Stocks in Focus
09/30/20-6:41AM EST Zacks

More Zacks News for DTE»

Premium Research for DTE

Zacks Rank	Hold 3
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	C Value | C Growth | C Momentum | C VGM
Earnings ESP	0.00%
Research Reports for DTE	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
DTE Energy Company	**DTE**	
Pampa Energia SA	**PAM**	
Alliant Energy Corporation	**LNT**	

Case Nos. 2020-00349 and 2020-00350
WP-30
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McKenzie

$91.58 USD
+1.53 (1.70%)
Updated Oct 2, 2020 04:02 PM ET

Trades from $1

Style Scores:
C Value | D Growth | D Momentum | D VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	89.22	Earnings ESP	1.49%
Day Low	88.69	Most Accurate Est	1.84
Day High	92.15	Current Qtr Est	1.81
52 Wk Low	62.13	Current Yr Est	5.08
52 Wk High	103.79	Exp Earnings Date	*BMO 11/13/20
Avg. Volume	3,935,727	Prior Year EPS	5.06
Market Cap	67.35 B	Exp EPS Growth (3-5yr)	3.10%
Dividend	3.86 (4.21%)	Forward PE	18.03
Beta	0.23	PEG Ratio	5.82

Utilities » Utility - Electric Power

*BMO = Before Market Open *AMC = After Market Close

Research Reports For DUK

Analyst | Snapshot

All Zacks' Analyst Reports »

News For DUK

Zacks News for DUK | Other News for DUK

Alliant Energy's (LNT) Capex, Focus on Renewables Bode Well
10/02/20-10:43AM EST Zacks

National Grid Aims to Reduce 20% of Scope 3 Emissions by 2030
10/01/20-12:56PM EST Zacks

DUK: What are Zacks experts saying now?
Zacks Private Portfolio Services

NextEra Unit to Buy GridLiance, Expand Transmission Network
10/01/20-9:57AM EST Zacks

Company News for Oct 1, 2020
10/01/20-8:31AM EST Zacks

NiSource Expands Long-Term Infrastructural Investment Plan
09/30/20-11:51AM EST Zacks

More Zacks News for DUK»

Premium Research for DUK

Zacks Rank	Hold 3
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	C Value | D Growth | D Momentum | D VGM
Earnings ESP	1.49%
Research Reports for DUK	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Duke Energy Corporation	DUK	
Pampa Energia SA	PAM	
Alliant Energy Corporation	LNT	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$103.65 USD
+2.37 (2.34%)
Updated Oct 2, 2020 04:00 PM ET

Style Scores:
B Value | C Growth | F Momentum | C VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	100.50	Earnings ESP	-2.04%
Day Low	100.17	Most Accurate Est	2.50
Day High	104.22	Current Qtr Est	2.55
52 Wk Low	75.20	Current Yr Est	5.61
52 Wk High	135.55	Exp Earnings Date	11/4/20
Avg. Volume	1,125,932	Prior Year EPS	5.40
Market Cap	20.75 B	Exp EPS Growth (3-5yr)	5.43%
Dividend	3.72 (3.59%)	Forward PE	18.48
Beta	0.51	PEG Ratio	3.41

Utilities » Utility - Electric Power

Research Reports For ETR

Analyst | Snapshot

All Zacks' Analyst Reports »

News For ETR

Zacks News for ETR Other News for ETR

Utilities Gear Up as Hurricane Sally Nears U.S. Gulf Coast
09/16/20-6:33AM EST Zacks

The Zacks Analyst Blog Highlights: Entergy, American Electric Power and CenterPoint Energy
08/31/20-12:37PM EST Zacks

ETR: What are Zacks experts saying now?
Zacks Private Portfolio Services

Entergy (ETR) Down 7.1% Since Last Earnings Report: Can It Rebound?
08/28/20-10:31AM EST Zacks

Hurricane Laura Devastates Louisiana: 3 Utilities in Focus
08/28/20-8:34AM EST Zacks

Should Value Investors Pick Entergy Corporation (ETR) Stock?
08/20/20-9:13AM EST Zacks

More Zacks News for ETR»

Premium Research for ETR

Zacks Rank	Hold 3
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	B Value | C Growth | F Momentum | C VGM
Earnings ESP	-2.04%
Research Reports for ETR	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Entergy Corporation	**ETR**	
Pampa Energia SA	**PAM**	
Alliant Energy Corporation	**LNT**	

$87.05 USD
+1.60 (1.87%)
Updated Oct 2, 2020 04:00 PM ET

Trades from $1

Style Scores:
C Value | B Growth | D Momentum | D VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity	
Open	84.93
Day Low	84.64
Day High	87.63
52 Wk Low	60.69
52 Wk High	99.42
Avg. Volume	1,480,333
Market Cap	29.83 B
Dividend	2.27 (2.61%)
Beta	0.32

Key Earnings Data	
Earnings ESP	0.00%
Most Accurate Est	1.02
Current Qtr Est	1.02
Current Yr Est	3.62
Exp Earnings Date	11/3/20
Prior Year EPS	3.45
Exp EPS Growth (3-5yr)	6.59%
Forward PE	24.07
PEG Ratio	3.65

Utilities » Utility - Electric Power

Research Reports For ES

Analyst | Snapshot | All Zacks' Analyst Reports »

News For ES

Zacks News for ES | Other News for ES

American Water's Unit Buys Granite City Wastewater System
09/28/20-9:39AM EST Zacks

Algonquin Power & Utilities (AQN) to Acquire ESSAL for $92.3M
09/14/20-8:58AM EST Zacks

ES: What are Zacks experts saying now?
Zacks Private Portfolio Services

Should iShares Morningstar MidCap Value ETF (JKI) Be on Your Investing Radar?
09/03/20-5:20AM EST Zacks

Eversource (ES) Down 6.4% Since Last Earnings Report: Can It Rebound?
08/29/20-10:31AM EST Zacks

Eversource (ES) to Ride on Solid Investments & Acquisitions
08/25/20-10:28AM EST Zacks

More Zacks News for ES»

Premium Research for ES

Zacks Rank	Sell 4
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	C Value | B Growth | D Momentum | D VGM
Earnings ESP	0.00%
Research Reports for ES	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Eversource Energy	**ES**	
Pampa Energia SA	**PAM**	
Alliant Energy Corporation	**LNT**	

$50.03 USD

+1.02 (2.08%)

Updated Oct 2, 2020 04:00 PM ET

Trades from $1

Style Scores:
C Value | F Growth | C Momentum | D VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	48.65	Earnings ESP	NA
Day Low	48.26	Most Accurate Est	NA
Day High	50.26	Current Qtr Est	NA
52 Wk Low	45.06	Current Yr Est	3.35
52 Wk High	80.52	Exp Earnings Date	11/3/20
Avg. Volume	350,001	Prior Year EPS	3.42
Market Cap	2.53 B	Exp EPS Growth (3-5yr)	3.39%
Dividend	2.40 (4.80%)	Forward PE	14.93
Beta	0.30	PEG Ratio	4.41

Utilities » Utility - Electric Power

Research Report For NWE

Snapshot

All Zacks' Analyst Reports »

News For NWE

Zacks News for NWE Other News for NWE

Where Can Traders Build Optimism?
04/23/20-2:45PM EST Zacks

Here's Why You Should Add American States Water (AWR) Stock
04/16/20-10:32AM EST Zacks

NWE: What are Zacks experts saying now?
Zacks Private Portfolio Services

4 Reasons to Add Atmos Energy (ATO) to Your Portfolio Now
04/14/20-8:47AM EST Zacks

Here's Why You Should Add AES Corp (AES) in Your Portfolio
04/13/20-10:11AM EST Zacks

Here's Why You Should Add Vistra Energy (VST) Stock Now
04/09/20-10:14AM EST Zacks

More Zacks News for NWE»

Premium Research for NWE

Zacks Rank	**Hold** 3
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	C **Value** | F **Growth** | C **Momentum** | D **VGM**
Earnings ESP	NA
Research Report for NWE	Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
NorthWestern Corporation	**NWE**	
Pampa Energia SA	**PAM**	
Alliant Energy Corporation	**LNT**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$55.95 USD
+0.88 (1.60%)
Updated Oct 2, 2020 04:03 PM ET

Trades from $1

Style Scores:
C Value | D Growth | D Momentum | D VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	54.59	Earnings ESP	-25.00%
Day Low	54.18	Most Accurate Est	0.62
Day High	56.41	Current Qtr Est	0.82
52 Wk Low	34.75	Current Yr Est	3.39
52 Wk High	63.88	Exp Earnings Date	10/29/20
Avg. Volume	2,179,757	Prior Year EPS	3.28
Market Cap	28.30 B	Exp EPS Growth (3-5yr)	3.46%
Dividend	1.96 (3.50%)	Forward PE	16.48
Beta	0.53	PEG Ratio	4.76

Utilities » Utility - Electric Power

Research Reports For PEG

Analyst Snapshot All Zacks' Analyst Reports »

News For PEG

Zacks News for PEG Other News for PEG

3 Top-Ranked Dividend Stocks: A Smarter Way to Boost Your Retirement Income - September 25, 2020
09/25/20-9:38AM EST Zacks

3 Top-Ranked Dividend Stocks: A Smarter Way to Boost Your Retirement Income - September 11, 2020
09/11/20-7:52AM EST Zacks

PEG: What are Zacks experts saying now?
Zacks Private Portfolio Services

Are You Looking for a High-Growth Dividend Stock? PSEG (PEG) Could Be a Great Choice
09/07/20-10:45AM EST Zacks

How to Maximize Your Retirement Portfolio with These Top-Ranked Dividend Stocks - September 02, 2020
09/02/20-8:18AM EST Zacks

Why Is PSEG (PEG) Down 0.4% Since Last Earnings Report?
08/30/20-10:30AM EST Zacks

More Zacks News for PEG»

Premium Research for PEG

Zacks Rank	**Hold** 3
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	C Value | D Growth | D Momentum | D VGM
Earnings ESP	-25.00%
Research Reports for PEG	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Public Service Enterprise Group Incorporated	PEG	
Pampa Energia SA	PAM	
Alliant Energy Corporation	LNT	

Case Nos. 2020-00349 and 2020-00350
WP-30
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McKenzie

$120.50 USD
+1.37 (1.15%)
Updated Oct 2, 2020 04:03 PM ET

Trades from $1

Style Scores:
C Value | F Growth | D Momentum | F VGM
Industry Rank:
Bottom 31% (174 out of 251)
Industry: Utility - Gas Distribution

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	118.06	Earnings ESP	11.66%
Day Low	117.70	Most Accurate Est	1.66
Day High	121.34	Current Qtr Est	1.49
52 Wk Low	88.00	Current Yr Est	7.62
52 Wk High	161.87	Exp Earnings Date	*AMC 11/6/20
Avg. Volume	1,461,053	Prior Year EPS	6.78
Market Cap	34.86 B	Exp EPS Growth (3-5yr)	7.36%
Dividend	4.18 (3.47%)	Forward PE	15.81
Beta	0.69	PEG Ratio	2.15
Utilities » Utility - Gas Distribution			

*BMO = Before Market Open *AMC = After Market Close

Research Reports For SRE

Analyst Snapshot All Zacks' Analyst Reports »

News For SRE

Zacks News for SRE Other News for SRE

Are You Looking for a High-Growth Dividend Stock? Sempra (SRE) Could Be a Great Choice
09/21/20-10:45AM EST Zacks

3 Top Dividend Stocks to Maximize Your Retirement Income - September 18, 2020
09/18/20-8:24AM EST Zacks

SRE: What are Zacks experts saying now?
Zacks Private Portfolio Services

Sempra's (SRE) Unit Ups Rebate on Energy Efficient Appliances
09/11/20-11:26AM EST Zacks

The Zacks Analyst Blog Highlights: PCG, POR, SRE and EIX
09/08/20-1:25PM EST Zacks

Sempra (SRE) is a Top Dividend Stock Right Now: Should You Buy?
09/04/20-10:45AM EST Zacks

More Zacks News for SRE»

Premium Research for SRE

Zacks Rank	**Hold** 3
Zacks Industry Rank	Bottom 31% (174 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	C Value | F Growth | D Momentum | F VGM
Earnings ESP	11.66%
Research Reports for SRE	Analyst | Snapshot

(= Change in last 30 days)
View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Sempra Energy	SRE	
Atmos Energy Corporation	ATO	
Chesapeake Utilities Corporation	CPK	

$56.26 USD
+1.64 (3.00%)
Updated Oct 2, 2020 04:02 PM ET

Style Scores:
C Value | C Growth | D Momentum | C VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Enter Symbol

Quote Overview

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	54.31	Earnings ESP	0.00%
Day Low	54.09	Most Accurate Est	1.27
Day High	56.57	Current Qtr Est	1.27
52 Wk Low	41.96	Current Yr Est	3.16
52 Wk High	71.10	Exp Earnings Date	11/4/20
Avg. Volume	4,031,916	Prior Year EPS	3.11
Market Cap	59.42 B	Exp EPS Growth (3-5yr)	4.00%
Dividend	2.56 (4.55%)	Forward PE	17.82
Beta	0.38	PEG Ratio	4.45

Utilities » Utility - Electric Power

Research Reports For SO

Analyst | Snapshot | All Zacks' Analyst Reports »

News For SO

Zacks News for SO | Other News for SO

PAM or SO: Which Is the Better Value Stock Right Now?
09/28/20-10:40AM EST Zacks

Utilities Gear Up as Hurricane Sally Nears U.S. Gulf Coast
09/16/20-6:33AM EST Zacks

SO: What are Zacks experts saying now?
Zacks Private Portfolio Services

Southern Co. (SO) Down 5.1% Since Last Earnings Report: Can It Rebound?
08/29/20-10:32AM EST Zacks

Top Research Reports for Apple, Alibaba, Sony & Others
08/24/20-11:19AM EST Zacks

PAM or SO: Which Is the Better Value Stock Right Now?
08/24/20-10:40AM EST Zacks

More Zacks News for SO»

Premium Research for SO

Zacks Rank	**Hold** 3
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	C Value | C Growth | D Momentum | C VGM
Earnings ESP	0.00%
Research Reports for SO	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Southern Company The	**SO**	
Pampa Energia SA	**PAM**	
Alliant Energy Corporation	**LNT**	

Case Nos. 2020-00349 and 2020-00350
WP-30
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McKenzie

$97.71 USD
-0.54 (-0.55%)
Updated Oct 2, 2020 04:00 PM ET

Trades from $1

Style Scores:
D Value | D Growth | B Momentum | D VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Quote Overview

View All Zacks #1 Ranked Stocks

Enter Symbol

Stock Activity		Key Earnings Data	
Open	97.66	Earnings ESP	-0.66%
Day Low	96.76	Most Accurate Est	0.76
Day High	98.32	Current Qtr Est	0.76
52 Wk Low	68.01	Current Yr Est	3.75
52 Wk High	109.53	Exp Earnings Date	11/4/20
Avg. Volume	1,150,826	Prior Year EPS	3.58
Market Cap	30.82 B	Exp EPS Growth (3-5yr)	5.94%
Dividend	2.53 (2.59%)	Forward PE	26.07
Beta	0.18	PEG Ratio	4.39

Utilities » Utility - Electric Power

Research Reports For WEC

Analyst Snapshot All Zacks' Analyst Reports »

News For WEC

Zacks News for WEC Other News for WEC

POR vs. WEC: Which Stock Is the Better Value Option?
08/17/20-10:40AM EST Zacks

WEC Energy (WEC) Q2 Earnings Beat Estimates, Revenues Miss
08/07/20-12:09PM EST Zacks

WEC: What are Zacks experts saying now?
Zacks Private Portfolio Services

Pinnacle West (PNW) to Post Q2 Earnings: What's in Store?
08/03/20-12:12PM EST Zacks

Sony (SNE) to Report Q1 Earnings: What's in the Offing?
08/03/20-10:50AM EST Zacks

Maxar (MAXR) to Report Q2 Earnings: What's in the Cards?
08/03/20-10:46AM EST Zacks

More Zacks News for WEC»

Premium Research for WEC

Zacks Rank	**Hold** 3
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	D Value | D Growth | B Momentum | D VGM
Earnings ESP	-0.66%
Research Reports for WEC	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
WEC Energy Group Inc	**WEC**	
Pampa Energia SA	**PAM**	
Alliant Energy Corporation	**LNT**	

Case Nos. 2020-00349 and 2020-00350
WP-30
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McKenzie

$70.48 USD

+0.10 (0.14%)

Updated Oct 2, 2020 04:00 PM ET

Trades from $1

Style Scores:
C Value | D Growth | C Momentum | D VGM
Industry Rank:
Bottom 28% (180 out of 251)
Industry: Utility - Electric Power

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	69.89	Earnings ESP	0.00%
Day Low	69.48	Most Accurate Est	1.11
Day High	70.89	Current Qtr Est	1.11
52 Wk Low	46.58	Current Yr Est	2.78
52 Wk High	73.00	Exp Earnings Date	10/22/20
Avg. Volume	2,162,752	Prior Year EPS	2.64
Market Cap	37.03 B	Exp EPS Growth (3-5yr)	5.81%
Dividend	1.72 (2.44%)	Forward PE	25.35
Beta	0.28	PEG Ratio	4.36

Utilities » Utility - Electric Power

Research Reports For XEL

Analyst Snapshot **All Zacks' Analyst Reports »**

News For XEL

Zacks News for XEL Other News for XEL

Alliant Energy's (LNT) Capex, Focus on Renewables Bode Well
10/02/20-10:43AM EST Zacks

National Grid Aims to Reduce 20% of Scope 3 Emissions by 2030
10/01/20-12:56PM EST Zacks

XEL: What are Zacks experts saying now?
Zacks Private Portfolio Services

NextEra Unit to Buy GridLiance, Expand Transmission Network
10/01/20-9:57AM EST Zacks

NiSource Expands Long-Term Infrastructural Investment Plan
09/30/20-11:51AM EST Zacks

Why You Should Add NRG Energy (NRG) to Your Portfolio Now
09/29/20-10:40AM EST Zacks

More Zacks News for XEL»

Premium Research for XEL

Zacks Rank	**Hold** 3
Zacks Industry Rank	Bottom 28% (180 out of 251)
Zacks Sector Rank	Bottom 25% (12 out of 16)
Style Scores	**C Value | D Growth | C Momentum | D VGM**
Earnings ESP	0.00%
Research Reports for XEL	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Xcel Energy Inc	**XEL**	
Pampa Energia SA	**PAM**	
Alliant Energy Corporation	**LNT**	

Short Label	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Yield on 30-year Treasury bonds, Source: FRB, Units: - percent per annum, Last updated: 05/28/20 - 15:00	1.45	1.52	1.81	2.13	2.37	2.61	2.83	3.03	3.19	3.31	3.37	3.41	3.44
Gross domestic product, Source: BEA, Units: billions of dollars- annual rate, Last updated: 05/28/20 - 15:00	20,070.12	21,231.15	22,315.26	23,335.91	24,369.06	25,466.99	26,576.54	27,736.32	28,933.48	30,138.00	31,384.01	32,697.26	34,091.09
Yield on 10-year Treasury notes, Source: FRB, Units: - percent per annum, Last updated: 05/28/20 - 15:00	0.84	0.69	0.90	1.22	1.50	1.81	2.10	2.40	2.64	2.82	2.93	3.00	3.05
Real gross domestic product, Source: BEA, Units: billions of chained 2012 dollars- annual rate, Last updated: 05/28/20 -	17,680.97	18,586.09	19,444.94	20,207.57	20,878.59	21,467.66	21,942.78	22,371.40	22,781.83	23,167.67	23,566.25	23,998.90	24,462.20
Yield on Aaa-rated corporate bonds, Source: FRB, Units: - percent per annum, Last updated: 05/28/20 - 15:00	2.72	2.97	3.13	3.15	3.11	3.21	3.41	3.59	3.75	3.87	3.95	3.99	4.03
Rate on Aa-rated public utility bonds, Source: Moodys, Units: - percent per annum, Last updated: 05/28/20 - 15:00	3.09	3.47	3.65	3.69	3.65	3.78	3.99	4.19	4.36	4.51	4.59	4.64	4.68
Chained price index--gross domestic product, Source: BEA, Units: index- 2012=100.0, Last updated: 05/28/20 - 15:00	113.50	114.23	114.76	115.48	116.71	118.63	121.11	123.98	127.00	130.08	133.17	136.24	139.36
Consumer price index, all-urban, Source: BLS, Units: - 1982-84=1.00 seasonally adjusted, Last updated: 05/28/20 - 15:0	2.58	2.62	2.67	2.69	2.72	2.78	2.84	2.92	2.98	3.05	3.12	3.18	3.25

Short Label	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Yield on 30-year Treasury bonds, Source: FRB, Units: - percent per annum, Last updated: 05/28/20 - 15:00	3.45	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44
Gross domestic product, Source: BEA, Units: billions of dollars- annual rate, Last updated: 05/28/20 - 15:00	35,530.06	37,025.83	38,570.10	40,154.55	41,787.20	43,470.63	45,196.66	47,013.92	48,924.49	50,888.47	52,935.76	55,076.45	57,328.85
Yield on 10-year Treasury notes, Source: FRB, Units: - percent per annum, Last updated: 05/28/20 - 15:00	3.06	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
Real gross domestic product, Source: BEA, Units: billions of chained 2012 dollars- annual rate, Last updated: 05/28/20 -	24,932.47	25,415.03	25,894.17	26,370.67	26,845.85	27,319.74	27,791.93	28,283.87	28,792.59	29,295.01	29,807.10	30,333.06	30,877.98
Yield on Aaa-rated corporate bonds, Source: FRB, Units: - percent per annum, Last updated: 05/28/20 - 15:00	4.04	4.05	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03
Rate on Aa-rated public utility bonds, Source: Moodys, Units: - percent per annum, Last updated: 05/28/20 - 15:00	4.69	4.70	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68
Chained price index--gross domestic product, Source: BEA, Units: index- 2012=100.0, Last updated: 05/28/20 - 15:00	142.50	145.68	148.95	152.27	155.65	159.11	162.62	166.22	169.92	173.71	177.59	181.57	185.66
Consumer price index, all-urban, Source: BLS, Units: - 1982-84=1.00 seasonally adjusted, Last updated: 05/28/20 - 15:0	3.31	3.38	3.45	3.52	3.59	3.67	3.74	3.82	3.90	3.99	4.07	4.16	4.25

Short Label	2046	2047	2048	2049	2050
Yield on 30-year Treasury bonds, Source: FRB, Units: - percent per annum, Last updated: 05/28/20 - 15:00	3.44	3.44	3.44	3.44	3.44
Gross domestic product, Source: BEA, Units: billions of dollars- annual rate, Last updated: 05/28/20 - 15:00	59,663.82	62,092.75	64,628.46	67,255.19	70,010.07
Yield on 10-year Treasury notes, Source: FRB, Units: - percent per annum, Last updated: 05/28/20 - 15:00	3.05	3.05	3.05	3.05	3.05
Real gross domestic product, Source: BEA, Units: billions of chained 2012 dollars- annual rate, Last updated: 05/28/20 -	31,424.68	31,983.21	32,554.41	33,126.54	33,719.65
Yield on Aaa-rated corporate bonds, Source: FRB, Units: - percent per annum, Last updated: 05/28/20 - 15:00	4.03	4.03	4.03	4.03	4.03
Rate on Aa-rated public utility bonds, Source: Moodys, Units: - percent per annum, Last updated: 05/28/20 - 15:00	4.68	4.68	4.68	4.68	4.68
Chained price index--gross domestic product, Source: BEA, Units: index- 2012=100.0, Last updated: 05/28/20 - 15:00	189.86	194.14	198.52	203.02	207.62
Consumer price index, all-urban, Source: BLS, Units: - 1982-84=1.00 seasonally adjusted, Last updated: 05/28/20 - 15:0	4.34	4.43	4.53	4.63	4.73

20. Macroeconomic Indicators

(billion 2012 chain-weighted dollars, unless otherwise noted)

Indicators	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Real Gross Domestic Product	**19,061**	**19,432**	**19,773**	**20,104**	**20,392**	**20,761**	**21,174**	**21,593**	**22,032**	**22,499**	**22,986**
Components of Real Gross Domestic Product											
Real Consumption	13,205	13,561	13,927	14,250	14,559	14,873	15,164	15,429	15,711	16,023	16,384
Real Business Fixed Investment	2,812	2,899	2,978	3,058	3,114	3,189	3,279	3,373	3,471	3,576	3,684
Real Government Spending	3,235	3,280	3,292	3,296	3,285	3,286	3,300	3,313	3,329	3,351	3,367
Real Exports	2,613	2,729	2,798	2,903	3,007	3,131	3,249	3,394	3,535	3,679	3,815
Real Imports	3,524	3,757	3,949	4,180	4,353	4,524	4,628	4,729	4,810	4,927	5,058
Energy Intensity											
(thousand Btu per 2012 dollar of GDP)											
Delivered Energy	3.95	3.89	3.85	3.80	3.76	3.69	3.62	3.55	3.48	3.41	3.34
Total Energy	5.25	5.13	5.07	4.99	4.91	4.82	4.70	4.60	4.50	4.41	4.32
Price Indices											
GDP Chain-type Price Index (2012=1.000)	1.123	1.150	1.179	1.208	1.238	1.266	1.295	1.325	1.357	1.389	1.422
Consumer Price Index (1982-84=1.00)											
All-urban	2.57	2.63	2.69	2.75	2.82	2.88	2.95	3.02	3.10	3.17	3.24
Energy Commodities and Services	2.24	2.29	2.32	2.36	2.40	2.44	2.51	2.60	2.67	2.73	2.77
Wholesale Price Index (1982=1.00)											
All Commodities	2.03	2.04	2.07	2.11	2.15	2.19	2.24	2.29	2.34	2.38	2.43
Fuel and Power	1.79	1.77	1.85	1.91	1.96	2.02	2.11	2.20	2.29	2.35	2.42
Metals and Metal Products	2.26	2.22	2.19	2.19	2.20	2.23	2.25	2.28	2.30	2.32	2.33
Industrial Commodities excluding Energy	2.09	2.10	2.12	2.15	2.18	2.21	2.25	2.29	2.33	2.37	2.41
Interest Rates (percent, nominal)											
Federal Funds Rate	2.42	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65
10-Year Treasury Note	2.68	2.94	3.13	3.23	3.28	3.28	3.27	3.26	3.25	3.24	3.23
AA Utility Bond Rate	4.07	4.28	4.43	4.58	4.66	4.66	4.65	4.65	4.65	4.65	4.65

20. Macroeconomic Indicators

(billion 2012 chain-weighted dollars, unless otherwise noted)

Indicators	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Real Gross Domestic Product	**23,483**	**23,967**	**24,448**	**24,911**	**25,369**	**25,816**	**26,262**	**26,716**	**27,175**	**27,651**	**28,163**
Components of Real Gross Domestic Product											
Real Consumption	16,760	17,127	17,504	17,866	18,215	18,565	18,910	19,262	19,627	20,001	20,382
Real Business Fixed Investment	3,786	3,886	3,982	4,080	4,174	4,262	4,357	4,457	4,555	4,659	4,772
Real Government Spending	3,391	3,411	3,434	3,458	3,481	3,504	3,526	3,545	3,564	3,582	3,604
Real Exports	3,941	4,063	4,190	4,313	4,447	4,576	4,699	4,842	4,970	5,107	5,257
Real Imports	5,194	5,330	5,465	5,595	5,744	5,888	6,014	6,169	6,302	6,438	6,577
Energy Intensity											
(thousand Btu per 2012 dollar of GDP)											
Delivered Energy	3.27	3.21	3.16	3.10	3.06	3.01	2.97	2.93	2.89	2.85	2.82
Total Energy	4.24	4.16	4.09	4.02	3.96	3.90	3.85	3.80	3.75	3.70	3.65
Price Indices											
GDP Chain-type Price Index (2012=1.000)	1.455	1.488	1.521	1.555	1.589	1.623	1.659	1.696	1.734	1.773	1.812
Consumer Price Index (1982-84=1.00)											
All-urban	3.32	3.39	3.47	3.54	3.62	3.70	3.78	3.87	3.96	4.05	4.14
Energy Commodities and Services	2.83	2.86	2.91	2.99	3.05	3.12	3.20	3.28	3.36	3.46	3.54
Wholesale Price Index (1982=1.00)											
All Commodities	2.47	2.52	2.56	2.61	2.65	2.69	2.74	2.79	2.84	2.89	2.94
Fuel and Power	2.50	2.56	2.63	2.72	2.79	2.86	2.95	3.03	3.12	3.21	3.29
Metals and Metal Products	2.34	2.34	2.35	2.35	2.35	2.35	2.35	2.36	2.36	2.35	2.36
Industrial Commodities excluding Energy	2.45	2.49	2.52	2.56	2.60	2.63	2.67	2.71	2.75	2.79	2.83
Interest Rates (percent, nominal)											
Federal Funds Rate	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65
10-Year Treasury Note	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24
AA Utility Bond Rate	4.65	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66

20. Macroeconomic Indicators

(billion 2012 chain-weighted dollars, unless otherwise noted)

Indicators	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2019-2050
Real Gross Domestic Product	**28,685**	**29,217**	**29,769**	**30,319**	**30,877**	**31,439**	**32,015**	**32,595**	**33,182**	**33,759**	**1.9%**
Components of Real Gross Domestic Product											
Real Consumption	20,777	21,181	21,594	22,016	22,445	22,886	23,342	23,813	24,290	24,769	2.0%
Real Business Fixed Investment	4,892	5,010	5,134	5,256	5,378	5,498	5,625	5,757	5,883	6,004	2.5%
Real Government Spending	3,620	3,642	3,664	3,683	3,703	3,721	3,737	3,753	3,772	3,788	0.5%
Real Exports	5,423	5,579	5,744	5,908	6,073	6,213	6,392	6,573	6,748	6,884	3.2%
Real Imports	6,745	6,888	7,051	7,225	7,402	7,546	7,760	7,971	8,163	8,297	2.8%
Energy Intensity											
(thousand Btu per 2012 dollar of GDP)											
Delivered Energy	2.78	2.74	2.71	2.68	2.65	2.62	2.59	2.56	2.54	2.51	-1.5%
Total Energy	3.60	3.56	3.51	3.47	3.43	3.39	3.36	3.32	3.29	3.26	-1.5%
Price Indices											
GDP Chain-type Price Index (2012=1.000)	1.854	1.896	1.940	1.985	2.032	2.080	2.130	2.183	2.237	2.292	2.3%
Consumer Price Index (1982-84=1.00)											
All-urban	4.23	4.33	4.43	4.54	4.65	4.76	4.87	4.99	5.12	5.25	2.3%
Energy Commodities and Services	3.63	3.74	3.83	3.95	4.06	4.17	4.31	4.45	4.58	4.69	2.4%
Wholesale Price Index (1982=1.00)											
All Commodities	2.99	3.05	3.10	3.16	3.22	3.28	3.35	3.42	3.49	3.55	1.8%
Fuel and Power	3.38	3.49	3.58	3.69	3.80	3.91	4.04	4.18	4.30	4.42	2.9%
Metals and Metal Products	2.36	2.37	2.37	2.37	2.38	2.37	2.38	2.38	2.39	2.39	0.2%
Industrial Commodities excluding Energy	2.87	2.92	2.96	3.01	3.06	3.10	3.15	3.21	3.26	3.31	1.5%
Interest Rates (percent, nominal)											
Federal Funds Rate	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	- -
10-Year Treasury Note	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	- -
AA Utility Bond Rate	4.66	4.67	4.67	4.67	4.67	4.66	4.66	4.66	4.66	4.67	- -

CRSP Deciles Size Premiums

	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Size Premium (Return in Excess of CAPM)
Decile				
Mid-Cap 3-5	$ 2,688.889	-	$ 13,100.225	0.80%
Low Cap 6-8	515.621	-	2,685.865	1.42%
Micro-Cap 9-10	1.973	-	515.602	3.16%
Breakdown of Deciles 1-10				
1-Largest	$ 31,090.379	-	$ 1,061,355.011	-0.28%
2	13,142.606	-	30,542.936	0.50%
3	6,618.604	-	13,100.225	0.73%
4	4,312.546	-	6,614.962	0.79%
5	2,688.889	-	4,311.252	1.10%
6	1,669.856	-	2,685.865	1.34%
7	993.855	-	1,668.282	1.47%
8	515.621	-	993.847	1.59%
9	230.024	-	515.602	2.22%
10- Smallest	1.973	-	229.748	4.99%
Breakdown of CRSP 10th Decile				
10a	$ 120.519	-	$ 229.748	3.49%
10w	181.408	-	229.748	2.69%
10x	120.519	-	181.170	4.42%
10b	$ 1.973	-	$ 120.178	8.02%
10y	62.612	-	120.178	6.62%
10z	1.973	-	62.199	10.91%

Source: Duff & Phelps; 2020 CRSP Deciles Size Study -- Supplementary Data Exhibits.

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McKenzie

Value Line Forecast for the U.S. Economy

	Actual					Estimated				
	2015	2016	2017	2018	2019	**2020**	**2021**	**2022**	**2023**	**2024**
Gross Domestic Product and its Components (2012 Chain Weighted $) Billions of Dollars										
Final Sales	17254	17659	18051	18566	19129	18313	18565	19122	19600	20051
Total Consumption	11922	12248	12567	12945	13238	12423	12795	13242	13640	14049
Nonresidential Fixed Investment	2408	2425	2531	2692	2777	2574	2569	2672	2792	2904
Structures	522	496	520	541	548	475	430	443	461	484
Equipment & Software	1137	1122	1176	1255	1268	1134	1167	1225	1274	1325
Residential Fixed Investment	555	591	612	603	602	598	609	615	615	622
Exports	2377	2376	2459	2533	2546	2152	2314	2499	2674	2835
Imports	3098	3160	3309	3453	3464	2976	3165	3355	3522	3699
Federal Government	1183	1188	1197	1232	1277	1349	1360	1354	1340	1327
State & Local Governments	1908	1958	1971	1990	2026	2021	2035	2045	2066	2076
Gross Domestic Product	18219	18707	19485	20612	21440	20519	21201	22099	23013	23942
Real GDP (2012 Chain Weighted $)	17387	17659	18051	18688	19092	18113	18511	19066	19600	20090
Prices and Wages — Annual Rates of Change										
GDP Deflator	1.0	1.0	1.9	2.4	1.7	0.6	1.3	1.2	1.3	0.8
CPI-All Urban Consumers	0.1	1.3	2.1	2.4	2.0	0.6	2.1	1.8	1.9	1.5
PPI-Finished Goods	-3.3	-1.0	3.2	3.0	1.0	-1.8	3.0	2.3	2.0	1.5
Employment Cost Index—Total Comp.	2.1	2.1	2.5	2.9	2.7	1.7	1.5	2.3	2.4	2.5
Productivity	1.3	0.3	1.3	1.5	1.9	1.4	1.1	1.3	1.4	1.0
Production and Other Key Measures										
Industrial Prod. (% Change, Annualized)	-1.0	-2.0	2.3	3.9	-0.7	-6.1	4.2	4.5	3.5	3.0
Factory Operating Rate (%)	75.3	74.2	75.1	76.6	75.6	68.3	70.4	72.0	74.0	75.0
Nonfarm Inven. Change (2012 Chain Weighted $)	131.3	28.5	35.3	59.3	62.2	-189.4	-20.0	100.0	130.0	130.0
Housing Starts (Mill. Units)	1.11	1.18	1.21	1.25	1.30	1.31	1.32	1.33	1.34	1.30
Existing House Sales (Mill. Units)	5.23	5.44	5.53	5.33	5.33	5.05	5.63	5.90	5.80	5.50
Total Light Vehicle Sales (Mill. Units)	17.4	17.5	17.1	17.2	17.0	13.3	14.6	15.5	15.8	16.0
National Unemployment Rate (%)	5.3	4.9	4.4	3.9	3.7	9.0	7.6	6.0	5.5	6.0
Federal Budget Surplus (Unified, FY, $Bill)	-439	-587	-666	-779	-1022	-4488	-1500	-1400	-1200	-1200
Price of Oil ($Bbl., U.S. Refiners' Cost)	48.40	40.60	50.69	64.46	59.36	35.99	40.00	50.00	55.00	50.00
Money and Interest Rates										
3-Month Treasury Bill Rate (%)	0.1	0.3	0.9	1.9	2.1	0.4	0.1	0.1	0.1	0.2
Federal Funds Rate (%)	0.1	0.4	1.0	1.8	2.2	0.4	0.1	0.1	0.2	0.3
10-Year Treasury Note Rate (%)	2.2	1.9	2.3	2.9	2.2	0.8	0.8	1.1	1.3	1.5
Long-Term Treasury Bond Rate (%)	2.9	2.6	2.9	3.1	2.6	1.5	1.5	2.0	2.1	2.5
AAA Corporate Bond Rate (%)	3.9	3.7	3.8	3.9	3.4	2.3	1.9	2.2	2.3	3.3
Prime Rate (%)	3.3	3.5	4.1	4.9	5.3	3.6	3.3	3.3	3.3	3.5
Incomes										
Personal Income (Annualized % Change)	4.8	2.6	4.7	5.3	3.5	8.7	1.8	4.0	4.1	4.2
Real Disp. Inc. (Annualized % Change)	4.1	1.8	2.9	3.6	1.6	10.1	-0.3	2.8	2.7	2.5
Personal Savings Rate (%)	7.6	6.8	7.0	7.9	7.6	18.3	10.3	10.0	9.0	8.0
After-Tax Profits (Annualized $Bill)	1740	1740	1814	1904	1939	2043	2110	2194	2326	2214
Yr-to-Yr % Change	-6.3	0.0	4.2	1.7	1.8	5.4	3.3	4.0	6.0	10.0
Composition of Real GDP-Annual Rates of Change										
Gross Domestic Product	2.9	1.6	2.4	3.0	2.2	-5.1	2.2	3.0	2.8	3.3
Final Sales	2.6	2.2	2.3	2.8	3.0	-4.3	1.4	3.0	2.5	3.5
Total Consumption	3.7	2.7	2.6	2.7	2.3	-6.2	3.0	3.5	3.0	3.5
Nonresidential Fixed Investment	1.8	0.2	4.4	6.9	3.2	-7.3	-0.2	4.0	4.5	5.0
Structures	-3.0	-5.0	4.7	3.7	1.3	-13.2	-9.5	3.0	4.0	8.0
Equipment & Software	3.2	-1.3	4.7	8.0	1.0	-10.6	2.9	5.0	4.0	4.0
Residential Fixed Investment	10.2	6.5	3.5	-0.6	-0.2	-0.7	2.0	1.0	0.0	1.0
Exports	0.5	0.0	3.5	3.0	0.5	-15.5	7.5	8.0	7.0	4.0
Imports	5.3	2.0	4.7	4.1	0.3	-14.1	6.3	6.0	5.0	3.0
Federal Government	-0.1	0.4	0.8	2.8	3.7	5.6	0.9	-0.5	-1.0	-0.5
State & Local Governments	3.2	2.6	0.6	1.2	1.8	-0.2	0.7	0.5	1.0	1.0

Blue Chip Financial Forecasts®

Top Analysts' Forecasts Of U.S. And Foreign Interest Rates, Currency Values And The Factors That Influence Them

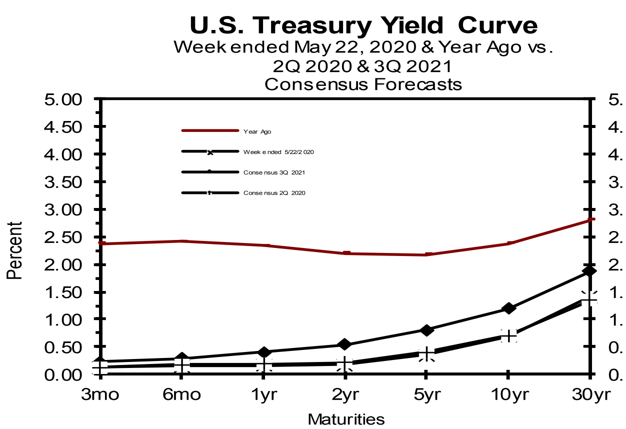
Vol. 39, No. 6, June 1, 2020

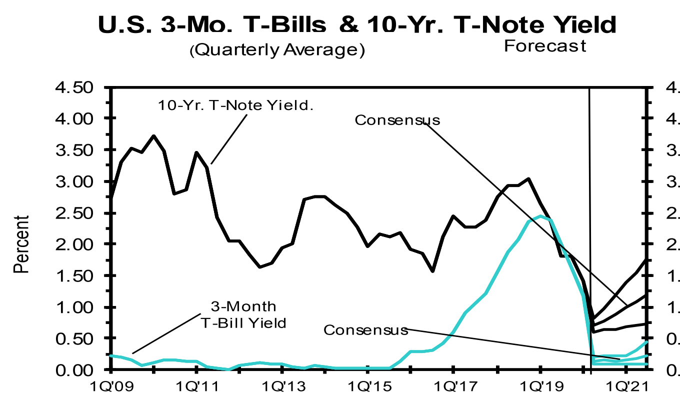
Wolters Kluwer

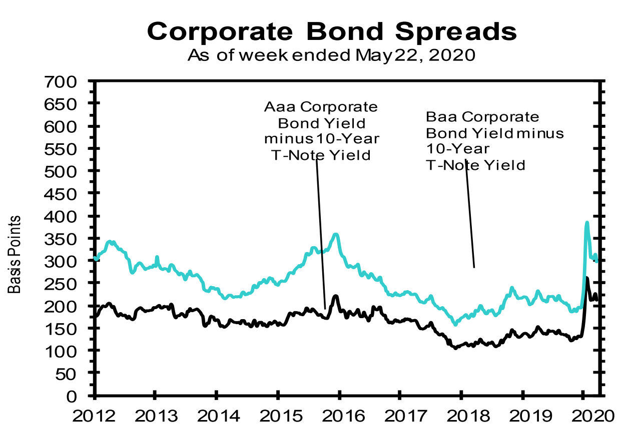
Consensus Forecasts of U.S. Interest Rates and Key Assumptions

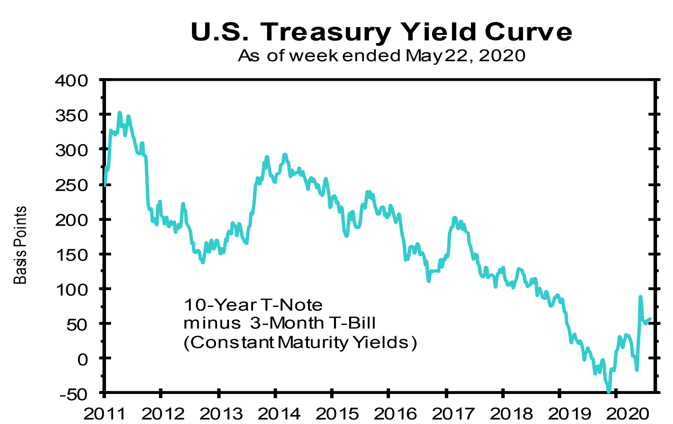
	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month			*Latest Qtr*						
Interest Rates	May 22	May 15	May 8	May 1	Apr	Mar	Feb	1Q 2020	**2Q 2020**	**3Q 2020**	**4Q 2020**	**1Q 2021**	**2Q 2021**	**3Q 2021**
Federal Funds Rate	0.05	0.05	0.05	0.04	0.05	0.65	1.58	1.26	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.78	4.75	4.43	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.4**
LIBOR, 3-mo.	0.37	0.40	0.46	0.68	1.09	1.10	1.68	1.53	**0.7**	**0.5**	**0.5**	**0.5**	**0.5**	**0.6**
Commercial Paper, 1-mo.	0.14	0.12	0.14	0.19	0.47	1.36	1.55	1.49	**0.3**	**0.3**	**0.4**	**0.4**	**0.4**	**0.5**
Treasury bill, 3-mo.	0.12	0.12	0.12	0.11	0.14	0.30	1.54	1.13	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**	**0.2**
Treasury bill, 6-mo.	0.15	0.15	0.15	0.13	0.17	0.30	1.51	1.12	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.3**
Treasury bill, 1 yr.	0.16	0.15	0.16	0.17	0.18	0.33	1.41	1.09	**0.2**	**0.2**	**0.2**	**0.3**	**0.3**	**0.4**
Treasury note, 2 yr.	0.17	0.16	0.17	0.21	0.22	0.45	1.33	1.10	**0.2**	**0.3**	**0.3**	**0.4**	**0.4**	**0.5**
Treasury note, 5 yr.	0.35	0.33	0.34	0.37	0.39	0.59	1.32	1.16	**0.4**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**
Treasury note, 10 yr.	0.69	0.67	0.67	0.64	0.66	0.87	1.50	1.38	**0.7**	**0.8**	**0.9**	**1.0**	**1.1**	**1.2**
Treasury note, 30 yr.	1.41	1.36	1.34	1.25	1.27	1.46	1.97	1.88	**1.4**	**1.5**	**1.5**	**1.7**	**1.8**	**1.9**
Corporate Aaa bond	2.82	2.94	2.89	2.77	2.86	3.11	2.85	3.00	**2.5**	**2.6**	**2.7**	**2.7**	**2.8**	**2.9**
Corporate Baa bond	3.66	3.81	3.74	3.68	3.87	4.11	3.50	3.76	**4.0**	**4.0**	**4.0**	**4.2**	**4.2**	**4.3**
State & Local bonds	3.26	3.37	3.46	3.50	3.41	3.29	2.93	3.07	**2.5**	**2.6**	**2.6**	**2.6**	**2.7**	**2.7**
Home mortgage rate	3.24	3.28	3.26	3.23	3.31	3.45	3.47	3.51	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.4**
	History								Consensus Forecasts-Quarterly					
Key Assumptions	2Q 2018	3Q 2018	4Q 2018	1Q 2019	2Q 2019	3Q 2019	4Q 2019	1Q 2020	**2Q 2020**	**3Q 2020**	**4Q 2020**	**1Q 2021**	**2Q 2021**	**3Q 2021**
Fed's AFE $ Index	105.5	107.8	109.4	109.4	110.3	110.5	110.3	111.2	**113.2**	**113.6**	**113.6**	**113.4**	**112.9**	**112.4**
Real GDP	3.5	2.9	1.1	3.1	2.0	2.1	2.1	-5.0	**-34.0**	**15.2**	**8.2**	**6.2**	**4.7**	**3.7**
GDP Price Index	3.2	2.0	1.6	1.1	2.4	1.8	1.3	1.4	**-0.4**	**1.0**	**1.3**	**1.5**	**1.7**	**1.7**
Consumer Price Index	2.2	2.1	1.3	0.9	3.0	1.8	2.4	1.2	**-3.2**	**1.3**	**1.7**	**2.1**	**1.9**	**1.9**

Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data: Treasury rates from the Federal Reserve Board's H.15; AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years, yield to maturity; State and local bond yields from Bank of America-Merrill Lynch, A-rated, yield to maturity; Mortgage rates from Freddie Mac, 30-year, fixed; LIBOR quotes from Intercontinental Exchange. All interest rate data are sourced from Haver Analytics. Historical data for Fed's Major Currency Index are from FRSR H.10. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS).









Long-Range Survey:

The table below contains the results of our twice-annual long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are consensus estimates for the years 2021 through 2026 and averages for the five-year periods 2022-2026 and 2027-2031. Apply these projections cautiously. Few if any economic, demographic and political forces can be evaluated accurately over such long time spans.

		Average For The Year						Five-Year Averages	
		2021	2022	2023	2024	2025	2026	2022-2026	2027-2031
1. Federal Funds Rate	CONSENSUS	**0.2**	**0.4**	**1.0**	**1.6**	**1.9**	**2.1**	**1.4**	**2.3**
	Top 10 Average	0.4	0.8	1.6	2.2	2.5	2.7	1.9	2.8
	Bottom 10 Average	0.1	0.1	0.4	1.0	1.3	1.5	0.9	1.7
2. Prime Rate	CONSENSUS	**3.4**	**3.6**	**4.1**	**4.7**	**5.0**	**5.2**	**4.5**	**5.4**
	Top 10 Average	3.5	3.9	4.6	5.3	5.5	5.7	5.0	5.9
	Bottom 10 Average	3.3	3.3	3.7	4.2	4.5	4.7	4.1	4.9
3. LIBOR, 3-Mo.	CONSENSUS	**0.6**	**0.9**	**1.4**	**2.0**	**2.3**	**2.4**	**1.8**	**2.6**
	Top 10 Average	0.8	1.3	1.9	2.5	2.7	3.0	2.3	3.1
	Bottom 10 Average	0.4	0.5	0.9	1.6	1.9	2.0	1.4	2.1
4. Commercial Paper, 1-Mo	CONSENSUS	**0.6**	**0.9**	**1.4**	**2.0**	**2.2**	**2.3**	**1.7**	**2.6**
	Top 10 Average	0.7	1.2	1.8	2.3	2.6	2.8	2.1	3.0
	Bottom 10 Average	0.3	0.5	1.1	1.6	1.9	2.0	1.4	2.2
5. Treasury Bill Yield, 3-Mo	CONSENSUS	**0.2**	**0.5**	**1.1**	**1.6**	**1.9**	**2.1**	**1.4**	**2.3**
	Top 10 Average	0.4	0.9	1.6	2.2	2.4	2.6	1.9	2.8
	Bottom 10 Average	0.1	0.2	0.5	1.1	1.4	1.6	0.9	1.8
6. Treasury Bill Yield, 6-Mo	CONSENSUS	**0.3**	**0.6**	**1.1**	**1.7**	**2.0**	**2.2**	**1.5**	**2.5**
	Top 10 Average	0.4	0.9	1.7	2.3	2.6	2.7	2.0	3.0
	Bottom 10 Average	0.2	0.2	0.6	1.2	1.5	1.7	1.1	1.9
7. Treasury Bill Yield, 1-Yr	CONSENSUS	**0.4**	**0.7**	**1.3**	**1.8**	**2.1**	**2.3**	**1.7**	**2.6**
	Top 10 Average	0.5	1.1	1.8	2.4	2.7	2.9	2.2	3.1
	Bottom 10 Average	0.2	0.3	0.7	1.3	1.6	1.8	1.1	2.0
8. Treasury Note Yield, 2-Yr	CONSENSUS	**0.5**	**0.9**	**1.5**	**2.0**	**2.3**	**2.5**	**1.8**	**2.7**
	Top 10 Average	0.8	1.3	2.0	2.5	2.9	3.0	2.4	3.3
	Bottom 10 Average	0.3	0.4	0.9	1.4	1.7	2.0	1.3	2.2
9. Treasury Note Yield, 5-Yr	CONSENSUS	**0.7**	**1.1**	**1.7**	**2.2**	**2.5**	**2.7**	**2.0**	**2.9**
	Top 10 Average	1.1	1.6	2.3	2.8	3.1	3.3	2.6	3.5
	Bottom 10 Average	0.5	0.7	1.2	1.6	1.8	2.1	1.5	2.3
10. Treasury Note Yield, 10-Yr	CONSENSUS	**1.2**	**1.5**	**2.1**	**2.5**	**2.7**	**2.9**	**2.3**	**3.1**
	Top 10 Average	1.5	2.0	2.6	3.1	3.3	3.5	2.9	3.8
	Bottom 10 Average	0.8	1.1	1.6	1.9	2.1	2.2	1.8	2.5
11. Treasury Bond Yield, 30-Yr	CONSENSUS	**1.8**	**2.2**	**2.7**	**3.1**	**3.3**	**3.5**	**3.0**	**3.8**
	Top 10 Average	2.2	2.7	3.3	3.7	3.9	4.1	3.5	4.4
	Bottom 10 Average	1.4	1.7	2.2	2.6	2.8	2.9	2.4	3.1
12. Corporate Aaa Bond Yield	CONSENSUS	**2.8**	**3.2**	**3.6**	**4.0**	**4.2**	**4.3**	**3.9**	**4.6**
	Top 10 Average	3.1	3.6	4.2	4.6	4.7	4.8	4.4	5.1
	Bottom 10 Average	2.4	2.7	3.1	3.5	3.7	3.8	3.4	4.2
13. Corporate Baa Bond Yield	CONSENSUS	**4.1**	**4.5**	**4.9**	**5.2**	**5.3**	**5.4**	**5.0**	**5.7**
	Top 10 Average	4.6	5.0	5.4	5.7	5.8	6.0	5.6	6.2
	Bottom 10 Average	3.6	3.9	4.3	4.6	4.7	4.8	4.4	5.2
14. State & Local Bonds Yield	CONSENSUS	**2.6**	**3.0**	**3.5**	**3.7**	**3.8**	**3.8**	**3.6**	**4.1**
	Top 10 Average	3.0	3.3	3.9	4.2	4.3	4.4	4.0	4.6
	Bottom 10 Average	2.3	2.6	2.9	3.2	3.2	3.3	3.0	3.7
15. Home Mortgage Rate	CONSENSUS	**3.4**	**3.6**	**4.0**	**4.4**	**4.5**	**4.7**	**4.2**	**4.9**
	Top 10 Average	3.8	4.0	4.5	4.8	5.0	5.2	4.7	5.5
	Bottom 10 Average	3.0	3.2	3.5	3.9	4.1	4.1	3.7	4.4
A. Fed's AFE Nominal $ Index	CONSENSUS	**112.8**	**112.6**	**112.5**	**111.8**	**111.4**	**111.0**	**111.9**	**110.6**
	Top 10 Average	114.1	114.5	114.1	113.8	113.5	113.4	113.9	113.9
	Bottom 10 Average	111.7	110.7	110.7	110.2	109.5	108.7	110.0	107.6

		Year-Over-Year, % Change						Five-Year Averages	
		2021	2022	2023	2024	2025	2026	2022-2026	2027-2031
B. Real GDP	CONSENSUS	**3.2**	**3.2**	**2.4**	**2.2**	**2.1**	**2.0**	**2.4**	**2.1**
	Top 10 Average	5.7	4.3	2.9	2.5	2.3	2.3	2.9	2.4
	Bottom 10 Average	0.5	2.2	1.9	1.9	1.8	1.8	1.9	1.8
C. GDP Chained Price Index	CONSENSUS	**1.1**	**1.7**	**1.9**	**2.0**	**2.0**	**2.0**	**1.9**	**2.0**
	Top 10 Average	1.8	2.2	2.2	2.2	2.3	2.2	2.2	2.2
	Bottom 10 Average	0.3	1.3	1.6	1.8	1.8	1.8	1.7	1.9
D. Consumer Price Index	CONSENSUS	**1.3**	**2.0**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.2**
	Top 10 Average	2.2	2.5	2.3	2.3	2.4	2.3	2.4	2.4
	Bottom 10 Average	0.4	1.5	1.8	1.8	1.9	1.9	1.8	2.0

S&P Global
Market Intelligence

Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

Table 3: Electric authorized ROEs: 2007-2019

Settled versus fully litigated cases

	All cases			Settled cases			Fully litigated cases		
Year	Average ROE (%)	Median ROE (%)	Number of observatio	Average ROE (%)	Median ROE (%)	Number of observatio	Average ROE (%)	Median ROE (%)	Number of observatio
2007	10.30	10.20	38	10.42	10.33	14	10.23	10.15	24
2008	10.41	10.30	37	10.43	10.25	17	10.39	10.54	20
2009	10.52	10.50	40	10.64	10.62	16	10.45	10.50	24
2010	10.37	10.30	61	10.39	10.30	34	10.35	10.10	27
2011	10.29	10.17	42	10.12	10.07	16	10.39	10.25	26
2012	10.17	10.08	58	10.06	10.00	29	10.28	10.25	29
2013	10.03	9.95	49	10.12	9.98	32	9.85	9.75	17
2014	9.91	9.78	38	9.73	9.75	17	10.05	9.83	21
2015	9.85	9.65	30	10.07	9.72	14	9.66	9.62	16
2016	9.77	9.75	42	9.80	9.85	17	9.74	9.60	25
2017	9.74	9.60	53	9.75	9.60	29	9.73	9.56	24
2018	9.60	9.58	48	9.57	9.63	26	9.63	9.53	22
2019	9.65	9.60	47	9.75	9.73	20	9.58	9.50	27

General rate cases versus limited-issue riders

	All cases			General rate cases			Limited-issue riders		
Year	Average ROE (%)	Median ROE (%)	Number of observatio	Average ROE (%)	Median ROE (%)	Number of observatio	Average ROE (%)	Median ROE (%)	Number of observatio
2007	10.30	10.20	38	10.32	10.23	36	9.90	9.90	1
2008	10.41	10.30	37	10.37	10.30	35	11.11	11.11	2
2009	10.52	10.50	40	10.52	10.50	38	10.55	10.55	2
2010	10.37	10.30	61	10.29	10.26	58	11.87	12.30	3
2011	10.29	10.17	42	10.19	10.14	40	12.30	12.30	2
2012	10.17	10.08	58	10.02	10.00	51	11.57	11.40	6
2013	10.03	9.95	49	9.82	9.82	40	11.34	11.40	7
2014	9.91	9.78	38	9.76	9.75	32	10.96	11.00	5
2015	9.85	9.65	30	9.60	9.53	23	10.87	11.00	6
2016	9.77	9.75	42	9.60	9.60	32	10.31	10.55	10
2017	9.74	9.60	53	9.68	9.60	42	10.01	9.95	10
2018	9.60	9.58	48	9.56	9.58	38	9.74	9.70	10
2019	9.65	9.60	47	9.64	9.65	33	9.68	9.31	14

Vertically integrated cases versus delivery-only cases

	All cases			Vertically integrated cases			Delivery-only cases		
Year	Average ROE (%)	Median ROE (%)	Number of observatio	Average ROE (%)	Median ROE (%)	Number of observatio	Average ROE (%)	Median ROE (%)	Number of observatio
2007	10.30	10.20	38	10.50	10.45	26	9.86	9.98	10
2008	10.41	10.30	37	10.48	10.47	26	10.04	10.25	9
2009	10.52	10.50	40	10.66	10.66	28	10.15	10.30	10
2010	10.37	10.30	61	10.42	10.40	41	9.98	10.00	17
2011	10.29	10.17	42	10.33	10.20	28	9.85	10.00	12
2012	10.17	10.08	58	10.10	10.20	39	9.75	9.73	12
2013	10.03	9.95	49	9.95	10.00	31	9.37	9.36	9
2014	9.91	9.78	38	9.94	9.90	19	9.49	9.55	13
2015	9.85	9.65	30	9.75	9.70	17	9.17	9.07	6
2016	9.77	9.75	42	9.77	9.78	20	9.31	9.33	12
2017	9.74	9.60	53	9.80	9.65	28	9.43	9.55	14
2018	9.60	9.58	48	9.68	9.73	23	9.38	9.50	15
2019	9.65	9.60	47	9.73	9.73	25	9.37	9.60	8

Data compiled Jan. 29, 2020.

Electric Average Authorized ROEs: 2006 — 2016

Settled versus Fully Litigated Cases

	All Cases		Settled Cases		Fully Litigated Cases	
Year	ROE %	(# Cases)	ROE %	(# Cases)	ROE %	(# Cases)
2006	10.32	(26)	10.26	(11)	10.37	(15)
2007	10.30	(38)	10.42	(14)	10.23	(24)
2008	10.41	(37)	10.43	(17)	10.39	(20)
2009	10.52	(40)	10.64	(16)	10.45	(24)
2010	10.37	(61)	10.39	(34)	10.35	(27)
2011	10.29	(42)	10.12	(16)	10.39	(26)
2012	10.17	(58)	10.06	(29)	10.28	(29)
2013	10.03	(49)	10.12	(32)	9.85	(17)
2014	9.91	(38)	9.73	(17)	10.05	(21)
2015	9.85	(30)	10.07	(14)	9.66	(16)
2016	9.77	(42)	9.80	(17)	9.74	(25)

General Rate Cases versus Limited Issue Riders

	All Cases		General Rate Cases		Limited Issue Riders	
Year	ROE %	(# Cases)	ROE %	(# Cases)	ROE %	(# Cases)
2006	10.32	(26)	10.34	(25)	9.80	(1)
2007	10.30	(38)	10.31	(37)	9.90	(1)
2008	10.41	(37)	10.37	(35)	11.11	(2)
2009	10.52	(40)	10.52	(38)	10.55	(2)
2010	10.37	(61)	10.29	(58)	11.87	(3)
2011	10.29	(42)	10.19	(40)	12.30	(2)
2012	10.17	(58)	10.01	(52)	11.57	(6)
2013	10.03	(49)	9.81	(42)	11.34	(7)
2014	9.91	(38)	9.75	(33)	10.96	(5)
2015	9.85	(30)	9.60	(24)	10.87	(6)
2016	9.77	(42)	9.60	(32)	10.31	(10)

Vertically Integrated Cases versus Delivery Only Cases

	All Cases		Vertically Integrated Cases		Delivery Only Cases	
Year	ROE %	(# Cases)	ROE %	(# Cases)	ROE %	(# Cases)
2006	10.32	(26)	10.63	(15)	9.91	(10)
2007	10.30	(38)	10.50	(26)	9.86	(11)
2008	10.41	(37)	10.48	(26)	10.04	(9)
2009	10.52	(40)	10.66	(28)	10.15	(10)
2010	10.37	(61)	10.42	(41)	9.98	(17)
2011	10.29	(42)	10.33	(28)	9.85	(12)
2012	10.17	(58)	10.10	(39)	9.73	(13)
2013	10.03	(49)	9.95	(31)	9.41	(11)
2014	9.91	(38)	9.94	(19)	9.50	(14)
2015	9.85	(30)	9.75	(17)	9.23	(7)
2016	9.77	(42)	9.77	(20)	9.31	(12)

Source: Regulatory Research Associates, an offering of S&P Global Market Intelligence

2.

Average Equity Returns Authorized January 1980 - December 1989

(Return Percent - No. of Observations)

Period	Electric Utilities	Gas Utilities	Telephone Utilities
1980 1st Quarter	13.97 (21)	13.45 (13)	12.63 (8)
2nd Quarter	14.25 (25)	14.38 (9)	12.62 (10)
3rd Quarter	14.30 (25)	13.87 (12)	12.86 (12)
4th Quarter	14.33 (33)	14.36 (23)	13.32 (12)
1980 Full Year	14.23(104)	14.05 (57)	12.94 (40)
1981 1st Quarter	14.87 (21)	14.69 (9)	13.98 (10)
2nd Quarter	15.03 (40)	14.61 (10)	14.16 (18)
3rd Quarter	15.31 (26)	14.86 (16)	14.37 (16)
4th Quarter	15.58 (36)	15.70 (25)	14.71 (20)
1981 Full Year	15.22(123)	15.11 (60)	14.32 (64)
1982 1st Quarter	15.71 (29)	15.56 (15)	14.96 (12)
2nd Quarter	15.60 (35)	15.62 (16)	15.00 (17)
3rd Quarter	15.63 (27)	15.72 (22)	15.61 (11)
4th Quarter	15.97 (34)	15.82 (30)	15.65 (14)
1982 Full Year	15.76(125)	15.62 (83)	15.12 (54)
1983 1st Quarter	15.53 (26)	15.41 (15)	14.75 (15)
2nd Quarter	15.10 (16)	14.84 (14)	14.75 (17)
3rd Quarter	15.39 (23)	15.24 (16)	14.69 (19)
4th Quarter	15.35 (26)	15.41 (20)	14.75 (20)
1983 Full Year	15.36 (95)	15.25 (65)	14.79 (71)
1984 1st Quarter	15.08 (19)	15.39 (8)	14.12 (13)
2nd Quarter	15.07 (15)	15.07 (7)	14.75 (6)
3rd Quarter	15.38 (22)	15.37 (12)	14.88 (10)
4th Quarter	15.89 (19)	15.33 (12)	14.76 (7)
1984 Full Year	15.32 (75)	15.31 (39)	14.50 (36)
1985 1st Quarter	15.51 (15)	15.03 (8)	14.63 (10)
2nd Quarter	15.27 (12)	15.44 (4)	14.80 (10)
3rd Quarter	14.91 (14)	14.84 (9)	14.50 (6)
4th Quarter	15.11 (17)	14.44 (13)	14.56 (14)
1985 Full Year	15.20 (58)	14.75 (34)	14.50 (40)
1986 1st Quarter	14.35 (14)	14.05 (4)	14.06 (8)
2nd Quarter	14.27 (16)	13.38 (9)	14.03 (7)
3rd Quarter	13.16 (10)	13.00 (5)	12.88 (3)
4th Quarter	13.52 (9)	13.63 (7)	13.88 (3)
1986 Full Year	13.93 (49)	13.46 (25)	13.88 (12)
1987 1st Quarter	12.92 (12)	12.81 (7)	12.88 (1)
2nd Quarter	13.15 (10)	13.13 (5)	12.63 (4)
3rd Quarter	13.17 (16)	12.58 (5)	13.98 (4)
4th Quarter	12.79 (19)	12.73 (12)	12.88 (4)
1987 Full Year	12.99 (57)	12.74 (29)	12.88 (13)
1988 1st Quarter	12.74 (8)	12.94 (5)	12.79 (2)
2nd Quarter	12.70 (7)	12.48 (4)	12.80 (1)
3rd Quarter	12.68 (8)	12.78 (9)	12.57 (3)
4th Quarter	12.96 (10)	12.98 (13)	13.30 (7)
1988 Full Year	12.79 (33)	12.85 (31)	13.13 (13)
1989 1st Quarter	13.04 (9)	12.90 (4)	12.96 (3)
2nd Quarter	13.22 (7)	13.25 (2)	12.79 (3)
3rd Quarter	12.36 (2)	12.56 (1)	13.75 (2)
4th Quarter	12.54 (9)	12.94 (16)	12.85 (7)
* 1989 Full Year	12.97 (27)	12.88 (31)	12.97 (15)

Special Research Study
January 1986

Argus UtilityScope Regulatory Service

RETURNS AUTHORIZED
JULY 1974 – DECEMBER 1985

ARGUS RESEARCH CORPORATION, 42 BROADWAY, NEW YORK, N. Y. 10004

Year	ROE	Year	ROE
1974	13.1	1980	14.1
1975	13.2	1981	15.2
1976	13.1	1982	15.8
1977	13.3	1983	15.4
1978	13.2	1984	15.4
1979	13.5	1985	15.2

TABLE OF CONTENT

NOTE: This Research Study has been prepared solely for the use of our clients and under no circumstance is it to be duplicated or disseminated to a party or parties outside your organization.

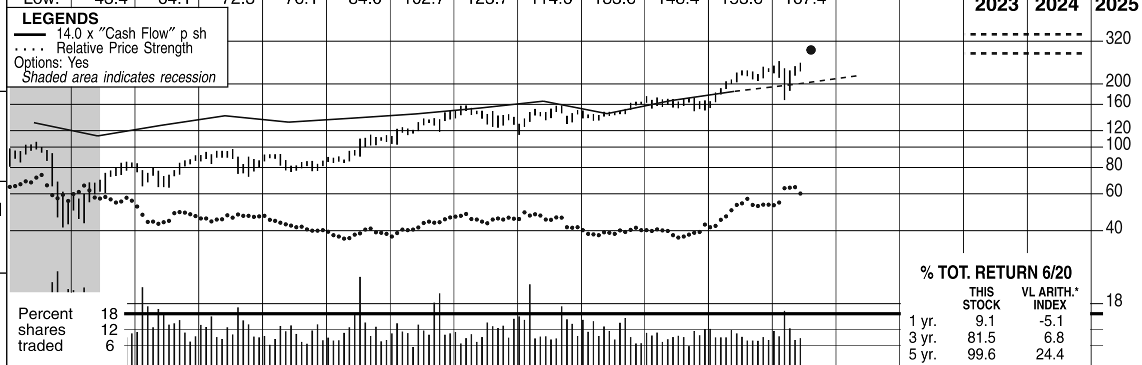
AIR PRODUCTS NYSE-APD

RECENT PRICE 290.87 | P/E RATIO 34.4 (Trailing: 33.7 / Median: 19.0) | RELATIVE P/E RATIO 1.60 | DIV'D YLD 1.8% | VALUE LINE

TIMELINESS 1 Raised 3/13/20
SAFETY 1 Raised 5/9/14
TECHNICAL 3 Lowered 7/31/20
BETA .95 (1.00 = Market)

High:	85.4	91.4	98.0	92.8	114.8	149.6	158.2	157.8	164.8	175.2	241.9	295.9
Low:	43.4	64.1	72.3	76.1	84.0	102.7	123.7	114.6	133.6	148.4	153.6	167.4

Target Price Range 2023 2024 2025



18-Month Target Price Range
Low-High Midpoint (% to Mid)
$189-$366 $278 (-5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	345	(+20%)	6%
Low	280	(-5%)	1%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	494	571	526
to Sell	466	472	582
Hld's(000)	186373	187547	185602

% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	9.1	-5.1
3 yr.	81.5	6.8
5 yr.	99.6	24.4

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
32.83	36.70	40.74	46.61	49.75	39.08	42.22	47.97	45.24	48.21	48.89	45.95	43.82	37.50	40.68	40.46	*40.15*	*42.80*	Sales per sh A	*58.50*
5.84	6.49	7.17	8.48	9.36	8.08	9.09	10.09	9.41	9.82	10.30	10.98	11.84	10.31	11.91	13.17	*13.70*	*15.30*	"Cash Flow" per sh	*20.55*
2.64	3.08	3.50	4.40	4.97	4.06	5.02	5.73	5.40	5.50	5.78	6.57	7.55	6.31	7.45	8.21	*8.35*	*9.75*	Earnings per sh B	*14.50*
1.04	1.25	1.34	1.48	1.70	1.79	1.92	2.23	2.50	2.77	3.02	3.20	3.39	3.71	4.25	4.64	*5.18*	*5.40*	Div'ds Decl'd per sh C■	*6.48*
3.12	4.19	5.81	4.90	5.18	5.58	4.82	6.43	7.16	7.22	7.89	7.50	4.86	4.76	7.14	9.03	*13.10*	*7.90*	Cap'l Spending per sh	*6.60*
19.68	20.62	22.67	25.52	24.03	22.68	25.94	27.57	30.48	33.35	34.49	33.66	32.57	46.19	49.46	50.15	*54.80*	*59.80*	Book Value per sh D	*79.00*
225.77	221.90	217.25	215.36	209.33	211.26	213.80	210.19	212.48	211.18	213.54	215.36	217.35	218.35	219.52	220.42	*221.00*	*222.00*	Common Shs Outst'g E	*223.00*
19.0	19.1	18.0	17.5	19.0	14.9	15.1	15.4	15.6	16.5	20.6	21.7	18.6	22.6	21.8	23.2	*Bold figures are*		Avg Ann'l P/E Ratio	*21.5*
1.00	1.02	.97	.93	1.14	.99	.96	.97	.99	.93	1.08	1.09	.98	1.14	1.18	1.25	*Value Line*		Relative P/E Ratio	*1.20*
2.1%	2.1%	2.1%	1.9%	1.8%	3.0%	2.5%	2.5%	3.0%	3.1%	2.5%	2.2%	2.4%	2.6%	2.6%	2.4%	*estimates*		Avg Ann'l Div'd Yield	*2.1%*

CAPITAL STRUCTURE as of 3/31/20

Total Debt $2989.5 mill. **Due in 5 Yrs** $2155 mill.
LT Debt $2922.10 mill. **LT Interest** $90.0 mill.
(Total interest coverage: 22.1x) (20% of Cap'l)

Leases, Uncapitalized Annual rentals $75.1 mill.
Pension Assets-9/19 $4.50 bill **Oblig.** $5.15 bill.

Pfd Stock None
Common Stock 220,854,647 shs.

MARKET CAP: $64.2 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
9026.0	10082	9611.7	10180	10439	9894.9	9524.4	8187.6	8930.2	8918.9	*8875*	*9500*	Sales ($mill) A	*13050*
25.6%	24.9%	24.2%	23.7%	24.5%	28.4%	32.2%	30.9%	32.3%	35.9%	*36.0%*	*36.0%*	Operating Margin	*36.5%*
863.4	873.9	840.8	907.0	956.9	936.4	925.9	865.8	970.7	1082.8	*1175*	*1220*	Depreciation ($mill)	*1330*
1079.8	1246.9	1158.2	1167.2	1243.1	1427.7	1647.8	1385.9	1644.7	1819.4	*1855*	*2175*	Net Profit ($mill)	*3255*
25.8%	24.9%	18.5%	17.7%	27.0%	24.0%	25.9%	23.4%	18.6%	19.4%	*20.0%*	*20.0%*	Income Tax Rate	*20.0%*
12.0%	12.4%	12.0%	11.5%	11.9%	14.4%	17.3%	16.9%	18.4%	20.4%	*20.9%*	*22.9%*	Net Profit Margin	*24.9%*
789.7	847.8	725.9	211.5	331.8	d737.3	1034.0	3387.7	2743.9	2797.4	*2300*	*3025*	Working Cap'l ($mill)	*5450*
3659.8	3927.5	4584.2	5056.3	4824.5	3949.1	4918.1	3402.4	2967.4	3227.4	*3000*	*3100*	Long-Term Debt ($mill)	*3400*
5546.9	5795.8	6477.2	7042.1	7365.8	7249.0	7079.6	10086	10858	11054	*12115*	*13275*	Shr. Equity ($mill)	*17625*
12.4%	13.4%	11.0%	10.2%	10.7%	13.2%	14.2%	10.7%	12.4%	13.2%	*12.5%*	*13.5%*	Return on Total Cap'l	*16.0%*
19.5%	21.5%	17.9%	16.6%	16.9%	19.7%	23.3%	13.7%	15.1%	16.5%	*15.5%*	*16.5%*	Return on Shr. Equity	*18.5%*
12.3%	13.6%	9.9%	8.5%	8.4%	10.3%	13.1%	5.9%	6.9%	7.5%	*6.0%*	*7.5%*	Retained to Com Eq	*10.0%*
37%	37%	44%	48%	50%	47%	44%	57%	55%	55%	*62%*	*55%*	All Div'ds to Net Prof	*45%*

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	2791.3	2248.7	2220.1
Receivables	1207.2	1260.2	1399.4
Inventory (FIFO)	396.1	388.3	399.7
Other	687.6	721.1	669.3
Current Assets	5082.2	4618.3	4688.5
Accts Payable	1817.8	1635.7	1649.1
Debt Due	460.9	98.6	67.4
Other	59.6	86.6	90.4
Current Liab.	2338.3	1820.9	1806.9

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	-1.5%	-3.5%	6.5%
"Cash Flow"	3.0%	3.5%	9.5%
Earnings	5.0%	5.5%	12.0%
Dividends	9.5%	8.5%	7.5%
Book Value	7.5%	8.0%	8.0%

Fiscal Year Ends	QUARTERLY SALES ($ mill.) AF Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2017	1883	1980	2122	2203	8188
2018	2217	2156	2259	2299	8930
2019	2224	2188	2224	2283	8919
2020	2255	2216	*2125*	*2279*	*8875*
2021	*2325*	*2300*	*2300*	*2575*	*9500*

Fiscal Year Ends	EARNINGS PER SHARE AB Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2017	1.47	1.43	1.65	1.76	6.31
2018	1.79	1.71	1.95	2.00	7.45
2019	1.85	1.92	2.17	2.27	8.21
2020	2.14	2.04	*1.99*	*2.18*	*8.35*
2021	*2.25*	*2.30*	*2.55*	*2.65*	*9.75*

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.81	.86	.86	.86	3.39
2017	.86	.95	.95	.95	3.71
2018	.95	1.10	1.10	1.10	4.25
2019	1.16	1.16	1.16	1.16	4.64
2020	1.16	1.34			

BUSINESS: Air Products and Chemicals, Inc. supplies a variety of atmospheric (oxygen, nitrogen) and process (hydrogen, helium) gases to energy, industrial, technology, and healthcare customers worldwide. The company is the world's largest supplier of hydrogen, with leading positions serving the refinery hydrogen, semiconductor materials, and natural gas liquefaction markets. FY2018: R&D: .8% of sales; foreign business: 62% of sales. Has about 17,700 employees. Vanguard Group owns 8.3% of shares out.; BlackRock, 8.0%; State Farm Mutual, 7.1%; officers & directors, less than 1% (12/19 Proxy). Chairman, Pres. & CEO: Seifi Ghasemi. Inc.: DE. Addr.: 7201 Hamilton Blvd, Allentown, PA 18195. Telephone: 610-481-4911. Internet: www.airproducts.com.

Air Products turned in a solid fiscal second-quarter performance (period ended March 31st). Adjusted share earnings were up 6%, on a modest increase in sales. Performance was driven by higher prices and volumes in all industrial gas segments, reflecting acquisitions, base business growth, and new plants. Because the company provides essential products, services, and equipment, most of its operations continued with only minor interruptions. Altogether, the profit impact from COVID-19 in the quarter was an estimated $0.06 to $0.08 per share.

Despite the pandemic, the company has continued to expand. In early July, it inked a $5 billion joint venture deal with ACWA Power and NEOM for a world-scale green hydrogen-based ammonia production facility in Saudi Arabia. Prior to that, it announced it would be investing $2 billion in a coal-to-methanol production facility in Indonesia. APD also announced and closed on the acquisition of five operating hydrogen plants in the U.S., and began to supply hydrogen to PBF Energy under a long-term agreement.

We have scaled back our earnings estimates for fiscal 2020 and 2021. Asia merchant volumes were impacted by the coronavirus, but have since rebounded. However, management expected that declines in the Americas and EMEA would be more significant in the June interim, and possibly longer. Thus, earnings comparisons will likely turn negative in the second half. For the year, we have trimmed our bottom-line call by $0.65, to $8.35, suggesting a small increase versus last year. Under the assumption that progress is made in curbing COVID-19, we look for a more sizable advance in fiscal 2021. However, we have taken a more conservative stance, reducing our forecast by $0.50, to $9.75 a share.

These shares are a timely selection for year-ahead relative performance. The stock, which held up very well during the recent market selloff, is up more than 35% since our last review in early May, better than double the S&P's advance over the period. Also of note, unlike many other industrial companies, Air Products' financials remain in solid shape. Yet, 3- 5-year upside potential is now quite modest.

Mario Ferro *July 31, 2020*

(A) Fisc. yr. ends Sept. 30th. (B) Excl. nonrec. gains/(losses): '06, (24¢); '07, 30¢; '09, ($1.06); '10, (28¢); '11, (14¢); '12, (74¢); '13, (77¢); '14, ($1.19); '15, (69¢); '16, (61¢); '17, ($1.15); '18, (86¢); '19, (27¢). Excl. disc. op.: '06, (8¢); '07, (3¢); '08, (82¢); '09, (4¢); '11, 4¢; '12, 78¢; '13, (5¢); '14, 2¢; '16, ($4.05); '17, $8.49; '18, 19¢; '20, Q2 17¢. Next egs. rep. due mid-Oct. (C) Divs. paid in mid-Feb., May, Aug., and Nov. ■ Div. reinv. plan avail. (D) Incl. intangibles. In '19: $1.2 bill., $5.52/sh. (E) In mill. (F) Qtrs. may not sum due to rounding.

Company's Financial Strength	A++
Stock's Price Stability	95
Price Growth Persistence	65
Earnings Predictability	90

AMDOCS LIMITED NDQ-DOX

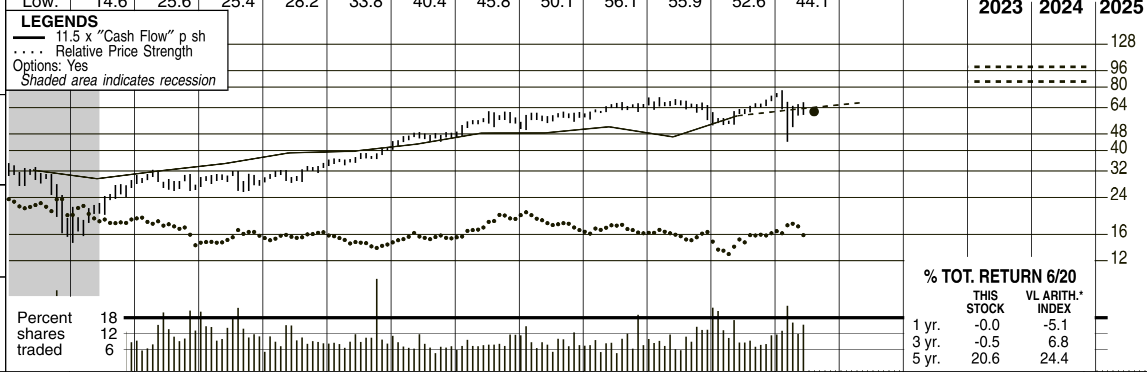
RECENT PRICE 61.26 | P/E RATIO 16.3 (Trailing: 16.8 Median: 17.0) | RELATIVE P/E RATIO 0.74 | DIV'D YLD 2.1% | VALUE LINE

TIMELINESS 2 Lowered 4/17/20
SAFETY 1 Raised 2/13/15
TECHNICAL 4 Lowered 8/7/20
BETA .95 (1.00 = Market)

High:	29.0	32.4	32.0	35.0	41.5	49.0	61.5	61.3	68.0	71.7	72.9	77.3
Low:	14.6	25.6	25.4	28.2	33.8	40.4	45.8	50.1	56.1	55.9	52.6	44.1

LEGENDS
— 11.5 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2023 | 2024 | 2025



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$47-$98	$73 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	100	(+65%)	15%
Low	85	(+40%)	10%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	181	200	180
to Sell	154	169	205
Hld's(000)	128083	129756	122667

% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-0.0	-5.1
3 yr.	-0.5	6.8
5 yr.	20.6	24.4

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
8.81	10.18	11.99	13.52	15.51	13.96	15.46	18.19	19.99	20.90	22.74	24.11	25.27	26.78	28.36	30.32	*31.80*	*33.80*	Revenues per sh A	*38.45*
1.74	2.04	2.50	2.84	2.80	2.56	2.80	3.02	3.39	3.46	3.73	4.21	4.22	4.51	4.04	5.08	*5.50*	*5.90*	"Cash Flow" per sh	*7.20*
1.16	1.45	1.85	1.93	1.74	1.58	1.69	1.86	2.32	2.53	2.62	2.95	2.71	2.96	2.47	3.49	*3.70*	*4.05*	Earnings per sh B	*5.10*
- -	- -	- -	- -	- -	- -	- -	- -	.13	.52	.60	.67	.76	.86	.97	1.11	*1.35*	*1.45*	Div'ds Decl'd per sh C	*1.65*
.27	.36	.39	.79	.67	.41	.45	.63	.75	.67	.71	.80	.88	.92	1.65	.95	*1.05*	*1.10*	Cap'l Spending per sh	*1.25*
7.17	8.27	10.42	12.40	13.76	15.67	16.73	17.31	18.67	20.46	21.67	22.54	23.47	24.75	24.60	25.97	*28.05*	*30.15*	Book Value per sh E	*35.60*
201.33	200.18	206.79	209.76	203.92	205.08	193.05	174.69	162.45	160.06	156.70	151.15	147.13	144.39	140.18	134.77	*132.00*	*131.00*	Common Shs Outst'g D	*130.00*
20.9	18.9	17.9	19.2	18.0	13.2	16.7	15.5	13.0	14.1	16.9	17.7	21.2	20.8	26.9	17.3	*Bold figures are*		Avg Ann'l P/E Ratio	*18.0*
1.10	1.01	.97	1.02	1.08	.88	1.06	.97	.83	.79	.89	.89	1.11	1.05	1.45	.94	*Value Line*		Relative P/E Ratio	*1.00*
- -	- -	- -	- -	- -	- -	- -	- -	.4%	1.5%	1.3%	1.3%	1.3%	1.4%	1.5%	1.8%	*estimates*		Avg Ann'l Div'd Yield	*1.8%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $350.0 mill. **Due in 5 Yrs** $350.0 mill.
LT Debt Nil **LT Interest** Nil

Leases, Uncapitalized: Annual rentals $75.2 mill.

No Defined Benefit Pension Plan

Common Stock 134,288,000

MARKET CAP: $8.2 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
2984.2	3177.7	3246.9	3345.9	3563.6	3643.5	3718.2	3867.2	3974.8	4086.7	*4200*	*4425*	Revenues ($mill) A	*5000*
20.3%	18.4%	18.5%	18.6%	18.5%	19.3%	21.6%	21.8%	21.0%	21.4%	*21.0%*	*21.0%*	Operating Margin	*22.0%*
195.9	181.5	159.6	140.8	162.8	174.8	211.8	214.9	211.2	205.8	*235*	*245*	Depreciation ($mill)	*275*
343.9	346.7	391.4	412.4	422.1	461.2	409.3	436.8	354.4	479.4	*495*	*530*	Net Profit ($mill)	*665*
10.7%	12.4%	11.3%	13.3%	13.8%	12.4%	15.5%	14.8%	15.9%	15.6%	*18.5%*	*19.0%*	Income Tax Rate	*19.0%*
11.5%	10.9%	12.1%	12.3%	11.8%	12.7%	11.0%	11.3%	8.9%	11.7%	*11.6%*	*12.0%*	Net Profit Margin	*13.3%*
1227.6	968.1	975.5	1207.8	1223.2	1014.7	734.4	875.5	425.7	467.7	*750*	*850*	Working Cap'l ($mill)	*1250*
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	*Nil*	*Nil*	Long-Term Debt ($mill)	*Nil*
3229.4	3023.3	3033.2	3274.8	3395.8	3406.8	3453.6	3574.1	3448.9	3500.0	*3700*	*3950*	Shr. Equity ($mill) E	*4625*
10.6%	11.5%	12.9%	12.6%	12.4%	13.5%	11.9%	12.2%	10.3%	13.7%	*13.0%*	*13.5%*	Return on Total Cap'l	*14.5%*
10.6%	11.5%	12.9%	12.6%	12.4%	13.5%	11.9%	12.2%	10.3%	13.7%	*13.0%*	*13.5%*	Return on Shr. Equity	*14.5%*
10.6%	11.5%	12.9%	10.0%	9.8%	10.6%	8.7%	8.8%	6.4%	9.5%	*8.5%*	*8.5%*	Retained to Com Eq	*9.5%*
- -	- -	- -	20%	22%	22%	27%	28%	38%	31%	*36%*	*36%*	All Div'ds to Net Prof	*32%*

CURRENT POSITION ($MILL.)

	2018	2019	3/31/20
Cash Assets	519.2	471.6	762.6
Receivables	971.5	987.9	946.3
Inventory (Avg Cst)	- -	- -	- -
Other	230.0	216.1	242.3
Current Assets	1720.7	1675.6	1951.2
A/P and Accr'd Exp	1162.5	1089.8	1019.6
Debt Due	- -	- -	350.0
Deferred Revenue	132.5	118.1	137.5
Other	- -	- -	59.7
Current Liab.	1295.0	1207.9	1566.8

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	7.0%	6.0%	*5.0%*
"Cash Flow"	5.0%	5.0%	*8.0%*
Earnings	5.5%	3.5%	*9.5%*
Dividends	- -	19.0%	*9.0%*
Book Value	6.0%	4.5%	*6.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.)A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2017	954.7	966.0	966.7	979.8	3867.2
2018	977.7	992.3	1002.2	1002.6	3974.8
2019	1012.1	1019.7	1024.7	1030.2	4086.7
2020	1042.0	1047.9	*1035*	*1075.1*	*4200*
2021	*1085*	*1100*	*1115*	*1125*	*4425*

Fiscal Year Ends	EARNINGS PER SHARE AB Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2017	.66	.76	.81	.73	2.96
2018	.80	.70	.64	.31	2.47
2019	.72	.90	.96	.90	3.49
2020	.85	.94	*.95*	*.96*	*3.70*
2021	*.90*	*1.00*	*1.10*	*1.05*	*4.05*

Cal-endar	QUARTERLY DIVIDENDS PAIDC Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.17	.195	.195	.195	.76
2017	.195	.22	.22	.22	.86
2018	.22	.25	.25	.25	.97
2019	.25	.285	.285	.285	1.11
2020	.3275	.3275			

BUSINESS: Amdocs Limited provides, through its subsidiaries, software and services for communications, entertainment, and media industry service providers around the world. Its offerings enable service providers to efficiently and cost-effectively introduce new products and services, process orders, monetize data, support new business, and generally enhance their understanding of their customers. FY '19 sales: North America (63%), Europe (15%), Rest of the World (22%). Employs 24,516. Officers and dir. own 1.8% of common stock; FMR LLC, 13.5%; (12/19 Proxy). Chairman: Robert A. Minicucci. President & CEO: Shuky Sheffer. Inc.: Island of Guernsey. Address: 1390 Timberlake Manor Pkwy, Chesterfield, MO 63017. Telephone: 314-212-8328. Internet: www.amdocs.com.

Amdocs Limited has agreed to acquire Opennet, a provider of 5G cloud technologies. The transaction, which carries a price tag of $180 million in cash, is expected to be completed by the end of September. Opennet's global capabilities should provide a nice boost to Amdocs' 5G service offerings, as demand for these entertainment and cloud products is rising exponentially in this COVID-19-driven tech era. Lastly, the deal is expected to be accretive to the bottom line in fiscal 2021.

March-period financial results were solid (fiscal year ends September 30, 2020). Revenues of $1.048 billion came in slightly better than our call, while share net of $0.94 was roughly on par with expectations. North American operations are firing on all cylinders, and several notable partnerships were either inked or renewed. That said, management unveiled somewhat conservative third-quarter guidance (results were set to be released shortly after we went to press with this Issue). At this time, we are leaving intact our full-year top-line estimate, at $4.2 billion, but have shaved a nickel from our bottom-line call, to $3.70 a share.

The company has taken on some short-term debt. We believe this is largely a precautionary action due to near-term business uncertainty (potentially slower deal signings) stemming from COVID-19. Still, the company is void of long-term obligations and generates significant free cash, which ought to support dividend payments, stock repurchases, and bolt-on acquisitions going forward.

Prospects are bright over the pull to 2023-2025. In particular, the digital streaming services arena has plenty of upside, as telecom and entertainment providers ratchet up network and user mobility capacity. We also think the artificial intelligence space has a good amount of potential.

Amdocs stock is a favorable selection for relative year-ahead price performance (Timeliness: 2). Conversely, at the recent quotation, capital appreciation potential three to five years hence is nothing to write home about. Thus, we recommend these good-quality shares primarily for subscribers with a six- to 12-month investment horizon.

Nicholas P. Patrikis *August 7, 2020*

(A) Fiscal year ends Sept. 30th.
(B) Dil. egs. Excl. n/r items: '03, 11¢; '04, 6¢; '05, d10¢; '06, d37¢; '15, d10¢. Quarterly egs. may not sum due to rounding. Next earnings report due mid-August.
(C) Dividends paid in mid-Jan, mid-April, mid-July, and mid-Oct.
(D) In millions.
(E) Includes intangibles. In '19: $2668 mill., $19.80/sh.

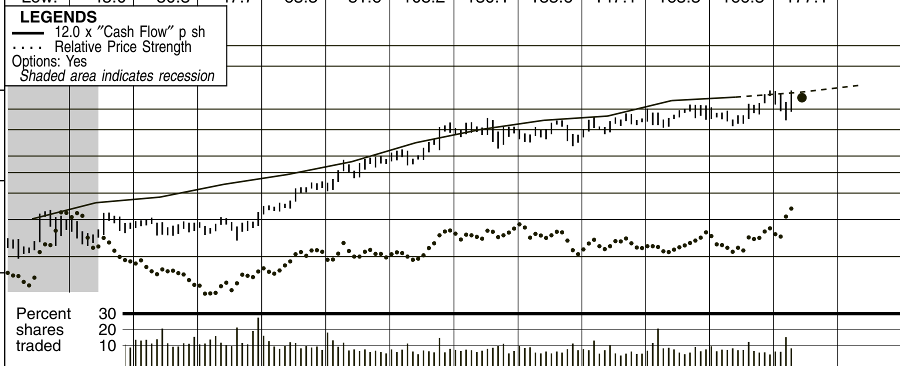
Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	75
Earnings Predictability	70

AMGEN NDQ-AMGN

RECENT PRICE 226.43 | P/E RATIO 14.4 (Trailing: 14.7, Median: 13.0) | RELATIVE P/E RATIO 0.78 | DIV'D YLD 3.0% | VALUE LINE

TIMELINESS 2 Raised 5/15/20
SAFETY 1 Raised 3/20/09
TECHNICAL 1 Raised 6/5/20
BETA .85 (1.00 = Market)

High:	64.8	61.3	65.0	90.8	119.7	173.1	181.8	176.9	191.1	210.2	245.0	245.0
Low:	45.0	50.3	47.7	63.3	81.6	108.2	130.1	133.6	147.1	163.3	166.3	177.1



Target Price Range
2023 | 2024 | 2025
400
320
200
160
120
100
80
60
40

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$180-$316 $248 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	360	(+60%)	15%
Low	295	(+30%)	10%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	822	828	936
to Sell	868	853	884
Hld's(000)	461888	459717	456092

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	36.4	-15.6
3 yr.	58.5	-2.4
5 yr.	72.0	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
8.37	10.16	12.24	13.59	14.33	14.72	16.15	19.59	22.83	24.75	26.38	28.73	31.14	31.64	37.72	39.50	***43.60***	***45.85***	Revenues per sh	***50.90***
2.87	3.72	4.41	4.57	5.03	6.01	6.39	7.35	8.16	9.41	11.56	13.34	14.75	15.48	18.30	18.99	***20.00***	***21.70***	"Cash Flow" per sh	***25.40***
2.19	2.95	3.51	3.31	3.90	4.83	5.12	5.25	6.46	7.60	8.70	10.38	11.65	12.58	14.40	14.82	***15.75***	***17.25***	Earnings per sh A	***20.50***
- -	- -	- -	- -	- -	- -	- -	.56	1.44	1.88	2.44	3.16	4.00	4.60	5.28	5.80	***6.40***	***7.00***	Div'ds Decl'd per sh D■	***8.40***
1.06	.71	1.04	1.17	.64	.53	.62	.71	.91	.92	.94	.79	1.00	.92	1.17	1.05	***1.25***	***1.30***	Cap'l Spending per sh	***1.50***
15.64	16.71	16.26	16.44	19.47	22.78	25.69	23.92	25.20	29.28	33.90	37.25	40.47	34.95	19.85	16.36	***17.10***	***21.75***	Book Value per sh B	***35.70***
1260.0	1224.0	1166.0	1087.0	1047.0	995.00	932.00	795.60	756.30	754.60	760.40	754.00	738.20	722.20	629.60	591.40	***585.00***	***575.00***	Common Shs Outst'g C	***560.00***
27.0	23.7	20.2	17.4	13.2	11.4	10.9	10.7	11.8	13.7	15.1	15.2	13.4	13.6	13.1	13.3	*Bold figures are*		Avg Ann'l P/E Ratio	***16.0***
1.43	1.26	1.09	.92	.79	.76	.69	.67	.75	.77	.79	.77	.70	.68	.71	.73	*Value Line*		Relative P/E Ratio	***.90***
- -	- -	- -	- -	- -	- -	- -	1.0%	1.9%	1.8%	1.9%	2.0%	2.6%	2.7%	2.8%	3.0%	*estimates*		Avg Ann'l Div'd Yield	***2.6%***

CAPITAL STRUCTURE as of 3/31/20
Total Debt $31848 mill. **Due in 5 Yrs** $14562 mill.
LT Debt $30008 mill. **LT Interest** $800 mill.
(75% of Cap'l)

Leases, Uncapitalized Annual rentals $164 mill.
No Defined Benefit Pension Plan

Common Stock 588,247,399 shares
as of 4/27/20
MARKET CAP: $133 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
15053	15582	17265	18676	20063	21662	22991	22849	23747	23362	***25500***	***26375***	Revenues ($mill)	***28500***
47.1%	42.1%	43.6%	44.3%	51.2%	54.4%	57.8%	68.9%	58.4%	57.0%	***54.0%***	***54.5%***	Operating Margin	***56.5%***
1017.0	1060.0	1088.0	1286.0	2092.0	2108.0	2105.0	1955.0	1946.0	2206.0	***2250***	***2300***	Depreciation ($mill)	***2450***
4937.2	4787.0	5085.0	5815.0	6698.0	7950.0	8785.1	9223.0	9577.7	9024.0	***9450***	***10175***	Net Profit ($mill)	***11785***
19.1%	10.4%	13.3%	6.1%	6.0%	13.0%	15.8%	29.3%	12.1%	14.2%	***14.5%***	***15.0%***	Income Tax Rate	***15.0%***
32.8%	30.7%	29.5%	31.1%	33.4%	36.7%	38.2%	40.4%	40.3%	38.6%	***37.0%***	***38.5%***	Net Profit Margin	***41.3%***
16559	21839	23018	19420	27705	29851	34806	40456	24130	5605.0	***8000***	***10000***	Working Cap'l ($mill)	***15000***
10874	21344	24034	29623	30215	29306	30193	34190	29510	26950	***25000***	***22000***	Long-Term Debt ($mill)	***18000***
23944	19029	19060	22096	25778	28083	29875	25241	12500	9673.0	***10000***	***12500***	Shr. Equity ($mill)	***20000***
14.7%	12.4%	12.4%	12.1%	12.9%	14.8%	15.7%	16.6%	24.5%	26.4%	***28.0%***	***30.5%***	Return on Total Cap'l	***31.5%***
20.6%	25.2%	26.7%	26.3%	26.0%	28.3%	29.4%	36.5%	76.6%	93.3%	***94.5%***	***81.5%***	Return on Shr. Equity	***59.0%***
20.6%	22.5%	20.8%	19.9%	18.8%	19.8%	19.4%	23.2%	48.6%	57.0%	***57.0%***	***49.0%***	Retained to Com Eq	***35.5%***
- -	10%	22%	24%	28%	30%	34%	36%	37%	39%	***40%***	***40%***	All Div'ds to Net Prof	***40%***

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	29304	8911	8012
Receivables	3580	4057	5009
Inventory (FIFO)	2940	3584	3682
Other	1794	1888	2110
Current Assets	37618	18440	18813
Accts Payable	1207	1371	1338
Debt Due	4419	2953	1840
Other	7862	8511	8649
Current Liab.	13488	12835	11827

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	10.0%	8.0%	*6.0%*
"Cash Flow"	13.0%	12.5%	*6.5%*
Earnings	13.5%	13.0%	*6.5%*
Dividends	- -	22.0%	*8.0%*
Book Value	2.0%	-4.0%	*7.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	5464	5810	5773	5802	22849
2018	5554	6059	5904	6230	23747
2019	5557	5871	5737	6197	23362
2020	6161	***6350***	***6450***	***6539***	***25500***
2021	***6200***	***6575***	***6600***	***7000***	***26375***

Cal-endar	EARNINGS PER SHARE AB Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	3.15	3.27	3.27	2.89	12.58
2018	3.47	3.83	3.69	3.42	14.40
2019	3.56	3.97	3.66	3.64	14.82
2020	4.17	***4.10***	***3.75***	***3.73***	***15.75***
2021	***4.15***	***4.35***	***4.25***	***4.50***	***17.25***

Cal-endar	QUARTERLY DIVIDENDS PAID D■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	1.00	1.00	1.00	1.00	4.00
2017	1.15	1.15	1.15	1.15	4.60
2018	1.32	1.32	1.32	1.32	5.28
2019	1.45	1.45	1.45	1.45	5.80
2020	1.60	1.60			

BUSINESS: Amgen Inc. is one of the world's largest independent biotech medicines company. It discovers, develops, manufactures, and markets medicines for serious ailments. Product sales were 95% in 2019, and includes: *Aranesp* and *EPOGEN* (treat anemia in patients with chronic renal failure); *Neulasta* and *Neupogen* (fight infections in chemotherapy patients), and *Enbrel* (treats autoimmune diseases). '19 Research & Development: 18.5% of sales. Employs 21,000. Off. & dir. own less than 1% of stock; The Vanguard Group 8.2%, BlackRock, Inc. 7.9%, Cap'l Research Global Investors, 6.0%. (3/20 Proxy). Chrmn., Pres. & CEO: Robert A. Bradway. Inc.: DE. Addr.: One Amgen Center Drive, Thousand Oaks, CA 91320. Tel.: 805-447-1000. Internet: www.amgen.com.

Positive news has driven Amgen stock higher, of late. Indeed, since our March report, the equity has increased in value. Although economic challenges (more below) are likely to persist over the near term, the company's competitive portfolio and pipeline focus have likely contributed to upbeat investor sentiment.

The company recorded decent 2020 first-quarter results, and reiterated its full-year guidance. In the March period, sales of $6.161 billion rose 11% above the year-ago tally. A favorable product mix including *Otezla* (psoriasis) and *Repatha* (lowering LDL cholesterol) helped offset lower revenues realized from legacy drugs, such as *Neupogen* (white blood cell enhancer) due to the loss of patent protection and the introduction of generic competition. Stock repurchases and cost-containment initiatives also helped Amgen earn $4.17 a share in the first quarter, 17% higher than last year's result. Given management's guidance, we continue to anticipate single-digit sales and earnings advances over this year and next.

The emergence of COVID-19 has cast some uncertainty, yet we do not foresee a meaningful disruption to Amgen's operations. Indeed, many of the company's medicines serve to treat patients with serious illnesses. Additionally, Amgen's supply chain continues to deliver its therapies to consumer channels including pharmacies and doctors' offices. Moreover, the company continues to accelerate its pipeline endeavors in the hopes of gaining further commercial success. Notably, it intends to virtually present data at the 2020 ASCO Conference for its clinical findings from its colorectal and nonsmall-cell lung cancer studies.

The company has also focused research endeavors toward a possible treatment for COVID-19. First, it has been testing *Otezla*, an existing drug used to treat inflammatory diseases such as psoriasis as a possible option. Also, it recently announced a partnership with Adaptive Biotechnologies to identify pipeline candidates.

The recent stock-price action limits capital appreciation potential over the 2023-2025 span, and long-term investors should avoid, for now

Nira Maharaj *June 5, 2020*

(A) EPS based on diluted shares. Excls. non-rec. items: '04, d40¢; '05, d2¢; '06, d$1.03; '07, d53¢; '09, d32¢; '10, d33¢; '11, d$1.21; '12, d$94¢; '13, d96¢; '14, d$2.00; '15, d$1.32; '16, d$1.41; '17, d$9.89; '18, d$1.78; '19, d$1.94. May not sum due to change in share count or rounding. Next earnings report due late July. (B) Incl. intangs. In '19: $34.116 bill., $57.68/sh. (C) In millions. (D) Div'ds paid in early Mar., June, Sept., Dec. ■Div'd reinvestment plan available.

Company's Financial Strength	A++
Stock's Price Stability	90
Price Growth Persistence	80
Earnings Predictability	100

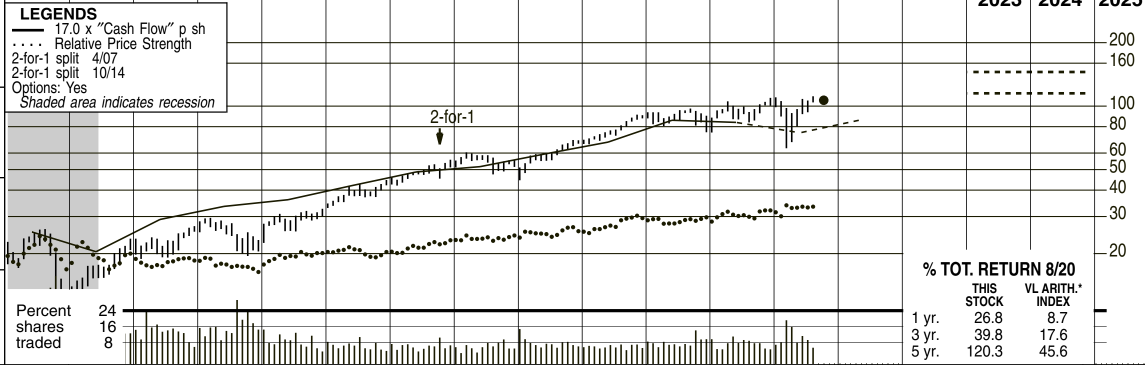
AMPHENOL CORP. NYSE-APH

RECENT PRICE 106.78 | P/E RATIO 30.4 (Trailing: 29.7 Median: 22.0) | RELATIVE P/E RATIO 1.43 | DIV'D YLD 0.9% | VALUE LINE

TIMELINESS 3 Lowered 11/1/19
SAFETY 1 Raised 9/28/18
TECHNICAL 2 Raised 9/25/20
BETA 1.00 (1.00 = Market)

High:	23.6	27.0	29.6	32.6	44.7	55.7	60.5	69.2	91.3	97.6	109.3	113.3
Low:	10.8	18.9	19.5	22.5	32.9	42.1	47.4	44.5	66.0	75.1	74.9	63.1

LEGENDS
—— 17.0 x "Cash Flow" p sh
.... Relative Price Strength
2-for-1 split 4/07
2-for-1 split 10/14
Options: Yes
Shaded area indicates recession



Target Price Range
2023 | 2024 | 2025

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$75-$145 $110 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	145	(+35%)	9%
Low	115	(+10%)	3%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	334	331	363
to Sell	289	363	318
Hld's(000)	284238	278994	283242

Percent shares traded 24 16 8

% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	26.8	8.7
3 yr.	39.8	17.6
5 yr.	120.3	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
4.43	5.16	6.98	7.97	9.45	8.14	10.12	12.08	13.42	14.58	17.25	18.08	20.43	22.94	27.48	27.61	*27.05*	*29.50*	Revenues per sh	*38.60*
.58	.74	.97	1.22	1.49	1.20	1.71	1.97	2.12	2.48	2.87	3.04	3.48	3.97	5.04	4.92	*4.40*	*5.10*	"Cash Flow" per sh	*7.70*
.46	.57	.73	.97	1.17	.92	1.41	1.53	1.70	1.93	2.25	2.41	2.72	3.12	3.85	3.75	*3.40*	*3.95*	Earnings per sh A	*6.50*
- -	.03	.03	.03	.03	.03	.03	.03	.21	.31	.45	.53	.56	.67	.84	.96	*1.00*	*1.12*	Div'ds Decl'd per sh B	*1.28*
.13	.16	.23	.29	.32	.18	.31	.31	.40	.50	.67	.56	.62	.74	1.04	.99	*.85*	*1.00*	Cap'l Spending per sh	*1.35*
1.39	1.97	2.55	3.54	3.94	5.04	6.61	6.66	7.60	9.04	9.38	10.51	11.92	13.05	13.46	15.21	*16.55*	*17.95*	Book Value per sh D	*20.00*
345.74	350.56	354.12	357.68	342.37	346.47	351.10	326.25	319.72	316.41	309.88	308.00	308.30	305.70	298.50	297.90	*296.00*	*295.00*	Common Shs Outst'g C	*285.00*
17.8	17.7	19.4	19.1	16.7	18.5	16.0	16.4	17.0	20.1	21.6	22.8	21.7	24.7	23.1	25.4	*Bold figures are*		Avg Ann'l P/E Ratio	*20.0*
.94	.94	1.05	1.01	1.01	1.23	1.02	1.03	1.08	1.13	1.14	1.15	1.14	1.24	1.25	1.37	*Value Line*		Relative P/E Ratio	*1.10*
- -	.3%	.2%	.2%	.2%	.2%	.1%	.1%	.7%	.8%	.9%	1.0%	1.0%	.9%	1.0%	1.0%	*estimates*		Avg Ann'l Div'd Yield	*1.1%*

CAPITAL STRUCTURE as of 6/30/20

Total Debt $3766.1 mill. **Due in 5 Yrs** $1673 mill.
LT Debt $3763.8 mill. **LT Interest** $110.0 mill.

(Total interest coverage: over 25x) (44% of Cap'l)
Leases, Uncapitalized: Annual leases $58.8 mill.

Pension Assets-12/19 $581.0 mill.
Oblig. $757.9 mill.

Pfd Stock None
Common Stock 298,376,863 shs.
as of 7/21/20
MARKET CAP: $31.9 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
3554.1	3939.8	4292.1	4614.7	5345.5	5568.7	6286.4	7011.3	8202.0	8225.4	*8000*	*8700*	Revenues ($mill)	*11000*
22.6%	22.1%	22.2%	22.7%	22.8%	22.9%	23.2%	23.7%	24.2%	23.5%	*22.5%*	*23.5%*	Operating Margin	*24.5%*
102.8	119.4	121.8	136.5	168.1	171.6	217.0	226.8	299.7	312.1	*290*	*300*	Depreciation ($mill)	*325*
496.4	524.2	555.3	647.0	721.9	763.5	856.0	986.1	1205.0	1155.0	*1015*	*1200*	Net Profit ($mill)	*1875*
24.3%	26.2%	28.2%	24.6%	26.2%	26.6%	26.5%	26.5%	23.4%	22.2%	*23.0%*	*23.0%*	Income Tax Rate	*23.0%*
14.0%	13.3%	12.9%	14.0%	13.5%	13.7%	13.6%	14.1%	14.7%	14.0%	*12.7%*	*13.8%*	Net Profit Margin	*17.0%*
1337.1	1538.8	1818.4	1547.7	2458.5	2841.6	1956.0	3076.6	2120.3	2078.5	*3000*	*3500*	Working Cap'l ($mill)	*5000*
799.6	1376.8	1606.2	1431.4	2672.3	2813.2	2635.5	3541.5	2806.4	3203.4	*4000*	*3500*	Long-Term Debt ($mill)	*3000*
2320.9	2171.8	2430.0	2859.5	2907.4	3238.5	3674.9	3989.8	4017.0	4530.3	*4900*	*5300*	Shr. Equity ($mill) D	*6100*
16.6%	15.4%	14.5%	15.8%	13.7%	13.2%	14.1%	13.7%	18.4%	15.7%	*12.0%*	*14.5%*	Return on Total Cap'l	*21.0%*
21.4%	24.1%	22.9%	22.6%	24.8%	23.6%	23.3%	24.7%	30.0%	25.5%	*20.5%*	*22.5%*	Return on Shr. Equity	*30.5%*
20.9%	23.7%	20.0%	19.2%	21.3%	18.7%	18.6%	19.6%	23.7%	19.3%	*14.5%*	*16.5%*	Retained to Com Eq	*25.0%*
2%	2%	13%	15%	14%	21%	20%	21%	21%	24%	*29%*	*28%*	All Div'ds to Net Prof	*19%*

CURRENT POSITION ($MILL.)

	2018	2019	6/30/20
Cash Assets	1279.3	891.2	1288.3
Receivables	1791.8	1736.4	1658.3
Inventory (FIFO)	1233.8	1310.1	1361.9
Other	266.7	273.5	309.5
Current Assets	4571.6	4211.2	4618.0
Accts Payable	890.5	866.8	928.0
Debt Due	764.3	403.3	2.3
Other	796.5	862.6	854.9
Current Liab.	2451.3	2132.7	1785.2

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	12.0%	11.5%	*7.0%*
"Cash Flow"	13.5%	13.5%	*9.0%*
Earnings	13.5%	13.0%	*10.5%*
Dividends	39.5%	21.5%	*7.0%*
Book Value	13.0%	10.0%	*6.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1560.1	1666.5	1840.8	1943.9	7011.3
2018	1866.9	1981.4	2129.0	2224.7	8202.0
2019	1958.5	2015.3	2100.6	2151.0	8225.4
2020	1862.0	1987.5	*2025*	*2125.5*	*8000*
2021	*2085*	*2145*	*2220*	*2250*	*8700*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.69	.74	.83	.86	3.12
2018	.84	.91	1.01	1.09	3.85
2019	.87	.93	.92	1.03	3.75
2020	.79	.85	*.83*	*.93*	*3.40*
2021	*.90*	*1.00*	*1.00*	*1.05*	*3.95*

Cal-endar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.14	.14	.14	.14	.56
2017	.16	.16	.16	.19	.67
2018	.19	.19	.23	.23	.84
2019	.23	.23	.23	.25	.94
2020	.25	.25	.25		

BUSINESS: Amphenol Corp. manufactures electrical, electronic, and fiber-optic connectors, interconnect systems, and coaxial and flat-ribbon cable. Its two primary business segments are Interconnect products and assemblies and Cable products. Amphenol sells its products to original equipment manufacturers, contract manufacturers, cable system operators, and telecommunication companies through manufacturer's reps. and dist. FMR LLC owns 13.3% of common stock outstanding; Vanguard Group, 11.1%; BlackRock, 7.7%; officers & directors: 2.7% (4/20 proxy). Employs about 74,000. Chairman: Martin H. Loeffler. President & CEO: R. Adam Norwitt. Inc.: DE. Address: 358 Hall Ave., Wallingford, CT 06492. Telephone: 203-265-8900. Internet: www.amphenol.com.

Amphenol Corporation's overall performance has perked up of late. Though the company's sales and profits still lag behind last year's pace, it seems the dropoff has not been as sharp as management had originally anticipated. To recap, like most of its peers, Amphenol has experienced the ill effects of the COVID-19 pandemic on its production process and end market demand trends. The electronics manufacturer has pared back unnecessary spending, capital expenditures, and employee compensation in order to help preserve margins during a turbulent economic cycle. Elsewhere, it appears expansion in the IT datacom, mobile device, and industrial business lines has largely mitigated a pronounced downturn in demand for automotive, commercial air, and networking solutions. Thus, we have chosen to lift our 2020 top- and bottom-line calls by $440 million and $0.45, to $8 billion and $3.40 a share, respectively.

We now look for earnings per share to reach a high-water mark next year. Indeed, we have hiked our 2021 EPS target by $0.20, to $3.95, which assumes the bulk of virus-related challenges will be in the rearview mirror by that point. We think the continued buildout of 5G mobile networks, in tandem with stout military spending levels, ought to fuel improved revenues moving forward. Meantime, the company's all-important book-to-bill ratio remains above parity (1.0), while management will likely resume its search for more strategic bolt-on acquisitions. It seems demand for new commercial airliners and passenger automobiles could linger in the doldrums for some time. However, a shift in focus has Amphenol capitalizing on the surging need for electronic medical devices (such as sensors and antennas). What's more, sales in overseas markets that have recovered from prior coronavirus outbreaks have started to ramp up orders.

This equity maintains a Timeliness rank of 3 (Average). The high-quality issue offers lackluster long-term appreciation potential, meaning patient accounts will want to wait for a better entry point before initiating a position. Amphenol's diverse product suite and sizable market share should allow it to regain its old form sooner rather than later, in our view.

Kenneth DeFranco, Jr. September 25, 2020

(A) Diluted earnings. Next earnings report due late October.
(B) Dividends historically paid in early January, April, July, and October.
(C) In millions, adjusted for stock splits.
(D) Includes intangibles. In 2019: $5605.3 mill., $18.82/sh.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	95
Earnings Predictability	95

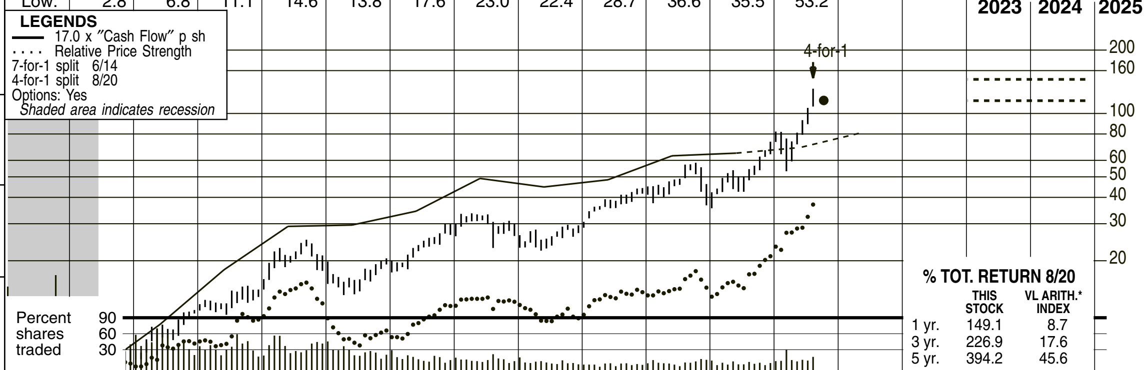
APPLE INC. NDQ-AAPL

RECENT PRICE **115.36** | P/E RATIO **32.9** (Trailing: 35.1, Median: 13.0) | RELATIVE P/E RATIO **1.54** | DIV'D YLD **0.7%** | **VALUE LINE**

TIMELINESS 3 Lowered 6/19/20
SAFETY 1 Raised 4/17/20
TECHNICAL 3 Lowered 9/25/20
BETA .90 (1.00 = Market)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	7.6	11.7	15.2	25.2	20.5	29.9	33.6	29.7	44.3	58.4	73.5	138.0
Low:	2.8	6.8	11.1	14.6	13.8	17.6	23.0	22.4	28.7	36.6	35.5	53.2

Target Price Range
2023 | 2024 | 2025



18-Month Target Price Range
Low-High Midpoint (% to Mid)
$105-$225 $165 (45%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	145	(+25%)	7%
Low	115	(Nil)	1%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	1283	1298	1336
to Sell	1806	1905	1838
Hld's(000)	646416	795948	251248

% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	149.1	8.7
3 yr.	226.9	17.6
5 yr.	394.2	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
.38	.60	.81	.98	1.31	1.45	2.54	4.16	5.95	6.79	7.79	10.47	10.10	11.18	13.96	14.64	***16.10***	***18.65***	Sales per sh A	***29.00***
.02	.06	.09	.16	.21	.25	.59	1.07	1.71	1.74	2.02	2.90	2.63	2.85	3.70	3.82	***4.05***	***4.80***	"Cash Flow" per sh	***7.70***
.01	.05	.08	.14	.19	.22	.54	.99	1.58	1.42	1.61	2.31	2.08	2.30	2.98	2.97	***3.25***	***3.90***	Earnings per sh B	***6.50***
- -	- -	- -	- -	- -	- -	- -	- -	.09	.41	.45	.50	.55	.60	.68	.75	***.80***	***.85***	Div'ds Decl'd per sh E	***1.60***
.01	.01	.03	.03	.04	.05	.08	.16	.32	.32	.41	.50	.60	.61	.70	.59	***.65***	***.70***	Cap'l Spending per sh	***.85***
.23	.32	.42	.60	.85	1.10	1.86	2.94	4.50	4.91	4.75	5.35	6.01	6.54	5.63	5.09	***4.25***	***5.45***	Book Value per sh	***10.85***
21921	23381	23947	24425	24873	25195	25647	26020	26298	25178	23465	22315	21345	20505	19020	17773	***17000***	***16500***	Common Shs Outst'g C	***15000***
37.9	26.2	29.1	26.3	30.4	19.2	15.2	12.4	12.0	12.3	13.0	12.8	12.6	14.9	15.3	16.1	*Bold figures are*		Avg Ann'l P/E Ratio	***20.0***
2.00	1.40	1.57	1.40	1.83	1.28	.97	.78	.76	.69	.68	.64	.66	.75	.83	.86	*Value Line*		Relative P/E Ratio	***1.10***
- -	- -	- -	- -	- -	- -	- -	- -	.5%	2.3%	2.2%	1.7%	2.1%	1.8%	1.5%	1.6%	*estimates*		Avg Ann'l Div'd Yield	***1.2%***

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
65225	108249	156508	170910	182795	233715	215639	229234	265595	260174	***273500***	***308000***	Sales ($mill) A	***435000***
29.8%	32.9%	37.4%	32.6%	33.1%	35.3%	32.7%	31.2%	30.8%	29.4%	***28.5%***	***29.0%***	Operating Margin	***30.5%***
1027.0	1814.0	3277.0	6757.0	7946.0	11257	10505	10157	10903	12547	***13500***	***14500***	Depreciation ($mill) D	***18000***
14013	25922	41733	37037	39510	53394	45687	48351	59531	55256	***55300***	***64400***	Net Profit ($mill)	***97500***
24.4%	24.2%	25.2%	26.2%	26.1%	26.4%	25.6%	24.6%	18.3%	15.9%	***14.5%***	***16.0%***	Income Tax Rate	***16.0%***
21.5%	23.9%	26.7%	21.7%	21.6%	22.8%	21.2%	21.1%	22.4%	21.2%	***20.2%***	***20.9%***	Net Profit Margin	***22.4%***
20956	17018	19111	29628	5083.0	8768.0	27863	27831	14473	57101	***45000***	***50000***	Working Cap'l ($mill)	***70000***
- -	- -	- -	16960	28987	53463	75427	97207	93735	91807	***94000***	***96000***	Long-Term Debt ($mill)	***100000***
47791	76615	118210	123549	111547	119355	128249	134047	107147	90488	***72500***	***90000***	Shr. Equity ($mill)	***162500***
29.3%	33.8%	35.3%	26.5%	28.4%	31.3%	23.2%	21.8%	30.8%	31.5%	***34.5%***	***36.0%***	Return on Total Cap'l	***38.0%***
29.3%	33.8%	35.3%	30.0%	35.4%	44.7%	35.6%	36.1%	55.6%	61.1%	***76.5%***	***71.5%***	Return on Shr. Equity	***60.0%***
29.3%	33.8%	33.2%	21.4%	25.4%	35.0%	26.2%	26.5%	42.8%	45.5%	***57.5%***	***56.0%***	Retained to Com Eq	***45.0%***
- -	- -	6%	29%	28%	22%	27%	26%	23%	26%	***25%***	***22%***	All Div'ds to Net Prof	***25%***

CAPITAL STRUCTURE as of 6/27/20
Total Debt $112723 mill. **Due in 5 Yrs** $60000 mill.
LT Debt $94048 mill. **LT Interest** $4000 mill. (57% of Cap'l)
Leases, Uncapitalized Annual rentals $1306 mill.

No Defined Benefit Pension Plan
Pfd Stock None
Common Stock 17,103 mill. shs.
as of 7/17/20
(adjusted for 4-for-1 split effective 8/31/20)
MARKET CAP: $2.0 trillion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	6/27/20
Cash Assets	66301	100557	93025
Receivables	23186	22926	17882
Inventory (FIFO)	3956	4106	3978
Other	37896	35230	25180
Current Assets	131339	162819	140065
Accts Payable	55888	46236	35325
Debt Due	20748	16240	18675
Other	40230	43242	41318
Current Liab.	116866	105718	95318

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	26.5%	14.0%	*14.0%*
"Cash Flow"	32.5%	13.5%	*14.5%*
Earnings	31.0%	12.5%	*15.5%*
Dividends	- -	16.5%	*15.5%*
Book Value	21.0%	4.0%	*11.0%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) A Dec.Per	Mar.Per	Jun.Per	Sep.Per	Full Fiscal Year
2017	78351	52896	45408	52579	229234
2018	88293	61137	53265	62900	265595
2019	84310	58015	53809	64040	260174
2020	91819	58313	59685	***63683***	***273500***
2021	***99500***	***68500***	***64000***	***76000***	***308000***

Fiscal Year Ends	EARNINGS PER SHARE A B Dec.Per	Mar.Per	Jun.Per	Sep.Per	Full Fiscal Year
2017	.84	.53	.42	.51	2.30
2018	.97	.68	.59	.74	2.98
2019	1.05	.62	.55	.75	2.97
2020	1.25	.64	.65	***.71***	***3.25***
2021	***1.35***	***.80***	***.75***	***1.00***	***3.90***

Cal-endar	QUARTERLY DIVIDENDS PAID E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.13	.143	.143	.143	.56
2017	.143	.158	.158	.158	.62
2018	.158	.183	.183	.183	.71
2019	.183	.193	.193	.193	.76
2020	.193	.205	.205		

BUSINESS: Apple Inc., established in 1977, is one of the world's largest makers of PCs and peripheral and consumer products, such as the *iPod* digital music player, the *iPad* tablet, the *iPhone* smartphone, and the *Apple Watch*, for sale primarily to the business, creative, education, government, and consumer markets. It also sells operating systems, services like *iCloud* storage and *Apple Pay*, and a host of digital content from the popular *iTunes* store and other portals. Research and development: 6.2% of '19 sales. Has approximately 137,000 employees. Off./dir. own less than 1.0% of common stock; Vanguard, 7.7%; BlackRock, 6.8% (1/20 Proxy). CEO: Tim Cook. Inc.: CA. Addr.: One Apple Park Way, Cupertino, CA 95014. Tel.: 408-996-1010. Internet: www.apple.com.

Apple bulls have had plenty to cheer about lately. The Dow component has tacked on another roughly 35% in value since our June review, as tech stocks have handily outperformed the broader market amid the COVID-19 crisis (that has hammered large swaths of the economy). Moreover, recent results have been far better than anticipated, a testament to the company's excellent execution and the resiliency of its businesses. For the third quarter of fiscal 2020 (ended June 27th), share net clocked in at $0.65, 18% above the year-earlier tally and well ahead of Wall Street's consensus view of $0.51. *(Note that all per-share data in this report have been adjusted for the 4-for-1 stock split effective on August 31st.)* The bottom-line beat was a quality one, too, with Apple overcoming store closures and inventory shortages to generate double-digit revenue growth (sales approached $60 billion) in what has historically been its slowest period of the year.

The company has benefited from new productivity initiatives and work-from-home trends that have swept the globe. Sales of *iPads*, for instance, not typically a big growth category, surged over 30% during the third quarter, while the traditional *Mac* line recorded a 22% top-line advance. And the cash-cow smartphone franchise returned to a modest expansion mode, aided by the success of the inexpensive ($399) *iPhone SE* model, which seemed to win over consumers that were previously aligned with the *Android* ecosystem. In the meantime . . .

The services and wearables segments have continued to fire on all cylinders. And they are apt to be the primary growth drivers here going forward. The new *Apple TV+* streaming platform should support further services gains, and heightened penetration of the *Apple Watch* collection ought to help sustain the impressive wearables momentum. All in all, despite the challenging operating environment, we still see share earnings rising 9% in fiscal 2020 (to $3.25) and another 20% in the upcoming fiscal year (to $3.90).

This issue is Average (3) for Timeliness, and the full valuation suggests that new long-term commitments are probably best deferred, for now.

Justin Hellman *September 25, 2020*

(A) Fiscal year ends last Saturday in September. **(B)** Diluted earnings. Quarters may not add to total due to rounding/changes in the share count. Next earnings report due in late October. **(C)** In millions, adjusted for splits. **(D)** Depreciation on accelerated basis. **(E)** New dividend policy adopted 3/12. Payments typically made in February, May, August, and November.

Company's Financial Strength	A++
Stock's Price Stability	85
Price Growth Persistence	85
Earnings Predictability	80

AT&T INC. NYSE-T

RECENT PRICE 30.93 | P/E RATIO 9.0 (Trailing: 8.7 Median: 13.0) | RELATIVE P/E RATIO 0.46 | DIV'D YLD 6.8% | VALUE LINE

TIMELINESS	3	Lowered 12/13/19
SAFETY	1	Raised 3/28/08
TECHNICAL	3	Lowered 5/15/20

BETA .80 (1.00 = Market)

High:	29.5	29.6	31.9	38.6	39.0	37.5	36.4	43.9	43.0	39.3	39.7	39.6
Low:	21.4	23.8	27.2	29.0	32.8	31.7	31.0	33.4	32.6	26.8	28.3	26.1

18-Month Target Price Range

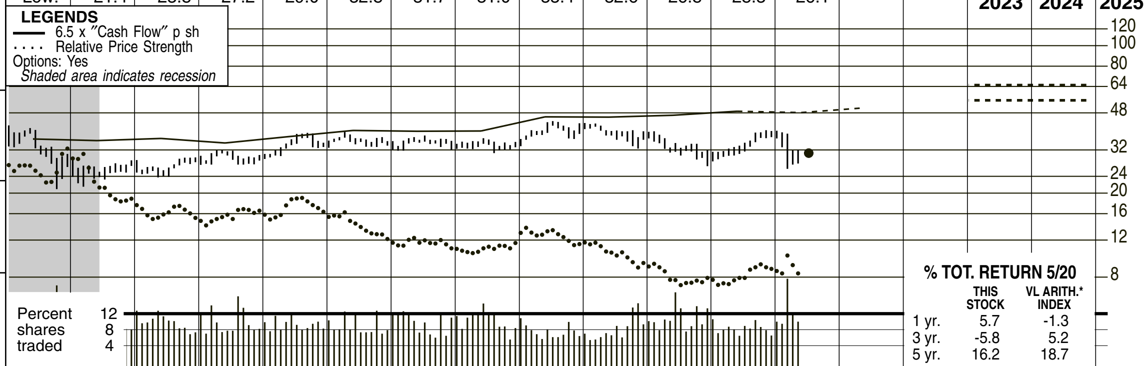
Low-High	Midpoint (% to Mid)
$24-$49	$37 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	65	(+110%)	24%
Low	55	(+80%)	20%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	1224	1359	1181
to Sell	961	1008	1227
Hld's(000)	3975381	4018964	3880310



2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
12.36	11.31	16.24	19.83	21.05	20.84	21.05	21.38	22.83	24.64	25.53	23.89	26.68	26.15	23.45	24.98	***24.55***	***25.25***	**Revenues per sh**	***28.90***
3.77	3.42	4.63	5.36	5.56	5.46	5.60	5.31	5.70	6.10	6.04	6.05	7.07	7.04	7.19	7.52	***7.40***	***7.80***	**"Cash Flow" per sh**	***9.00***
1.47	1.72	2.34	2.76	2.16	2.12	2.29	2.20	2.33	2.50	2.50	2.69	2.84	3.05	3.52	3.58	***3.45***	***3.75***	**Earnings per sh A**	***4.65***
1.25	1.29	1.33	1.42	1.60	1.64	1.68	1.72	1.76	1.80	1.84	1.88	1.92	1.96	2.00	2.04	***2.08***	***2.12***	**Div'ds Decl'd per sh B ■**	***2.60***
1.54	1.44	2.14	2.93	3.34	2.81	3.30	3.39	3.49	4.01	4.09	3.26	3.50	3.51	2.92	2.71	***2.75***	***2.85***	**Cap'l Spending per sh**	***3.25***
12.29	14.11	29.76	19.09	16.35	17.34	18.94	17.85	16.61	17.50	16.76	19.96	20.06	22.94	25.28	25.39	***27.35***	***28.75***	**Book Value per sh C**	***32.05***
3300.9	3876.9	3882.0	6043.5	5893.0	5901.9	5911.1	5926.5	5581.4	5226.3	5186.9	6144.9	6139.0	6139.4	7281.6	7254.6	***7125.0***	***7125.0***	**Common Shs Outst'g D**	***6750.0***
17.2	13.9	12.6	14.2	15.4	12.1	11.7	13.4	14.5	14.2	13.8	12.6	13.8	12.7	9.5	9.5	*Bold figures are*		**Avg Ann'l P/E Ratio**	***13.0***
.91	.74	.68	.75	.93	.81	.74	.84	.92	.80	.73	.63	.72	.64	.51	.52	*Value Line*		**Relative P/E Ratio**	***.70***
5.0%	5.4%	4.5%	3.6%	4.8%	6.4%	6.3%	5.8%	5.2%	5.1%	5.3%	5.6%	4.9%	5.1%	6.0%	6.0%	*estimates*		**Avg Ann'l Div'd Yield**	***4.3%***

CAPITAL STRUCTURE as of 3/31/20
Total Debt $164269 mill. **Due in 5 Yrs** $56000 mill.
LT Debt $147202 mill. **LT Interest** $7500 mill.

Pension Assets-12/19 $53530 mill. **Oblig.** $59873 mill.

Pfd Stock None

Common Stock 7,125 mill. shares as of 4/30/20

MARKET CAP: $220 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
124399	126723	127434	128752	132447	146801	163786	160546	170756	181193	***175000***	***180000***	**Revenues ($mill)**	***195000***
13612	13103	13698	13463	13056	15188	17577	18860	23957	26306	***24600***	***26700***	**Net Profit ($mill)**	***31400***
39.3%	33.6%	32.6%	33.2%	34.6%	32.4%	32.7%	9.5%	19.7%	18.9%	***19.0%***	***19.0%***	**Income Tax Rate**	***19.0%***
10.9%	10.3%	10.7%	10.5%	9.9%	10.3%	10.7%	11.7%	14.0%	14.5%	***14.1%***	***14.8%***	**Net Profit Margin**	***16.1%***
34.5%	36.7%	41.7%	43.1%	46.7%	48.9%	47.8%	47.0%	46.2%	42.8%	***43.0%***	***41.5%***	**Long-Term Debt Ratio**	***38.5%***
65.5%	63.3%	58.3%	56.9%	53.3%	50.7%	51.8%	52.6%	51.1%	52.2%	***57.0%***	***58.5%***	**Common Equity Ratio**	***61.5%***
170921	167097	159053	160772	162935	242155	237791	267979	360134	353243	***342000***	***350000***	**Total Capital ($mill)**	***351500***
103196	107087	109767	110968	112898	124450	124899	125222	131473	130128	***131000***	***132000***	**Net Plant ($mill)**	***135000***
8.8%	8.9%	9.7%	9.6%	9.1%	7.2%	8.5%	8.2%	8.0%	9.1%	***8.5%***	***8.5%***	**Return on Total Cap'l**	***10.0%***
12.2%	12.4%	14.8%	14.7%	15.0%	12.4%	14.3%	13.4%	13.0%	14.3%	***12.5%***	***13.0%***	**Return on Shr. Equity**	***14.5%***
12.2%	12.4%	14.8%	14.7%	15.0%	12.4%	14.3%	13.4%	13.0%	14.3%	***12.5%***	***13.0%***	**Return on Com Equity**	***14.5%***
3.3%	2.8%	3.7%	4.1%	4.0%	4.1%	4.7%	4.8%	5.7%	6.2%	***5.0%***	***5.5%***	**Retained to Com Eq**	***6.5%***
73%	78%	75%	72%	73%	67%	67%	64%	56%	57%	***60%***	***57%***	**All Div'ds to Net Prof**	***56%***

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	5204	12130	9955
Other	46223	42631	42749
Current Assets	51427	54761	52704
Accts Payable	43184	45956	40771
Debt Due	10255	11838	17067
Other	10981	11117	11866
Current Liab.	64420	68911	69704
Fix. Chg. Cov.	355%	332%	371%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	2.0%	.5%	*2.5%*
"Cash Flow"	3.0%	4.0%	*3.5%*
Earnings	3.5%	6.5%	*5.5%*
Dividends	2.5%	2.0%	*4.5%*
Book Value	3.5%	7.5%	*4.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	39365	39837	39668	41676	160546
2018	38038	38986	45739	47993	170756
2019	44827	44957	44588	46821	181193
2020	42779	***41721***	***44000***	***46500***	***175000***
2021	***44000***	***44250***	***44500***	***47250***	***180000***

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.74	.79	.74	.78	3.05
2018	.85	.91	.90	.86	3.52
2019	.86	.89	.94	.89	3.58
2020	.84	***.82***	***.88***	***.91***	***3.45***
2021	***.90***	***.90***	***.95***	***1.00***	***3.75***

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.48	.48	.48	.48	1.92
2017	.49	.49	.49	.49	1.96
2018	.50	.50	.50	.50	2.00
2019	.51	.51	.51	.51	2.04
2020	.52	.52			

BUSINESS: AT&T Inc., formerly SBC Communications, is one of the world's largest telecom carriers and is the largest in the U.S. Its traditional (SBC only) wireline subsidiaries provide services in 13 states, including California, Texas, Illinois, Michigan, Ohio, Missouri, Connecticut, Indiana, Wisconsin, Oklahoma, Kansas, Arkansas, and Nevada. Also owns AT&T Wireless (previously Cingular). Acquired AT&T Corp., 11/05; BellSouth, 12/06; DirecTV, 7/15; Time Warner, 6/18. '19 sales mix: Service, 90%; Equipment, 10%. Has about 244,500 employees. BlackRock, 7.0% of common stock; Officers & directors own less than 1% (3/20 Proxy). Chrmn. & CEO: Randall Stephenson. Inc.: DE. Addr.: 208 S. Akard St., Dallas, Texas, 75202. Tel.: 210-821-4105. Internet: www.att.com.

AT&T will soon have a new CEO. Randall Stephenson, who orchestrated the $85 billion acquisition of Time Warner (completed in mid-2018), is retiring from the top spot effective July 1st. In his place, John Stankey, the current president and COO of the Dallas-based telecom giant, will move into the corner office. Mr. Stankey's appointment has the blessing of Elliott Management, an activist hedge fund that has been pushing AT&T to shake up the managerial ranks and improve operations across the former Time Warner media assets (including Warner Bros. studios and the HBO, CNN, TBS, and TNT networks). And he seems like a good fit for the job, given his deep involvement with the new WarnerMedia business segment. Still, Mr. Stankey will have his work cut out for him. Indeed . . .

The company continues to face numerous challenges. The COVID-19 pandemic is hampering near-term results (it took a $0.05 bite out of share net in the first quarter), most notably by hurting advertising and wireless-equipment sales. But AT&T is grappling with longer-range problems, too, from a sizable debt load to mounting subscriber losses at DirecTV. And the competitive landscape isn't getting any easier, thanks to the recent merger between T-Mobile and Sprint. (AT&T unsuccessfully tried to purchase T-Mobile back in 2011.) Nonetheless . . .

We see a gradual turnaround unfolding here. We have lowered our 2020 share-earnings call by $0.20, to $3.45, to reflect the ongoing coronavirus crisis. The bottom line will probably begin to recover next year, however, supported by solid wireless service revenue growth. The *HBO Max* streaming service, which launched in May, should also prove to be a nice catalyst. The streaming space has gotten crowded, with the company competing for cord-cutters with the likes of Netflix, Disney, Amazon, and Apple. Yet, AT&T's extensive content library should help the new offering to quickly gain traction.

We continue to like this issue for income-oriented buy-and-hold investors. Though stock buybacks have been suspended, the company generates ample free cash flow and is committed to maintaining its generous dividend payout.

Justin Hellman *June 12, 2020*

(A) Diluted earnings. Excl. nonrecurring gain/(losses): '04, $0.32; '05, ($0.30); '06, ($0.45). Next earnings report due late July. **(B)** Div'ds paid in February, May, August, and November. Incl. one-time div'ds: In '03, $0.25. ■ Div'd reinvestment plan available. **(C)** Incl. goodwill: '19: $146241 mill., $20.16/sh. **(D)** In millions.

Company's Financial Strength	A++
Stock's Price Stability	100
Price Growth Persistence	25
Earnings Predictability	100

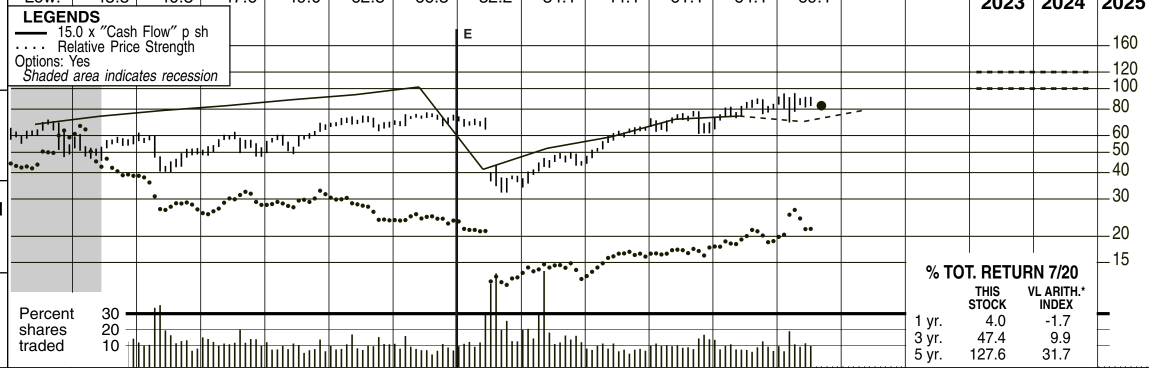
BAXTER INT'L NYSE-BAX

RECENT PRICE 83.16 | P/E RATIO 26.3 (Trailing: 26.2 Median: 19.0) | RELATIVE P/E RATIO 1.23 | DIV'D YLD 1.2% | VALUE LINE

TIMELINESS 2 Lowered 8/14/20
SAFETY 1 Raised 2/16/18
TECHNICAL 2 Lowered 8/14/20
BETA .80 (1.00 = Market)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	61.0	61.9	62.5	68.9	74.6	77.3	74.0	50.2	66.2	78.4	89.9	95.2
Low:	45.5	40.3	47.6	49.0	62.8	66.3	32.2	34.1	44.1	61.1	64.1	69.1

Target Price Range 2023 | 2024 | 2025



18-Month Target Price Range
Low-High Midpoint (% to Mid)
$73-$125 $99 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	120	(+45%)	11%
Low	100	(+20%)	6%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	423	478	373
to Sell	452	487	598
Hld's(000)	425645	419059	425439

% TOT. RETURN 7/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	4.0	-1.7
3 yr.	47.4	9.9
5 yr.	127.6	31.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
15.44	15.76	15.95	17.78	20.05	20.90	22.48	24.42	25.98	28.10	30.74	18.20	18.83	19.50	21.69	22.45	***22.15***	***23.55***	Sales per sh	***27.45***
2.66	2.46	3.13	3.80	4.52	4.94	5.25	5.54	5.91	6.24	6.80	2.76	3.48	3.95	4.78	4.95	***4.65***	***5.30***	"Cash Flow" per sh	***6.65***
1.68	1.52	2.23	2.79	3.38	3.80	3.98	4.31	4.53	4.67	4.90	1.38	1.96	2.48	3.05	3.31	***3.10***	***3.75***	Earnings per sh A	***5.00***
.58	.58	.58	.72	.91	1.07	1.18	1.27	1.46	1.88	2.02	1.68	.49	.58	.70	.82	***.93***	***1.01***	Div'ds Decl'd per sh B ■	***1.22***
.91	.71	.81	1.09	1.55	1.69	1.66	1.69	2.13	2.81	3.50	1.66	1.33	1.17	1.33	1.38	***1.30***	***1.35***	Cap'l Spending per sh	***1.45***
6.01	6.88	9.64	10.91	10.11	11.97	11.31	11.57	12.70	15.58	14.97	16.15	15.36	16.85	15.19	15.57	***16.25***	***17.65***	Book Value per sh C	***23.55***
616.00	624.90	650.48	633.64	615.99	600.97	580.73	569.00	546.21	543.04	542.38	547.66	539.60	541.48	513.00	506.16	***510.00***	***510.00***	Common Shs Outst'g D	***510.00***
18.8	24.5	18.4	19.6	18.2	14.2	12.6	12.6	12.8	14.9	14.7	40.5	22.4	23.3	22.9	24.1	*Bold figures are*	*Value Line*	Avg Ann'l P/E Ratio	***22.0***
.99	1.30	.99	1.04	1.10	.95	.80	.79	.81	.84	.77	2.04	1.18	1.17	1.24	1.30		*estimates*	Relative P/E Ratio	***1.20***
1.8%	1.6%	1.4%	1.3%	1.5%	2.0%	2.4%	2.3%	2.5%	2.7%	2.8%	3.0%	1.1%	1.0%	1.0%	1.0%			Avg Ann'l Div'd Yield	***1.1%***

CAPITAL STRUCTURE as of 6/30/20
Total Debt $6374 mill. **Due in 5 Yrs** $1767 mill.
LT Debt $6055 mill. **LT Interest** $112 mill.
(43% of Cap'l)

Leases, Uncapitalized Annual rentals $112.0 mill.

Pension Assets-12/19 $3.0 billion
Obligation $4.0 billion

Common Stock 506,231,732 shares
as of 7/21/20

MARKET CAP: $42.1 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
13056	13893	14190	15259	16671	9968.0	10163	10561	11127	11362	***11300***	***12000***	Sales ($mill)	***14000***
28.6%	26.0%	27.9%	27.5%	27.0%	12.1%	15.0%	19.1%	20.6%	25.6%	***24.5%***	***26.0%***	Operating Margin	***28.0%***
685.0	670.0	712.0	823.0	1005.0	759.0	800.0	761.0	785.0	789.0	***795***	***800***	Depreciation ($mill)	***850***
2366.0	2485.0	2516.0	2567.0	2683.0	755.0	1078.0	1376.0	1666.0	1717.0	***1580***	***1910***	Net Profit ($mill)	***2550***
20.1%	18.0%	21.9%	22.0%	21.7%	18.6%	21.9%	18.0%	16.9%	16.7%	***17.0%***	***17.0%***	Income Tax Rate	***17.0%***
18.1%	17.9%	17.7%	16.8%	16.1%	7.6%	10.6%	13.0%	15.0%	15.1%	***14.0%***	***15.9%***	Net Profit Margin	***18.2%***
3948.0	3793.0	4501.0	4098.0	4309.0	6046.0	3830.0	4442.0	3083.0	4273.0	***5000***	***5000***	Working Cap'l ($mill)	***5500***
4363.0	4749.0	5580.0	8126.0	7606.0	3935.0	2779.0	3509.0	3473.0	4809.0	***6000***	***5500***	Long-Term Debt ($mill)	***5000***
6567.0	6585.0	6938.0	8463.0	8120.0	8846.0	8290.0	9124.0	7794.0	7882.0	***8300***	***9000***	Shr. Equity ($mill)	***12000***
22.0%	22.1%	20.4%	15.8%	17.5%	6.4%	10.0%	11.1%	15.0%	13.8%	***11.5%***	***13.5%***	Return on Total Cap'l	***15.5%***
36.0%	37.7%	36.3%	30.3%	33.0%	8.5%	13.0%	15.1%	21.4%	21.8%	***19.0%***	***21.0%***	Return on Shr. Equity	***21.5%***
25.6%	27.0%	24.7%	18.2%	19.6%	NMF	9.8%	11.6%	16.6%	16.4%	***13.5%***	***15.5%***	Retained to Com Eq	***16.0%***
29%	29%	32%	40%	41%	121%	25%	23%	23%	25%	***30%***	***27%***	All Div'ds to Net Prof	***24%***

CURRENT POSITION ($MILL.)	2018	2019	6/30/20
Cash Assets	1832	3335	4085
Receivables	1812	1896	1884
Inventory (FIFO)	1653	1653	1905
Other	622	619	692
Current Assets	5919	7503	8566
Accts Payable	2728	2689	2561
Debt Due	4	541	319
Other	104	- -	- -
Current Liab.	2836	3230	2880

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	1.0%	-5.5%	4.5%
"Cash Flow"	.5%	-6.5%	6.5%
Earnings	-1.0%	-9.0%	9.0%
Dividends	-2.5%	-17.0%	9.5%
Book Value	3.5%	2.0%	7.0%

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	2475	2605	2707	2774	10561
2018	2677	2842	2767	2841	11127
2019	2632	2840	2851	3039	11362
2020	2802	2718	***2830***	***2950***	***11300***
2021	***2850***	***3000***	***3000***	***3150***	***12000***

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.58	.63	.64	.64	2.48
2018	.70	.77	.80	.78	3.05
2019	.75	.84	.74	.97	3.31
2020	.82	.64	***.75***	***.89***	***3.10***
2021	***.88***	***.94***	***.95***	***.98***	***3.75***

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.115	.115	.13	.13	.49
2017	.13	.13	.16	.16	.58
2018	.16	.16	.19	.19	.70
2019	.19	.19	.22	.22	.82
2020	.22	.22	.245		

BUSINESS: Baxter International, through its subsidiaries, provides a broad portfolio of healthcare products, including acute and chronic dialysis therapies; sterile IV solutions; infusion systems and devices; parenteral nutrition therapies; inhaled anesthetics; generic injectable pharmaceuticals; and surgical hemostat and sealant products. At 12/31/19, it manufactured products in over 20 countries and sold them in over 100. Completed spinoff of pharma. business Baxalta (7/15). Acq. Claris Injectables (7/17). Has 50,000 employees. Off./dirs. own less than 1% of comm. stock; BlackRock, 8.0%; Vanguard, 7.7%; Wellington, 6.1% (3/20 proxy). Chairman and CEO: Jose E. Almeida. Inc.: DE. Addr.: 1 Baxter Pkwy., Deerfield, IL. 60015. Tel.: 224-948-2000. Internet: www.baxter.com.

Baxter's second-quarter results fell short of consensus expectations. The company reported adjusted earnings of $0.64 a share on sales of $2.72 billion, versus $0.84 and $2.84 billion in the comparable year-ago period. While some fallout was widely anticipated, due to business disruptions stemming from COVID-19, the tallies missed analysts' targets by about $0.07 a share on the bottom line and $140 million on the top. To make matter worse, management provided full-year guidance that fell well below previous expectations. BAX shares have declined roughly 9% in price since the day of the second-quarter release (July 30th).

The company is targeting adjusted earnings of $3.00-$3.10 a share in 2020. The range implies a year-over-year decline of 8% at the midpoint. Management also guided for sales growth of down 1% to up 1% on a reported basis and flat to up 3% operationally, the latter of which excludes the impact of foreign exchange. Altogether, the bottom-line outlook was a bit of a disappointment, considering that the average analyst estimate had been closer to $3.30 prior to the Q2 release. Baxter is clearly projecting a more drawn out recovery than many had initially anticipated. We have lowered our 2020 adjusted earnings estimate to $3.10 a share (previously $3.25).

We look for meaningful recovery to occur in 2021. Stay-at-home policies and overwhelmed hospitals took a significant toll on certain areas of Baxter's business in Q2, most notably in the Advanced Surgery (sales -27%), Medication Delivery (-11%), and Pharmaceuticals (-10%) segments. While a recent resurgence in COVID cases may continue limit physician visits in the near term, pent up demand should help to fuel a strong rebound when more normalized conditions are realized. Our 2021 earnings estimate stands at $3.75 a share, implying annual growth of 21% compared to our 2020 call.

The Timeliness rank was recently dropped a notch to 2 (Above Average). Despite the downgrade, BAX shares are still pegged to outperform the broader market in the year ahead. Our 18-month projections suggest a midpoint case of $99 a share, implying appreciation potential of about 20% at current price levels.

Michael Ratty *August 14, 2020*

(A) Diluted egs. Excl. nonrecur. gains/(losses): '07, ($0.18); '08, ($0.22); '09, ($0.21); '10, ($1.59); '11, ($0.43); '12, ($0.35); '13, ($1.01); '14, ($0.34); '15, $0.38; '16, $7.05; '17, ($1.19); '18, ($0.08); '19, ($1.38). May not sum due to rounding. Next egs. report due late October.
(B) Div'd historically paid in Jan., Apr., July, and Oct.■ Div'd reinvestment plan available.
(C) Incl. intang. In 2019: $4.5 billion, $8.89/sh.
(D) In millions, adjusted for stock split.
(E) Data post 2014 reflect completed spinoff of biopharmaceutical operation (July 1, 2015).

Company's Financial Strength	A+
Stock's Price Stability	100
Price Growth Persistence	100
Earnings Predictability	45

BRISTOL-MYERS SQ. NYSE-BMY

RECENT PRICE	P/E RATIO	(Trailing / Median)	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
57.77	20.3	(Trailing: NMF, Median: 26.0)	0.98	3.1%	1613

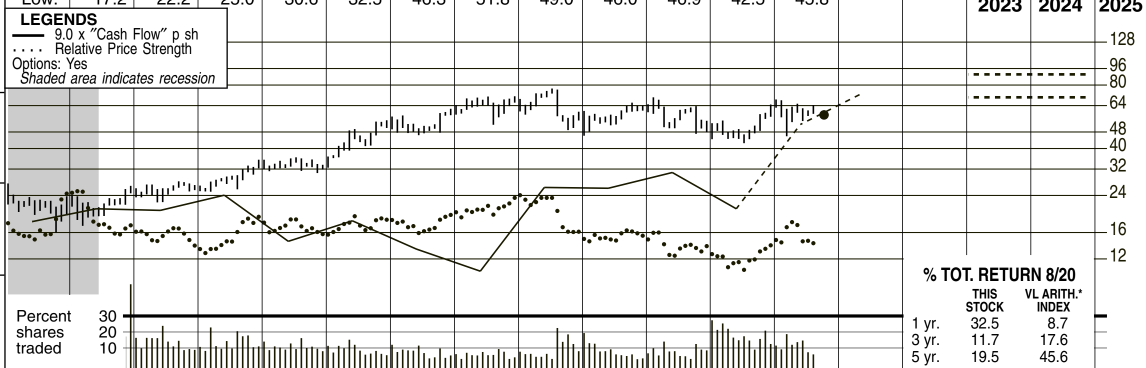
TIMELINESS **3** Raised 2/16/18

SAFETY **1** Raised 10/2/20

TECHNICAL **2** Lowered 10/2/20

BETA .85 (1.00 = Market)

High:	26.6	28.0	35.4	36.3	54.5	61.8	70.9	77.1	66.1	70.1	64.8	68.3
Low:	17.2	22.2	25.0	30.6	32.5	46.3	51.8	49.0	46.0	46.9	42.5	45.8



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$49-$116	$83 (45%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	90	(+55%)	*14%*
Low	70	(+20%)	*8%*

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	1643	938	1051
to Sell	437	1096	908
Hld's(000)	1756852	1684120	1631173

% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	32.5	8.7
3 yr.	11.7	17.6
5 yr.	19.5	45.6

Bristol-Myers Squibb was incorporated in Delaware in August 1933 as successor to a New York business started in 1887. The company was formed by a merger between Bristol-Myers Company and Squibb Corporation on October 4, 1989. The combination was effected through an exchange of 2.4 shares of Bristol-Myers for each share of Squibb.The merger was effected utilizing the pooling-of-interests accounting method.

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
11.47	12.61	10.81	9.98	9.55	9.97	11.67	12.79	13.89	11.61	*18.35*	*19.75*	Sales per sh	*22.60*
2.26	2.68	1.62	2.03	1.49	1.17	2.91	2.89	3.42	2.30	*5.80*	*8.20*	"Cash Flow" per sh	*9.45*
1.79	2.16	1.16	1.54	1.20	.93	2.65	2.32	3.03	2.01	*1.50*	*3.85*	Earnings per sh A	*5.00*
1.28	1.33	1.37	1.41	1.45	1.49	1.53	1.57	1.60	1.64	*1.80*	*1.84*	Div'ds Decl'd per sh B■	*2.04*
.25	.22	.34	.33	.32	.49	.73	.65	.59	.37	*.30*	*.35*	Cap'l Spending per sh	*.55*
9.20	9.42	8.36	9.28	9.01	8.59	9.72	7.23	8.64	22.92	*22.25*	*23.15*	Book Value per sh C	*24.55*
1699.3	1685.3	1630.4	1641.3	1662.1	1661.0	1664.0	1625.0	1624.0	2251.0	*2254.0*	*2250.0*	Common Shs Outst'g D	*2250.0*
14.3	13.4	28.7	28.6	43.6	NMF	23.9	24.8	19.1	25.0	*Bold figures are*		Avg Ann'l P/E Ratio	*16.0*
.91	.84	1.83	1.61	2.30	NMF	1.25	1.25	1.03	1.35	*Value Line*		Relative P/E Ratio	*.90*
5.0%	4.6%	4.1%	3.2%	2.8%	2.3%	2.4%	2.7%	2.8%	3.3%	*estimates*		Avg Ann'l Div'd Yield	*2.6%*
19484	21244	17621	16385	15879	16560	19427	20776	22561	26145	*41400*	*44400*	Sales ($mill)	*50880*
35.7%	37.9%	20.0%	23.9%	19.3%	16.0%	23.8%	17.4%	22.7%	27.0%	*16.5%*	*28.0%*	Operating Margin	*29.0%*
744.0	801.0	681.0	763.0	467.0	376.0	382.0	789.0	637.0	1746.0	*9710*	*9780*	Depreciation ($mill)	*9965*
3102.0	3709.0	1960.0	2563.0	2004.0	1565.0	4457.0	3907.0	4920.0	3439.0	*3380*	*8665*	Net Profit ($mill)	*11250*
48.9%	46.9%	16.2%	11.3%	15.8%	24.7%	24.6%	23.9%	17.6%	30.9%	*25.0%*	*23.0%*	Income Tax Rate	*23.0%*
15.9%	17.5%	11.1%	15.6%	12.6%	9.5%	22.9%	18.8%	21.8%	13.2%	*8.2%*	*19.5%*	Net Profit Margin	*22.1%*
6534.0	7538.0	1242.0	6476.0	6147.0	2398.0	4863.0	5291.0	6506.0	11050	*11000*	*11000*	Working Cap'l ($mill)	*11800*
5328.0	5376.0	6568.0	7981.0	7242.0	6550.0	5716.0	6975.0	5646.0	43387	*41840*	*42000*	Long-Term Debt ($mill)	*40100*
15638	15867	13638	15236	14983	14266	16177	11741	14031	51598	*50120*	*52100*	Shr. Equity ($mill) C	*55230*
15.6%	18.3%	10.7%	12.0%	9.8%	8.3%	21.1%	21.9%	26.0%	4.1%	*4.5%*	*11.0%*	Return on Total Cap'l	*14.5%*
19.8%	23.4%	14.4%	16.8%	13.4%	11.0%	27.6%	33.3%	35.1%	6.7%	*6.5%*	*16.5%*	Return on Shr. Equity	*20.5%*
5.8%	9.2%	NMF	1.7%	NMF	NMF	11.8%	11.3%	16.4%	1.5%	*NMF*	*8.5%*	Retained to Com Eq	*12.5%*
71%	61%	117%	90%	120%	NMF	57%	66%	53%	78%	*120%*	*48%*	All Div'ds to Net Prof	*41%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $46672 mill. **Due in 5 Yrs** $4819 mill.
LT Debt $41853 mill. **LT Interest** $641.9 mill.
(46% of Cap'l)
(Total interest coverage: .7x)
Leases, Capitalized $19.5 mill.

Pension Assets-12/19 $7.6 bill. **Oblig.** $9.2 bill.

Pfd Stock None
Common Stock 2,254,689,026 shs.
as of 8/11/20

MARKET CAP: $130.2 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	6/30/20
Cash Assets	10659	15393	21658
Receivables	5986	7685	7855
Inventory (Avg Cst)	1314	4293	2384
Other	826	1994	2446
Current Assets	18785	29345	34343
Accts Payable	1956	2445	2852
Debt Due	1703	3346	4819
Other	6287	12513	15750
Current Liab.	9946	18304	23421

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	2.0%	5.0%	*11.0%*
"Cash Flow"	4.0%	11.0%	*22.0%*
Earnings	5.5%	13.5%	*12.5%*
Dividends	3.0%	2.5%	*4.0%*
Book Value	6.5%	8.0%	*11.5%*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	4929	5144	5254	5449	20776
2018	5193	5704	5691	5973	22561
2019	5920	6273	6007	7945	26145
2020	10781	10129	*10200*	*10290*	*41400*
2021	*10800*	*11000*	*11300*	*11300*	*44400*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.94	.58	.51	.29	2.32
2018	.91	.23	1.16	.73	3.03
2019	1.04	.87	.83	d.73	2.01
2020	d.34	d.04	*.90*	*.98*	*1.50*
2021	*1.00*	*.90*	*.95*	*1.00*	*3.85*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.38	.38	.38	.39	1.53
2017	.39	.39	.39	.40	1.57
2018	.40	.40	.40	.40	1.60
2019	.40	.41	.41	.41	1.63
2020	.45	.45	.45		

BUSINESS: Bristol-Myers Squibb manufactures proprietary medical products, ethical pharmaceuticals, diagnostics, infant formula, orthopedic implants, health and beauty aids. Major brand names include: *Plavix, Avapro, Pravachol, Coumadin, Reyataz, Sustiva, Baraclude, Erbitux, Taxol, Sprycel, Ixempra, Abilify, Enfamil, Enfagrow*, and *Nivolumab.* Foreign sales represent 61% of '19 total, (45% of op. profit); R&D, 27.2%. '19 depreciation rate: 10.4%. Estimated plant age: 20 years. Has about 26,200 employees. Off. & dir. own less than 1% of stock; Wellington, 5.0%; Vanguard, 8.7%; BlackRock, 7.6% (4/20 proxy). Chairman and CEO: Giovanni Caforio MD. Incorp.: DE. Address: 430 East 29th street, 14th floor, New York, NY 10016. Tel.: 212-546-4000. Internet: www.bms.com.

Bristol-Myers stock is struggling to attain the highs achieved in August, 2016. Back then, the equity was riding high on hopes that its key lung cancer-fighting drug, *Opdivo*, known as a novel checkpoint inhibitor, would fly through final clinical trials to become the next standard in lung cancer treatments. However, the therapy bombed, as it was found to be no more efficacious than chemotherapy. This immediately sent the stock price down a whopping 23%. Bristol's stock price has never fully recovered from the drop. Having invested so much time and money in developing *Opdivo*, Bristol has been using it in combination with other cancer-fighting therapies in the hopes that it would become more effective. So far, though, this strategy has met with mixed success.

In November, 2019, Bristol bought Celgene with the express purpose of jump-starting earnings and therefore, the stock price. BMY acquired Celgene for *Ozanimod*, a treatment for relapsing multiple-sclerosis, *Liso-cel* (for relapsed large B-cell lymphoma), and *bb2121*, a multiple myeloma drug. *Ozanimod* has already been FDA approved for commercial use. *Liso-cell* is expected to be approved on March 31, 2021, and *bb2121* is expected to pass FDA muster by the end of this year. If all three drugs are approved, each BMY investor would receive a contingent value right worth $9 a share. If exercised, this would push up the stock price significantly. In addition, we assume that approval of all three medicines would raise sales and earnings, theoretically raising the stock price. We think there is a 50/50 chance all three will be approved.

Meantime, the company is paying out a healthy and growing dividend. This has provided some solace to investors who have stuck with the company since 2016. That mode of comfort should continue while investors hope that the aforementioned drugs, plus the *Opdivo* team, bear some fruit.

Investors should take a peek at this issue. If only because we foresee no catalyst on the short-term horizon that would derail the stock in a precipitous manner. Faint praise perhaps, but a plus, nevertheless.

Jeremy J. Butler *October 2, 2020*

(A) Based on GAAP diluted shares outstanding. Next earnings report due late October. Includes extraordinary charge of $0.83 in 2012; $1.10 in 2017.
(B) Dividends historically paid in the first week of February, May, August, and November. ■ Dividend reinvestment plan available.
(C) Includes intangibles. In '19: $8.22 million, $5.02/sh.
(D) In millions.

Company's Financial Strength	A++
Stock's Price Stability	80
Price Growth Persistence	60
Earnings Predictability	40

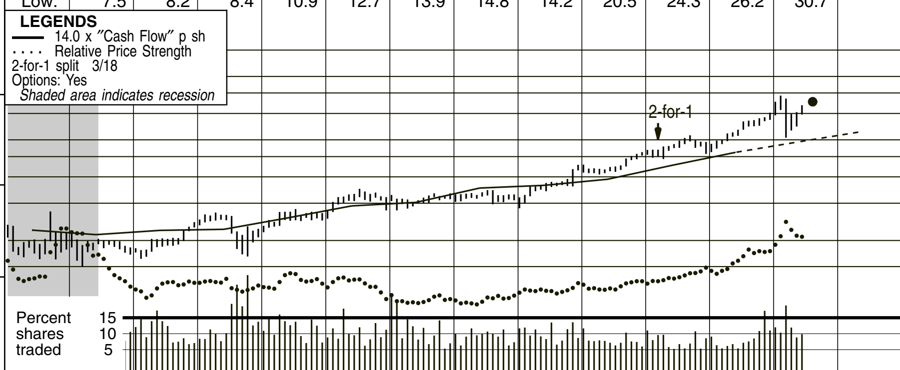
BROWN & BROWN NYSE-BRO

RECENT PRICE 45.49 | P/E RATIO 28.4 (Trailing: 29.3 / Median: 21.0) | RELATIVE P/E RATIO 1.29 | DIV'D YLD 0.7% | VALUE LINE

TIMELINESS 2 Lowered 5/22/20
SAFETY 1 Raised 5/11/18
TECHNICAL 3 Lowered 8/7/20
BETA .95 (1.00 = Market)

High:	10.8	12.2	13.5	14.1	17.6	16.7	17.3	22.8	26.2	31.5	40.4	48.7
Low:	7.5	8.2	8.4	10.9	12.7	13.9	14.8	14.2	20.5	24.3	26.2	30.7

LEGENDS
— 14.0 x "Cash Flow" p sh
.... Relative Price Strength
2-for-1 split 3/18
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$32-$65	$49 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	50	(+10%)	4%
Low	40	(-10%)	-2%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	181	193	191
to Sell	154	173	181
Hld's(000)	198323	205728	205238

% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	22.5	-5.1
3 yr.	94.9	6.8
5 yr.	162.6	24.4

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
2.34	2.82	3.14	3.41	3.45	3.41	3.41	3.54	4.17	4.69	5.49	5.97	6.30	6.81	7.20	8.49	*8.80*	*9.30*	Revenues per sh	*11.15*
.58	.70	.79	.87	.80	.76	.80	.81	.91	1.04	1.08	1.27	1.30	1.39	1.62	1.87	*2.10*	*2.35*	"Cash Flow" per sh	*2.90*
.46	.54	.62	.68	.59	.54	.56	.57	.63	.74	.71	.85	.91	.98	1.22	1.40	*1.60*	*1.80*	Earnings per sh A	*2.20*
.07	.09	.11	.13	.14	.15	.16	.16	.17	.19	.21	.23	.25	.28	.31	.33	*.35*	*.37*	Div'ds Decl'd per sh B	*.50*
.04	.05	.05	.11	.05	.04	.04	.05	.08	.06	.09	.07	.06	.09	.15	.26	*.10*	*.10*	Cap'l Spending per sh	*.15*
2.26	2.74	3.32	3.90	4.39	4.82	5.27	5.73	6.28	6.90	7.37	7.73	8.42	9.35	10.73	11.90	*12.30*	*12.65*	Book Value per sh D	*13.90*
276.64	278.77	280.03	281.35	283.09	284.15	285.59	286.70	287.76	290.84	286.97	277.97	280.21	276.21	279.58	281.66	*284.00*	*285.00*	Common Shs Outst'g C	*282.00*
22.0	22.3	24.4	19.5	16.6	17.4	17.7	20.5	20.1	21.2	22.1	19.0	20.0	23.2	22.8	23.9	*Bold figures are*		Avg Ann'l P/E Ratio	*20.0*
1.16	1.19	1.32	1.04	1.00	1.16	1.13	1.29	1.28	1.19	1.16	.96	1.05	1.17	1.23	1.29	*Value Line*		Relative P/E Ratio	*1.00*
.7%	.7%	.7%	1.0%	1.5%	1.6%	1.6%	1.4%	1.4%	1.2%	1.3%	1.4%	1.4%	1.2%	1.1%	1.0%	*estimates*		Avg Ann'l Div'd Yield	*1.1%*

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
973.5	1013.5	1200.0	1363.3	1575.8	1660.5	1766.6	1881.3	2014.2	2392.2	*2500*	*2650*	Revenues ($mill)	*3150*
35.6%	34.7%	33.3%	33.7%	30.0%	33.1%	32.3%	32.1%	30.4%	30.1%	*31.0%*	*31.0%*	Operating Margin	*32.5%*
65.9	67.1	78.9	85.4	103.8	108.3	107.7	108.1	109.4	128.7	*145*	*160*	Depreciation ($mill)	*195*
161.8	164.0	184.0	217.1	206.9	243.3	257.5	277.0	344.3	398.5	*455*	*510*	Net Profit ($mill)	*620*
39.2%	39.4%	39.6%	39.3%	39.1%	39.6%	39.2%	38.4%	25.6%	24.2%	*24.0%*	*23.5%*	Income Tax Rate	*22.0%*
16.6%	16.2%	15.3%	15.9%	13.1%	14.7%	14.6%	14.7%	17.1%	16.7%	*18.1%*	*19.3%*	Net Profit Margin	*19.7%*
182.6	226.5	191.7	21.1	300.9	208.8	315.5	254.7	384.3	449.4	*500*	*550*	Working Cap'l ($mill)	*650*
250.1	250.0	450.0	380.0	1152.8	1079.9	1018.4	856.1	1457.0	1500.3	*1450*	*1350*	Long-Term Debt ($mill)	*1000*
1506.3	1644.0	1807.3	2007.1	2113.7	2149.8	2360.2	2582.7	3000.6	3350.3	*3500*	*3600*	Shr. Equity ($mill)	*3925*
9.6%	9.0%	8.5%	9.4%	6.8%	8.1%	8.2%	8.6%	8.2%	8.9%	*9.5%*	*11.0%*	Return on Total Cap'l	*13.0%*
10.7%	10.0%	10.2%	10.8%	9.8%	11.3%	10.9%	10.7%	11.5%	11.9%	*13.0%*	*14.0%*	Return on Shr. Equity	*16.0%*
7.8%	7.1%	7.4%	8.1%	7.0%	8.3%	7.9%	7.7%	8.7%	9.2%	*10.0%*	*11.5%*	Retained to Com Eq	*12.0%*
28%	28%	27%	25%	29%	26%	27%	28%	25%	23%	*22%*	*21%*	All Div'ds to Net Prof	*23%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $1.541 bill. **Due in 5 Yrs** $480.0 mill.
LT Debt $1.483 bill. **LT Interest** $63.0 mill.
(LT Interest Coverage: 11.5x)
(31% of Cap'l)
Leases, Uncapitalized: Annual rentals $40.9 mill.

No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 283,441,000 shs.

MARKET CAP: $12.9 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	790.5	975.3	791.8
Receivables	844.8	942.9	1000.1
Other	532.0	576.6	491.9
Current Assets	2167.3	2494.8	2283.8
Accts Payable	944.9	1114.3	1126.0
Debt Due	50.0	55.0	58.8
Other	788.1	876.0	705.8
Current Liab	1783.0	2045.3	1890.6

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	7.5%	10.5%	*7.0%*
"Cash Flow"	6.0%	9.5%	*10.0%*
Earnings	5.0%	10.0%	*10.5%*
Dividends	8.5%	10.0%	*8.5%*
Book Value	9.5%	8.5%	*4.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	465.1	466.3	475.6	474.3	1881.3
2018	501.5	473.1	530.9	508.7	2014.2
2019	619.3	575.2	618.7	579.0	2392.2
2020	698.5	*570*	*630*	*601.5*	*2500*
2021	*700*	*635*	*670*	*645*	*2650*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.25	.23	.27	.24	.98
2018	.32	.26	.38	.27	1.22
2019	.41	.33	.41	.27	1.40
2020	.54	*.30*	*.42*	*.34*	*1.60*
2021	*.55*	*.42*	*.45*	*.38*	*1.80*

Cal-endar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.06	.06	.06	.0675	.25
2017	.0675	.0675	.0675	.075	.28
2018	.075	.075	.075	.08	.31
2019	.08	.08	.08	.085	.33
2020	.085	.085			

BUSINESS: Brown & Brown Inc. operates an insurance brokerage firm that markets property/casualty products and services to commercial, professional, and individual customers. The company's property insurance protects against physical damage to property and the resultant interruption of business caused by firestorm, windstorm, or other perils. Casualty insurance relates to legal liabilities, workers' compensation, commercial and private automobile insurance, and fidelity and surety insurance. Has 8,271 employees. Off./dir. own 17.1% of stock (includes J. Hyatt Brown, 14.5%) (4/20 Proxy). Chairman: J. Hyatt Brown. CEO & Pres.: J. Powell Brown. Inc.: FL. Address: 220 South Ridgewood Ave., Daytona Beach, FL 32114. Telephone: 386-252-9601. Internet: www.bbinsurance.com.

Brown & Brown's stock price is on the mend. Since our mid-May review, shares of the diversified insurance firm have risen roughly 20% in value, rebounding strongly from the COVID-19-induced sell-off earlier this year. Following the past few months of appreciation, Brown shares are not trading far from recently etched all-time highs.

Respectable top- and bottom-line growth is probably in the cards this year and next. For 2020, the company started off on the right foot amidst a challenging economic backdrop. Despite what we believe to be a more subdued back half of the year due to lingering coronavirus constraints, our model calls for decent revenue and earnings expansion. Next year, similar growth is likely on tap, as we look for earnings of $1.80 a share from revenues of $2.5 billion.

Brown & Brown is acquiring more assets. Coming off the heels of some notable asset accumulation earlier this year, Brown recently announced the acquisition of First Resource, an auto finance and insurance provider that operates in Texas and the Southwest. Looking forward, we think there is more insurance industry consolidation on the horizon and, based on its track record, Brown is likely to take part in the action.

A potential macroeconomic recovery augurs well for long-term prospects. While the near term may still be a bit cloudy due to a lack of transparency around consumer and business spending, we think the sky will clear as the economy slowly reopens and business activity picks up. As a result, demand for property and casualty insurance products ought to noticeably strengthen. On top of that, we expect management to continue to pursue tuck-in acquisitions as part of its broader growth strategy.

Brown & Brown shares are favorably ranked (2) for relative year-ahead price performance, but have fallen one notch on our Timeliness ranking scale. Conversely, investors with a view to 2023-2025 can probably find better options elsewhere. The stock is presently trading firmly within our 3- to 5-year Target Price parameters, thus limiting the issue's long-term appeal.

Nicholas P. Patrikis *August 7, 2020*

(A) Diluted earnings. Excludes n/r items: '17, $0.85. Next earnings report due late October. Earnings may not sum due to rounding or changes in shares outstanding.
(B) Dividends historically paid in early February, May, August, and November.
(C) In millions, adjusted for split.
(D) Includes intangibles. In '19: $4662.9 million, $16.56. a share.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	80
Earnings Predictability	90

BROWN-FORMAN 'B' NYSE-BFB

RECENT PRICE **57.39** | P/E RATIO **31.2** (Trailing: 32.1, Median: 26.0) | RELATIVE P/E RATIO **2.33** | DIV'D YLD **1.2%** | VALUE LINE

TIMELINESS 3 Lowered 3/27/20
SAFETY 1 Raised 5/21/93
TECHNICAL 2 Raised 3/27/20
BETA .80 (1.00 = Market)

18-Month Target Price Range
Low-High: $50-$82 | Midpoint (% to Mid): $66 (15%)

2023-25 PROJECTIONS

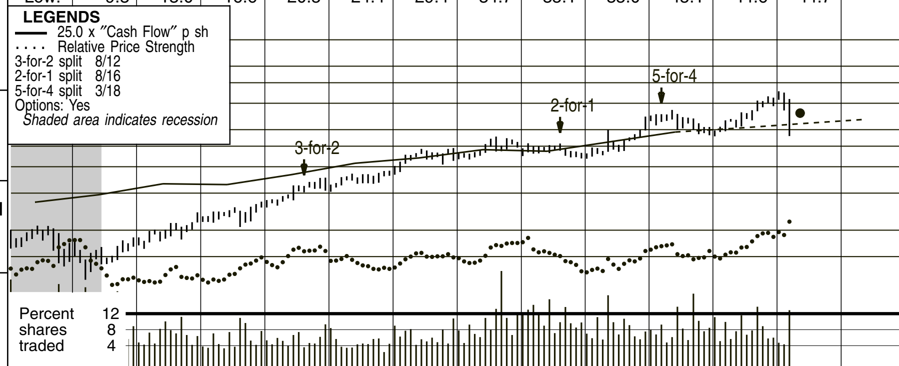
	Price	Gain	Ann'l Total Return
High	90	(+55%)	13%
Low	75	(+30%)	8%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	256	271	259
to Sell	219	216	245
Hld's(000)	148717	152583	153816

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	14.8	19.5	21.9	28.4	30.7	39.2	44.4	41.4	55.3	59.6	69.0 / 72.9

High:	14.8	19.5	21.9	28.4	30.7	39.2	44.4	41.4	55.3	59.6	69.0	72.9
Low:	9.3	13.0	16.6	20.5	24.4	29.4	34.7	35.1	35.0	45.1	44.6	44.7



Target Price Range
2023 | 2024 | 2025

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	6.4	-26.1
3 yr.	55.8	-16.7
5 yr.	63.8	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
4.05	3.44	3.84	4.57	4.41	4.48	4.76	5.11	5.33	5.61	6.01	6.25	6.24	6.75	6.97	**7.10**	**7.45**	**7.80**	Sales per sh A	**9.25**
.63	.70	.75	.87	.87	.94	1.06	1.05	1.17	1.33	1.41	1.54	1.51	1.68	1.87	**1.95**	**2.05**	**2.15**	"Cash Flow" per sh	**3.45**
.52	.62	.67	.76	.77	.82	.95	.95	1.07	1.22	1.28	1.38	1.37	1.54	1.73	**1.80**	**1.90**	**2.00**	Earnings per sh B	**3.25**
.18	.22	.24	.27	.30	.31	.33	.36	.39	.44	.48	.52	.56	.61	.65	.66	**.69**	**.74**	Div'ds Decl'd per sh C■	**.88**
.09	.09	.10	.07	.10	.07	.08	.11	.18	.24	.23	.22	.23	.26	.25	**.50**	**.60**	**.70**	Cap'l Spending per sh	**.90**
2.29	2.72	2.72	3.05	3.23	3.44	3.79	3.88	3.05	3.81	3.65	3.16	2.85	2.74	3.45	**3.65**	**3.90**	**4.05**	Book Value per sh D	**5.35**
571.35	574.05	577.67	565.28	562.98	551.11	543.71	532.78	534.28	533.64	521.75	494.36	480.11	481.00	477.17	**478.50**	**476.50**	**475.00**	Common Shs Outst'g E	**465.00**
19.7	22.5	22.3	19.7	17.8	16.1	17.9	21.4	24.1	24.7	28.4	28.8	27.6	30.4	29.3		Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	**25.0**
1.04	1.20	1.20	1.05	1.07	1.07	1.14	1.34	1.53	1.39	1.49	1.45	1.45	1.53	1.58				Relative P/E Ratio	**1.40**
1.8%	1.6%	1.6%	1.8%	2.2%	2.4%	1.9%	1.8%	1.5%	1.4%	1.3%	1.3%	1.5%	1.3%	1.3%				Avg Ann'l Div'd Yield	**1.1%**
						2586.0	2723.0	2849.0	2991.0	3134.0	3089.0	2994.0	3248.0	3324.0	**3400**	**3550**	**3700**	Sales ($mill) A	**4300**
						29.5%	30.7%	32.5%	33.6%	35.1%	35.4%	34.6%	35.1%	35.5%	**35.8%**	**36.0%**	**36.5%**	Operating Margin	**37.5%**
						55.0	49.0	51.0	50.0	51.0	56.0	58.0	64.0	58.0	**65.0**	**70.0**	**75.0**	Depreciation ($mill)	**95.0**
						523.4	513.0	576.0	659.0	684.0	707.5	669.0	746.0	835.0	**865**	**920**	**960**	Net Profit ($mill)	**1500**
						31.0%	32.5%	31.7%	30.4%	31.7%	29.5%	28.3%	26.6%	19.9%	**20.0%**	**21.0%**	**21.0%**	Income Tax Rate	**23.0%**
						20.2%	18.8%	20.2%	22.0%	21.8%	22.9%	22.3%	23.0%	25.1%	**25.4%**	**25.9%**	**25.9%**	Net Profit Margin	**34.8%**
						1269.0	1345.0	1348.0	1616.0	1296.0	1442.0	1381.0	1734.0	2016.0	**2025**	**2050**	**2075**	Working Cap'l ($mill)	**2125**
						504.0	503.0	997.0	997.0	748.0	1230.0	1689.0	2341.0	2290.0	**2300**	**2200**	**2100**	Long-Term Debt ($mill)	**2000**
						2060.0	2069.0	1628.0	2032.0	1905.0	1562.0	1370.0	1316.0	1647.0	**1750**	**1850**	**1925**	Shr. Equity ($mill)	**2500**
						21.0%	20.5%	22.6%	22.2%	26.3%	26.2%	22.8%	21.3%	22.3%	**22.0%**	**23.5%**	**24.5%**	Return on Total Cap'l	**34.0%**
						25.4%	24.8%	35.4%	32.4%	35.9%	45.3%	48.8%	56.7%	50.7%	**49.0%**	**50.0%**	**50.0%**	Return on Shr. Equity	**60.0%**
						16.7%	15.5%	22.5%	21.0%	22.5%	28.3%	28.8%	NMF	31.9%	**31.0%**	**32.0%**	**32.0%**	Retained to Com Eq	**43.5%**
						34%	37%	36%	35%	37%	38%	41%	104%	37%	**36%**	**36%**	**37%**	All Div'ds to Net Prof	**27%**

CAPITAL STRUCTURE as of 1/31/20
Total Debt $2297 mill. **Due in 5 Yrs** $220 mill.
LT Debt $2293 mill. **LT Interest** $60 mill.

(Total interest coverage: 21.1x) (54% of Cap'l)
Leases, Uncapitalized Annual rentals $23 mill.
Pension Assets-4/19 $754 mill. **Obligations** $958 mill.

Pfd Stock None
Common Stock 478,139,410 shs. (incl. 169,039,764 Cl. 'A' voting shs.)
as of 2/29/20
MARKET CAP: $27.4 billion (Large Cap)

CURRENT POSITION ($MILL.)	2017	2018	1/31/20
Cash Assets	239	307	276
Receivables	639	609	732
Inventory (LIFO)	1379	1520	1668
Other	298	283	318
Current Assets	2555	2719	2994
Accts Payable	154	150	558
Debt Due	215	150	4
Other	452	403	102
Current Liab.	821	703	664

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '23-'25
Sales	4.5%	4.5%	5.0%
"Cash Flow"	7.5%	7.5%	10.5%
Earnings	8.0%	7.5%	11.0%
Dividends	8.5%	9.0%	5.5%
Book Value	- -	-3.5%	8.5%

Fiscal Year Begins	QUARTERLY SALES ($ mill.)A Jul.31	Oct.31	Jan.31	Apr.30	Full Fiscal Year
2017	723	914	878	733	3248
2018	766	910	904	744	3324
2019	766	989	899	**746**	**3400**
2020	**787**	**995**	**975**	**793**	**3550**
2021	**820**	**1025**	**995**	**860**	**3700**

Fiscal Year Begins	EARNINGS PER SHARE A B Jul.31	Oct.31	Jan.31	Apr.30	Full Fiscal Year
2017	.36	.49	.44	.23	1.54
2018	.41	.52	.47	.33	1.73
2019	.39	.59	.48	**.34**	**1.80**
2020	**.42**	**.60**	**.50**	**.38**	**1.90**
2021	**.44**	**.62**	**.54**	**.40**	**2.00**

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Apr.31	Jul.30	Oct.30	Jan.31	Full Year
2016	.136	.136	.146	.146	.56
2017	.146	.146	.146	.157	.59
2018	.157	.157	.158	.166	.64
2019	.166	.166	.166	.174	.67
2020	.174				

BUSINESS: Brown-Forman is engaged in the production and marketing of distilled spirits and wines. Major brands include *Jack Daniel's*, *Finlandia*, *Canadian Mist*, and *Korbel*. In the U.S., sells spirits either through wholesale distributors or directly to state governments in those states that control alcohol sales. Sold Hartmann luggage business, 5/07; Lenox tableware division, 9/05; minority stake in Glenmorangie PLC, 11/04. Acquired Slane Castle Irish Whiskey 6/15. Acquired Benriach 6/16. Non-U.S. sales represent 53% of total revenue. Has 4,700 employees. Off. & dir. own about 6.5% of 'A' and 31.2% of 'B' shares (6/19 Proxy). CEO: Lawson Whiting. Inc.: DE. Address: 850 Dixie Highway Louisville, KY 40201-1080. Tel.: 502-585-1100. Internet: www.brown-forman.com.

Brown-Forman shares have declined roughly 15% in price since our January review. Investors have likely reacted to the company's tempered fiscal 2019 full-year guidance (year ends April 30th) and cautious outlook. Notably, the global spread of COVID-19 is expected to impact operations in the near term. Indeed, Brown-Forman anticipates that lower manufacturing activities at its production plants will lead to supply-chain disruptions for the foreseeable future. Additionally, in light of economic concerns, consumers may adopt more constrained spending habits for nonessential items such as alcoholic beverages.

The company has certain headwinds to overcome. Ongoing trade uncertainties and increased tariffs may contribute to near-term challenges. Also, falling demand for Brown-Forman's traditional *Jack Daniel's* label is a concern. Too, weakening economic conditions in countries such as Mexico indicate that top- and bottom-line contributions from these emerging markets will probably lessen. Lastly, higher costs for ingredients, such as agave, have led to increased manufacturing expenses for tequila labels *Herradura* and *el Jimador*.

There are measures being implemented that should help improve operating results. First, pricing initiatives ought to alleviate tariff-related and manufacturing burdens. Additionally, brand building and a growing portfolio of well-sought-after premium (*Woodford Reserve*) and ready-to-drink, on trend, offerings (*Jack Daniel's Tennessee Apple*) are expected to facilitate sales growth in the 2%-4% range in fiscal 2019, 2020, and 2021 (years end April 30th). Moreover, management's ongoing efforts to maintain cost discipline through efficiency actions, such as improved route-to-market distributions ought to support bottom-line growth in the 4%-5% range over the next three years.

Despite the recent stock-price decline, long-term investors should wait for a better entry point. At present, these high-quality shares possess below average capital appreciation over the 2023-2025 pull. Moreover, ongoing turmoil in the global markets makes near-term stock-price volatility a likelihood.

Nira Maharaj *April 17, 2020*

(A) Excludes excise taxes. Fiscal yr. ends April 30th of foll. cal. year. **(B)** Dil. earnings. Excls. nonrec. gain (loss): '04, 2¢; '05, 4¢; '06, 3¢, '09, (3¢), '10, 14¢, '12, 3¢, '15, 70¢; '17, (6¢). May not sum due to rounding. Next earnings report due early June. **(C)** Div'ds paid early April, July, Oct., and Jan. ■ Co. Div'd reinvestment plan available. Special dividend of $1.00 paid on 4/2/18. **(D)** Incl. intangibles. In '18: $1398.0 mill., $2.92/sh. **(E)** In mills., adj for splits.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	85
Earnings Predictability	100

CHURCH & DWIGHT NYSE-CHD

RECENT PRICE	P/E RATIO	(Trailing / Median)	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
74.75	26.7	(Trailing: 28.0 / Median: 24.0)	1.24	1.3%	1187

TIMELINESS 1 Raised 5/22/20
SAFETY 1 Raised 7/6/07
TECHNICAL 2 Raised 5/8/20
BETA .65 (1.00 = Market)

18-Month Target Price Range
Low-High **Midpoint (% to Mid)**
$63-$108 $86 (15%)

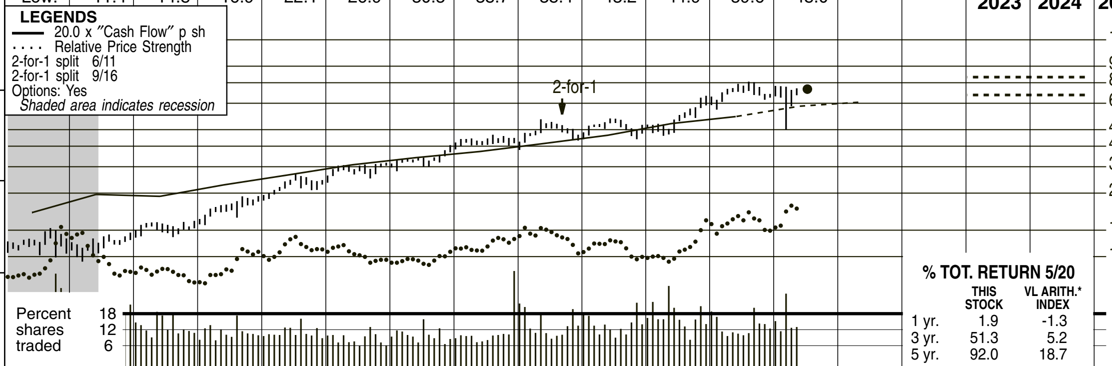
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	85	(+15%)	5%
Low	70	(-5%)	Nil

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	337	346	324
to Sell	378	402	423
Hld's(000)	203755	205298	201629

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	15.6	17.8	23.2	29.6	33.5	40.5	45.4	53.7	54.2	69.5	81.0	77.2
Low:	11.4	14.8	16.9	22.1	26.9	30.5	38.7	38.4	43.2	44.9	59.6	48.0



% TOT. RETURN 5/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	1.9	-1.3
3 yr.	51.3	5.2
5 yr.	92.0	18.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
5.78	6.87	7.44	8.38	8.64	8.93	9.09	9.66	10.53	11.49	12.36	13.06	13.75	15.25	16.79	17.76	*18.55*	*19.40*	Sales per sh E	*22.00*
.51	.66	.74	.85	.97	1.18	1.16	1.31	1.46	1.63	1.77	1.89	2.06	2.26	2.56	2.77	*3.10*	*3.25*	"Cash Flow" per sh	*3.80*
.34	.46	.52	.62	.72	.87	.99	1.11	1.23	1.40	1.51	1.63	1.77	1.94	2.27	2.44	*2.80*	*2.95*	Earnings per sh A	*3.50*
.06	.06	.07	.07	.09	.12	.16	.34	.48	.56	.62	.67	.71	.76	.87	.91	*.96*	*1.00*	Div'ds Decl'd per sh B■	*1.20*
.14	.15	.18	.18	.35	.48	.22	.27	.27	.24	.26	.24	.20	.18	.24	.30	*.35*	*.30*	Cap'l Spending per sh	*.50*
2.22	2.76	3.30	4.08	4.75	5.68	6.57	7.17	7.43	8.28	7.88	7.78	7.79	8.96	9.94	10.87	*11.50*	*14.20*	Book Value per sh C	*17.00*
252.75	252.75	261.44	264.98	280.29	282.20	284.82	284.57	277.56	277.93	266.70	259.91	253.96	247.63	246.89	245.42	*247.50*	*248.00*	Common Shs Outst'g D	*250.00*
21.4	19.4	18.1	19.9	19.8	15.8	16.6	18.4	21.2	22.3	23.1	26.0	26.5	25.3	24.1	29.3	*Bold figures are*		Avg Ann'l P/E Ratio	*22.0*
1.13	1.03	.98	1.06	1.19	1.05	1.06	1.15	1.35	1.25	1.22	1.31	1.39	1.27	1.30	1.59	*Value Line*		Relative P/E Ratio	*1.20*
.8%	.7%	.7%	.5%	.6%	.8%	.9%	1.7%	1.9%	1.8%	1.8%	1.6%	1.5%	1.5%	1.6%	1.3%	*estimates*		Avg Ann'l Div'd Yield	*1.6%*
						2589.2	2749.3	2921.9	3194.3	3297.6	3394.8	3493.1	3776.2	4145.9	4357.7	*4585*	*4815*	Sales ($mill) E	*5500*
						18.9%	20.3%	20.6%	21.3%	21.2%	22.2%	22.6%	22.1%	20.6%	20.7%	*20.0%*	*20.0%*	Operating Margin	*22.0%*
						44.1	49.8	56.0	59.7	57.1	58.3	59.7	60.9	64.4	63.8	*65.0*	*68.0*	Depreciation ($mill) E	*75.0*
						285.9	324.2	349.8	394.4	413.9	432.3	463.9	497.9	568.6	615.9	*700*	*740*	Net Profit ($mill)	*875*
						34.1%	36.3%	35.5%	34.0%	33.8%	34.2%	34.7%	32.3%	21.0%	20.4%	*25.0%*	*25.0%*	Income Tax Rate	*25.0%*
						11.0%	11.8%	12.0%	12.3%	12.6%	12.7%	13.3%	13.2%	13.7%	14.1%	*15.3%*	*15.4%*	Net Profit Margin	*15.9%*
						202.4	371.6	208.2	464.6	127.2	33.3	d245.1	65.2	d248.1	d135.9	*50.0*	*150*	Working Cap'l ($mill)	*750*
						249.7	249.7	649.4	649.5	698.6	692.8	693.4	2103.4	1508.8	1810.2	*1800*	*1800*	Long-Term Debt ($mill)	*1800*
						1870.9	2040.8	2060.9	2299.9	2101.9	2023.2	1977.9	2218.0	2453.8	2667.8	*2850*	*3525*	Shr. Equity ($mill)	*4250*
						14.1%	14.3%	13.2%	13.8%	15.3%	16.5%	17.9%	12.1%	15.3%	14.6%	*15.0%*	*14.0%*	Return on Total Cap'l	*14.5%*
						15.3%	15.9%	17.0%	17.1%	19.7%	21.4%	23.5%	22.4%	23.2%	23.1%	*24.5%*	*21.0%*	Return on Shr. Equity	*20.5%*
						12.9%	11.1%	10.4%	10.4%	11.7%	12.7%	14.2%	13.9%	14.5%	14.7%	*16.0%*	*14.0%*	Retained to Com Eq	*13.5%*
						15%	30%	38%	39%	40%	41%	39%	38%	38%	36%	*34%*	*34%*	All Div'ds to Net Prof	*34%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $2782.7 mill. **Due in 5 Yrs** $550 mill.
LT Debt $1810.8 mill. **LT Interest** $85.0 mill.
(Total interest coverage: 11.5x) (39% of Cap'l)

Leases, Uncapitalized Annual rentals $23.4 mill.
No Defined Benefit Plan

Pfd Stock None
Common Stock 245,892,719 shares
as of 4/28/20

MARKET CAP: $18.4 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	316.7	155.7	1046.6
Receivables	345.3	356.4	353.5
Inventory (LIFO)	382.8	417.4	395.7
Other	33.4	26.9	33.0
Current Assets	1078.2	956.4	1828.8
Accts Payable	430.2	473.3	741.2
Debt Due	598.3	252.9	971.9
Other	297.8	366.1	55.9
Current Liab.	1326.3	1092.3	1769.0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	6.5%	7.5%	5.0%
"Cash Flow"	9.5%	9.5%	7.0%
Earnings	11.5%	10.0%	8.0%
Dividends	25.5%	9.0%	6.0%
Book Value	7.5%	5.0%	9.5%

Cal-endar	QUARTERLY SALES ($ mill.) E Mar.Per.	Jun.Per.	Sep.Per.	Dec.Per.	Full Year
2017	877.2	898.0	967.9	1033.1	3776.2
2018	1006.0	1027.9	1037.6	1074.4	4145.9
2019	1044.7	1079.4	1089.4	1144.2	4357.7
2020	1165.2	*1125*	*1140*	*1154.8*	*4585*
2021	*1180*	*1200*	*1210*	*1225*	*4815*

Cal-endar	EARNINGS PER SHARE A Mar.Per.	Jun.Per.	Sep.Per.	Dec.Per.	Full Year
2017	.52	.41	.49	.52	1.94
2018	.63	.49	.58	.57	2.27
2019	.70	.55	.62	.58	2.44
2020	.92	*.60*	*.65*	*.63*	*2.80*
2021	*.95*	*.65*	*.65*	*.70*	*2.95*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.178	.178	.178	.178	.71
2017	.19	.19	.19	.19	.76
2018	.218	.218	.218	.218	.87
2019	.228	.228	.228	.228	.91
2020	.24	.24			

BUSINESS: Church & Dwight Co., Inc. develops, manufactures, and markets a broad range of consumer goods. Household Products (42% of 2019 sales), Personal Care (34%), Consumer International (17%), and Specialty Care (7%). Brands include *ARM & HAMMER, Trojan, OxiClean, SpinBrush, First Response, Nair, Orajel, XTRA, L'il Critters, VitaFusion, Simply Saline, Flawless, Batiste,* and *Waterpik.* Wal-Mart accounted for 24% of 2019 sales. Has approximately 48,000 employees. Officers/directors own 2.0% of stock; Vanguard, 12.0%; BlackRock, 9.0%; State Street, 5.0% (3/20 proxy). Inc.: DE. Chairman, President, and CEO: Matthew T. Farrell. Address: 500 Charles Ewing Boulevard, Ewing, NJ 08628. Telephone: 609-683-5900. Internet: www.churchdwight.com.

Church & Dwight began the year on an impressive note. Share earnings jumped 31%, on a 12% sales gain, handily beating our estimates, due to the demand for many of the company's products in the wake of the global coronavirus pandemic. In fact, domestic consumption increased 30% across most of its brands in March, owing to pantry loading. The following month, Church & Dwight focused on replenishing inventories and store shelves. A better product mix and pricing initiatives, on top of contributions from recent acquisitions, should continue to lift results in the coming quarters.

The coronavirus pandemic will likely influence operations in the near term. Management ought to prioritize the health and safety of its employees. Too, it has ramped up the manufacturing of its higher-in-demand cleaning products, such as baking soda, laundry detergent, and cleaners, and healthcare offerings, such as vitamins and nasal hygiene. Meanwhile, Church & Dwight has implemented cost controls, and worked to bolster operating efficiencies, and reallocated resources to support much-needed brands.

The company is well positioned this year and next. We have raised our near-term estimates, and now look for share profits to grow 15%, on a 5% sales advance in 2020. We anticipate stronger consumer demand will counter supply-chain disruptions and other uncertainties due to the ongoing coronavirus pandemic, or headwinds from commodity costs or foreign currency fluctuations. Next year, the company will probably resume other growth efforts, including product innovation, or ramping up marketing expenditures to boost its brand equity. Too, it may pursue other bolt-on acquisitions to strengthen its asset roster. All told, we look for the top and bottom lines to expand at a mid- to upper-single-digit clip through 2021.

These shares are favorably ranked for the year ahead. C&D's defensive characteristics have long appealed to those seeking slow-and-steady growth. And its high scores for Financial Strength and Safety add to the issue's conservative allure. On the other hand, much of the long-term capital appreciation potential is already baked into the recent quotation.

Orly Seidman *June 19, 2020*

(A) Dil. earnings. Excl. nonrecurring gains/(losses): '08, 4¢; '09, 3¢; '10, (10¢); '11, (5¢); '16, (2¢). EPS may not sum due to rounding. Incl. acquisition related charges: '04, 15¢. Next earnings report due early August.
(B) Dividends are hist. paid in Mar., June, Sep., and Dec. ■ Dividend reinvestment plan available. (C) Incl. intangibles. In '19: $4829.0 mill., $24.05 p/sh.
(D) In mill., adj. for splits.
(E) Sales excl. amort. after 2009.

Company's Financial Strength	A+
Stock's Price Stability	100
Price Growth Persistence	80
Earnings Predictability	100

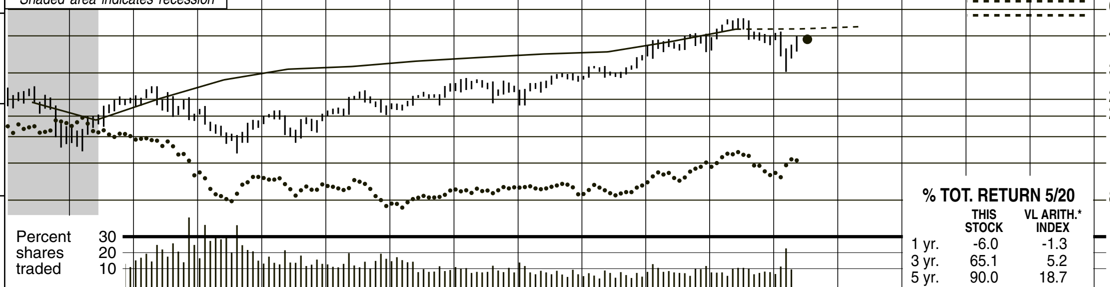
CISCO SYSTEMS NDQ-CSCO

RECENT PRICE 46.30 | P/E RATIO 15.0 (Trailing: 14.3, Median: 12.0) | RELATIVE P/E RATIO 0.76 | DIV'D YLD 3.1% | VALUE LINE

TIMELINESS 3 Raised 4/24/20
SAFETY 1 Raised 12/16/16
TECHNICAL 4 Raised 5/1/20
BETA .95 (1.00 = Market)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
High:	24.8	27.7	22.3	21.3	26.5	28.6	30.3	32.0	39.0	49.5	58.2	50.3
Low:	13.6	19.0	13.3	15.0	20.0	21.3	23.0	22.5	29.8	37.3	41.0	32.4

LEGENDS
— 14.0 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range
2023 | 2024 | 2025

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$34-$79	$57 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(+50%)	*14%*
Low	60	(+30%)	*10%*

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	1133	1341	1182
to Sell	1081	1026	1193
Hld's(000)	3137999	3080575	3032026

% TOT. RETURN 5/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-6.0	-1.3
3 yr.	65.1	5.2
5 yr.	90.0	18.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
3.31	3.95	4.70	5.73	6.71	6.24	7.08	7.95	8.69	9.02	9.23	9.67	9.79	9.63	10.69	12.21	*11.65*	*11.90*	Revenues per sh A	*14.60*
.95	1.08	1.13	1.43	1.66	1.37	1.73	2.12	2.38	2.45	2.60	2.71	2.82	2.88	3.23	3.69	*3.60*	*3.65*	"Cash Flow" per sh	*4.45*
.76	.87	.89	1.17	1.31	1.05	1.33	1.62	1.85	2.02	2.06	2.21	2.36	2.39	2.60	3.10	*3.15*	*3.20*	Earnings per sh B	*4.00*
--	--	--	--	--	--	--	.12	.28	.62	.72	.80	.94	1.10	1.24	1.34	*1.41*	*1.50*	Div'ds Decl'd per sh E	*2.00*
.09	.11	.13	.21	.22	.17	.18	.22	.21	.22	.25	.24	.23	.19	.18	.21	*.17*	*.20*	Cap'l Spending per sh	*.35*
3.88	3.69	3.95	5.16	5.83	6.68	7.83	8.69	9.68	10.97	11.09	11.74	12.64	13.27	9.36	7.90	*8.60*	*9.25*	Book Value per sh	*12.50*
6650.4	6274.7	6059.0	6100.0	5893.0	5785.0	5655.0	5435.0	5298.0	5389.0	5107.0	5085.0	5029.0	4983.0	4614.0	4250.0	*4220.0*	*4180.0*	Common Shs Outst'g C	*4000.0*
29.6	21.6	21.3	22.0	20.6	17.7	17.9	11.9	9.7	10.3	11.3	12.3	11.5	13.3	15.1	16.1	*Bold figures are*		Avg Ann'l P/E Ratio	*16.0*
1.56	1.15	1.15	1.17	1.24	1.18	1.14	.75	.62	.58	.59	.62	.60	.67	.82	.88	*Value Line*		Relative P/E Ratio	*.90*
--	--	--	--	--	--	--	.6%	1.6%	3.0%	3.1%	2.9%	3.5%	3.5%	3.2%	2.7%	*estimates*		Avg Ann'l Div'd Yield	*3.1%*

CAPITAL STRUCTURE as of 4/25/20

Total Debt $16.1 bill. **Due in 5 years** $17.9 bill.
LT Debt $11.6 bill. **LT Interest** $425 mill.
(24% of Cap'l)
Leases, Uncapitalized Annual rentals $441 mill.

No Defined Benefit Pension Plan
Pfd Stock None

Common Stock 4,222,296,202 shs.
as of 5/14/20

MARKET CAP: $195 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
40040	43218	46061	48607	47142	49161	49247	48005	49330	51904	*49100*	*49700*	Revenues ($mill) A	*58350*
28.0%	32.0%	33.3%	31.0%	31.4%	31.6%	33.4%	32.1%	34.0%	35.9%	*37.5%*	*36.5%*	Operating Margin	*36.5%*
2030.0	2486.0	2602.0	2351.0	2432.0	2442.0	2150.0	2286.0	2192.0	1897.0	*1840*	*1880*	Depreciation ($mill)	*1995*
7767.0	9033.0	10017	10866	10863	11354	12022	12067	12703	13787	*13390*	*13475*	Net Profit ($mill)	*16150*
17.5%	21.3%	21.9%	20.8%	20.8%	21.7%	21.8%	22.1%	21.0%	19.0%	*20.0%*	*20.0%*	Income Tax Rate	*20.0%*
19.4%	20.9%	21.7%	22.4%	23.0%	23.1%	24.4%	25.1%	25.8%	26.6%	*27.3%*	*27.1%*	Net Profit Margin	*27.7%*
32188	39725	44202	43329	47305	52660	53808	56120	34802	16043	*15250*	*16000*	Working Cap'l ($mill)	*16550*
12188	16234	16297	12928	20401	21457	24483	25725	20331	14475	*11500*	*11000*	Long-Term Debt ($mill)	*10000*
44267	47226	51286	59120	56654	59698	63586	66137	43204	33571	*36250*	*38750*	Shr. Equity ($mill)	*50000*
14.3%	14.7%	15.3%	15.5%	14.5%	14.3%	14.0%	13.6%	20.7%	29.6%	*28.0%*	*27.0%*	Return on Total Cap'l	*27.0%*
17.5%	19.1%	19.5%	18.4%	19.2%	19.0%	18.9%	18.2%	29.4%	41.1%	*37.0%*	*35.0%*	Return on Shr. Equity	*32.5%*
17.5%	17.7%	16.6%	12.8%	12.5%	12.2%	11.4%	9.9%	15.6%	23.3%	*20.0%*	*18.5%*	Retained to Com Eq	*16.0%*
--	7%	15%	30%	35%	36%	40%	46%	47%	43%	*45%*	*47%*	All Div'ds to Net Prof	*50%*

CURRENT POSITION ($MILL.)

	2018	2019	4/25/20
Cash Assets D	46548	33413	28574
Receivables	5554	5491	4569
Inventory (FIFO)	1846	1383	1212
Other	7889	7468	6952
Current Assets	61837	47755	41307
Accts Payable	1904	2059	2393
Debt Due	5238	10191	4506
Other	19893	19462	19038
Current Liab.	27035	31712	25937

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	5.5%	4.0%	*5.0%*
"Cash Flow"	8.0%	5.5%	*5.5%*
Earnings	8.5%	6.5%	*7.0%*
Dividends	--	18.0%	*8.5%*
Book Value	5.5%	-1.0%	*4.5%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Oct.Per	Jan.Per	Apr.Per	Jul.Per	Full Fiscal Year
2017	12352	11580	11940	12133	48005
2018	12136	11887	12463	12844	49330
2019	13072	12446	12958	13428	51904
2020	13159	12005	11983	*11953*	*49100*
2021	*12250*	*12000*	*12600*	*12850*	*49700*

Fiscal Year Ends	EARNINGS PER SHARE AB Oct.Per	Jan.Per	Apr.Per	Jul.Per	Full Fiscal Year
2017	.61	.57	.60	.61	2.39
2018	.61	.63	.66	.70	2.60
2019	.75	.73	.78	.83	3.10
2020	.84	.77	.79	*.75*	*3.15*
2021	*.75*	*.80*	*.80*	*.85*	*3.20*

Cal-endar	QUARTERLY DIVIDENDS PAID E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.21	.26	.26	.26	.99
2017	.26	.29	.29	.29	1.13
2018	.29	.33	.33	.33	1.28
2019	.33	.35	.35	.35	1.38
2020	.35	.36			

BUSINESS: Cisco Systems, Inc. is a leading provider of Internet Protocol-based networking and other products for transporting data, voice, and video across geographically dispersed local-area-networks, metropolitan-area networks, and wide-area networks. Devices are primarily integrated by Cisco IOS Software and include Routers, Switches, New Products, and Other. Provides services associated with these products. Foreign business accounted for 40.4% of 2019 revenues. R&D, 12.7% of revenues. Has about 75,900 employees. Officers/Directors hold less than 1.0% of stock; BlackRock, 7.6%, Vanguard, 8.4%. (9/19 proxy). Chrmn. & CEO: Chuck Robbins. Inc.: CA. Address: 170 W. Tasman Drive, San Jose, CA 95134-1706. Tele.: 408-526-4000. Web: www.cisco.com.

Cisco Systems is being hurt by the coronavirus outbreak. The company started the fiscal third quarter ahead of expectations, but there was a slowdown across the business in April as countries went into lockdown. The global pandemic also disrupted the supply chain during the period, as Cisco experienced some manufacturing and component constraints. The company is still highly dependent on China from a supply chain perspective, but we think this should prove less of a problem going forward as factory capacity in that country has come back on line to a large degree.

The company's recent results have been mostly lackluster. Total product revenue dropped 12% in the fiscal third quarter, with the Infrastructure Platform division declining 15%. This was the portion of the business that was most impacted by the supply chain headwind. Cisco did see continued strength from the flagship *Catalyst 9000* line of switches, as customers looked to quickly scale remote access capabilities to enable more employees to work remotely. Routing sales to service providers and enterprises were down, as was data center revenue. There was a strong uptick in conferencing offerings, again thanks to the influx of pandemic-driven work-from-home activity. There was a 5% decrease in Applications revenue owing to weakness in unified communications and telepresence gear. Finally, Security products continued to perform well, rising 6%.

Near-term guidance leaves much to be desired. The company currently expects revenue to decrease 8.5%-11.5% in the final quarter of the fiscal year, while adjusted earnings per share will likely land between $0.72 and $0.74.

Conservative investors may be interested in Cisco's risk-adjusted long-term total return potential. While it's clear that some customer groups are delaying purchases due to unprecedented macroeconomic uncertainty, Cisco's large customers can only delay upgrades for so long, especially as bandwidth gets strained as more people work from home. Meanwhile, Cisco remains very well positioned to take advantage of promising long-term technology transitions.

Kevin Downing *June 12, 2020*

(A) Fiscal year ends on last Saturday in July (four 13-week quarters). (B) Diluted earnings. May not sum due to rounding. Next egs. report due mid-August. GAAP egs. prior to 2011, pro-forma thereafter. (C) In millions, adjusted for stock splits. (D) Long- and short-term investments in current assets beginning in fiscal 2006. (E) Dividend commenced March 29, 2011, paid in late Jan., April, July, and Oct.

Company's Financial Strength	A++
Stock's Price Stability	90
Price Growth Persistence	65
Earnings Predictability	100

COCA-COLA NYSE-KO

RECENT PRICE 46.67 | P/E RATIO 23.2 (Trailing: 22.1 Median: 20.0) | RELATIVE P/E RATIO 1.73 | DIV'D YLD 3.5% | VALUE LINE

TIMELINESS 1 Raised 3/13/20
SAFETY 1 New 7/27/90
TECHNICAL 2 Raised 4/10/20
BETA .65 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$45-$62	$54 (15%)

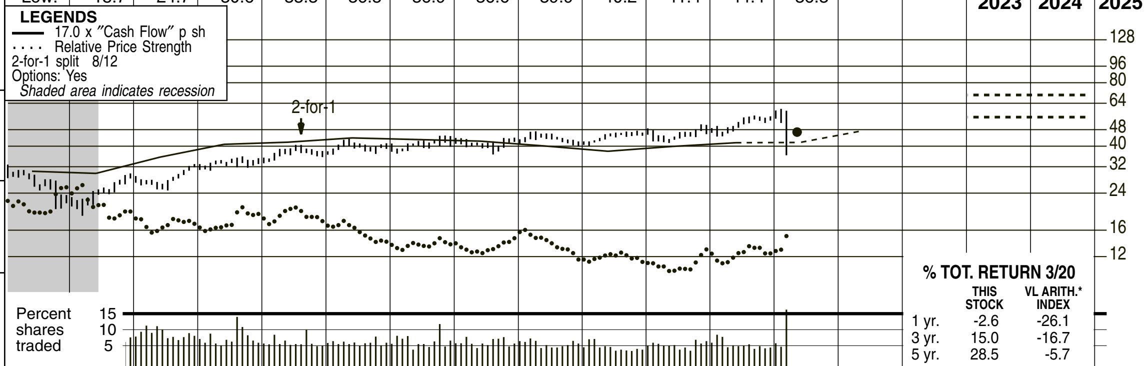
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(+50%)	13%
Low	55	(+20%)	8%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	885	919	1088
to Sell	959	943	888
Hld's(000)	2922659	2915166	2968437

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	29.7	32.9	35.9	40.7	43.4	45.0	43.9	47.1	47.5	50.8	55.9	60.1
Low:	18.7	24.7	30.6	33.3	36.5	36.9	36.6	39.9	40.2	41.4	44.4	36.3



% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-2.6	-26.1
3 yr.	15.0	-16.7
5 yr.	28.5	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
4.56	4.88	5.20	6.22	6.91	6.73	7.66	10.29	10.74	10.64	10.54	10.24	9.76	8.31	7.46	8.71	*8.65*	*9.40*	Sales per sh	*11.05*
1.23	1.29	1.40	1.54	1.79	1.75	2.09	2.41	2.46	2.58	2.53	2.49	2.37	2.23	2.35	2.45	*2.45*	*2.80*	"Cash Flow" per sh	*3.50*
1.03	1.09	1.19	1.29	1.51	1.47	1.75	1.92	1.97	2.08	2.04	2.00	1.91	1.91	2.08	2.11	*2.05*	*2.35*	Earnings per sh A	*3.00*
.50	.56	.62	.68	.76	.82	.88	.94	1.02	1.12	1.22	1.32	1.40	1.48	1.56	1.60	*1.64*	*1.72*	Div'ds Decl'd per sh B■	*2.00*
.16	.19	.30	.36	.43	.43	.48	.65	.62	.58	.55	.59	.53	.39	.32	.48	*.45*	*.50*	Cap'l Spending per sh	*.55*
3.31	3.45	3.65	4.69	4.43	5.38	6.76	6.99	7.34	7.54	6.94	5.91	5.38	4.01	3.98	4.43	*4.70*	*5.05*	Book Value per sh C	*5.50*
4818.7	4738.0	4636.0	4636.0	4624.0	4606.0	4584.0	4526.0	4469.0	4402.0	4366.0	4324.0	4288.0	4259.0	4268.0	4280.0	*4275.0*	*4250.0*	Common Shs Outst'g D	*4100.0*
22.6	19.7	18.5	21.0	17.8	16.6	16.2	17.4	18.8	19.1	20.0	20.6	22.8	23.2	21.9	24.1	*Bold figures are*		Avg Ann'l P/E Ratio	*21.0*
1.19	1.05	1.00	1.11	1.07	1.11	1.03	1.09	1.20	1.07	1.05	1.04	1.20	1.17	1.18	1.31	*Value Line*		Relative P/E Ratio	*1.15*
2.2%	2.6%	2.8%	2.5%	2.8%	3.4%	3.1%	2.8%	2.8%	2.8%	3.0%	3.2%	3.2%	3.3%	3.4%	3.1%	*estimates*		Avg Ann'l Div'd Yield	*3.2%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $42.763 bill. **Due in 5 Yrs.** $28.9 bill.
LT Debt $27.516 bill. **Total Int.** $860.0 mill.
(Total interest coverage: 12.9x)
(59% of Cap'l)

Pension Assets-12/19 $8.1 bill. **Oblig.** $8.8 bill.

Pfd Stock None

Common Stock 4,280,000,000 shs.

MARKET CAP: $200 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
35123	46554	48017	46854	45998	44294	41863	35410	31856	37266	*37000*	*40000*	Sales ($mill)	*45250*
31.4%	27.9%	26.6%	28.3%	28.1%	27.9%	28.1%	30.9%	34.2%	31.6%	*32.0%*	*34.0%*	Operating Margin	*35.0%*
1443.0	1954.0	1982.0	1977.0	1976.0	1970.0	1787.0	1260.0	1086.0	1365.0	*1650*	*1700*	Depreciation ($mill)	*1850*
8144.0	8932.0	9019.0	9374.0	9091.0	8797.0	8354.0	8240.0	8935.0	9104.0	*8870*	*10240*	Net Profit ($mill)	*12510*
22.7%	23.9%	23.1%	23.0%	22.5%	22.5%	22.5%	24.0%	18.7%	19.4%	*20.0%*	*20.0%*	Income Tax Rate	*20.0%*
23.2%	19.2%	18.8%	20.0%	19.8%	19.9%	20.0%	23.3%	28.0%	24.4%	*24.0%*	*25.6%*	Net Profit Margin	*27.6%*
3071.0	1214.0	2507.0	3493.0	612.0	6465.0	7478.0	9351.0	1411.0	d6562	*d5250*	*d5000*	Working Cap'l ($mill)	*d4750*
14041	13656	14736	19154	19063	28407	29684	31182	25364	27516	*28000*	*28000*	Long-Term Debt ($mill)	*28500*
31003	31635	32790	33173	30320	25554	23062	17072	16981	18981	*20075*	*21380*	Shr. Equity ($mill)	*22590*
18.5%	20.2%	19.4%	18.3%	18.7%	16.5%	16.3%	17.6%	21.8%	20.2%	*19.5%*	*21.5%*	Return on Total Cap'l	*25.5%*
26.3%	28.2%	27.5%	28.3%	30.0%	34.4%	36.2%	48.3%	52.6%	48.0%	*44.0%*	*48.0%*	Return on Shr. Equity	*55.5%*
13.1%	14.6%	13.5%	13.3%	12.3%	12.0%	10.0%	11.2%	13.5%	11.9%	*9.0%*	*13.0%*	Retained to Com Eq	*18.5%*
50%	48%	51%	53%	59%	65%	72%	77%	74%	75%	*80%*	*73%*	All Div'ds to Net Prof	*67%*

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	20675	15964	11175
Receivables	3667	3396	3971
Inventory (Avg Cst)	2655	2766	3379
Other	9548	8508	1886
Current Assets	36545	30634	20411
Accts Payable	2288	2498	3804
Debt Due	16503	18191	15247
Other	8403	8534	7922
Current Liab.	27194	29223	26973

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	2.0%	-5.0%	*5.0%*
"Cash Flow"	3.5%	-1.5%	*7.0%*
Earnings	3.5%	- -	*6.5%*
Dividends	7.5%	6.5%	*4.5%*
Book Value	-1.5%	-10.5%	*5.0%*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	9118	9702	9078	7512	35410
2018	7626	8927	8245	7058	31856
2019	8694	9997	9507	9068	37266
2020	*8400*	*9500*	*9900*	*9200*	*37000*
2021	*9500*	*10750*	*10250*	*9500*	*40000*

Cal-endar	EARNINGS PER SHARE A Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	.43	.59	.50	.39	1.91
2018	.46	.61	.58	.43	2.08
2019	.48	.63	.56	.44	2.11
2020	*.42*	*.54*	*.61*	*.48*	*2.05*
2021	*.50*	*.68*	*.65*	*.52*	*2.35*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	- -	.35	.35	.70	1.40
2017	- -	.37	.37	.74	1.48
2018	- -	.39	.39	.78	1.56
2019	- -	.40	.40	.80	1.60
2020	- -	.41			

BUSINESS: The Coca-Cola Company is the world's largest nonalcoholic beverage company. Markets over 500 beverage brands through a network of company-owned and independent bottlers/distributors, wholesalers, and retailers. Leading company/licensed brands include *Coca-Cola, Diet Coke, Sprite, Fanta, Fresca, Dasani, glaceau vitaminwater, Powerade,* and *Minute Maid.* Int'l markets accounted for 69% of 2019 net sales; Advertising expenses, 11.4% of 2019 revenues. Has about 86,250 employees. Directors and officers own 1.0% of stock; Berkshire Hathaway, 9.3%; Vanguard, 7.4%; BlackRock, 6.4% (3/20 Proxy). Chairman & CEO: James Quincey. Inc.: DE. Address: One Coca-Cola Plaza, Atlanta, GA 30313. Tel.: 404-676-2121. Web: www.coca-cola.com.

The Coca-Cola Company has withdrawn its guidance for 2020. Previously, it was expecting earnings per share to climb 7%, to roughly $2.25. The gains were to be underpinned by another year of healthy growth in organic revenues, which clocked in at 6% in 2019 and were targeted at 5% this year. Such a scenario, though, has been derailed by the coronavirus, which has taken a big bite out of on-premise sales. These customers, such as restaurants and sports and entertainment venues, represent about 40% of industry sales. For Coke, the financial impact is likely to be particularly pronounced in North America, where the fountain business has a high degree of vertical integration compared to the rest of the world. Elsewhere, most of the company's operations in China, where the pandemic originated, are back up and running, and consumer demand is on the upswing, though not yet to pre-crisis levels.

The flagship brand has been making solid progress. Retail value increased 6% globally for *Coca-Cola* products in 2019. The growth is being aided by newer additions to the portfolio, particularly *Zero Sugar*, which enjoyed another year of double-digit growth. And the company continues to roll out additional offerings to more markets. In particular, *Plus Coffee* is now available in more than 40 countries, while *Coca-Cola Energy* was introduced to U.S. consumers over the winter. Overall, once current pandemic-related disruptions are in the past, we expect the encouraging trends in organic revenue growth across Coke's portfolio to resume. And our initial 2021 estimate calls for earnings to reach $2.35 a share.

These timely shares carry our Highest rank (1) for Safety. Granted, this equity has actually modestly underperformed the broader market since late February, likely reflecting concerns about Coke's exposure to the restaurant and foodservice industries. KO stock, though, still has a number of attributes that make it well suited for conservative accounts, including top scores for Price Stability and Earnings Predictability. Too, the recent 3% hike in the quarterly dividend helped to push the yield up to 3.5%, 40 basis points higher than the *Value Line* median.

Robert M. Greene *April 17, 2020*

(A) Based on diluted shares. Next earnings report due April 21st. Excludes nonrecurring gain/(losses): '04, (3¢); '05, (7¢); '06, (11¢); '08, (27¢); '10, 79¢; '11, (8¢); '13, (18¢); '14, (44¢); '15, (33¢); '16, (42¢); '17, ($1.64); '18, (51¢); '19, (4¢). (B) Div'ds historically paid about the first April, July, Oct., Dec. ■ Div'd reinvestment plan available. (C) Includes intangibles. In '19: $26.8 bill., $6.25/sh. (D) In millions, adjusted for stock split.

Company's Financial Strength	A++
Stock's Price Stability	100
Price Growth Persistence	30
Earnings Predictability	100

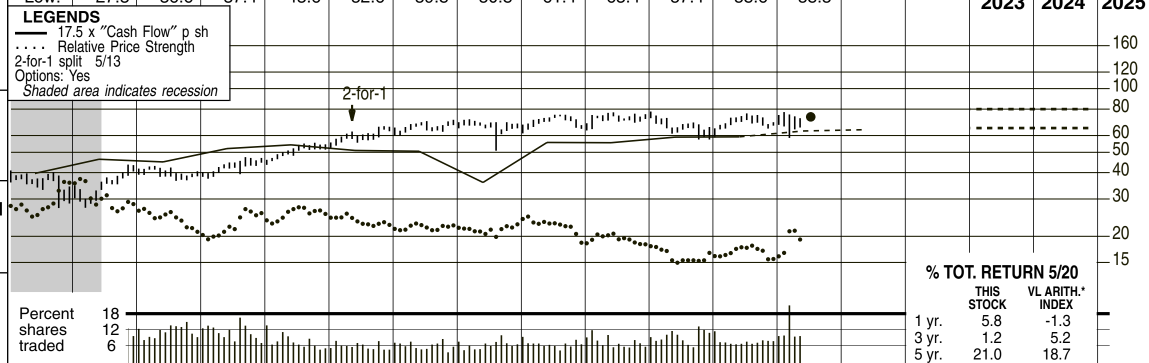
COLGATE-PALMOLIVE NYSE-CL

RECENT PRICE	73.51	P/E RATIO	24.9 (Trailing: 25.1, Median: 25.0)	RELATIVE P/E RATIO	1.16	DIV'D YLD	2.4%	VALUE LINE	1189

TIMELINESS 1 Raised 6/19/20
SAFETY 1 Raised 10/11/02
TECHNICAL 2 Lowered 6/12/20
BETA .75 (1.00 = Market)

High:	43.7	43.1	47.4	55.5	66.5	71.3	71.6	75.4	77.3	77.9	76.4	77.4		
Low:	27.3	36.6	37.4	43.6	52.6	59.8	50.8	61.4	63.4	57.4	58.6	58.5		

Target Price Range 2023 | 2024 | 2025



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$58-$93	$76 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	80	(+10%)	5%
Low	65	(-10%)	Nil

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	565	616	589
to Sell	635	677	735
Hld's(000)	668748	671882	649499

% TOT. RETURN 5/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	5.8	-1.3
3 yr.	1.2	5.2
5 yr.	21.0	18.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
10.05	11.04	11.94	13.55	15.29	15.51	15.73	17.43	18.26	18.94	19.05	17.96	16.76	17.67	18.01	18.36	**18.60**	**18.85**	Sales per sh	**21.20**
1.59	1.71	1.85	2.10	2.27	2.64	2.57	2.97	3.10	2.91	2.89	2.05	3.18	3.17	3.37	3.38	**3.60**	**3.65**	"Cash Flow" per sh	**4.40**
1.21	1.32	1.46	1.69	1.83	2.19	2.16	2.47	2.58	2.38	2.36	1.52	2.72	2.59	2.75	2.75	**2.95**	**3.00**	Earnings per sh A	**3.65**
.48	.56	.63	.70	.78	.86	1.02	1.14	1.22	1.33	1.42	1.50	1.55	1.59	1.66	1.71	**1.75**	**1.85**	Div'ds Decl'd per sh B■	**2.05**
.33	.38	.46	.57	.68	.58	.56	.56	.60	.73	.83	.77	.65	.63	.51	.39	**.40**	**.40**	Cap'l Spending per sh	**.65**
.92	1.06	1.16	2.05	1.74	2.98	2.70	2.47	2.34	2.51	1.26	d.34	d.27	d.07	d.12	.14	**1.25**	**2.05**	Book Value per sh C	**5.40**
1053.3	1032.3	1025.3	1018.1	1002.8	988.33	989.70	960.04	935.73	919.95	906.71	892.74	906.71	874.70	862.91	854.70	**853.00**	**848.00**	Common Shs Outst'g D	**837.00**
21.8	19.7	20.6	20.5	19.8	16.1	18.6	17.3	19.6	25.1	28.0	44.1	25.8	27.9	24.2	25.1	*Bold figures are*		Avg Ann'l P/E Ratio	**20.0**
1.15	1.05	1.11	1.09	1.19	1.07	1.18	1.09	1.25	1.41	1.47	2.22	1.35	1.40	1.31	1.37	*Value Line*		Relative P/E Ratio	**1.10**
1.8%	2.1%	2.1%	2.0%	2.2%	2.5%	2.5%	2.7%	2.4%	2.2%	2.2%	2.2%	2.2%	2.2%	2.5%	2.5%	*estimates*		Avg Ann'l Div'd Yield	**2.6%**

CAPITAL STRUCTURE as of 3/31/20
Total Debt $7846 mill. **Due in 5 Yrs** $3670 mill.
LT Debt $7336 mill. **LT Interest** $400 mill.
(Total int. cov.: 23.8x) (96% of Cap'l)
Leases, Uncapitalized Annual rentals $167 mill.

Pension Assets-12/19 $2.1 bill. **Oblig.** $2.9 bill.

Pfd Stock None
Common Stock 856,528,455 shs.

MARKET CAP: $63.0 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
15564	16734	17085	17420	17277	16034	15195	15454	15544	15693	**15850**	**16000**	Sales ($mill)	**17750**
26.8%	25.4%	25.9%	25.4%	26.4%	27.3%	28.4%	27.6%	28.0%	27.2%	**25.5%**	**25.5%**	Operating Margin	**27.0%**
376.0	421.0	425.0	439.0	442.0	449.0	443.0	475.0	511.0	519.0	**530**	**540**	Depreciation ($mill)	**605**
2203.0	2431.0	2472.0	2241.0	2180.0	1384.0	2441.0	2299.0	2400.0	2367.0	**2525**	**2555**	Net Profit ($mill)	**3060**
32.6%	32.6%	32.1%	32.4%	33.8%	44.0%	30.8%	29.8%	26.2%	23.4%	**25.0%**	**25.0%**	Income Tax Rate	**25.0%**
14.2%	14.5%	14.5%	12.9%	12.6%	8.6%	16.1%	14.9%	15.4%	15.1%	**15.9%**	**16.0%**	Net Profit Margin	**17.3%**
2.0	686.0	820.0	352.0	917.0	850.0	1033.0	1231.0	452.0	141.0	**590**	**520**	Working Cap'l ($mill)	**435**
2815.0	4430.0	4926.0	4749.0	5644.0	6269.0	6250.0	6566.0	6354.0	7333.0	**7150**	**6500**	Long-Term Debt ($mill)	**5500**
2675.0	2375.0	2189.0	2305.0	1145.0	d299.0	d243.0	d60.0	d102.0	117.0	**1070**	**1725**	Shr. Equity ($mill)	**4505**
41.0%	36.1%	34.8%	32.6%	33.1%	24.3%	41.9%	36.5%	39.5%	32.7%	**30.5%**	**31.0%**	Return on Total Cap'l	**30.5%**
82.4%	102.4%	112.9%	97.2%	NMF	- -	- -	- -	NMF	NMF	**NMF**	**NMF**	Return on Shr. Equity	**68.0%**
43.8%	51.7%	54.6%	37.3%	64.1%	- -	- -	- -	NMF	NMF	**96.0%**	**58.0%**	Retained to Com Eq	**30.0%**
47%	49%	52%	62%	66%	108%	62%	67%	66%	68%	**59%**	**61%**	All Div'ds to Net Prof	**56%**

CURRENT POSITION ($MILL.)

	2018	2019	3/31/20
Cash Assets	726	883	854
Receivables	1400	1440	1551
Inventory (FIFO)	1250	1400	1301
Other	417	456	542
Current Assets	3793	4179	4248
Accts Payable	1222	1237	1216
Debt Due	12	514	510
Other	2107	2287	2717
Current Liab.	3341	4038	4443

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	2.0%	-1.0%	3.0%
"Cash Flow"	3.5%	2.0%	5.0%
Earnings	3.5%	2.0%	5.0%
Dividends	8.0%	4.5%	3.5%
Book Value	- -	- -	NMF

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	3762	3826	3974	3892	15454
2018	4002	3886	3845	3811	15544
2019	3884	3866	3928	4015	15693
2020	4097	**3825**	**3950**	**3978**	**15850**
2021	**3900**	**3950**	**4050**	**4100**	**16000**

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.64	.59	.68	.68	2.59
2018	.72	.73	.60	.70	2.75
2019	.65	.68	.67	.75	2.75
2020	.83	**.69**	**.67**	**.76**	**2.95**
2021	**.70**	**.73**	**.72**	**.85**	**3.00**

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.38	.39	.39	.39	1.55
2017	.39	.40	.40	.40	1.59
2018	.42	.42	.42	.42	1.68
2019	.42	.43	.43	.43	1.71
2020	.43	.44			

BUSINESS: Colgate-Palmolive Company is the second-largest domestic maker of toiletries, and other household products. Major brands: *Ajax, Fab, Murphy, Palmolive* cleansers; *Colgate* toothpaste; *Irish Spring, Palmolive, Sanex, Softsoap* soaps; *Mennen* shave cream; *Hill's* pet food brands—Science Diet and Prescription Diet. Foreign operations: About 62% of 2019 sales. 2019 depreciation rate: 6.1%. Company has about 34,300 employees. ESOP controls 7.6% of common equivalent shares. Vanguard owns 9.1% of common; BlackRock, 7.0%. Officers & Directors, 0.8% (3/20 proxy). CEO., and Pres., Noel Wallace: Chrmn., Ian Cook. Inc: Delaware. Address: 300 Park Avenue, New York, New York 10022. Tele.: 212-310-2000. Internet: www.colgatepalmolive.com.

Colgate-Palmolive started the year on a good note. Sales just over $4 billion and earnings of $0.83 a share both easily topped our respective estimates of $4.035 billion and $0.70 a share as well as the Wall Street consensus. The company benefited from a solid performance in most markets, though Latin America and the Asia/Pacific region failed to impress. Leadership cited higher pricing and cost-reduction efforts as other reasons for the strong performance in the March quarter.

Management withdrew its guidance in light of the economic uncertainty associated with COVID-19. The company intends to reintroduce its outlook when it has better visibility. In response, investors briefly bid this equity down despite the outperformance that accompanied the conservative stance.

We have reined in our top- and bottom-line targets. The lag effect of pantry stocking ought to lower demand for a quarter or so. Additionally, the economic challenges may result in conservative consumer spending. Colgate's offerings are widely essential, so these challenges ought to be limited. Still, we lowered our sales estimate from $16.4 billion to $15.85 billion, but are keeping our share-net target intact at $2.95 this year, though our numbers for the rest of the year are lower following the earnings beat.

The company will probably remain stockholder friendly. As many pause their stock repurchase and dividend plans, Colgate-Palmolive ought to buck the trend. In fact, we look for increases in the payout in the years ahead.

We are cautiously optimistic about the long term. Market conditions ought to be more favorable. The strategic efforts should start to bear fruit in that time frame. Colgate will likely remain active on the mergers and acquisitions front, which provides some upside. For example, the addition of oral care brand Hello represents a nice growth opportunity.

Conservative investors may want to consider this stock. Timely shares of CL hold our Highest rank for Safety and a strong rating for Financial Strength (A+). The consumer products giant has weathered downturns before and is well positioned to deal with the challenges.

Richard J. Gallagher *June 19, 2020*

(A) Diluted earnings. Excludes nonrec. gains/(losses): '09, ($0.27); '10, ($0.26). Includes non-rec gain/(loss): '08, ($0.11); '15, $0.08; '17, ($0.31). Next egs. report due late July.
(B) Dividends historically paid in mid-February, mid-May, mid-August, and mid-November. ■ Div'd reinvestment plan available.
(C) Inc. intang. In '19: $6,175 mill., $7.22/sh.
(D) In mill., adjusted for stock split.

Company's Financial Strength	A+
Stock's Price Stability	100
Price Growth Persistence	45
Earnings Predictability	50

COMCAST CORP. NDQ-CMCSA

RECENT PRICE 44.81 | P/E RATIO 19.1 (Trailing: 15.0 Median: 16.0) | RELATIVE P/E RATIO 0.89 | DIV'D YLD 2.1% | VALUE LINE

TIMELINESS	2 Lowered 5/29/20
SAFETY	1 Raised 5/15/20
TECHNICAL	3 Raised 9/11/20
BETA .80 (1.00 = Market)	

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$35-$59	$47 (5%)

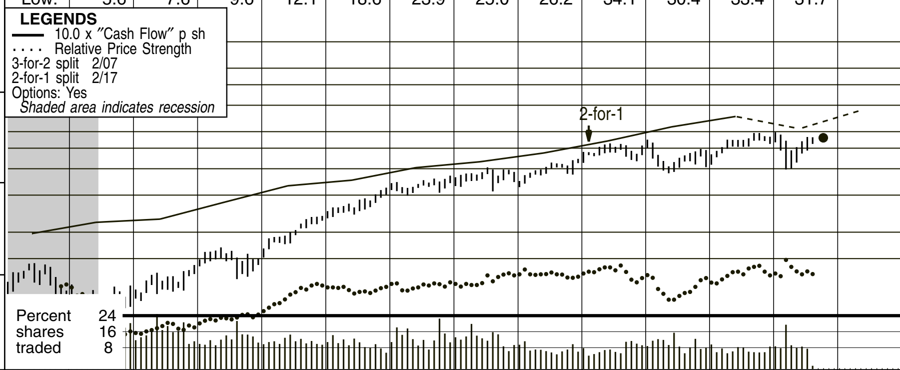
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	85	(+90%)	*19%*
Low	70	(+55%)	*13%*

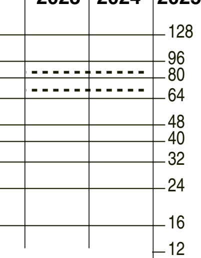
Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	1122	934	936
to Sell	710	997	909
Hld's(000)	3781746	3804967	3796547

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	9.0	11.2	13.6	19.1	26.0	29.7	32.5	35.7	42.2	44.0	47.3	47.7
Low:	5.6	7.6	9.6	12.1	18.6	23.9	25.0	26.2	34.1	30.4	33.4	31.7



Target Price Range



% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	3.0	8.7
3 yr.	16.9	17.6
5 yr.	74.3	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
3.06	3.47	2.62	5.13	5.95	6.30	6.83	10.32	11.90	12.45	13.58	15.25	16.92	18.20	20.88	23.93	*22.55*	*24.95*	Revenues per sh	*30.25*
.84	.92	.74	1.41	1.58	1.79	1.85	2.22	2.66	2.83	3.24	3.45	3.80	4.33	5.05	5.66	*4.95*	*5.65*	"Cash Flow" per sh	*7.30*
.14	.17	.23	.37	.46	.63	.65	.79	1.14	1.28	1.47	1.63	1.74	2.06	2.55	3.13	*2.40*	*3.00*	Earnings per sh A	*4.25*
--	--	--	--	.13	.15	.19	.23	.33	.39	.45	.50	.55	.61	.76	.84	*.90*	*.98*	Div'ds Decl'd per sh B	*1.20*
.55	.56	.46	1.02	1.00	.90	.89	.98	1.09	1.27	1.47	1.74	1.92	2.06	2.26	2.43	*2.20*	*2.20*	Cap'l Spending per sh	*1.85*
6.24	6.27	4.31	6.86	7.02	7.53	7.99	8.74	9.38	9.76	10.41	10.70	11.35	14.77	15.82	18.17	*19.35*	*21.10*	Book Value per sh E	*28.20*
6636.2	6415.9	9545.9	6022.1	5761.3	5675.1	5553.0	5411.9	5260.1	5194.2	5063.2	4884.8	4751.6	4644.5	4526.0	4553.0	*4500.0*	*4450.0*	Common Shs Outst'g C	*4300.0*
NMF	NMF	47.5	34.1	20.9	11.8	14.3	14.9	14.0	16.9	18.2	18.1	18.2	18.6	14.0	13.5	*Bold figures are*		Avg Ann'l P/E Ratio	*18.0*
NMF	NMF	2.56	1.81	1.26	.79	.91	.93	.89	.95	.96	.91	.96	.94	.76	.74	*Value Line*		Relative P/E Ratio	*1.00*
--	--	--	--	1.3%	2.0%	2.1%	1.9%	2.0%	1.8%	1.7%	1.7%	1.7%	1.6%	2.1%	2.0%	*estimates*		Avg Ann'l Div'd Yield	*1.5%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $109.9 bill. **Due in 5 Yrs** $33.6 bill.
LT Debt $105.9 bill. **LT Interest** $4.4 bill.
(Total interest coverage: 4.7x) (56% of Cap'l)

Leases, Uncapitalized $877.0 mill.

Pfd Stock None

Common Stock 4,568,100,614 shares (4,558,656,239 Class A shs.; 9,444,375 Class B shs.)[D]
MARKET CAP: $205 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
37937	55842	62570	64657	68775	74510	80403	84526	94507	108942	*101500*	*111000*	Revenues ($mill)	*130000*
38.5%	33.2%	31.9%	33.2%	33.3%	33.1%	32.9%	33.4%	32.1%	31.2%	*28.5%*	*30.0%*	Operating Margin	*32.0%*
6616.0	7636.0	7798.0	7871.0	8019.0	8680.0	9558.0	10267	11017	11372	*11450*	*11650*	Depreciation ($mill)	*13125*
3635.0	4377.0	6203.0	6816.0	8380.0	8171.0	8485.0	9850.0	11844	14417	*10865*	*13425*	Net Profit ($mill)	*18275*
39.9%	35.8%	32.3%	35.8%	31.1%	37.1%	37.0%	33.7%	23.1%	20.6%	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
9.6%	7.8%	9.9%	10.5%	12.2%	11.0%	10.6%	11.7%	12.5%	13.2%	*10.7%*	*12.1%*	Net Profit Margin	*14.1%*
652.0	d4668	3277.0	d4837	d3879	d5875	d5174	d5501	d5755	d4900	*d4750*	*d4300*	Working Cap'l ($mill)	*d3000*
29615	37942	38082	44567	44017	48994	55566	59422	107345	102931	*100000*	*97000*	Long-Term Debt ($mill)	*93000*
44354	47274	49356	50694	52711	52269	53943	68606	71613	82726	*87135*	*93825*	Shr. Equity ($mill)	*121300*
6.4%	6.6%	8.5%	8.5%	10.0%	9.4%	9.1%	8.9%	7.6%	9.0%	*6.5%*	*8.0%*	Return on Total Cap'l	*9.5%*
8.2%	9.3%	12.6%	13.4%	15.9%	15.6%	15.7%	14.4%	16.5%	17.4%	*12.5%*	*14.0%*	Return on Shr. Equity	*15.0%*
5.8%	6.7%	9.3%	9.6%	11.6%	11.0%	10.9%	10.2%	11.9%	12.9%	*7.5%*	*9.5%*	Retained to Com Eq	*11.0%*
29%	27%	26%	29%	27%	30%	31%	29%	28%	26%	*38%*	*33%*	All Div'ds to Net Prof	*28%*

CURRENT POSITION ($MILL.)	2018	2019	6/30/20
Cash Assets	3814	5500	13935
Receivables	11104	11292	10227
Other	6930	8600	3323
Current Assets	21848	25392	27485
Accts Payable	8494	10826	10426
Debt Due	4398	4452	4046
Other	14711	15014	13973
Current Liab.	27603	30292	28445

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	13.5%	10.5%	*6.5%*
"Cash Flow"	12.0%	11.5%	*6.5%*
Earnings	18.0%	15.0%	*8.5%*
Dividends	23.5%	13.5%	*8.5%*
Book Value	8.5%	10.5%	*9.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	20463	21165	20983	21915	84526
2018	22791	21735	22135	27846	94507
2019	26859	26858	26827	28398	108942
2020	26609	23715	*24500*	*26676*	*101500*
2021	*26800*	*27600*	*28100*	*28500*	*111000*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.53	.52	.52	.49	2.06
2018	.62	.65	.65	.64	2.55
2019	.76	.78	.79	.79	3.13
2020	.71	.69	*.45*	*.55*	*2.40*
2021	*.65*	*.78*	*.77*	*.80*	*3.00*

Cal-endar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.1375	.1375	.1375	.1375	.55
2017	.1375	.1575	.1575	.1575	.61
2018	.19	.19	.19	.19	.76
2019	.21	.21	.21	.21	.84
2020	.23	.23			

BUSINESS: Comcast Corp. is the nation's leading cable TV provider, with 21.3 million video subscribers in 39 states and the District of Columbia (as of 12/19). Internet service has 28.6 million subs; phone service, 11.3 million. Also has sole ownership of NBCUniversal, which includes major broadcast and cable networks (NBC, Bravo, USA), film studios (Universal Pictures), digital media, and resort parks. Acquired European pay-TV provider SKY plc, 12/18. Has 190,000 employees. Offs./dirs. own 100% of Class B stock and less than 1% of regular Class A shares; Vanguard Group, 8.9% of Class A (4/20 proxy). Chairman, Pres., & CEO: Brian Roberts. Inc.: PA. Address: One Comcast Center, Philadelphia, PA, 19103. Tel.: 215-665-1700. Internet: www.comcast.com.

June-quarter results at Comcast were not as weak as we had feared. To wit, adjusted share net at the cable and media giant fell 12%, year over year, to $0.69, compared to the 31% decline implied by our $0.54 call. The "positive" surprise largely reflected unexpected strength within the Filmed Entertainment business, where EBITDA jumped 25% even as revenue declined 18%. Like other studios, Comcast's Universal Pictures unit (UP) had no theatrical releases during the quarter, as movie theaters remained closed due to COVID-19. With less need to promote new films, UP incurred lower costs. At the same time, it continued to generate lucrative licensing and transmission fees from past releases. That said, the dynamic is ultimately expected to turn negative.

It may be a year or more before quarterly earnings once again head in the right direction. Underpinning our trepidation is what we expect will be lower, coronavirus-related returns not only within the film business but at the company's theme parks. Following brief shutdowns, the amusement parks have all reopened, save for Universal Studios Hollywood in southern California. Still, we expect capacity restrictions and enhanced safety measures to weigh on results.

The news isn't all bad. In the U.S., Comcast is on a pace to add more than one million broadband customers for the 14th-straight year. Importantly, the high-speed Internet business enjoys much-higher profit margins than the traditional video bundle, as the latter includes programming costs. At the same time, it provides a hedge, as more and more American households are cutting the cord and opting for inexpensive streaming services.

Shares of Comcast remain a favorable selection for relative year-ahead price performance (2; Above Average). At the stock's recent quotation, we think that buy-and-hold investors will also do well here. Still, in the near term, conservative accounts may want to take a pass, given the continued uncertainty surrounding the coronavirus. Notably, we suspect that it could take longer than expected for the theme park and film businesses to regain their pre-COVID-19 footing.

Nils C. Van Liew *September 11, 2020*

(A) Earnings based on diluted average class A and class B shares. Excl. n/r gains/(losses): '05, ($.08); '06, $0.32; '07, $0.09; '08, $0.06; '14, $0.26; '16, $0.04; '17, $2.69; '18, ($.02); '19, ($.30). Earnings may not sum due to rounding. Next earnings report due late Oct. (B) Div'd reinstated 4/08. Divs. paid in March, June, Sept., and Dec. (C) In millions, adjusted for stock split. (D) Class A stockholders entitled to 0.1173 votes per share; class B stockholders entitled to 15 votes per sh. (E) Incl. intang. In '19, $164.2 bill., $36.06/sh.

Company's Financial Strength	A+
Stock's Price Stability	100
Price Growth Persistence	95
Earnings Predictability	100

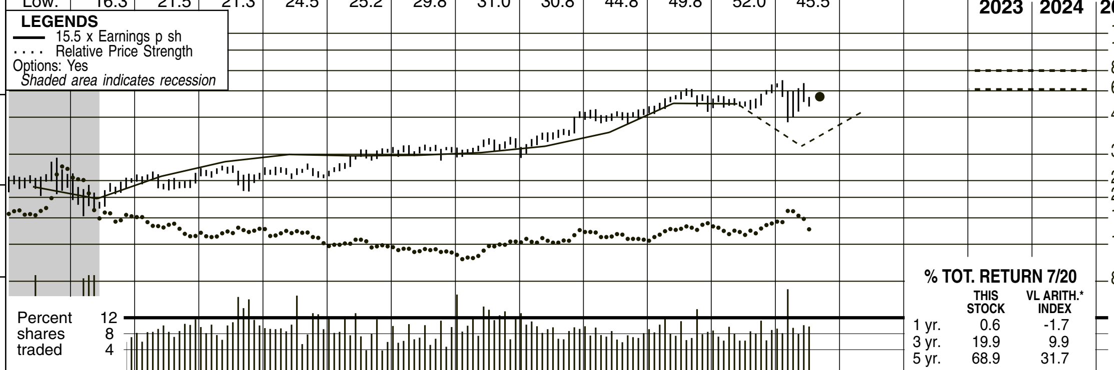
COMMERCE BANCSH. NDQ-CBSH

RECENT PRICE 60.07 | P/E RATIO 23.0 (Trailing: 22.8 Median: 16.0) | RELATIVE P/E RATIO 1.06 | DIV'D YLD 1.8% | VALUE LINE

TIMELINESS 3 Lowered 4/19/19
SAFETY 1 New 7/27/90
TECHNICAL 4 Lowered 9/4/20
BETA .90 (1.00 = Market)

High:	26.0	26.5	28.4	28.9	34.2	35.6	38.8	51.2	52.5	65.8	68.6	71.9
Low:	16.3	21.5	21.3	24.5	25.2	29.8	31.0	30.8	44.8	49.8	52.0	45.5

LEGENDS
— 15.5 x Earnings p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range
2023 | 2024 | 2025

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$47-$92	$70 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	80	(+35%)	9%
Low	65	(+10%)	4%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	130	281	141
to Sell	155	89	176
Hld's(000)	78128	77794	76130

Percent shares traded 12 8 4

% TOT. RETURN 7/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	0.6	-1.7
3 yr.	19.9	9.9
5 yr.	68.9	31.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
1.49	1.60	1.64	1.57	1.45	1.27	1.62	1.91	2.06	2.03	2.05	2.11	2.25	2.62	3.60	3.58	*2.25*	*3.35*	Earnings per sh A	*4.40*
.42	.46	.49	.53	.56	.56	.58	.59	.63	.64	.67	.71	.74	.78	.85	.99	*1.04*	*1.10*	Div'ds Decl'd per sh B	*1.26*
10.04	9.98	10.92	11.83	12.15	13.93	15.04	16.49	16.83	17.18	17.75	18.73	19.99	21.86	23.93	26.67	*28.20*	*30.70*	Book Value per sh D	*39.90*
142.07	134.01	132.07	129.09	129.78	135.37	134.54	131.58	128.79	128.66	123.11	118.35	117.63	117.65	116.45	112.09	*111.00*	*111.00*	Common Shs Outst'g C	*111.00*
14.7	15.3	15.6	15.9	16.7	16.6	14.7	13.5	12.8	15.0	16.4	16.6	17.6	18.7	16.0	16.3	*Bold figures are*		Avg Ann'l P/E Ratio	*16.5*
.78	.81	.84	.84	1.01	1.11	.94	.85	.81	.84	.86	.84	.92	.94	.86	.89	*Value Line*		Relative P/E Ratio	*.90*
1.9%	1.9%	1.9%	2.1%	2.3%	2.7%	2.4%	2.3%	2.4%	2.1%	2.0%	2.0%	1.9%	1.6%	1.5%	1.7%	*estimates*		Avg Ann'l Div'd Yield	*1.7%*

CAPITAL STRUCTURE as of 6/30/20

LT Debt $1.5 mill. **LT Interest** $.5 mill.

Pension Assets-12/19 $107.6 mill. **Oblig.**$120.6 mill.

Pfd Stock $144.8 mill. **Pfd. Div'd** $9.0 mill.

Common Stock 111,533,322 shs. as of 8/3/20

MARKET CAP: $6.7 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
18502	20649	22160	23072	23994	24605	25641	24833	25464	26066	*30000*	*30000*	Total Assets ($mill)	*33000*
9213.4	8992.9	9658.9	10795	11313	12293	13257	13824	13980	14577	*16000*	*16000*	Loans ($mill)	*18000*
645.9	646.1	639.9	619.4	620.2	634.3	680.0	733.7	823.8	821.3	*820*	*865*	Net Interest Inc ($mill)	*950*
100.0	51.5	27.3	20.4	29.5	28.7	36.3	45.2	42.7	50.4	*220*	*125*	Loan Loss Prov'n ($mill)	*90.0*
403.3	403.7	404.5	414.0	450.1	453.9	474.3	511.7	500.9	528.3	*540*	*570*	Noninterest Inc ($mill)	*640*
631.1	617.2	618.5	629.6	657.8	675.9	717.1	769.7	737.8	767.4	*800*	*815*	Noninterest Exp ($mill)	*850*
221.7	256.3	269.3	261.0	261.8	263.7	275.4	319.4	433.5	421.2	*265*	*385*	Net Profit ($mill)	*505*
30.3%	31.9%	31.9%	31.9%	31.4%	30.4%	31.0%	25.7%	19.5%	20.5%	*22.0%*	*22.0%*	Income Tax Rate	*22.0%*
1.20%	1.24%	1.22%	1.13%	1.09%	1.07%	1.07%	1.29%	1.70%	1.62%	*.90%*	*1.30%*	Return on Total Assets	*1.55%*
112.3	111.8	103.7	107.3	104.1	103.8	102.0	1.8	8.7	2.4	*50*	*50*	Long-Term Debt ($mill)	*100*
2023.5	2170.4	2167.1	2210.6	2330.2	2362.0	2495.8	2716.6	2931.3	3134.7	*3275*	*3550*	Shr. Equity ($mill)	*4575*
10.9%	10.5%	9.8%	9.6%	9.7%	9.6%	9.7%	10.9%	11.5%	12.0%	*11.0%*	*12.0%*	Shr. Eq. to Total Assets	*14.0%*
49.8%	43.6%	43.6%	46.8%	47.1%	50.0%	51.7%	55.7%	54.9%	55.9%	*53.5%*	*53.5%*	Loans to Tot Assets	*54.5%*
11.0%	11.8%	12.4%	11.8%	11.2%	11.2%	11.0%	11.8%	14.8%	13.4%	*8.0%*	*11.0%*	Return on Shr. Equity	*11.0%*
7.1%	8.2%	8.7%	8.1%	7.9%	7.7%	7.6%	8.5%	11.6%	10.0%	*5.0%*	*7.5%*	Retained to Com Eq	*8.0%*
35%	31%	30%	31%	34%	36%	35%	32%	25%	29%	*44%*	*32%*	All Div'ds to Net Prof	*28%*

ASSETS($Mill.)	2018	2019	6/30/20
Loans	13980.4	14577.1	16154.3
Funds Sold	20.7	13.8	12.8
Securities	8698.7	8741.9	10468.1
Other Earning	1393.2	1245.9	2255.0
Other	1370.8	1487.1	1605.9
LIABILITIES($Mill.)			
Deposits	20323.7	20520.4	24527.0
Funds Borrowed	1956.4	1850.8	1740.4
Long-Term Debt	8.7	2.4	1.5
Net Worth	2931.3	3134.7	3357.9
Other	243.7	557.5	869.3
Total	25463.8	26065.8	30496.1
Loan Loss Resrv.	159.9	160.7	240.7

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Loans	4.5%	8.0%	*5.0%*
Earnings	8.5%	10.0%	*5.0%*
Dividends	5.0%	6.0%	*6.5%*
Book Value	6.5%	7.0%	*8.5%*
Total Assets	5.5%	4.0%	*5.0%*

Cal-endar	LOANS ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31
2017	13415	13469	13588	13824
2018	13734	13795	13796	13980
2019	13960	14099	14302	14577
2020	14902	16154	*16200*	*16000*
2021	*15800*	*15900*	*16000*	*16000*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.59	.64	.62	.77	2.62
2018	.84	.91	.93	.92	3.60
2019	.81	.91	.93	.93	3.58
2020	.44	.34	*.65*	*.82*	*2.25*
2021	*.80*	*.85*	*.85*	*.85*	*3.35*

Cal-endar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.185	.185	.185	.185	.74
2017	.194	.194	.194	.194	.78
2018	.213	.213	.213	.213	.85
2019	.248	.248	.248	.248	.99
2020	.27	.27			

BUSINESS: Commerce Bancshares, Inc. has 552 bank/ATM locations in Missouri, Illinois, Kansas, Oklahoma, & Colorado. Net loan losses, about .35% of average loans in '19. Loan loss reserve, 1.47% of loans on 6/30/20. Problem & past-due assets, .14% of loans & OREO. Loans (12/31/19): commercial, 37%; commercial real estate, 25%; residential mortgage, 18%; consumer, 20%. On 12/31/19, had 4,576 full-time equivalent employees. Directors & officers own 3.4% of stock; Commerce Bank in trust capacities, 6.9%; Vanguard, 9.6%; BlackRock, 8.6%; State Street, 5.1% (proxy 3/20). C.E.O.: David W. Kemper. Incorporated: MO. Address: 1000 Walnut, P.O. Box 13686, Kansas City, MO 64199. Telephone: 816-234-2000. Internet: www.commercebank.com.

Commerce Bancshares posted unusual June-period results. Given the tremendous economic impact that COVID-19 has caused, disruptions come as no surprise. Simultaneously, Federal relief programs have provided much needed support, thereby diluting credit concerns.

Earnings of $0.34 a share in the second quarter were down sharply. The primary consideration was a steeper provision for loan losses. Given the present stress on the economy, problematic loans are likely to increase in the not-too-distant future. The bleak forecast necessitated an increase in reserves for future loan losses, and Commerce recorded an $81 million provision in the quarter.

Charge-offs have remained surprisingly low, so far. The company wrote off $8.4 million of loans in the June interim, but that was actually notably less than $11.3 million last year, when the economy was performing much better. The reason is the aforementioned relief programs. In some cases, customers have been permitted to skip payments temporarily and, in turn, consumer loan charge-offs were lower than usual.

Loan growth has surged. Demand for Paycheck Protection Program (PPP) loans has been huge. This program provides small businesses with loans to help navigate the difficult time. Commerce provided funding to 7,443 customers, for an aggregate $1.5 billion. Average total loans were also up $1.5 billion, to $16.2 billion. Aside from this commercial production, growth in both personal and commercial real estate was partially offset by lower consumer credit utilization.

Low interest rates are a net headwind. The net interest margin dropped 39 basis points last quarter, to 2.94%. A higher level of interest-bearing deposits also increased expenses. Rates are set to stay down for the foreseeable future, but the company has done a fine job executing in the environment so far.

These shares are not for everyone. Long-term capital gains potential is not going to whet too many appetites. But, conservative income investors will appreciate the high Price Stability score, relatively strong creditworthiness, and dividend growth potential.

Jeffrey Hirt *September 4, 2020*

(A) Based on diluted shares outstanding. May not sum due to rounding. Next earnings report due early October. (B) Dividends historically paid in late March, June, September, and December. Plus stock dividend: 5% in '04, '05, '06, '07, '08, '09, '10, '11, '12, '13, '14, '15, '16, '17, '18, '19. Excludes special div'd of $1.2958 a share paid Dec. 17, 2012. (C) In millions, adjusted for stock dividends. (D) Incl. intangibles: As of 12/31/19, $148.5 mill., $1.33 a share.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	75
Earnings Predictability	75

COSTCO WHOLESALE NDQ-COST

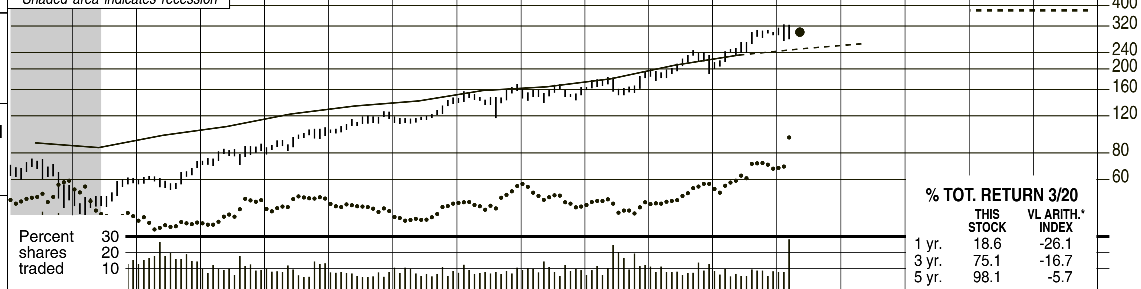
RECENT PRICE 299.62 | P/E RATIO 33.9 (Trailing: 35.6 Median: 24.0) | RELATIVE P/E RATIO 2.32 | DIV'D YLD 0.9% | VALUE LINE

TIMELINESS 1 Raised 8/9/19
SAFETY 1 Raised 2/6/09
TECHNICAL 2 Raised 4/24/20
BETA .85 (1.00 = Market)

High: 61.3 73.2 88.7 106.0 126.1 146.8 169.7 169.6 195.4 245.2 307.3 325.3
Low: 38.2 53.4 69.5 78.8 98.9 109.5 117.0 138.6 150.0 175.8 199.9 271.3

LEGENDS
— 20.0 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2023 | 2024 | 2025



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$266-$395	$331 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	460	(+55%)	12%
Low	380	(+25%)	7%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	798	822	1014
to Sell	684	754	696
Hld's(000)	318224	314921	312803

Percent shares traded 30 20 10

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	18.6	-26.1
3 yr.	75.1	-16.7
5 yr.	98.1	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
103.98	112.04	130.12	148.53	167.59	163.88	179.80	204.75	229.30	240.72	257.36	265.32	271.34	295.11	323.09	347.34	*376.70*	*399.55*	Revenues per sh A D	*535.70*
2.86	3.12	3.50	4.05	4.48	4.25	4.85	5.34	6.13	6.69	7.05	7.90	8.24	9.00	10.43	11.65	*12.50*	*13.25*	"Cash Flow"per sh	*16.50*
1.86	2.04	2.31	2.63	2.89	2.57	2.93	3.30	3.97	4.49	4.65	5.27	5.33	5.85	7.09	8.19	*8.85*	*9.50*	Earnings per sh B	*12.00*
.20	.43	.49	.55	.61	.68	.77	.89	1.03	1.17	1.33	1.51	1.70	1.90	2.14	2.44	*2.84*	*2.92*	Div'ds Decl'd per sh C■	*3.72*
16.48	18.80	19.78	19.73	21.25	22.98	24.98	27.64	28.59	24.80	28.11	24.24	27.61	24.65	29.21	34.67	*41.75*	*47.95*	Book Value per sh	*59.50*
462.64	472.48	462.28	437.01	432.51	435.97	433.51	434.27	432.35	436.84	437.68	437.95	437.52	437.20	438.19	439.63	*438.00*	*438.00*	Common Shs Outst'g	*420.00*
20.0	22.3	22.1	21.0	23.1	19.5	19.9	22.1	21.9	23.4	25.1	26.7	29.0	27.6	26.8	29.1	*Bold figures are*		Avg Ann'l P/E Ratio	*35.0*
1.06	1.19	1.19	1.11	1.39	1.30	1.27	1.39	1.39	1.31	1.32	1.34	1.52	1.39	1.45	1.59	*Value Line*		Relative P/E Ratio	*1.95*
.5%	.9%	1.0%	1.0%	.9%	1.4%	1.3%	1.2%	1.2%	1.1%	1.1%	1.1%	1.1%	1.2%	1.1%	1.0%	*estimates*		Avg Ann'l Div'd Yield	*0.9%*

CAPITAL STRUCTURE as of 2/16/20
Total Debt $5599 mill. **Due in 5 Yrs** $3800.0 mill.
LT Debt $5099 mill. **LT Interest** $120 mill.
(23% of Cap'l)

Leases, Uncapitalized Annual rentals $239 mill.
No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 441,579,952 shs.
as of 3/4/20

MARKET CAP: $132.3 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
77946	88915	99137	105156	112640	116199	118719	129025	141576	152703	*165000*	*175000*	Revenues ($mill) A D	*225000*
12.8%	12.6%	12.4%	12.6%	12.6%	13.0%	13.3%	13.3%	13.0%	13.0%	*13.0%*	*13.0%*	Gross Margin D	*13.0%*
3.7%	3.7%	3.7%	3.8%	3.8%	4.1%	4.2%	4.2%	4.2%	4.1%	*4.2%*	*4.2%*	Operating Margin D	*4.2%*
540	592	608	634	663	686	715	741	762	782	*800*	*820*	Number of Stores	*860*
1307.5	1462.0	1741.0	1977.0	2058.0	2334.0	2350.0	2564.0	3134.0	3629.0	*3895*	*4160*	Net Profit ($mill)	*5050*
36.1%	35.3%	35.4%	34.5%	34.7%	34.4%	34.3%	35.7%	28.4%	24.5%	*25.5%*	*25.5%*	Income Tax Rate	*27.0%*
1.7%	1.6%	1.8%	1.9%	1.8%	2.0%	2.0%	2.0%	2.2%	2.4%	*2.4%*	*2.4%*	Net Profit Margin	*2.2%*
1645.0	1656.0	1266.0	2583.0	3176.0	759.0	d357.0	d178.0	363.0	248.0	*1430*	*2520*	Working Cap'l ($mill)	*3100*
2141.0	1253.0	1381.0	4998.0	5093.0	4864.0	4061.0	6573.0	6487.0	5124.0	*4650*	*4600*	Long-Term Debt ($mill)	*4500*
10829	12002	12361	10833	12303	10617	12079	10778	12799	15243	*18290*	*21000*	Shr. Equity ($mill)	*25000*
10.5%	11.4%	13.0%	12.8%	12.2%	15.5%	15.0%	15.2%	16.7%	17.8%	*17.0%*	*16.5%*	Return on Total Cap'l	*17.0%*
12.1%	12.2%	14.1%	18.2%	16.7%	22.0%	19.5%	23.8%	24.5%	23.8%	*21.5%*	*20.0%*	Return on Shr. Equity	*20.0%*
9.0%	8.9%	10.5%	13.5%	12.0%	15.7%	13.3%	16.1%	19.1%	16.6%	*14.5%*	*13.5%*	Retained to Com Eq	*14.0%*
26%	27%	26%	26%	28%	28%	32%	33%	22%	30%	*32%*	*31%*	All Div'ds to Net Prof	*31%*

CURRENT POSITION ($MILL.)	2018	2019	2/16/20
Cash Assets	7259	9444	8718
Receivables	1669	1535	1988
Inventory (LIFO)	11040	11395	11850
Other	321	1111	1147
Current Assets	20289	23485	23703
Accts Payable	11237	11679	11072
Debt Due	- -	1699	500
Other	8689	9859	11123
Current Liab.	19926	23237	22695

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	7.0%	5.5%	7.0%
"Cash Flow"	8.5%	9.0%	7.0%
Earnings	9.0%	9.0%	9.0%
Dividends	13.5%	13.0%	9.5%
Book Value	3.0%	- -	9.0%

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A E Nov.Per	Feb.Per	May Per	Aug.Per	Full Fiscal Year
2017	28099	29766	28860	42300	129025
2018	31809	32995	32361	44411	141576
2019	35069	35396	34740	47498	152703
2020	37040	39072	*38300*	*50588*	*165000*
2021	*39400*	*41500*	*40600*	*53500*	*175000*

Fiscal Year Ends	EARNINGS PER SHARE A B E Nov.Per	Feb.Per	May Per	Aug.Per	Full Fiscal Year
2017	1.17	1.17	1.40	2.08	5.85
2018	1.45	1.59	1.70	2.36	7.09
2019	1.61	2.01	1.89	2.69	8.19
2020	1.73	2.10	*2.15*	*2.87*	*8.85*
2021	*1.85*	*2.30*	*2.25*	*3.10*	*9.50*

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.40	.45	.45	.45	1.75
2017	.45	.50	.50	.50	1.95
2018	.50	.57	.57	.57	2.21
2019	.57	.65	.65	.65	2.52
2020	.65				

BUSINESS: Costco Wholesale Corporation was formed by the merger of Price Co. and Costco Wholesale in October '93. The company operates wholesale-membership warehouses in the U.S. 543 as of 9/1/19, Canada 100, Mexico 39, United Kingdom 29, Japan 26, Korea 16, Taiwan 13, Australia 11, Spain 2, Iceland 1, France, 1 China, 1. Sells merchandise directly from warehouses to a restricted membership. Food and sundries account for 40% of sales. Employs around 245,000 people. Offs. & Dirs. own less than 1.0% of common stock; Vanguard, 8.6%; BlackRock, 6.4% (12/19 proxy). Chrmn.: Jeffrey H. Brotman. Pres. & CEO: W. Craig Jelinek. Inc.: Washington. Addr: 999 Lake Drive, Issaquah, Washington 98027. Tel.: 425-313-8100. Internet: www.costco.com.

Costco Wholesale shares have held up well despite widespread selling in the broader market. Costco has long been viewed as a "safe haven" stock due to the essential nature of its merchandise. The fact that it offers bulk products has made it a particularly important destination for individuals facing lengthy stay-at-home orders motivated by the coronavirus outbreak. This has helped the shares stay roughly flat over the last three months as stock prices in general have fallen in value by more than 15%.

The company recently reported solid yet uneven results for the month of March. Sales grew 11.7% year over year for the five-week period ended April 7th. U.S. same-store sales rose 10.7%, with roughly half coming from more traffic and half from a greater average transaction amount. This result was higher than the 9.1% reported for the February quarter. Shoppers' initial response to the pandemic led to significant sales and traffic increases during the first two weeks of March. However, activity slowed in the second half as more states enacted stay-at-home orders. Costco also started making some operational changes in an effort to reduce the spread of the virus and comply with local restrictions. These included limiting the number of individuals allowed in its warehouses at any given time, adjusting operating hours, and temporarily closing some departments such as optical and hearing aids. It has also limited service at food courts, and in some locations, ceased sales of certain merchandise deemed nonessential by regulators.

These timely shares may interest conservative investors willing to pay a premium for safety. Costco's offering of popular name-brand frozen and shelf-stable foods should continue to attract shoppers during the pandemic, even with social distancing measures and stay-at-home orders in place. Although, higher unemployment rates and reduced wages for Americans will likely hinder growth to some degree, the average Costco shopper is more affluent than that of discount retailers like Walmart or dollar stores. All told, Costco had a healthy business heading into this crisis, and may be even better positioned coming out of it.

Kevin Downing *April 24, 2020*

(A) Fiscal year ends on Sunday nearest Aug. 31st. Interim periods cover 12, 12, 12, and 16 weeks.(B) Excludes n/r gains/(losses): '05, 15¢; '07, (26¢); '09 (9¢); '10, (1¢); '12, (8¢); '13, (14¢). Next egs. report due late May. (C) Div'ds historically paid in mid-Feb., mid-May, early Aug., and mid-Nov. ■ Div'd reinvestment plan available. Special div'd of $7.00 paid in 12/12; $5.00 in 2/15; $7.00 paid in 5/17. (D) Incl. membership fees. (E) Totals may not sum due to rounding.

Company's Financial Strength	A+
Stock's Price Stability	95
Price Growth Persistence	85
Earnings Predictability	95

CVS HEALTH NYSE-CVS

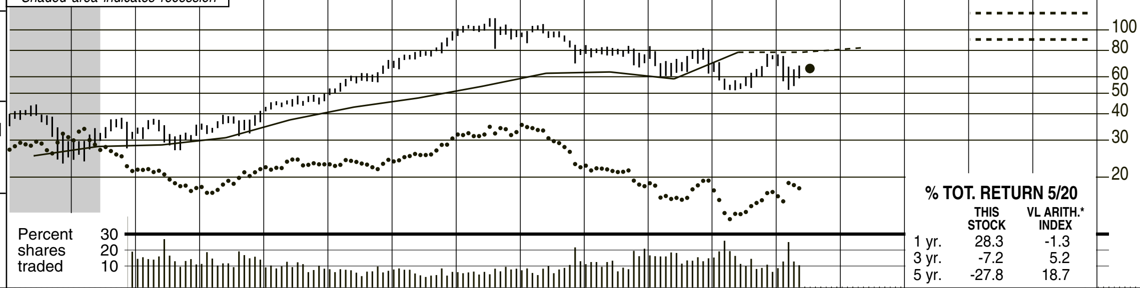
RECENT PRICE 65.64 | P/E RATIO 9.2 (Trailing: 8.9 Median: 13.0) | RELATIVE P/E RATIO 0.47 | DIV'D YLD 3.0% | VALUE LINE

TIMELINESS 2 Raised 5/22/20
SAFETY 1 Raised 6/12/20
TECHNICAL 4 Lowered 6/12/20
BETA .90 (1.00 = Market)

High:	38.3	37.8	41.3	49.8	72.0	98.6	113.6	106.7	84.7	83.9	77.0	76.4
Low:	23.7	26.8	31.3	41.0	49.0	64.9	81.4	69.3	66.4	60.1	51.7	52.0

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 7.5 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High Midpoint (% to Mid)
$46-$96 $71 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	115	(+75%)	15%
Low	95	(+45%)	10%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	887	938	1004
to Sell	705	767	767
Hld's(000)	1015529	1018418	999008

% TOT. RETURN 5/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	28.3	-1.3
3 yr.	-7.2	5.2
5 yr.	-27.8	18.7

"Consumer Value Stores" began as a health and beauty aids chain in '63. It grew to 17 stores in '64. The first pharmacy opened in '67. In '69, the chain was sold to Melville, which aggressively expanded the operation, and coupled that with an aggressive acquisition strategy that included Revco and Arbor Drug. Melville restructured in '95, and changed its name to CVS on 11/19/96.

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
70.74	82.51	100.03	107.42	122.25	139.23	167.32	182.21	150.25	197.22	**198.65**	**205.30**	Sales per sh	**241.65**
3.79	4.11	4.99	5.74	6.33	7.20	8.30	8.43	7.82	10.46	**10.45**	**11.00**	"Cash Flow" per sh	**13.50**
2.69	2.80	3.43	4.00	4.51	5.16	5.84	5.90	7.08	7.08	**7.10**	**7.50**	Earnings per sh A	**9.50**
.35	.50	.65	.90	1.10	1.40	1.70	2.00	2.00	2.00	**2.14**	**2.30**	Div'ds Decl'd per sh B■	**3.00**
27.66	29.32	30.63	32.15	33.30	33.78	34.71	37.17	44.96	49.05	**54.05**	**58.95**	Book Value per sh D	**76.25**
1363.0	1298.0	1231.0	1180.0	1140.0	1101.0	1061.0	1014.0	1295.0	1302.0	**1314.0**	**1315.0**	Common Shs Outst'g C	**1200.0**
12.1	12.9	13.2	14.7	17.4	19.7	15.9	13.2	10.0	8.7	Bold figures are		Avg Ann'l P/E Ratio	**11.0**
.77	.81	.84	.83	.92	.99	.83	.66	.54	.47	Value Line		Relative P/E Ratio	**.65**
1.1%	1.4%	1.4%	1.5%	1.4%	1.4%	1.8%	2.6%	2.8%	3.3%	estimates		Avg Ann'l Div'd Yield	**2.7%**
96413	107100	123133	126761	139367	153290	177526	184765	194579	256776	**261000**	**270000**	Sales ($mill)	**290000**
22.5%	20.7%	19.7%	20.2%	19.6%	18.7%	17.6%	16.8%	21.0%	17.5%	**17.5%**	**17.5%**	Gross Margin	**18.0%**
8.4%	7.8%	7.7%	8.2%	8.5%	8.2%	7.8%	7.3%	7.9%	7.7%	**7.5%**	**7.5%**	Operating Margin	**8.0%**
7182	7300	7458	7600	7800	9600	9709	9803	9967	9941	**10125**	**10200**	Number of Stores	**10500**
3700.0	3766.0	4393.6	4902.0	5287.0	5837.0	6332.0	6064.0	7406.0	9247.0	**9325**	**9600**	Net Profit ($mill)	**11500**
38.9%	39.3%	38.6%	38.9%	39.8%	39.1%	38.6%	38.1%	26.5%	25.6%	**26.0%**	**27.5%**	Income Tax Rate	**28.5%**
3.8%	3.5%	3.6%	3.9%	3.8%	3.8%	3.6%	3.3%	3.8%	3.6%	**3.6%**	**3.6%**	Net Profit Margin	**4.0%**
6636.0	6638.0	6062.0	9900.0	6956.0	7209.0	4792.0	581.0	1234.0	d3001	**4500**	**7250**	Working Cap'l ($mill)	**22500**
8652.0	9208.0	9133.0	12841	11695	26267	25615	22181	71444	64699	**65000**	**60000**	Long-Term Debt ($mill)	**55000**
37700	38051	37704	37938	37958	37196	36830	37691	58225	63864	**71000**	**77500**	Shr. Equity ($mill)	**91500**
8.4%	8.4%	9.8%	10.0%	11.1%	9.7%	10.7%	10.7%	6.7%	8.4%	**8.0%**	**8.0%**	Return on Total Cap'l	**8.5%**
9.8%	9.9%	11.7%	12.9%	13.9%	15.7%	17.2%	16.1%	12.7%	14.5%	**13.0%**	**12.5%**	Return on Shr. Equity	**12.5%**
8.5%	8.1%	9.5%	10.0%	10.5%	11.5%	12.2%	10.7%	9.2%	10.4%	**9.0%**	**8.5%**	Retained to Com Eq	**8.5%**
13%	18%	19%	22%	24%	27%	29%	34%	28%	28%	**30%**	**32%**	All Div'ds to Net Prof	**32%**

CAPITAL STRUCTURE as of 3/31/20
Total Debt $71818 mill. **Due in 5 Yrs** $28715 mill.
LT Debt $65735 mill. **LT Interest** $2683.7 mill.
(Total interest coverage; 8.4x)
(50% of Cap'l)
Leases, Uncapitalized Annual rentals $2699 mill.

Pension Assets-12/19 $6395 mill. **Oblig.** $6239 mill.

Pfd Stock None

Common Stock 1,307,090,830 shs.
as of 4/27/20
MARKET CAP: $85.8 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	6581	8056	12713
Receivables	17631	19617	23027
Inventory (FIFO)	16450	17516	16976
Other	4581	5113	6242
Current Assets	45243	50302	58958
Accts Payable	8925	10492	10223
Debt Due	1985	3781	6083
Other	33099	39030	43254
Current Liab.	44009	53303	59560

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	11.0%	10.0%	5.5%
"Cash Flow"	10.5%	9.5%	7.0%
Earnings	11.0%	11.0%	6.0%
Dividends	22.5%	18.0%	7.0%
Book Value	6.5%	6.5%	9.5%

Cal-endar	QUARTERLY SALES ($ mill.) Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	44514	45685	46181	48385	184765
2018	45743	46922	47490	54424	194579
2019	61646	63431	64810	66889	256776
2020	66755	**62495**	**64500**	**67250**	**261000**
2021	**65250**	**67000**	**67750**	**70000**	**270000**

Cal-endar	EARNINGS PER SHARE A Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	1.17	1.33	1.50	1.92	5.90
2018	1.48	1.69	1.73	2.14	7.08
2019	1.62	1.89	1.84	1.73	7.08
2020	1.91	**1.74**	**1.75**	**1.70**	**7.10**
2021	**1.80**	**1.85**	**1.90**	**1.95**	**7.50**

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.425	.425	.425	.425	1.70
2017	.50	.50	.50	.50	2.00
2018	.50	.50	.50	.50	2.00
2019	.50	.50	.50	.50	2.00
2020	.50	.50			

BUSINESS: CVS Health Corp. is the nation's foremost integrated health-care services provider, combining one of the nation's leading pharmaceutical services companies with the country's largest pharmacy chain. It fills more than one billion prescriptions per year and has 9,800-plus locations in 42 states, Puerto Rico, and the District of Columbia. Acquired Drogaria Onofre, giving it a presence in Brazil in 2/13. New stores average about 1,300 square feet. Pharmacy (Rx) contributes 75.0% of sales; 3rd-party payors, 99.2% of Rx sales. It has roughly 250,000 employees. Officers & directors own less than 1% of common stock. (3/20 proxy). CEO & President: Larry J. Merlo. Inc.: DE. Address: One CVS Drive, Woonsocket, RI 02895. Telephone: 401-765-1500. Internet: www.cvs.com.

CVS Health put together a better-than-expected showing for the first quarter. Earnings easily surpassed expectations, coming in at $1.91 a share, 18% ahead of the year-earlier tally as well as our estimate for a flat result. The top line also trounced assumptions, tallying $66.8 billion. This represented an 8.3% year-over-year increase, more than double what we had been modeling. Management credited stockpiling of goods and medications in light of the coronavirus for a bulk of the sales growth.

We have tempered our outlook for the remainder of the year, nonetheless. Much of the United States, along with the rest of the world, shut down and implemented shelter-in-place laws, towards the end of the March quarter. And while pharmacies remained open because they are essential businesses, many customers have since stayed home in an effort to social distance. Most areas have recently reopened, but April and May are expected to have been especially hurt by lower traffic. Meanwhile, we believe that it is highly likely that trends will not show too much improvement in the months ahead due to ongoing uncertainty regarding the virus. Despite the March-quarter beats, management left intact its top- and bottom-line guidance, pointing to declines through the final nine months of the year. For now, our 2020 share-earnings estimate remains unchanged at $7.10, calling for a flattish result. It should be noted that CVS was dealing with a tough reimbursement climate and increased competition even before the pandemic reared its head.

Our presentation looks for top- and bottom-line improvement next year. We see share net reaching the $7.5 vicinity, on sales of $270 billion. Cost-cutting efforts are expected to help, but our assumption is largely predicated on a more normalized operating environment.

Investors of all types should take a look here. These shares have retraced some, but not all, of their earlier losses, and offer worthwhile risk-adjusted long-term price recovery potential. Meantime, CVS is an Above Average selection for Timeliness. Also, the dividend is well covered and above average. Strong cash flows underpin a good deal of our optimism.

Andre J. Costanza *June 12, 2020*

(A) From cont. oper.; based on diluted shares. Excl. net nonrecurring items: '08 (17¢); '09, 8¢; '10 (18¢); '11 (23¢); '12; (42¢); '13, (26¢); '14, (46¢); '15 (50¢); '16, (93¢); '17, (55¢); '18, ($5.06); '19, ($2.00); '20, (38¢). Excludes amortization as of 2008. May not add due to rounding. Next egs. report due early Aug. (B) Dividends are historically paid in early Jan., May, Aug., Nov. ■ Div'd reinvest. plan avail. May not add due to rounding. (C) In mill., adj. for stk. splt. (D) Includes intangibles of $112.9 billion, or $86.71 a share, as of 12/31/19.

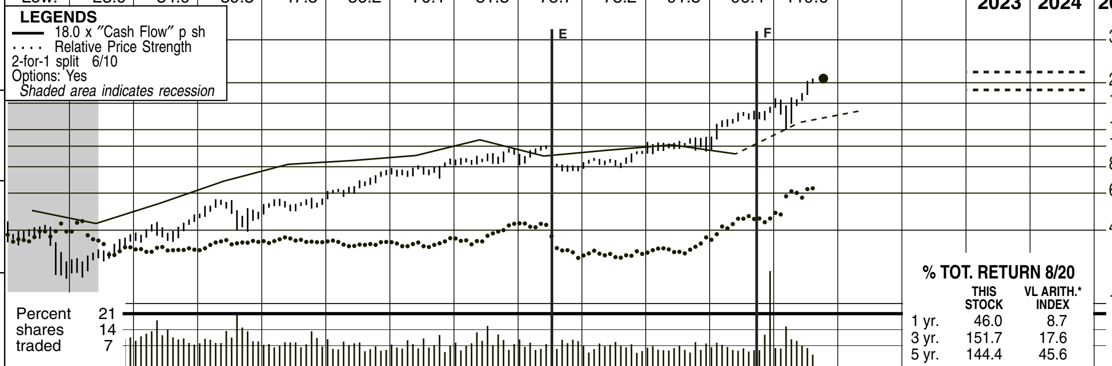
Company's Financial Strength	A++
Stock's Price Stability	75
Price Growth Persistence	45
Earnings Predictability	100

DANAHER CORP. NYSE-DHR

RECENT PRICE 209.79 | P/E RATIO 39.3 (Trailing: 53.0 / Median: 21.0) | RELATIVE P/E RATIO 1.88 | DIV'D YLD 0.3% | VALUE LINE

TIMELINESS – Suspended 7/12/19
SAFETY 1 Raised 10/9/20
TECHNICAL – Suspended 7/12/19
BETA .85 (1.00 = Market)

High:	38.3	47.6	56.1	57.2	77.4	87.5	97.6	102.8	95.2	110.9	154.0	211.3
Low:	23.9	34.9	39.3	47.5	56.2	70.1	81.3	75.7	78.2	91.8	96.4	119.6



18-Month Target Price Range
Low-High Midpoint (% to Mid)
$168-$283 $226 (5%)

Target Price Range
2023 | 2024 | 2025

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	225	(+5%)	2%
Low	185	(-10%)	-2%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	653	604	718
to Sell	666	786	696
Hld's(000)	556775	547475	557233

% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	46.0	8.7
3 yr.	151.7	17.6
5 yr.	144.4	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
11.15	13.07	15.57	17.32	19.92	17.29	20.03	23.40	26.56	27.39	28.27	29.94	24.39	26.31	28.36	25.75	30.00	34.05	Revenues per sh	44.65
1.46	1.76	2.08	2.39	2.76	2.39	2.98	3.80	4.57	4.76	5.02	5.96	5.00	5.32	5.64	5.21	7.20	8.25	"Cash Flow" per sh	10.90
1.15	1.38	1.65	1.92	2.12	1.81	2.31	2.83	3.23	3.42	3.63	4.30	3.34	3.50	3.74	3.26	5.10	6.00	Earnings per sh A	8.25
.03	.04	.04	.05	.06	.06	.08	.09	.13	.08	.33	.54	.58	.55	.62	.67	.71	.80	Div'ds Decl'd per sh B	1.20
.19	.20	.22	.25	.30	.29	.33	.49	.67	.79	.85	.92	.85	.89	.93	.91	.90	.95	Cap'l Spending per sh	1.30
7.48	8.31	10.78	14.27	15.39	17.98	20.80	24.58	27.66	32.07	33.19	34.49	33.23	37.84	40.22	43.52	52.10	56.35	Book Value per sh C	70.00
617.84	611.14	616.48	636.60	637.40	646.96	659.18	687.73	687.50	698.10	704.30	686.80	692.20	696.60	701.50	695.50	710.00	710.00	Common Shs Outst'g D	700.00
21.8	19.5	19.8	20.1	17.0	17.1	17.3	17.3	16.4	19.3	21.3	20.4	25.8	24.5	27.0	41.0	Bold figures are		Avg Ann'l P/E Ratio	25.0
1.15	1.04	1.07	1.07	1.02	1.14	1.10	1.09	1.04	1.08	1.12	1.03	1.35	1.23	1.46	2.23	Value Line		Relative P/E Ratio	1.40
.1%	.1%	.1%	.1%	.2%	.2%	.2%	.2%	.2%	.1%	.4%	.6%	.7%	.6%	.6%	.5%	estimates		Avg Ann'l Div'd Yield	.6%

CAPITAL STRUCTURE as of 7/3/20
Total Debt $22387.2 mill. **Due in 5 Yrs** $11000.0 mill.
LT Debt $22370.0 mill. **LT Interest** $1230.0 mill. (38% of Cap'l)

Leases, Uncapitalized Annual rentals $179.5 mill.
Pension Assets-12/19 $3.0 bill. **Oblig.** $3.9 bill.
Pfd Stock $1.6 bill.
Common Stock 709,408,837 shs. as of 7/17/20
MARKET CAP: $149 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
13203	16091	18260	19118	19914	20563	16882	18330	19893	17911	21310	24190	Revenues ($mill)	31250
19.2%	20.7%	21.5%	22.0%	21.9%	24.4%	23.0%	23.2%	23.7%	24.9%	25.0%	25.5%	Operating Margin	27.0%
397.1	634.9	839.8	895.0	938.5	1051.3	1128.1	1238.3	1307.7	1189.5	1500	1600	Depreciation ($mill)	1850
1568.9	1979.1	2299.3	2426.0	2598.4	3045.2	2332.2	2469.8	2650.9	2432.3	3620	4260	Net Profit ($mill)	5775
23.5%	24.9%	23.6%	23.4%	25.4%	20.2%	16.4%	16.0%	19.5%	26.4%	22.0%	22.0%	Income Tax Rate	22.0%
11.9%	12.3%	12.6%	12.7%	13.0%	14.8%	13.8%	13.5%	13.3%	13.6%	17.0%	17.6%	Net Profit Margin	18.5%
2424.7	2100.4	3381.7	4586.3	4034.9	1666.3	d208.9	2057.7	2252.3	20665	7000	8500	Working Cap'l ($mill)	10000
2783.9	5206.8	5287.6	3436.7	3401.5	12025	9674.2	10327	9688.5	21517	22200	21500	Long-Term Debt ($mill)	19250
13711	16905	19017	22385	23378	23690	23003	26358	28214	30271	37000	40000	Shr. Equity ($mill)	49000
9.9%	9.3%	9.8%	9.7%	9.9%	8.8%	7.4%	6.9%	7.2%	4.8%	7.0%	8.0%	Return on Total Cap'l	9.5%
11.4%	11.7%	12.1%	10.8%	11.1%	12.9%	10.1%	9.4%	9.4%	8.0%	10.0%	10.5%	Return on Shr. Equity	12.0%
11.1%	11.3%	11.6%	10.6%	10.1%	11.4%	8.4%	7.9%	7.9%	6.7%	8.5%	9.0%	Retained to Com Eq	10.0%
3%	3%	4%	2%	9%	12%	17%	15%	16%	22%	14%	13%	All Div'ds to Net Prof	15%

CURRENT POSITION ($MILL.)	2018	2019	7/3/20
Cash Assets	787.8	19912.3	5539.3
Receivables	3489.6	3191.4	3378.4
Inventory (LIFO)	1910.1	1628.3	2592.9
Other	906.3	864.6	833.2
Current Assets	7093.8	25596.6	12343.8
Accts Payable	1712.8	1514.4	1598.6
Debt Due	51.8	212.4	17.2
Other	3076.9	3205.3	3984.1
Current Liab.	4841.5	4932.1	5599.9

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	3.5%	-1.5%	9.0%
"Cash Flow"	7.5%	1.0%	13.0%
Earnings	6.0%	.5%	16.0%
Dividends	27.0%	28.5%	12.0%
Book Value	9.0%	4.0%	10.0%

Cal-endar	QUARTERLY REVENUES ($ mill.)A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	4206	4510	4528	5086	18330
2018	4695	4981	4853	5364	19893
2019	4220	4445	4378	4868	17911
2020	4343	5297	5490	6180	21310
2021	5060	6000	6200	6930	24190

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.69	.79	.81	1.21	3.50
2018	.80	.95	.93	1.05	3.74
2019	.45	.90	.84	1.07	3.26
2020	.81	1.24	1.35	1.70	5.10
2021	1.05	1.45	1.55	1.95	6.00

Cal-endar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.135	.16	.16	.125	.58
2017	.125	.14	.14	.14	.545
2018	.14	.16	.16	.16	.62
2019	.16	.17	.17	.17	.67
2020	.17	.18	.18		

BUSINESS: Danaher Corp. designs, manufactures, and markets life sciences/diagnostic/environmental & applied solutions products and services. Spun off Fortive (instrum./ind. tech.) 7/16 and Envista (dental) 9/19. Acquired five companies in 2019 for $331 mill.; 2 in 2018 ($2.2 billion); 10 in 2017 ($386 mill.); 9 in 2016 ($5.4 bill.) (Cepheid/$4.0 bill.); 12 in 2015 ($14.3 bill.) (Pall/$13.6 bill.); 17 in '14 ($3.2 bill.); 14 in '13 ($957 mill.). Foreign sales were 63% of 2019 revenues. Offs. and dirs. own 11.7% of common (11.4% is Rales brothers); Vanguard, 7.1%; BlackRock, 6.5%; T. Rowe Price, 5.8% (3/20 Proxy). Pres. & CEO: Tom Joyce. Inc.: DE. Addr.: 2200 Pennsylvania Avenue, N.W., Suite 800W, Washington, D.C. 20037-1701. Tel.: 202-828-0850. Internet: www.danaher.com.

Danaher stock is trading north of $200 a share for the first time in its history. The company's aggressive wheeling and dealing of late has caught Wall Street's attention at a time when the investment community is looking for rock-solid companies. Recall, DHR enacted the dental exchange offer, now known as Envista, roughly one year ago. Then, it acquired the GE Biopharma arm from that company and created a new life sciences arm named Cytiva. (These are the reasons for the suspended Timeliness ranking). Now, with the larger moves completed, future prospects are bright. Also, Danaher's growth-via-acquisition machine is likely to have numerous targets on which to feed in a post-pandemic world. Add to this a recent good quarterly performance (more color below), and it becomes more clear why the shares are up 20% in value over the past three months.

Despite the pandemic, second-quarter results were solid. In a very challenging environment, DHR put up figures that outdistanced both our and Wall Street's expectations. Revenues were a hair below the $5.3 billion mark, and share net was more than a dime ahead of our call. The GE Biopharma units being run through the Danaher Business System showed just how powerful that renowned system is, as profitability enhancements were rampant. Cash flow generation was also ample, leaving the company well-positioned for 2021 and beyond.

We think share net can reach the $6.00 level in 2021. The aforementioned portfolio alterations were made with smoothing out the revenue stream (recurring revenues) and increasing the potential profitability of the fold, as a whole. We see the early signs of success here and think next year will be significantly better, given a hopeful return to a more normalized business environment. Of course, management is always looking for more deals, so things can change in a hurry at Danaher.

Investors have likely already missed the boat with regard to this top-quality selection. The quotation is within our recently lifted Target Price Range out to 2023-2025. Also, the dividend here is not a priority, with most excess funding earmarked for M&A activity.

Erik M. Manning *October 9, 2020*

(A) Diluted egs. May not sum due to rounding. 2016 restated to reflect Fortive spinoff. Excl. nonrecur. gains/(losses): '05, 2¢; '06, 9¢; '07, (6¢); '08, (14¢); '09, (16¢); '10, 33¢; '15, (63¢); '16, (26¢). Excl. gains/(loss) from discont. ops.; '07, 24¢; '15, $1.07; '16, 57¢; '17, 3¢; '19, 79¢. Next egs. report due between October 22nd and 26th. (B) Dividends paid in late March, June, Sept., and Dec. (C) Incl. intang.'19: $32.47 mill., $46.67/sh. (D) In mills., adj. for stock splits. (E) Spun off Fortive (FTV) 7/16. (F) Spunoff Envista (NVST) 9/19.

Company's Financial Strength	A+
Stock's Price Stability	100
Price Growth Persistence	NMF
Earnings Predictability	75

GENERAL MILLS NYSE-GIS

RECENT PRICE **62.19** | P/E RATIO **16.9** (Trailing: 17.2 / Median: 16.0) | RELATIVE P/E RATIO **0.80** | DIV'D YLD **3.2%** | VALUE LINE

TIMELINESS 2 Raised 7/17/20
SAFETY 1 Raised 11/5/04
TECHNICAL 2 Lowered 6/12/20
BETA .70 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$38-$75	$57 (-10%)

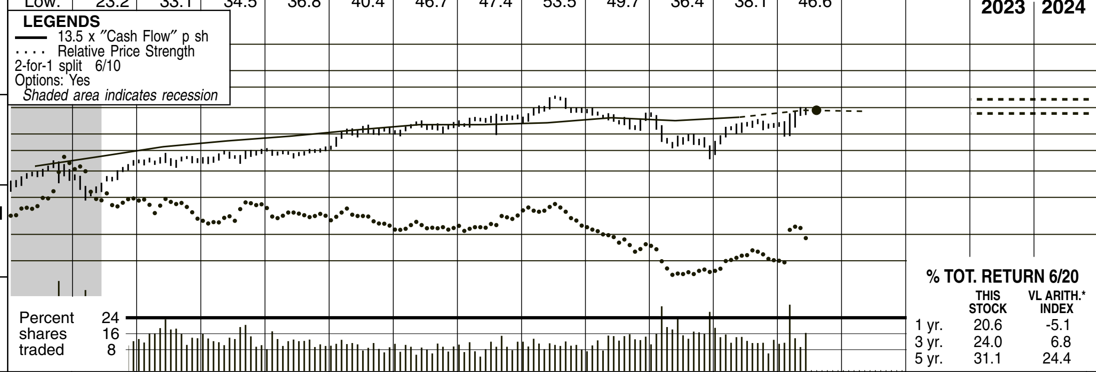
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(+15%)	6%
Low	60	(-5%)	3%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	526	647	487
to Sell	603	551	706
Hld's(000)	425430	436128	429806

High:	36.0	39.0	40.8	41.9	53.1	55.6	59.9	72.9	63.7	60.7	56.4	64.3
Low:	23.2	33.1	34.5	36.8	40.4	46.7	47.4	53.5	49.7	36.4	38.1	46.6



% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	20.6	-5.1
3 yr.	24.0	6.8
5 yr.	31.1	24.4

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
14.60	15.24	16.35	18.30	20.23	22.40	22.54	23.08	25.69	27.74	29.25	29.45	27.75	27.08	26.54	28.02	28.91	*28.50*	Sales per sh A	*30.35*
1.97	2.09	2.13	2.30	2.50	2.78	3.09	3.30	3.47	3.71	3.94	3.93	4.01	4.24	4.11	4.26	4.60	*4.50*	"Cash Flow" per sh	*5.00*
1.43	1.37	1.45	1.59	1.76	1.99	2.30	2.48	2.56	2.69	2.83	2.86	2.92	3.08	3.11	3.22	3.61	*3.50*	Earnings per sh A B	*3.95*
.55	.62	.67	.72	.79	.86	.96	1.12	1.22	1.32	1.55	1.67	1.78	1.92	1.96	1.96	1.96	*1.96*	Div'ds Decl'd per sh C ■	*2.20*
.83	.56	.51	.68	.77	.86	.99	1.01	1.04	.96	1.08	1.19	1.22	1.19	1.05	.89	.76	*.80*	Cap'l Spending per sh	*.95*
6.92	7.69	8.11	7.82	9.21	7.89	8.23	9.87	9.90	10.41	10.67	8.35	8.26	7.50	10.35	11.72	13.22	*14.95*	Book Value per sh D	*20.00*
758.00	738.00	712.00	680.00	675.00	656.00	656.50	644.80	648.50	640.80	612.30	598.70	596.80	576.90	593.10	601.90	609.80	*610.00*	Common Shs Outst'g F	*610.00*
16.2	17.5	16.8	17.6	16.5	15.2	14.3	14.7	15.1	15.7	17.8	18.6	20.0	20.5	17.0	14.1	15.0		Avg Ann'l P/E Ratio	*16.5*
.86	.93	.91	.93	.99	1.01	.91	.92	.96	.88	.94	.94	1.05	1.03	.92	.75	.79		Relative P/E Ratio	*.90*
2.4%	2.6%	2.8%	2.6%	2.7%	2.9%	2.9%	3.1%	3.2%	3.1%	3.1%	3.1%	3.1%	3.0%	3.7%	4.3%	3.6%		Avg Ann'l Div'd Yield	*3.4%*

CAPITAL STRUCTURE as of 5/31/20
Total Debt $13539.5 mill. **Due in 5 Yrs** $7.44 bill.
LT Debt $10929.0 mill. **LT Interest** $390.0 mil.
(Total interest coverage: 7.8X) (58% of Cap'l)

Leases, Uncapitalized Annual rentals $115.4 mill.
Plan Assets-5/20 $7.0 bill. **Oblig.** $7.6 bill.

Pfd Stock None

Common Stock 609,869,264 shs.
as of 6/15/20
MARKET CAP: $37.9 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
14797	14880	16658	17774	17910	17630	16563	15620	15740	16865	17627	*17400*	Sales ($mill) A	*18500*
21.0%	20.8%	19.5%	19.5%	19.4%	18.2%	20.6%	21.6%	21.2%	20.4%	20.3%	*21.0%*	Operating Margin	*21.5%*
457.1	472.6	541.5	588.0	585.4	588.3	608.1	603.6	618.8	620.1	594.7	*600*	Depreciation ($mill)	*600*
1571.5	1652.0	1707.3	1788.7	1824.4	1765.2	1787.4	1842.9	1820.6	1946.4	2211.9	*2145*	Net Profit ($mill)	*2435*
34.3%	31.6%	30.2%	31.9%	33.3%	25.4%	30.3%	27.0%	24.7%	17.0%	18.3%	*22.0%*	Income Tax Rate	*22.0%*
10.6%	11.1%	10.2%	10.1%	10.2%	10.0%	10.8%	11.8%	11.6%	11.5%	12.5%	*12.3%*	Net Profit Margin	*13.2%*
d289.1	242.8	d151.8	d995.0	d1030	d1104	d1078	d1269	d3218	d2901	d2370	*d2100*	Working Cap'l ($mill)	*400*
5268.5	5542.5	6161.9	5926.1	6423.5	7607.7	7057.7	7642.9	12669	11625	10929	*9775*	Long-Term Debt ($mill)	*8775*
5402.9	6365.5	6421.7	6672.2	6534.8	4996.7	4930.2	4327.9	6141.1	7054.5	8058.5	*9115*	Shr. Equity ($mill)	*12210*
16.2%	15.3%	14.9%	15.5%	15.3%	15.2%	16.1%	16.6%	10.4%	11.4%	12.7%	*12.5%*	Return on Total Cap'l	*12.5%*
29.1%	26.0%	26.6%	26.8%	27.9%	35.3%	36.3%	42.6%	29.6%	27.6%	27.4%	*23.5%*	Return on Shr. Equity	*20.0%*
17.2%	14.5%	14.1%	13.8%	12.9%	15.0%	14.5%	16.4%	11.1%	10.8%	12.6%	*10.5%*	Retained to Com Eq	*9.0%*
41%	44%	47%	49%	54%	58%	60%	62%	63%	61%	54%	*56%*	All Div'ds to Net Prof	*56%*

CURRENT POSITION ($MILL.)

	2018	2019	5/31/20
Cash Assets	399.0	450.0	1677.8
Receivables	1684.2	1679.7	1615.1
Inventory (LIFO)	1642.2	1559.3	1426.3
Other	398.3	497.5	402.1
Current Assets	4123.7	4186.5	5121.3
Accts Payable	2746.2	2854.1	3247.7
Debt Due	3149.9	2865.2	2610.5
Other	1445.8	1367.8	1633.3
Current Liab.	7341.9	7087.1	7491.5

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '18-'20 to '23-'25
Sales	2.5%	-.5%	*1.5%*
"Cash Flow"	4.5%	2.5%	*2.5%*
Earnings	5.0%	3.5%	*3.0%*
Dividends	8.5%	5.5%	*2.0%*
Book Value	3.5%	3.5%	*9.5%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) A Aug.Per	Nov.Per	Feb.Per	May Per	Full Fiscal Year
2017	3909	4112	3793	3806	15620
2018	3769	4198	3882	3891	15740
2019	4094	4411	4198	4161	16865
2020	4003	4421	4180	5023	17627
2021	*4150*	*4450*	*4225*	*4575*	*17400*

Fiscal Year Ends	EARNINGS PER SHARE ABE Aug.Per	Nov.Per	Feb.Per	May Per	Full Fiscal Year
2017	.78	.85	.72	.73	3.08
2018	.71	.82	.79	.79	3.11
2019	.71	.85	.83	.83	3.22
2020	.79	.95	.77	1.10	3.61
2021	*.83*	*.97*	*.82*	*.88*	*3.50*

Cal-endar	QUARTERLY DIVIDENDS PAID C ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.44	.46	.48	.48	1.86
2017	.48	.48	.49	.49	1.94
2018	.49	.49	.49	.49	1.96
2019	.49	.49	.49	.49	1.96
2020	.49	.49			

BUSINESS: General Mills, Inc. is a manufacturer of branded consumer foods that are sold through retail stores. Sales breakdown (excl. joint ventures): North America Retail (61% of fiscal 2020 sales); Convenience Stores & Foodservice (10%); Europe & Australia (10%); Pet (10%); and Asia & Latin America (9%). Brands include: *Cheerios*, *Wheaties*, *Total*, *Betty Crocker*, *Bisquick*, *Annie's*, *Yoplait*, *Haagen-Dazs*, *Old El Paso*, *Blue Buffalo*, *Cinnamon Toast Crunch*, and *Progresso*. Acquired Blue Buffalo 4/18. Has 35,000 emplys. Off./dir. own less than 1.0% of common stock; Vanguard Grp., Inc. 7.6% (8/19 Proxy). Chrmn. & CEO: Jeffrey Harmening. Inc.: DE. Addr.: Number One General Mills Blvd., Minneapolis, MN 55426. Tel.: 763-764-7600. Internet: www.generalmills.com.

General Mills stock recently traded at a multiyear high. The interest was driven by a few factors, not the least of which was a terrific conclusion to fiscal 2020 (ended May 31st). We also think this issue is viewed as a comfortable holding when the market has shown stretches of heightened volatility, which we saw after the COVID-19 outbreak stateside. Investors should note the stock's below-market Beta and Safety rank of 1 (Highest).

The company delivered impressive fiscal fourth-quarter results. The increased demand due to people eating at home and practicing social-distancing measures to slow the spread of the coronavirus helped General Mills produce adjusted share earnings of $1.10. That figure was markedly higher than our $0.84 estimate and 33% above the prior-year figure. For the full fiscal year, the cereal, snacks, yogurt, and pet foods producer earned $3.61 a share (our call was at $3.35). In the final quarter, a surge in COVID-19-driven sales was the primary catalyst, with respective outsized top-line gains of 36% and 37% for the North American Retail and Pet segments.

We expect a modest pullback in share earnings in fiscal 2021. However, our call of $3.50 would still be a healthy showing. Management expects continued concerns about the coronavirus, including a recent surge in cases in states that have aggressively opened their economies, along with an onerous employment picture (the jobless rate was above 11% in June), to result in more people eating at home than normal over the summer and fall months. This should benefit GIS, as roughly 85% of its sales come from at-home consumption.

This stock is ranked 2 (Above Average) for Timeliness. But when the extra business from more people eating at home abates, the company will still be faced with challenges, including a secular decline in cereal consumption, a weak yogurt business, and a highly competitive pet foods category. Management has made brand building and product innovation a key focus to fix these problems, but until we see consistent top- and bottom-line gains, we think this high-quality equity may best fit conservative portfolios that stress income generation.

William G. Ferguson *July 17, 2020*

(A) Fiscal year ends last Sun. in May. (B) Diluted egs. Excl. nonrecurring items: '04, (5¢); '05, (17¢); '08, 10¢; '09, (9¢); '10, (6¢); '11, 22¢; '12, (21¢); '13, 10¢; '15, (89¢); '16, (15¢); '17, (31¢); '18, 53¢; '19, (32¢); '20, (5¢). Next earnings report due late September. (C) Div'ds. historically paid in Feb, May, Aug., and Nov. ■ Div'd reinvest. plan available. (D) Incl. intang. At 5/31/20: $21.04 bill. or $34.50/sh. (E) Qrtrly. egs. may not sum to total due to change in shares outstanding. (F) In mill., adj. for split.

Company's Financial Strength	A+
Stock's Price Stability	95
Price Growth Persistence	35
Earnings Predictability	100

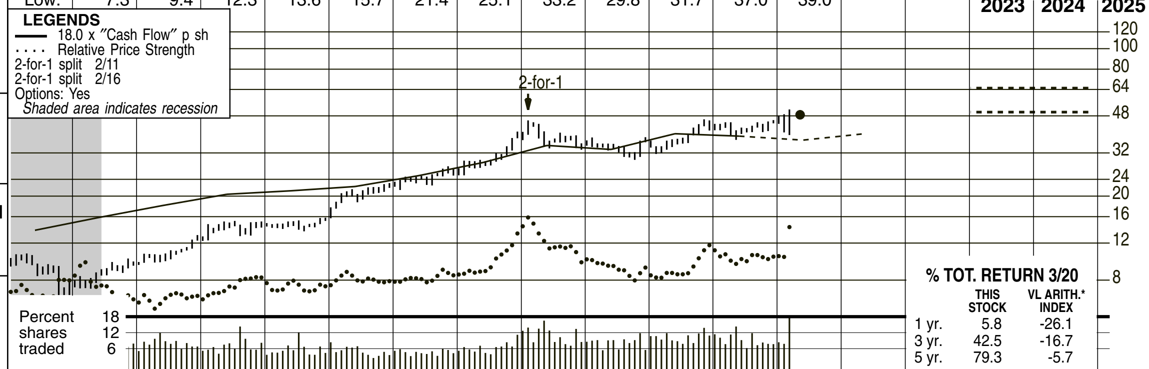
HORMEL FOODS NYSE-HRL

RECENT PRICE 48.55 | P/E RATIO 27.7 (Trailing: 26.8 / Median: 21.0) | RELATIVE P/E RATIO 2.07 | DIV'D YLD 2.0% | VALUE LINE

TIMELINESS 1 Raised 4/3/20
SAFETY 2 Lowered 1/19/18
TECHNICAL 4 Lowered 3/27/20
BETA .60 (1.00 = Market)

High:	10.1	13.1	15.3	15.8	23.1	27.7	40.4	45.7	38.0	46.3	45.8	51.5
Low:	7.3	9.4	12.3	13.6	15.7	21.4	25.1	33.2	29.8	31.7	37.0	39.0

Target Price Range: 2023 | 2024 | 2025



18-Month Target Price Range
Low-High: $35-$52 | Midpoint (% to Mid): $44 (-10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	65	(+35%)	9%
Low	50	(+5%)	3%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	246	291	302
to Sell	275	209	229
Hld's(000)	238266	235427	243943

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	5.8	-26.1
3 yr.	42.5	-16.7
5 yr.	79.3	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
8.67	9.82	10.46	11.41	12.55	12.23	13.57	14.96	15.65	16.60	17.67	17.53	18.02	17.35	17.87	17.77	*18.20*	*18.75*	Sales per sh A	*20.75*
.57	.67	.74	.78	.77	.88	1.01	1.13	1.18	1.23	1.39	1.60	1.93	1.85	2.20	2.14	*2.05*	*2.20*	"Cash Flow" per sh	*3.20*
.39	.46	.51	.54	.52	.63	.76	.87	.93	.98	1.12	1.32	1.64	1.57	1.86	1.80	*1.75*	*1.90*	Earnings per sh A B	*2.85*
.11	.13	.14	.15	.19	.19	.21	.26	.30	.34	.40	.50	.58	.68	.75	.84	*.93*	*1.02*	Div'ds Decl'd per sh C ■	*1.20*
.15	.19	.26	.23	.23	.18	.17	.18	.25	.20	.30	.27	.48	.42	.73	.55	*.65*	*.70*	Cap'l Spending per sh	*.85*
2.54	2.86	3.28	3.47	3.73	3.97	4.52	5.04	5.37	6.29	6.85	7.57	8.42	9.34	10.49	11.08	*11.95*	*12.65*	Book Value per sh D	*15.00*
551.50	551.37	549.36	542.71	538.08	534.37	531.93	527.93	526.09	527.32	527.23	528.41	528.48	528.42	534.14	534.49	*538.00*	*538.00*	Common Shs Outst'g E	*540.00*
18.1	16.9	17.0	17.3	18.2	13.0	13.7	15.7	15.6	19.8	21.3	21.6	23.4	21.8	19.6	23.4	*Bold figures are*		Avg Ann'l P/E Ratio	*20.0*
.96	.90	.92	.92	1.10	.87	.87	.98	.99	1.11	1.12	1.09	1.23	1.10	1.06	1.28	*Value Line*		Relative P/E Ratio	*1.10*
1.6%	1.7%	1.6%	1.6%	2.0%	2.3%	2.0%	1.9%	2.1%	1.8%	1.7%	1.8%	1.5%	2.0%	2.1%	2.0%	*estimates*		Avg Ann'l Div'd Yield	*2.1%*

CAPITAL STRUCTURE as of 1/26/20
Total Debt $317.3 mill. **Due in 5 Yrs** $250.0 mill.
LT Debt $309.0 mill. **LT Interest** $15.0 mill. (5% of Cap'l)
Leases, Uncapitalized Annual rentals $15.6 mill.

Pension Assets-10/19 $1477.3 mill. **Oblig.** $1616.2 mill.

Pfd Stock None
Common Stock 537,776,130 shs. as of 3/1/20

MARKET CAP: $26.1 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
7220.7	7895.1	8230.7	8751.7	9316.3	9263.9	9523.2	9167.5	9545.7	9497.3	*9800*	*10100*	Sales ($mill) A	*11200*
10.6%	10.6%	10.3%	10.4%	11.2%	13.0%	14.9%	15.0%	13.8%	13.9%	*13.5%*	*14.0%*	Operating Margin	*17.5%*
125.6	124.2	119.5	124.9	130.0	133.4	132.0	131.0	161.9	165.2	*170*	*175*	Depreciation ($mill)	*190*
409.0	474.2	500.1	526.2	602.7	713.8	890.1	846.7	1012.1	978.8	*940*	*1020*	Net Profit ($mill)	*1540*
34.9%	33.3%	33.4%	33.6%	34.3%	34.3%	32.4%	33.8%	14.3%	19.1%	*21.5%*	*21.5%*	Income Tax Rate	*21.5%*
5.7%	6.0%	6.1%	6.0%	6.5%	7.7%	9.3%	9.2%	10.6%	10.3%	*9.6%*	*10.1%*	Net Profit Margin	*13.8%*
757.0	1220.0	1534.4	1263.4	1178.1	849.0	976.7	968.3	911.2	1256.4	*1375*	*1500*	Working Cap'l ($mill)	*2000*
- -	250.0	250.0	250.0	250.0	250.0	250.0	250.0	624.8	250.0	*310*	*325*	Long-Term Debt ($mill)	*500*
2406.6	2659.8	2824.9	3316.6	3612.1	3998.2	4448.0	4935.9	5600.8	5921.5	*6425*	*6800*	Shr. Equity ($mill) D	*8100*
17.0%	16.7%	16.5%	14.9%	15.8%	16.9%	19.1%	16.4%	16.5%	16.0%	*14.0%*	*14.5%*	Return on Total Cap'l	*18.0%*
17.0%	17.8%	17.7%	15.9%	16.7%	17.9%	20.0%	17.2%	18.1%	16.5%	*14.5%*	*15.0%*	Return on Shr. Equity	*19.0%*
12.4%	12.9%	12.3%	10.6%	11.1%	11.6%	13.3%	10.1%	11.1%	9.1%	*7.0%*	*7.0%*	Retained to Com Eq	*11.0%*
27%	27%	30%	33%	34%	35%	33%	41%	38%	45%	*53%*	*54%*	All Div'ds to Net Prof	*42%*

CURRENT POSITION ($MILL.)

	2018	2019	1/26/20
Cash Assets	459.1	687.6	739.2
Receivables	600.4	574.4	562.5
Inventory (FIFO)	963.5	1042.4	1057.3
Other	27.1	57.0	36.0
Current Assets	2050.1	2361.4	2395.0
Accts Payable	618.8	590.0	490.0
Debt Due	- -	- -	8.3
Other	520.1	515.0	524.8
Current Liab.	1138.9	1105.0	1023.1

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	4.0%	1.0%	*2.5%*
"Cash Flow"	10.0%	10.0%	*7.5%*
Earnings	12.0%	11.5%	*8.5%*
Dividends	16.0%	17.0%	*8.0%*
Book Value	10.5%	11.0%	*6.5%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) A Jan.Per	Apr.Per	Jul.Per	Oct.Per	Full Fiscal Year
2017	2280.2	2187.3	2207.4	2492.6	9167.5
2018	2331.3	2330.6	2359.1	2524.7	9545.7
2019	2360.4	2344.7	2290.7	2501.5	9497.3
2020	2384.4	*2355.6*	*2410*	*2650*	*9800*
2021	*2450*	*2450*	*2475*	*2725*	*10100*

Fiscal Year Ends	EARNINGS PER SHARE A B Jan.Per	Apr.Per	Jul.Per	Oct.Per	Full Fiscal Year
2017	.44	.39	.34	.40	1.57
2018	.56	.44	.39	.47	1.86
2019	.44	.52	.37	.47	1.80
2020	.45	*.42*	*.40*	*.48*	*1.75*
2021	*.48*	*.46*	*.44*	*.52*	*1.90*

Cal-endar	QUARTERLY DIVIDENDS PAID C ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.145	.145	.145	.145	.58
2017	.17	.17	.17	.17	.68
2018	.188	.188	.188	.188	.75
2019	.21	.21	.21	.21	.84
2020	.233	.233			

BUSINESS: Hormel Foods Corporation is an international manufacturer and marketer of consumer-branded meat and food products, which are sold fresh, frozen, cured, smoked, cooked, and canned. Well-known brand names include: *Hormel, Always Tender, Cure 81, SPAM, Dinty Moore, Jennie-O, Mary Kitchen, Little Sizzlers, Chi-Chi's, Kid's Kitchen, and Skippy.* Distributes products to supermarkets and independent food stores in all 50 states as well as overseas. Has approximately 18,800 employees. The Hormel Foundation owns 48.0% of common stock; all officers/-directors as a group, 1.2% (12/19 Proxy). President and CEO: James P. Snee. Inc.: DE. Address: 1 Hormel Place, Austin, MN 55912-3680. Telephone: 507-437-5611. Internet: www.hormel.com.

Hormel Foods stock has exerted its safe-haven status over the past three months. Indeed, since our last review in January, the stock has climbed 9% in value, while the broader S&P 500 Index has plunged into bear market territory amidst the coronavirus outbreak. We attribute this to a flight to quality on the part of jittery investors, with many shifting out of volatile growth names into more-defensive, dividend-paying issues. Consumers, being asked to "shelter in place" in select communities across the country, have also been hunkering down and stockpiling canned goods.

This hoarding behavior augurs well for the company's Grocery Products segment as we look out through fiscal 2020 (ends October 31st). That division has been struggling of late (first-quarter organic volume and segment profit fell 4% and 28%, respectively), hampered by heightened raw material costs, lower contract manufacturing earnings, weakness in the *SKIPPY* peanut butter line, and the recently completed CytoSport divestiture. And a recovery there would be encouraging, adding to the momentum that Hormel is seeing in its *Jennie-O* turkey business and Refrigerated Foods (especially foodservice) unit. As things stand presently . . .

We expect the Refrigerated and rejuvenated *Jennie-O* segments to do most of the heavy lifting in the coming periods. Indeed, strength in those areas should offset coronavirus-related softness in China and other international markets, along with any lingering pressures on the Grocery Products division. Acquisitions ought to bolster results, as well. This includes a just-announced deal to purchase Sadler's Smokehouse, a pit-smoked meats outfit based in Texas, for $270 million. Sadler's should help Hormel build on its foodservice momentum and better capitalize on the growing demand for authentic barbeque fare. All in all, while the bottom line seems apt to retreat a bit this year, we envision share net rebounding to $1.90 in fiscal 2021 and about $2.85 by the 2023-2025 horizon.

This equity is timely (1), and should still provide long-term investors with decent risk-adjusted returns. Steady dividend growth is a plus here, too.

Justin Hellman *April 17, 2020*

(A) Fiscal year ends on last Saturday in Oct. (B) Based on diluted shares outstanding. Excludes nonrecurring gain: '04, 3¢. Next earnings report due late May. (C) Dividends have historically been paid in the middle of Feb., May, Aug., and Nov. ■ Div'd reinvestment plan available. (D) Includes intangibles. In '19: $3515.5 mill., $6.58/sh. (E) In millions, adjusted for splits.

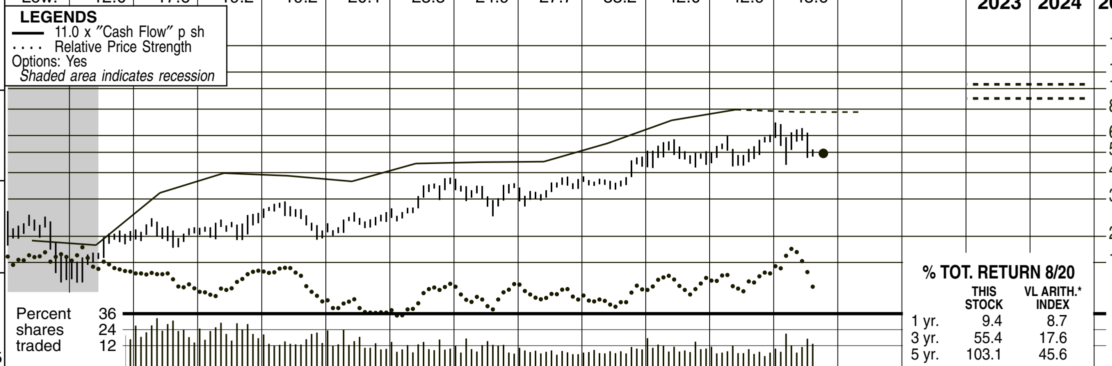
Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	90
Earnings Predictability	95

INTEL NDQ-INTC

RECENT PRICE **49.41** | P/E RATIO **10.9** (Trailing: 8.8; Median: 11.0) | RELATIVE P/E RATIO **0.51** | DIV'D YLD **2.7%** | VALUE LINE

High:	21.3	24.4	25.8	29.3	26.0	37.9	37.5	38.4	47.6	57.6	60.5	69.3
Low:	12.0	17.6	19.2	19.2	20.1	23.5	24.9	27.7	33.2	42.0	42.9	43.6

TIMELINESS 1 Raised 4/24/20
SAFETY 1 Raised 4/10/09
TECHNICAL 4 Lowered 9/25/20
BETA .85 (1.00 = Market)



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$46-$91	$69 (40%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	105	(+115%)	23%
Low	90	(+80%)	18%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	1185	1024	1188
to Sell	1123	1366	1194
Hld's(000)	2851903	2771576	2758495

% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	9.4	8.7
3 yr.	55.4	17.6
5 yr.	103.1	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
5.47	6.56	6.14	6.59	6.76	6.36	7.92	10.80	10.79	10.61	11.77	11.72	12.56	13.39	15.69	16.78	*17.45*	*17.10*	Sales per sh	*19.30*
1.94	2.20	1.68	1.98	1.74	1.65	2.92	3.62	3.51	3.30	4.02	4.07	4.10	5.02	6.44	7.24	*7.05*	*7.05*	"Cash Flow" per sh	*9.10*
1.16	1.40	.86	1.18	.92	.77	2.05	2.39	2.13	1.89	2.31	2.33	2.72	3.47	4.59	4.89	*4.85*	*4.70*	Earnings per sh A	*6.50*
.16	.32	.41	.45	.55	.56	.63	.78	.87	.90	.90	.96	1.04	1.08	1.20	1.26	*1.32*	*1.36*	Div'ds Decl'd per sh B ■	*1.50*
.61	.98	1.00	.86	.93	.82	.94	2.15	2.23	2.16	2.13	1.55	2.03	2.51	3.36	3.78	*4.20*	*4.65*	Cap'l Spending per sh	*6.00*
6.17	6.11	6.37	7.35	7.03	7.55	8.97	9.18	10.36	11.73	11.77	13.12	14.19	14.91	16.60	18.10	*18.60*	*19.55*	Book Value per sh	*22.75*
6253.0	5919.0	5766.0	5818.0	5562.0	5523.0	5511.0	5000.0	4944.0	4967.0	4748.0	4725.0	4730.0	4687.0	4516.0	4290.0	*4300.0*	*4300.0*	Common Shs Outst'g C	*4400.0*
22.1	17.8	23.3	19.9	21.7	22.2	10.1	9.2	11.7	12.2	13.2	13.8	12.3	10.9	10.7	10.5	*Bold figures are*		Avg Ann'l P/E Ratio	*15.0*
1.17	.95	1.26	1.06	1.31	1.48	.64	.58	.74	.69	.69	.69	.65	.55	.58	.57	*Value Line*		Relative P/E Ratio	*.85*
.6%	1.3%	2.0%	1.9%	2.8%	3.3%	3.0%	3.5%	3.5%	3.9%	3.0%	3.0%	3.1%	2.9%	2.4%	2.4%	*estimates*		Avg Ann'l Div'd Yield	*1.5%*

CAPITAL STRUCTURE as of 6/27/20
Total Debt $38,347 mill. **Due in 5 Yrs** $2,370 mill.
LT Debt $36,093 mill. **LT Interest** $360.0 mill.
(31% of Cap'l)
Interest Coverage: 52.2x
Leases, Uncapitalized Annual rentals $229.0 mill.

Pens. Assets-12/19 $2654 mill. **Oblig.** $4284mill.
Pfd Stock None

Common Stock 4,253,000,000 shs.
as of 3/28/20
MARKET CAP: $210 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
43623	53999	53341	52708	55870	55355	59387	62761	70848	71965	*75000*	*73500*	Sales ($mill)	*85000*
45.9%	42.4%	39.9%	36.2%	41.7%	40.5%	35.9%	40.2%	43.7%	44.2%	*44.5%*	*45.5%*	Operating Margin	*48.0%*
4398.0	5141.0	6357.0	6790.0	7380.0	7821.0	6266.0	6762.0	7520.0	9204.0	*9400*	*10000*	Depreciation ($mill) D	*11500*
11692	12942	11005	9620.0	11704	11420	13146	16756	21570	21853	*20855*	*20210*	Net Profit ($mill)	*28600*
28.7%	27.2%	26.0%	23.7%	25.9%	19.6%	24.0%	46.6%	10.0%	12.8%	*13.0%*	*14.0%*	Income Tax Rate	*14.0%*
26.8%	24.0%	20.6%	18.3%	20.9%	20.6%	22.1%	26.7%	30.4%	30.4%	*27.8%*	*27.5%*	Net Profit Margin	*33.6%*
22284	13844	18460	18516	11711	24689	15206	12079	12161	8929.0	*10000*	*11500*	Working Cap'l ($mill)	*17000*
2077.0	7084.0	13136	13165	12107	20036	20649	25037	25098	25308	*24000*	*23500*	Long-Term Debt ($mill)	*20000*
49430	45911	51203	58256	55865	61982	67108	69885	74982	77659	*80000*	*84000*	Shr. Equity ($mill)	*100000*
22.8%	24.5%	17.2%	13.6%	17.3%	14.1%	15.3%	18.0%	21.8%	21.4%	*20.0%*	*19.0%*	Return on Total Cap'l	*24.0%*
23.7%	28.2%	21.5%	16.5%	21.0%	18.4%	19.6%	24.0%	28.8%	28.1%	*26.0%*	*24.0%*	Return on Shr. Equity	*28.5%*
16.6%	19.2%	13.0%	8.8%	13.1%	11.1%	12.3%	16.7%	21.4%	21.0%	*19.0%*	*17.0%*	Retained to Com Eq	*22.0%*
30%	32%	40%	47%	38%	40%	37%	30%	26%	26%	*27%*	*29%*	All Div'ds to Net Prof	*23%*

CURRENT POSITION ($MILL.)	2018	2019	6/27/20
Cash Assets	11650	13123	25815
Receivables	6722	7659	7441
Inventory (FIFO)	7253	8744	8969
Other	3162	1713	2165
Current Assets	28787	31239	44390
Accts Payable	3824	4128	5045
Debt Due	1251	3692	2254
Other	11541	14490	15182
Current Liab.	16626	22310	22481

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	9.0%	6.5%	*4.0%*
"Cash Flow"	13.5%	11.5%	*6.5%*
Earnings	16.5%	15.5%	*7.0%*
Dividends	8.5%	6.0%	*4.0%*
Book Value	8.5%	8.0%	*5.5%*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	14796	14763	16149	17053	62761
2018	16066	16962	19163	18657	70848
2019	16061	16505	19190	20209	71965
2020	19828	19728	*18200*	*17244*	*75000*
2021	*18200*	*18400*	*18400*	*18500*	*73500*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.66	.72	1.01	1.08	3.47
2018	.87	1.04	1.40	1.28	4.59
2019	.89	1.06	1.42	1.52	4.89
2020	1.45	1.23	*1.10*	*1.07*	*4.85*
2021	*1.15*	*1.17*	*1.19*	*1.19*	*4.70*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.26	.26	.26	.26	1.04
2017	.26	.273	.273	.273	1.08
2018	.30	.30	.30	.30	1.20
2019	.315	.315	.315	.315	1.26
2020	.33	.33	.333		

BUSINESS: Intel is a leading manufacturer of integrated circuits. Markets served: primarily makers of personal computers; also communications, industrial automation, military, and other electronic equipment. Main products: microprocessors (notably, the Pentium series), microcontrollers, and memory chips. Also sells computer modules and boards, and network products. Foreign business: about 78% of '19 sales. R&D: 18.6% of sales. '19 deprec. rate: 7.2%. Has 110,800 empl. Off./dir. own less than 1% of common shares; The Vanguard Group, 8.4%; BlackRock, 7.1%. (3/20 proxy). Chair.: Andy Bryant. Pres.: Venkata Renduchintala. CEO: Robert Swan. Inc.: DE. Addr.: 2200 Mission College Blvd., Santa Clara, CA 95054. Tel.: 408-765-8080. Internet: www.intc.com.

Intel reported mixed news during its June-quarter conference call. On a positive note, share earnings and sales were above estimates for the period. On the other hand, management announced a delay in 7 nanometer chips, which wasn't well received with investors, who bid the stock price down sharply. In fact, these shares are trading markedly lower than they were at the time of our June review.

Looking at the June quarter with more granularity, results were quite solid overall. Earnings per share clocked in at $1.23, which marked a 16% advance over the previous year's tally, and sharply above our $1.10 estimate. June-period sales of $19.7 billion increased 20% on a year-over-year basis and were considerably above our $18.5 billion expectation. Data-centric sales advanced 34% on a year-to-year basis, thanks to very-solid results at the Data Center Group (DCG) and its memory business (NSG). DCG was propelled by 47% growth in cloud service provider sales. Furthermore, NSG (Non-Volatile Memory Solutions Group) registered record sales for the period reflecting strong demand for products used in 5G network infrastructure. These positive variables helped offset year-over-year declines at the Internet of Things and Mobileye divisions. The latter segment has been constrained by lackluster results in the automotive industry.

Earnings comparisons will likely become increasingly difficult over the back half of the year and into 2021. While work-from-home initiatives have recently improved comparisons in the PC-centric business, Intel is up against tough comparisons over the next four quarters. The coronavirus has been a bit of a double-edged sword for the company's results. It has helped the personal computer division to an extent as more people work from home. However, corporate IT spending will likely take a hit this year.

Earnings ought to climb at a high single-digit clip, on average, over the 3 to 5 years ahead. Our optimism is based on a decent economic backdrop and the company getting its 7-nanometer production kinks worked out.

These timely shares also offer wide long-term price-gains potential.

Alan G. House *September 25, 2020*

(A) Dil. egs. Excl. nonrecurr. gains (losses): '10, (4¢); '16, (60¢). Next egs. report due late Oct.
(B) Dividends historically paid late Feb., May, Aug., and Nov. ■ Dividend reinvestment plan available. (C) In millions.
(D) Excludes amortization of goodwill and other acquisition-related intangibles.

Company's Financial Strength	A++
Stock's Price Stability	85
Price Growth Persistence	75
Earnings Predictability	95

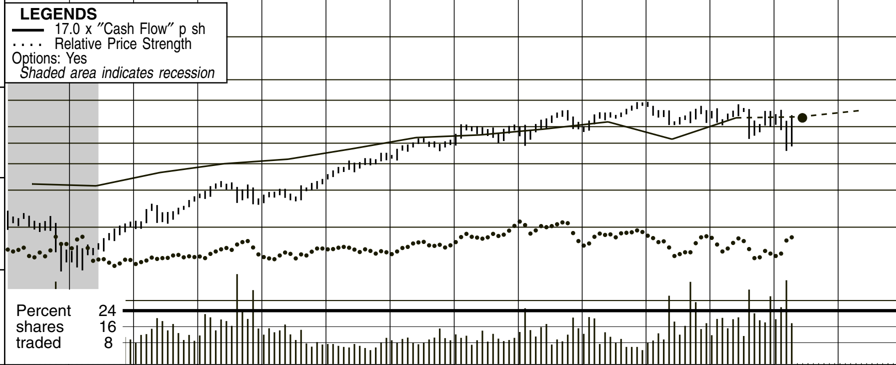
INT'L FLAVORS & FRAG. NYSE-IFF

RECENT PRICE 131.90 | P/E RATIO 20.9 (Trailing: 21.2; Median: 20.0) | RELATIVE P/E RATIO 1.15 | DIV'D YLD 2.4% | VALUE LINE

TIMELINESS – Suspended 12/27/19
SAFETY 1 Raised 3/11/11
TECHNICAL – Suspended 12/27/19
BETA .90 (1.00 = Market)

High:	42.6	56.1	66.3	67.8	90.3	105.8	123.1	143.6	156.6	157.4	153.0	143.9
Low:	25.0	39.3	51.2	52.1	67.5	82.9	97.6	97.2	113.2	122.1	104.9	92.1

LEGENDS
— 17.0 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High $95-$199; Midpoint (% to Mid) $147 (10%)

Target Price Range 2023 | 2024 | 2025
320 / 200 / 160 / 120 / 100 / 80 / 60 / 40 / 18

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	230	(+75%)	17%
Low	190	(+45%)	12%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	284	286	289
to Sell	221	229	216
Hld's(000)	102093	102531	101933

Percent shares traded 24 / 16 / 8

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-2.6	-15.6
3 yr.	0.9	-2.4
5 yr.	26.7	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
21.52	21.97	23.43	28.10	30.38	29.39	32.68	34.45	34.57	36.28	38.24	37.78	39.34	43.05	37.31	48.13	*49.55*	*52.90*	Sales per sh	*69.00*
3.04	3.04	3.39	3.94	3.77	3.70	4.27	4.71	4.95	5.54	6.26	6.45	6.87	7.43	6.15	7.77	*7.85*	*8.45*	"Cash Flow" per sh	*12.00*
2.08	1.96	2.34	2.70	2.76	2.69	3.26	3.74	3.98	4.47	5.08	5.25	5.51	5.89	6.00	6.17	*6.30*	*6.80*	Earnings per sh A	*9.50*
.67	.72	.74	.88	.96	1.00	1.04	1.16	1.30	1.46	1.72	2.06	2.40	2.66	2.84	2.96	*3.06*	*3.26*	Div'ds Decl'd per sh B ■	*4.76*
.75	1.03	.65	.81	1.09	.84	1.32	1.58	1.55	1.65	1.77	1.26	1.60	1.63	1.60	2.21	*2.10*	*2.50*	Cap'l Spending per sh	*2.70*
9.63	10.09	10.12	7.62	7.29	9.71	12.45	13.65	15.30	17.98	18.80	19.87	20.53	21.33	56.58	58.22	*57.55*	*59.60*	Book Value per sh C	*69.00*
94.52	90.74	89.42	81.02	78.66	79.16	80.26	80.92	81.63	81.38	80.78	80.02	79.21	78.95	106.62	106.79	*106.00*	*104.00*	Common Shs Outst'g D	*100.00*
18.1	18.9	16.3	18.4	14.3	12.7	14.4	15.7	14.8	17.7	19.1	21.6	22.6	23.1	22.7	21.3	*Bold figures are*		Avg Ann'l P/E Ratio	*22.0*
.96	1.01	.88	.98	.86	.85	.92	.98	.94	.99	1.01	1.09	1.19	1.16	1.23	1.15	*Value Line*		Relative P/E Ratio	*1.20*
1.8%	1.9%	1.9%	1.8%	2.4%	2.9%	2.2%	2.0%	2.2%	1.8%	1.8%	1.8%	1.9%	2.0%	2.1%	2.3%	*estimates*		Avg Ann'l Div'd Yield	*2.3%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $4332.5 mill. **Due in 5 Yrs** $1490 mill.
LT Debt $3946.9 mill. **LT Interest** $220.0 mill.
(Interest coverage: 7.3x)
(40% of Capital)
Pension Assets-12/19 $1.6 bill. **Oblig.**$1.8 bill.

Pfd Stock None

Common Stock 106,851,144 shs.
as of 5/1/20
MARKET CAP: $14.1 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
2622.9	2788.0	2821.4	2952.9	3088.5	3023.2	3116.4	3398.7	3977.5	5140.1	*5250*	*5500*	Sales ($mill)	*6900*
19.3%	19.7%	20.0%	21.1%	22.4%	22.8%	23.9%	22.8%	23.3%	21.7%	*22.0%*	*22.5%*	Operating Margin	*24.0%*
79.2	75.3	76.7	83.2	89.4	89.6	102.5	118.0	125.7	130.2	*150*	*160*	Depreciation ($mill)	*230*
263.6	306.2	327.5	368.0	416.3	426.6	441.4	468.3	529.6	699.6	*680*	*720*	Net Profit ($mill)	*970*
26.7%	27.1%	26.4%	25.7%	25.3%	24.2%	23.8%	20.7%	18.8%	19.5%	*20.0%*	*22.0%*	Income Tax Rate	*23.0%*
10.0%	11.0%	11.6%	12.5%	13.5%	14.1%	14.2%	13.8%	13.3%	13.6%	*13.0%*	*13.1%*	Net Profit Margin	*14.1%*
664.2	752.6	949.9	1092.5	1191.2	713.8	710.7	1127.7	1813.6	1390.3	*1400*	*1450*	Working Cap'l ($mill)	*1500*
787.7	778.2	881.1	932.7	934.2	937.8	1066.9	1632.2	4504.4	3997.4	*4000*	*4000*	Long-Term Debt ($mill)	*3500*
999.4	1104.4	1248.8	1463.1	1518.6	1590.3	1626.2	1684.2	6033.0	6217.3	*6100*	*6200*	Shr. Equity ($mill) C	*6900*
16.1%	17.4%	16.4%	16.3%	17.9%	17.8%	17.4%	15.1%	5.7%	7.5%	*7.5%*	*8.0%*	Return on Total Cap'l	*9.0%*
26.4%	27.7%	26.2%	25.1%	27.4%	26.8%	27.1%	27.8%	8.8%	11.3%	*11.0%*	*11.5%*	Return on Shr. Equity	*14.0%*
18.2%	19.5%	15.7%	19.2%	18.6%	16.8%	15.8%	15.6%	5.0%	6.2%	*6.0%*	*6.0%*	Retained to Com Eq	*7.0%*
31%	29%	40%	24%	32%	37%	42%	44%	43%	45%	*49%*	*48%*	All Div'ds to Net Prof	*50%*

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	634.9	606.8	433.2
Receivables	946.9	884.4	943.1
Inventory	1078.5	1123.1	1075.9
Other	281.6	328.2	366.1
Current Assets	2941.9	2942.5	2818.3
Accts Payable	471.4	510.4	456.2
Debt Due	48.6	385.0	385.6
Other	608.3	656.8	585.2
Current Liab.	1128.3	1552.2	1427.0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	4.0%	3.5%	*8.5%*
"Cash Flow"	6.5%	5.0%	*9.0%*
Earnings	8.5%	6.0%	*8.0%*
Dividends	11.5%	13.5%	*9.0%*
Book Value	18.5%	21.0%	*7.0%*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	828.3	842.9	872.9	854.6	3398.7
2018	930.9	920.0	907.5	1219.0	3977.5
2019	1297.4	1292.6	1266.3	1283.8	5140.1
2020	1347.3	*1290*	*1280*	*1332.7*	*5250*
2021	*1360*	*1380*	*1400*	*1360*	*5500*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.52	1.50	1.47	1.40	5.89
2018	1.69	1.66	1.54	1.22	6.00
2019	1.57	1.61	1.53	1.46	6.17
2020	1.62	*1.60*	*1.55*	*1.53*	*6.30*
2021	*1.70*	*1.75*	*1.70*	*1.65*	*6.80*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.56	.56	.56	.64	2.32
2017	.64	.64	.64	.69	2.61
2018	.69	.69	.69	.73	2.80
2019	.73	.73	.73	.75	2.94
2020	.75	.75			

BUSINESS: International Flavors & Fragrances, Inc. is a leading manufacturer of flavor and fragrance chemicals sold to consumer products manufacturers worldwide. The company currently operates in two business segments: Taste (accounts for about 62% of sales); Scent (about 38%). Its products are used in perfumes, cosmetics, soaps and detergents, prepared foods, beverages, dairy foods, pharmaceuticals, and confectionery and tobacco products. In '19, North America generated 23% of sales. R&D spending accounted for 7% of 2019 sales. Has about 13,600 employees. Off. and dir. own less than 1% of stock; 3 institutions own 41% (3/20 proxy). CEO: Andreas Fibig. Inc.: NY. Address: 521 W. 57th St., New York, NY 10019. Tele.: 212-765-5500. Internet: www.iff.com.

International Flavors & Fragrances (IFF) has been holding up relatively well lately. During the first quarter, sales advanced 4%, to $1.35 billion, with profits of $1.62 per share. These figures were slightly better than we had anticipated. Of note, both of the company's business segments made contributions. The Scent unit benefited from strength in the consumer fragrance and the fragrance ingredients categories. In the fine fragrance area, demand was sluggish, owing to softness in the perfumes and cosmetics lines. Elsewhere, the Taste segment also made progress, and the ongoing integration of the Frutarom business should help.

IFF has been operational, despite the coronavirus pandemic. The company's business has been deemed necessary, and has carried on with few disruptions. In some cases, business has even benefited from stronger demand for ingredients used in highly coveted personal hygiene and disinfectant products. Nonetheless, IFF, along with many other companies, has withdrawn its guidance due to limited visibility. We have lowered our 2020 forecast, which calls for sales of $5.25 billion, with earnings of $6.30 per share.

The company is in solid financial shape. At the end of March, IFF had cash of $433 million on its balance sheet, and a fully available $1 billion credit facility. To conserve funds, the capital spending budget will likely be trimmed, as projects, where travel is required, will likely be postponed. Too, the company may be more conservative about repurchasing shares.

The acquisition of DuPont's Nutrition and Biosciences business is moving forward. The merger is on track to close in early 2021. It has cleared regulatory hurdles in the U.S., and is awaiting approvals in Europe and China. IFF has been working on plans to integrate the two businesses. The combined company will have strong R&D capabilities and will be strongly dedicated to innovation.

IFF stock is unranked for Timeliness due to the pending transaction. The deal should close as planned, and we will update our numbers at that time. Meanwhile, our projections suggest that IFF, as currently configured, holds decent risk-adjusted returns for the next 3 to 5 years.

Adam Rosner *May 29, 2020*

(A) Excludes one-time gains/(losses): '04, 3¢, '05, (8¢); '06, 14¢; '07, 12¢; '08, 11¢; '09, 16¢; '10, 11¢; '11, 48¢; '12, (44¢); '13, (18¢); '14, (2¢); '15, (9¢); '16 (46¢).; '17 ($2.17); '18 ($2.21); '19 ($2.17). Ex. disc.: '05, (2¢). Next egs rept. due late July. Egs. do not sum due to rounding and change in shares. (B) Div's. hist. paid in early Jan, April, July, and Oct. ■ Div. reinvestment plan available. (C) Includes intangibles. In 2019: $8439.5 million, $79.03 per share. (D) In millions.

Company's Financial Strength	A+
Stock's Price Stability	80
Price Growth Persistence	80
Earnings Predictability	100

JOHNSON & JOHNSON NYSE-JNJ

RECENT PRICE 147.35 | P/E RATIO 18.7 (Trailing: 18.5; Median: 17.0) | RELATIVE P/E RATIO 0.87 | DIV'D YLD 2.7% | VALUE LINE

TIMELINESS	2	Lowered 8/14/20
SAFETY	1	New 7/27/90
TECHNICAL	2	Lowered 8/14/20

BETA .85 (1.00 = Market)

High:	65.4	66.2	68.1	72.7	96.0	109.5	106.5	126.1	144.4	149.0	147.8	157.0
Low:	46.3	56.9	57.5	61.7	70.3	86.1	81.8	94.3	110.8	118.6	125.0	109.2

Target Price Range 2023 | 2024 | 2025

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$118-$223	$171 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	230	(+55%)	*14%*
Low	190	(+30%)	*9%*

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	1101	1430	1311
to Sell	1431	1272	1419
Hld's(000)	1793882	1829286	1814178

% TOT. RETURN 7/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	14.3	-1.7
3 yr.	18.2	9.9
5 yr.	65.6	31.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
15.94	16.98	18.43	21.51	23.02	22.47	22.49	23.87	24.19	25.28	26.71	25.44	26.56	28.50	30.64	31.17	*30.50*	*33.45*	Sales per sh A	*40.80*
3.84	4.25	4.60	5.23	5.70	5.69	5.92	6.25	6.48	7.08	7.26	6.95	7.50	7.64	8.35	11.52	*10.65*	*11.85*	"Cash Flow" per sh	*14.90*
3.10	3.50	3.76	4.15	4.57	4.63	4.76	5.00	5.10	5.52	5.70	5.48	5.93	5.41	5.61	8.68	*7.85*	*9.00*	Earnings per sh A B	*11.65*
1.10	1.28	1.46	1.62	1.80	1.93	2.11	2.25	2.40	2.59	2.76	2.95	3.15	3.32	3.54	3.75	*3.95*	*4.25*	Div'ds Decl'd per sh C■	*5.50*
.73	.88	.92	1.04	1.11	.86	.87	1.06	1.06	1.27	1.33	1.26	1.19	1.22	1.38	1.33	*1.20*	*1.50*	Cap'l Spending per sh	*1.50*
10.71	12.73	13.59	15.25	15.35	18.37	20.66	20.95	23.33	26.25	25.06	25.83	26.02	22.43	22.44	22.59	*26.10*	*29.25*	Book Value per sh D	*41.20*
2971.0	2974.5	2893.2	2840.2	2769.2	2754.3	2738.1	2724.4	2778.5	2820.6	2783.3	2755.0	2706.5	2682.5	2662.3	2632.5	*2625.0*	*2600.0*	Common Shs Outst'g E	*2550.0*
18.1	18.5	16.6	15.4	14.3	12.5	13.1	12.7	13.1	15.6	17.7	18.2	19.1	23.9	23.7	15.6	*Bold figures are*		Avg Ann'l P/E Ratio	*18.0*
.96	.99	.90	.82	.86	.83	.83	.80	.83	.88	.93	.92	1.00	1.20	1.28	.84	*Value Line*		Relative P/E Ratio	*1.00*
2.0%	2.0%	2.3%	2.5%	2.8%	3.3%	3.4%	3.5%	3.6%	3.0%	2.7%	3.0%	2.8%	2.6%	2.7%	2.8%	*estimates*		Avg Ann'l Div'd Yield	*2.6%*

CAPITAL STRUCTURE as of 6/28/20
Total Debt $30,394 mill. **Due in 5 Yrs** $9,740 mill.
LT Debt $25,062 mill. **LT Interest** $148.4 mill.
(28% of Capital)

Leases, Uncapitalized Annual rentals $215 mill.

Pension Assets-12/19 $32.2 bill. **Oblig.** $37.2 bill.

Preferred Stock None

Common Stock 2,632,823,475 shares
as of 7/20/20
MARKET CAP: $388 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
61587	65030	67224	71312	74331	70074	71890	76450	81581	82059	*80000*	*87000*	Sales ($mill) A	*104000*
31.4%	32.3%	35.7%	33.3%	33.7%	31.1%	34.6%	31.7%	33.1%	46.3%	*41.0%*	*43.0%*	Operating Margin	*43.5%*
2939.0	3158.0	3666.0	4104.0	3895.0	3746.0	3754.0	5642.0	6929.0	7009.0	*7000*	*7250*	Depreciation ($mill)	*8000*
13279	13867	14345	15876	16323	15409	16540	14856	15297	23310	*21000*	*23500*	Net Profit ($mill)	*30000*
21.1%	20.1%	23.1%	17.2%	20.6%	19.7%	16.5%	15.9%	15.0%	17.4%	*16.0%*	*17.5%*	Income Tax Rate	*18.5%*
21.6%	21.3%	21.3%	22.3%	22.0%	22.0%	23.0%	19.4%	18.8%	28.4%	*26.3%*	*27.3%*	Net Profit Margin	*28.8%*
24235	31505	21854	30732	34226	32463	38745	12551	14803	9310.0	*17500*	*27500*	Working Cap'l ($mill)	*50000*
9156.0	12969	11489	13328	15122	12857	22442	30675	27684	26494	*25000*	*24000*	Long-Term Debt ($mill)	*21000*
56579	57080	64826	74053	69752	71150	70418	60160	59752	59471	*68500*	*76000*	Shr. Equity ($mill)	*105000*
20.6%	20.2%	19.1%	18.4%	19.5%	18.6%	18.2%	16.9%	18.1%	27.3%	*23.0%*	*24.0%*	Return on Total Cap'l	*24.0%*
23.5%	24.3%	22.1%	21.4%	23.4%	21.7%	23.5%	24.7%	25.6%	39.2%	*30.5%*	*31.0%*	Return on Shr. Equity	*28.5%*
13.2%	13.5%	11.9%	11.6%	12.3%	10.2%	11.2%	9.8%	9.7%	22.5%	*15.5%*	*16.5%*	Retained to Com Eq	*15.0%*
44%	44%	46%	46%	48%	53%	52%	60%	62%	43%	*49%*	*48%*	All Div'ds to Net Prof	*47%*

CURRENT POSITION ($MILL.)	2018	2019	6/28/20
Cash Assets	19687	19287	19135
Receivables	14098	14481	14645
Inventory (FIFO)	8599	9020	9424
Other	3649	2486	2688
Current Assets	46033	45274	45892
Accts Payable	7537	8544	6765
Debt Due	2796	1202	5332
Other	20897	26218	24675
Current Liab.	31230	35964	36772

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	3.0%	3.5%	*5.0%*
"Cash Flow"	5.0%	5.5%	*8.5%*
Earnings	4.0%	4.0%	*10.0%*
Dividends	7.0%	6.5%	*7.5%*
Book Value	3.5%	-2.0%	*11.0%*

Cal-endar	QUARTERLY SALES ($ mill.) A Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	17766	18839	19650	20195	76450
2018	20009	20831	20348	20393	81581
2019	20021	20562	20729	20747	82059
2020	20691	18336	*19973*	*21000*	*80000*
2021	*21250*	*21500*	*21750*	*22500*	*87000*

Cal-endar	EARNINGS PER SHARE AB Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	1.61	1.40	1.37	1.03	5.41
2018	1.60	1.45	1.44	1.12	5.61
2019	2.10	2.58	2.12	1.88	8.68
2020	2.30	1.67	*1.95*	*1.93*	*7.85*
2021	*2.35*	*2.50*	*2.15*	*2.00*	*9.00*

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.75	.80	.80	.80	3.15
2017	.80	.84	.84	.84	3.32
2018	.84	.90	.90	.90	3.54
2019	.90	.95	.95	.95	3.75
2020	.95	1.01			

BUSINESS: Johnson & Johnson is engaged in the research & development, manufacture, and sale of a broad range of products in the healthcare field. It operates three business segments: Consumer (baby care, beauty, skin care, oral care, wound care, etc.), Pharmaceutical (antiinfective, antipsychotic, contraceptive, dermatology, gastrointestinal, etc.), and Medical Devices (orthopedic, surgery, interventional solutions, and eye health fields). Employs approximately 132,200. Officers & directors less than 1.0% of common stock; Vanguard Group, 8.7%; BlackRock, 7.3%; State Street, 5.8%. (3/20 Proxy). Chairman & CEO: Alex Gorsky. Inc.: NJ. Address: One Johnson & Johnson Plaza, New Brunswick, NJ 08933. Telephone: 732-524-0400. Internet: www.jnj.com.

Johnson & Johnson reported better-than-expected second-quarter financial results and upped guidance across the board, but investors seemed unimpressed. Indeed, the stock actually trickled slightly lower in value following the release. That said, JNJ stock has performed fairly well since plunging in March, and is trading not too far off its year-to-date highs. We continue to think that many in the investment community are tying their hopes to the possibility that the company will be able to develop a coronavirus vaccine.

June-quarter sales and earnings were unimpressive after deeper inspection. The top line declined 10.8% and earnings plunged 35.3% as the global pandemic resulted in lower demand and elevated costs. Sales were down across all geographic regions and all operating segments other than Pharmaceuticals.

Guidance was improved, but pointed to continued near-term weakness. Management said that it now expects to earn between $7.75 and $7.95 a share for all of 2020, up from its previous $7.50-$7.90 range. The sales expectation, meantime, was ratcheted up to a $79.7 billion-$81.4 billion range, from the earlier $77.5 billion-$80.5 billion outlook. Nonetheless, the updated outlook calls for declines in the second half of the year, with the September quarter likely to bear most of the pain. All things considered, we are modeling for full-year share earnings of $7.85, on sales of $80.0 billion.

Growth should get back on track next year, but there are a number of variables at play. Our assumption is largely predicated on a more normalized backdrop. Our call is for earnings of $9.00 a share, on sales of $87.0 billion, for now.

These shares are a timely option for year-ahead relative price performance. However, the current price tag discounts a decent portion of the gains we envision out to mid-decade as the market appears to be factoring in the possibility that JNJ will be successful in developing a COVID-19 vaccine. Still, prospects are better on a risk-adjusted total return basis. And while JNJ is still facing some legal headwinds, its healthy cash flow generation should help it weather the storm.

Andre J. Costanza *August 14, 2020*

(A) Years end on the last Sunday in December. (B) Diluted earnings. Excludes nonrecurring: '04, d26¢; '05, d4¢; '06, d3¢; '07, d52¢; '09, d23¢; '10, 2¢; '11, d$1.51; '12, d$1.24; '13, d71¢; 4th qtr.'17, d$5.73 (due to tax reform.); '19 ($3.05)' '20, (44¢). GAAP from 2015-2018. Next earnings report due late Oct. (C) Dividends historically paid: March, June, September, and December. ■ Dividend reinvestment plan available. (D) Includes intangibles. On 12/31/19: $81.3 billion, $30.76 a share. (E) In millions.

Company's Financial Strength	A++
Stock's Price Stability	100
Price Growth Persistence	85
Earnings Predictability	75

KELLOGG CO. NYSE-K

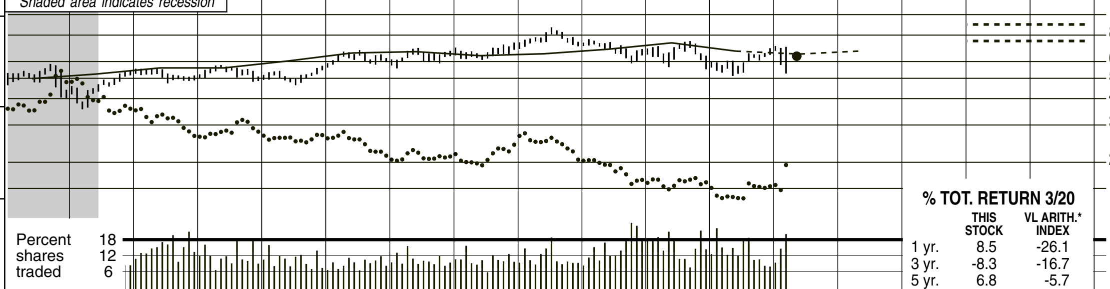
RECENT PRICE 63.51 | P/E RATIO 17.4 (Trailing: 16.1 Median: 16.0) | RELATIVE P/E RATIO 1.30 | DIV'D YLD 3.6% | VALUE LINE

TIMELINESS 3 Lowered 4/5/19
SAFETY 1 Raised 1/30/09
TECHNICAL 3 Lowered 3/20/20
BETA .60 (1.00 = Market)

High:	54.1	56.0	57.7	57.2	68.0	69.5	73.7	87.2	76.7	75.0	69.3	71.1
Low:	35.6	47.3	48.1	46.3	56.0	55.7	61.1	68.7	58.8	55.1	51.3	52.7

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 12.5 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High: $49-$78 | Midpoint (% to Mid): $64 (0%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	90	(+40%)	12%
Low	75	(+20%)	8%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	283	327	384
to Sell	344	314	306
Hld's(000)	302559	296884	297378

Percent shares traded 18 / 12 / 6

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	8.5	-26.1
3 yr.	-8.3	-16.7
5 yr.	6.8	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
23.28	25.11	27.42	30.19	33.58	32.97	33.91	36.94	39.30	40.77	40.95	38.64	37.07	37.39	39.40	39.75	**39.25**	**39.60**	Sales per sh	**44.75**
3.15	3.39	3.41	3.78	3.99	4.18	4.48	4.48	4.83	5.27	5.34	5.12	5.22	5.49	5.89	5.37	**5.20**	**5.40**	"Cash Flow" per sh	**6.50**
2.16	2.36	2.51	2.76	2.99	3.16	3.30	3.38	3.37	3.77	3.87	3.53	3.72	4.04	4.33	3.94	**3.80**	**4.00**	Earnings per sh A	**4.95**
1.01	1.06	1.14	1.20	1.30	1.43	1.56	1.67	1.74	1.80	1.90	1.98	2.04	2.12	2.20	2.26	**2.28**	**2.36**	Div'ds Decl'd per sh B ■	**2.66**
.67	.92	1.14	1.21	1.21	.99	1.30	1.66	1.48	1.76	1.63	1.58	1.44	1.45	1.68	1.72	**1.75**	**1.70**	Cap'l Spending per sh	**1.80**
5.47	5.63	5.20	6.48	3.79	5.96	5.90	4.93	6.70	9.77	7.83	6.08	5.44	6.40	7.56	8.04	**9.55**	**11.05**	Book Value per sh C	**15.50**
413.02	405.33	397.70	390.05	381.86	381.38	365.60	357.30	361.27	362.80	356.00	350.02	351.07	345.60	343.87	341.54	**342.00**	**341.00**	Common Shs Outst'g D	**330.00**
19.2	18.9	18.9	19.0	17.0	14.5	15.7	15.8	15.3	16.5	16.5	18.7	20.5	17.1	15.4	15.2	*Bold figures are*		Avg Ann'l P/E Ratio	**16.5**
1.01	1.01	1.02	1.01	1.02	.97	1.00	.99	.97	.93	.87	.94	1.08	.86	.83	.83	*Value Line*		Relative P/E Ratio	**.90**
2.4%	2.4%	2.4%	2.3%	2.6%	3.1%	3.0%	3.1%	3.4%	2.9%	3.0%	3.0%	2.7%	3.1%	3.3%	3.8%	*estimates*		Avg Ann'l Div'd Yield	**3.3%**

CAPITAL STRUCTURE as of 12/28/19
Total Debt $8036 mill. **Due in 5 Yrs** $4163 mill.
LT Debt $7195 mill. **LT Interest** $264 mill.
(Long-term interest earned: 7.4X)
(72% of Cap'l)
Pension Assets-12/19 $5.17 bill. **Oblig.** $5.65 bill.
Leases, Uncapitalized: Annual Rentals $129.0 mill.
Pfd Stock None
Common Stock 341,543,030 shs.

MARKET CAP: $21.7 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
12397	13198	14197	14792	14580	13525	13014	12923	13547	13578	**13425**	**13500**	Sales ($mill)	**14775**
19.2%	17.8%	16.7%	18.2%	18.2%	16.3%	19.5%	19.9%	17.7%	16.8%	**16.5%**	**16.8%**	Operating Margin	**17.5%**
392.0	369.0	448.0	532.0	503.0	534.0	517.0	481.0	516.0	484.0	**480**	**475**	Depreciation ($mill)	**510**
1247.0	1231.0	1297.2	1379.7	1397.3	1258.0	1317.0	1416.0	1510.0	1351.0	**1300**	**1370**	Net Profit ($mill)	**1630**
28.8%	29.0%	22.7%	28.4%	28.2%	11.2%	15.0%	22.6%	12.0%	18.9%	**21.0%**	**21.0%**	Income Tax Rate	**21.0%**
10.1%	9.3%	9.1%	9.3%	9.6%	9.3%	10.1%	11.0%	11.1%	10.0%	**9.7%**	**10.1%**	Net Profit Margin	**11.0%**
d269.0	d286.0	d1143	d568.0	d1024	d2503	d1534	d1443	d1372	d1347	**d1400**	**d1350**	Working Cap'l ($mill)	**d100**
4908.0	5037.0	6082.0	6330.0	5935.0	5289.0	6698.0	7836.0	8207.0	7195.0	**6500**	**5850**	Long-Term Debt ($mill)	**4850**
2158.0	1760.0	2419.0	3545.0	2789.0	2128.0	1910.0	2212.0	2601.0	2747.0	**3265**	**3770**	Shr. Equity ($mill)	**5120**
19.9%	20.1%	16.8%	15.1%	17.3%	18.6%	17.5%	15.3%	15.2%	14.9%	**14.5%**	**15.5%**	Return on Total Cap'l	**17.5%**
57.8%	69.9%	53.6%	38.9%	50.1%	59.1%	69.0%	64.0%	58.1%	49.2%	**40.0%**	**36.5%**	Return on Shr. Equity	**32.0%**
30.7%	35.6%	27.9%	20.5%	25.7%	26.2%	31.5%	30.7%	28.8%	21.2%	**16.0%**	**15.0%**	Retained to Com Eq	**14.5%**
47%	49%	48%	47%	49%	56%	54%	52%	50%	57%	**60%**	**59%**	All Div'ds to Net Prof	**54%**

CURRENT POSITION ($MILL.)	2017	2018	12/28/19
Cash Assets	281	321	397
Receivables	1389	1375	1576
Inventory (Avg Cst)	1217	1330	1226
Other	149	131	232
Current Assets	3036	3157	3431
Accts Payable	2269	2427	2387
Debt Due	779	686	841
Other	1431	1416	1550
Current Liab.	4479	4529	4778

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	2.0%	-0.5%	2.5%
"Cash Flow"	4.0%	2.5%	2.5%
Earnings	4.0%	3.0%	3.0%
Dividends	5.5%	4.0%	3.5%
Book Value	2.5%	-2.0%	13.5%

Cal-endar	QUARTERLY SALES ($ mill.) Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	3254	3187	3273	3209	12923
2018	3401	3360	3469	3317	13547
2019	3522	3461	3372	3223	13578
2020	**3300**	**3325**	**3350**	**3450**	**13425**
2021	**3350**	**3365**	**3400**	**3385**	**13500**

Cal-endar	EARNINGS PER SHARE A Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	1.06	.97	1.05	.96	4.04
2018	1.23	1.14	1.06	.90	4.33
2019	1.01	.99	1.03	.91	3.94
2020	**.85**	**.90**	**1.00**	**1.05**	**3.80**
2021	**.92**	**.99**	**1.05**	**1.04**	**4.00**

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.50	.50	.52	.52	2.04
2017	.52	.52	.54	.54	2.12
2018	.54	.54	.56	.56	2.20
2019	.56	.56	.57	.57	2.26
2020	.57				

BUSINESS: Kellogg Company and its subsidiaries manufacture and market ready-to-eat cereals and convenience foods, such as savory snacks, toaster pastries, cereal bars, fruit-flavored snacks, frozen waffles, and veggie foods. Brand names include: *Kellogg's*, *Pringles*, *Cheez-It*, *Special K*, *Rice Krispies*, *Pop-Tarts*, *Eggo*, *Kashi*, *RXBAR*, *Morningstar Farms*, and *Nutri-Grain*. Foreign operations: 42% of sales in 2019. Adv. costs: 5.0% of sales. Acquired Pringles, 5/12. Has about 31,000 employees. W.K. Kellogg Foundation controls 19.4% of common; BlackRock, Inc., 7.9%; off./dir., 1.1% (3/20 Proxy). Chairman, CEO, and Pres.: Steven A. Cahillane. Inc.: DE. Address: One Kellogg Square, Battle Creek, MI 49016-3599. Tel.: 269-961-2000. Internet: www.kelloggs.com.

Kellogg shares held up better than most stocks during the recent highly volatile stretch that saw the broader market fall into bear territory in mid-March. This is not overly surprising, given the consumer staples stock's defensive-oriented nature and its Safety rank of 1 (Highest). *(Note: Stocks ranked 1 or 2 for Safety have historically outperformed the overall market when it was in bear market territory.)* The fact that individuals and families still have to eat during tough economic times is keeping demand for packaged foods healthy, especially as consumers load up on such essential items as they stay at home during the ongoing coronavirus pandemic. That said,

Our near-term outlook for Kellogg has clouded since our last report in mid-January. There are a number of factors behind our downward revision (we have cut our 2020 share-net estimate from $4.05 to $3.80). At the forefront was a disappointing end to 2019 and management's reduced full-year 2020 guidance. The company's operating margin is likely to narrow some, as Kellogg increases its marketing and brand-building investments, particularly behind the refrigerated foods operations and the struggling cereal business; Kellogg sold a number of noncore businesses last year. Brand building remains a key initiative for Kellogg, especially given years of sluggish top-line performances. Investors also should note that foreign sales account for more than 40% of Kellogg's annual sales, which bears watching because of the global coronavirus pandemic. The impact of COVID-19 on global sales was not yet known as we went to press with this report.

This neutrally ranked stock has appeal during volatile times for the U.S. stock market. As noted, it is top ranked for Safety, and the Beta coefficient of 0.60 suggests that Kellogg shares are far less risky than the overall market. The main attribute is the issue's competitive and well-covered dividend. That said, those with a longer-term investment horizon and a willingness to withstand the likely continued volatility in the market may want to look elsewhere as recovery potential to 2023-2025 falls well below the *Value Line* median.

William G. Ferguson *April 17, 2020*

(A) Based on diluted shares. Excludes nonrecurring gains (losses): '12, ($0.09); '13, $1.17; '14, ($2.12); '15, ($1.81); '16, ($1.76); '17, ($0.42); '18, ($0.50); '19, ($1.14). Quarterly earnings may not sum to total due to a change in the share count. Next earnings report due early May. (B) Dividends historically paid mid-Mar, June, Sept., and Dec. ■ Div'd reinvestment plan available. (C) Includes intangibles. In '19: $8.437 billion, $24.70/sh. (D) In millions.

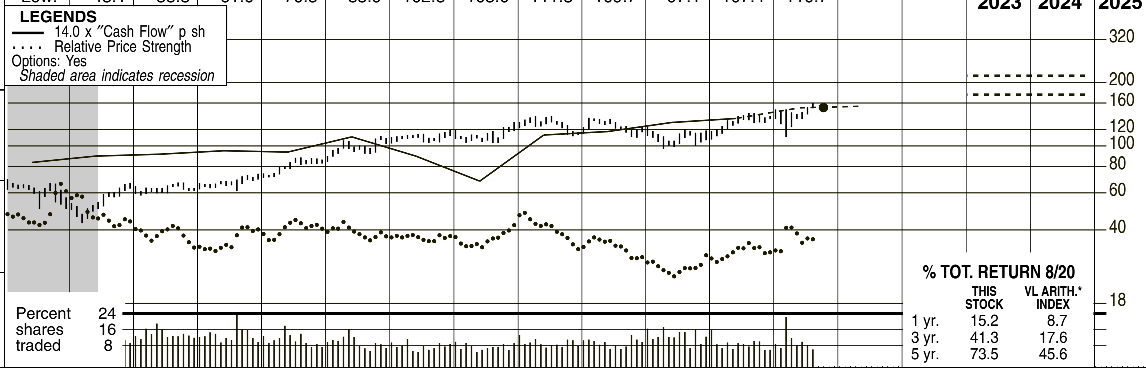
Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	15
Earnings Predictability	95

KIMBERLY-CLARK NYSE-KMB

RECENT PRICE **152.23** | P/E RATIO **18.5** (Trailing: 19.3, Median: 19.0) | RELATIVE P/E RATIO **0.87** | DIV'D YLD **2.8%** | **VALUE LINE** | 1193

TIMELINESS 1 Raised 3/27/20
SAFETY 1 New 7/27/90
TECHNICAL 2 Lowered 9/18/20
BETA .75 (1.00 = Market)

High:	67.0	67.2	74.1	88.3	111.7	118.8	129.9	138.9	136.2	123.5	143.5	160.2	
Low:	43.1	58.3	61.0	70.5	83.9	102.8	103.0	111.3	109.7	97.1	107.4	110.7	



18-Month Target Price Range
Low-High Midpoint (% to Mid)
$121-$206 $164 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	215	(+40%)	11%
Low	175	(+15%)	6%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	660	586	649
to Sell	632	736	681
Hld's(000)	252163	243281	244730

% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	15.2	8.7
3 yr.	41.3	17.6
5 yr.	73.5	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
31.23	34.46	36.76	43.40	46.94	45.84	48.53	52.68	54.10	55.55	53.99	51.51	51.04	52.01	53.58	54.03	**55.50**	**57.45**	Sales per sh	**66.00**
5.39	5.74	6.10	6.34	5.98	6.40	6.53	6.78	6.70	7.89	6.40	4.87	8.05	8.38	9.25	9.66	**10.85**	**11.05**	"Cash Flow" per sh	**12.75**
3.61	3.78	3.90	4.25	4.06	4.52	4.45	3.99	4.42	5.53	3.91	2.77	5.99	6.23	6.61	6.89	**8.15**	**8.25**	Earnings per sh A	**9.70**
1.60	1.80	1.96	2.08	2.27	2.38	2.58	2.76	2.96	3.24	3.36	3.52	3.68	3.88	4.00	4.09	**4.28**	**4.32**	Div'ds Decl'd per sh B■	**4.85**
1.11	1.54	2.13	2.35	2.19	2.03	2.37	2.45	2.81	2.50	2.84	2.93	2.16	2.24	2.54	3.54	**3.20**	**3.00**	Cap'l Spending per sh	**2.65**
13.73	12.04	13.38	12.41	9.38	12.96	14.54	13.27	12.81	12.75	2.00	d.48	d.29	1.97	d.83	d.10	**2.50**	**3.65**	Book Value per sh C	**10.90**
482.90	461.50	455.60	420.90	413.60	417.00	406.90	395.70	389.30	380.80	365.30	360.90	356.60	351.10	345.00	341.50	**340.00**	**335.00**	Common Shs Outst'g D	**330.00**
17.6	16.5	15.9	16.3	15.2	12.2	14.1	16.9	18.2	17.8	28.1	40.6	21.2	19.9	16.7	18.8	*Bold figures are*		Avg Ann'l P/E Ratio	**20.0**
.93	.88	.86	.87	.91	.81	.90	1.06	1.16	1.00	1.48	2.04	1.11	1.00	.90	1.02	*Value Line*		Relative P/E Ratio	**1.10**
2.5%	2.9%	3.2%	3.0%	3.7%	4.3%	4.1%	4.1%	3.7%	3.3%	3.1%	3.1%	2.9%	3.1%	3.6%	3.2%	*estimates*		Avg Ann'l Div'd Yield	**2.5%**

CAPITAL STRUCTURE as of 6/30/20
Total Debt $8,073 mill. **Due 5 Yrs** $3,120 mill.
LT Debt $7,223 mill. **LT Interest** $425 mill.
(LT interest earned: 13.4x)
(94% of Tot. Cap'l)

Leases, Uncapitalized Annual rentals $145.0 mill.
Pension Assets-12/19 $3.803 bill. **Oblig.** $4.047 bill.

Pfd Stock None
Common Stock 341,047,156 shs. **as of 7/16/20**

MARKET CAP: $51.9 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
19746	20846	21063	21152	19724	18591	18202	18259	18486	18450	**18875**	**19250**	Sales ($mill)	**21780**
18.7%	16.7%	16.8%	19.3%	17.2%	12.7%	22.1%	22.2%	21.7%	22.8%	**23.0%**	**23.0%**	Operating Margin	**25.0%**
813.0	1091.0	857.0	863.0	862.0	746.0	705.0	724.0	882.0	917.0	**920**	**925**	Depreciation ($mill)	**1000**
1843.0	1591.0	1750.0	2142.0	1476.0	1013.0	2166.0	2217.0	2310.0	2381.0	**2770**	**2775**	Net Profit ($mill)	**3200**
30.9%	30.2%	31.7%	31.5%	38.0%	31.3%	30.6%	28.6%	21.0%	23.0%	**24.0%**	**23.5%**	Income Tax Rate	**23.0%**
9.3%	7.6%	8.3%	10.1%	7.5%	5.4%	11.9%	12.1%	12.5%	12.9%	**14.2%**	**14.4%**	Net Profit Margin	**14.7%**
990.0	886.0	498.0	702.0	d667.0	d923.0	d731.0	d647.0	d1495	d1862	**d1250**	**d1075**	Working Cap'l ($mill)	**d150**
5120.0	5426.0	5070.0	5386.0	5630.0	6106.0	6439.0	6472.0	6247.0	6213.0	**7000**	**6000**	Long-Term Debt ($mill)	**5000**
5917.0	5249.0	4985.0	4856.0	729.0	d174.0	d102.0	690.0	d287.0	d33.0	**850**	**1220**	Shr. Equity ($mill) C	**3600**
17.7%	16.1%	18.8%	22.3%	25.4%	19.6%	36.7%	33.2%	40.9%	40.6%	**34.0%**	**37.5%**	Return on Total Cap'l	**37.0%**
31.1%	30.3%	35.1%	44.1%	NMF	- -	- -	NMF	NMF	NMF	**NMF**	**NMF**	Return on Shr. Equity	**89.0%**
13.1%	9.4%	12.0%	18.9%	30.2%	- -	- -	NMF	NMF	NMF	**NMF**	**NMF**	Retained to Com Eq	**44.5%**
58%	69%	66%	57%	85%	NMF	61%	61%	60%	59%	**54%**	**53%**	All Div'ds to Net Prof	**50%**

CURRENT POSITION ($MILL.)

	2018	2019	6/30/20
Cash Assets	539	442	1448
Receivables	2164	2263	2024
Inventory (LIFO)E	1813	1790	1825
Other	525	562	607
Current Assets	5041	5057	5904
Accts Payable	3190	3055	3032
Debt Due	1208	1534	850
Other	2138	2330	2612
Current Liab.	6536	6919	6494

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	1.5%	-.5%	3.5%
"Cash Flow"	4.0%	5.5%	6.0%
Earnings	4.5%	7.5%	6.5%
Dividends	6.0%	4.5%	3.5%
Book Value	- -	- -	NMF

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	4483	4554	4640	4582	18259
2018	4731	4604	4582	4569	18486
2019	4633	4594	4640	4583	18450
2020	5009	4612	**4654**	**4600**	**18875**
2021	**5050**	**4750**	**4750**	**4700**	**19250**

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.57	1.49	1.60	1.57	6.23
2018	1.71	1.59	1.71	1.60	6.61
2019	1.66	1.67	1.84	1.71	6.89
2020	2.13	2.20	**2.00**	**1.82**	**8.15**
2021	**2.20**	**2.20**	**2.00**	**1.85**	**8.25**

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.88	.92	.92	.92	3.64
2017	.92	.97	.97	.97	3.83
2018	1.00	1.00	1.00	1.00	4.00
2019	1.03	1.03	1.03	1.03	4.12
2020	1.07	1.07	1.07		

BUSINESS: Kimberly-Clark develops, manufactures, and markets personal care products (*Huggies, Pull-Ups, Little Swimmers, Good-Nites, Kotex, Lightdays, Depend*, and *Poise)* and consumer tissue products (*Kleenex, Scott, Cottonelle*, and *Viva*). KC Professional focuses on workplace health/safety (supporting products incl. apparel, wipers, soaps, sanitizers, tissues, and towels); Health Care provides medical supplies, infection prevention & health education. Walmart accounted for 14% of '19 sales. Employs 40,000. Off./dir. own less than 1% of stock; Vanguard, 8.3%; BlackRock, 7.3%; State St., 5.4% (3/20 Proxy). Inc.: DE. CEO: Michael D. Hsu. Exec. Exec. Chairman: Thomas J. Falk. Addr.: P.O. Box 619100, Dallas, TX 75261. Tel.: 972-281-1200. Internet: www.kimberly-clark.com.

Kimberly-Clark continued to impress during the second quarter. In all, share earnings climbed 32%, while sales came in flat for the June period. Though the company contended with some challenges due to the COVID-19 pandemic, demand for many of its products surged as customers stocked up due to increased at-home consumption. In fact, organic sales of consumer tissues jumped 14% (up 22% in North America) year over year.

The company is well positioned for near-term growth. The uptick in demand should support the top line. And management's ongoing business improvements ought to aid profit gains. Still, some difficulties in its global markets, including currency headwinds, may temper some of the dynamic organic growth and recent divestitures will weigh on near-term comparisons. All told, we look for share earnings to climb 15%-20%, on a 2% sales gain this year. The top and bottom lines will likely advance at a low single-digit clip in 2021.

Margins are improving. The Global Restructuring Program and aggressive cost controls (Project FORCE) have already begun to bear fruit. The company is targeting cost savings of $510 million-$560 million this year. These restructuring measures should achieve a total of $1.3 billion-$1.4 billion in aftertax savings by the end of 2021. Kimberly will likely enjoy a commodity cost tailwind, driven by lower pulp prices, this year. Too, continued productivity enhancements should benefit its manufacturing plants. Meanwhile, the company signed a definitive agreement to acquire Softex Indonesia for approximately $1.2 billion. The tuck-in acquisition should complement its current asset roster. Too, K-C will likely continue to invest in its brands and offerings.

This issue has a lot of investment appeal. It is ranked Highest (1) for Timeliness. Moreover, its stellar scores for Financial Strength, Safety, and Price Stability add to its conservative luster. KMB has an attractive dividend yield and may tempt investors seeking good risk-adjusted total returns. However, some of the good news we anticipate over the coming 3 to 5 years is already factored into the recent quotation.

Orly Seidman *September 18, 2020*

(A) Dil. earnings. Excl. non-recurring gains/(losses): '04, ($0.01); '05, ($0.50); '06, ($0.65); '07, ($0.16); '08, ($0.04). EPS may not sum due to change in shares out. Next earnings report due late October.
(B) Div's hist. paid in early January, April, July, and October. ■ Div'd reinvestment plan available.
(C) Incl. intang. In '19: $1,467.0 mill., $4.29/sh.
(D) In millions.
(E) Foreign: FIFO.

Company's Financial Strength	A+
Stock's Price Stability	95
Price Growth Persistence	60
Earnings Predictability	45

ELI LILLY AND CO. NYSE-LLY

RECENT PRICE 151.18 | P/E RATIO 20.3 (Trailing: 22.1 Median: 17.0) | RELATIVE P/E RATIO 0.98 | DIV'D YLD 2.0% | VALUE LINE 1621

TIMELINESS 2 Lowered 10/2/20
SAFETY 1 Raised 10/21/05
TECHNICAL 3 Lowered 10/2/20
BETA .75 (1.00 = Market)

18-Month Target Price Range
Low-High: $126-$235 | Midpoint (% to Mid): $181 (20%)

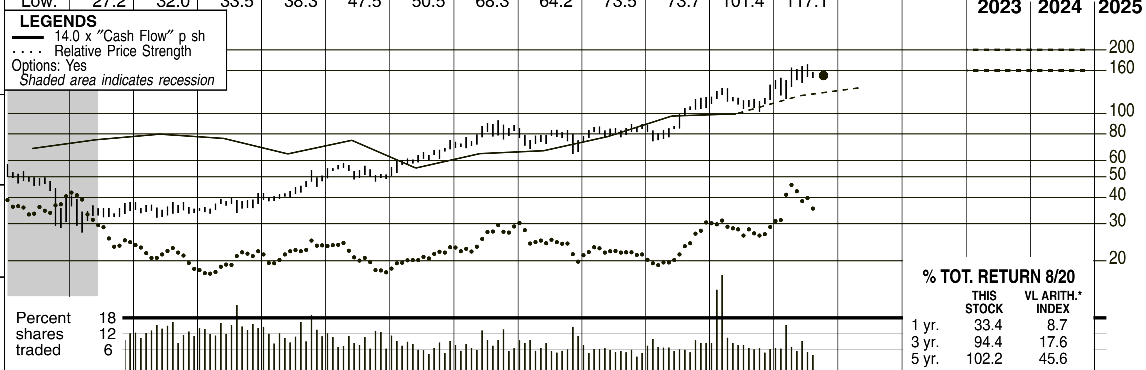
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	200	(+30%)	9%
Low	160	(+5%)	4%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	719	663	736
to Sell	639	730	753
Hld's(000)	744828	737040	732177

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	40.8	38.1	41.9	54.0	58.4	75.1	92.9	85.4	89.1	119.8	137.0	170.8
Low:	27.2	32.0	33.5	38.3	47.5	50.5	68.3	64.2	73.5	73.7	101.4	117.1



Target Price Range 2023 | 2024 | 2025

% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	33.4	8.7
3 yr.	94.4	17.6
5 yr.	102.2	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018[E]	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
12.24	12.96	13.87	16.43	17.94	19.00	20.03	20.98	19.76	20.70	17.66	18.06	19.28	20.79	23.23	23.31	25.25	27.65	Sales per sh	33.35
3.24	3.43	3.76	4.33	4.86	5.35	5.70	5.43	4.59	5.33	3.93	4.60	4.75	5.54	6.95	7.10	8.65	9.50	"Cash Flow" per sh	11.40
2.82	2.88	3.18	3.54	4.02	4.42	4.74	4.41	3.39	4.15	2.78	3.43	3.52	4.28	5.55	6.04	7.30	8.00	Earnings per sh [A]	9.50
1.42	1.52	1.60	1.70	1.88	1.96	1.96	1.96	1.96	1.96	1.96	2.00	2.04	2.08	2.25	2.58	2.96	3.16	Div'ds Decl'd per sh [B]■	3.76
1.68	1.15	.95	.95	.83	.67	.60	.58	.79	.91	1.05	.96	.94	.98	1.15	1.08	1.10	1.10	Cap'l Spending per sh	1.15
9.65	9.55	9.70	12.05	5.93	8.29	10.77	11.69	12.92	15.80	13.86	13.18	12.72	10.54	9.30	2.72	5.25	7.45	Book Value per sh	13.35
1131.9	1130.1	1131.7	1134.3	1136.1	1149.0	1152.3	1157.8	1143.6	1116.8	1110.6	1105.3	1100.9	1100.0	1057.0	957.53	950.00	940.00	Common Shs Outst'g [C]	900.00
23.4	19.1	17.3	15.7	11.4	7.8	7.4	8.4	12.9	12.7	22.2	22.9	21.7	19.1	16.9	19.4	Bold figures are		Avg Ann'l P/E Ratio	19.0
1.24	1.02	.93	.83	.69	.52	.47	.53	.82	.71	1.17	1.15	1.14	.96	.91	1.05	Value Line		Relative P/E Ratio	1.05
2.2%	2.8%	2.9%	3.1%	4.1%	5.7%	5.6%	5.3%	4.5%	3.7%	3.2%	2.5%	2.7%	2.5%	2.4%	2.2%	estimates		Avg Ann'l Div'd Yield	2.1%

CAPITAL STRUCTURE as of 6/30/20
Total Debt $16328.2 mill. **Due in 5 Yrs** $3551 mill.
LT Debt $15064.4 mill. **LT Interest** $400 mill. (79% of Cap'l)

Leases, Uncapitalized Annual rentals $138.1 mill.

Pension Assets-12/19 $12.9 bill. **Oblig.** $16.3 bill.

Pfd Stock None

Common Stock 956,470,372 shs. as of 7/27/20

MARKET CAP: $145 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
23076	24287	22603	23113	19616	19959	21222	22871	24556	22320	24000	26000	Sales ($mill)	30000
36.2%	31.7%	29.4%	30.3%	24.0%	25.2%	25.3%	28.4%	31.7%	31.5%	33.0%	33.0%	Operating Margin	33.0%
1328.2	1373.6	1462.2	1445.6	1379.0	1427.7	1496.6	1567.3	1609.0	1232.6	1300	1400	Depreciation ($mill)	1700
5239.5	4913.5	3784.0	4502.6	2987.6	3656.3	3735.6	4530.4	5734.6	5568.2	6940	7520	Net Profit ($mill)	8550
22.6%	20.0%	22.8%	19.2%	19.2%	20.9%	20.1%	20.5%	16.0%	11.8%	15.0%	15.0%	Income Tax Rate	15.0%
22.7%	20.2%	16.7%	19.5%	15.2%	18.3%	17.6%	19.8%	23.4%	24.9%	28.9%	28.9%	Net Profit Margin	28.5%
7738.6	5317.3	4649.2	4188.1	972.3	4344.0	4114.8	4666.2	8661.5	1934.4	3000	3500	Working Cap'l ($mill)	5000
6770.5	5464.7	5519.4	4200.3	5367.7	7972.4	8367.8	9940.5	11640	13818	14500	13500	Long-Term Debt ($mill)	10000
12413	13536	14774	17641	15388	14571	14008	11592	9828.7	2606.9	5000	7000	Shr. Equity ($mill)	12000
27.6%	26.1%	18.9%	20.8%	14.6%	16.5%	17.1%	21.6%	27.3%	35.1%	36.5%	37.5%	Return on Total Cap'l	40.0%
42.2%	36.3%	25.6%	25.5%	19.4%	25.1%	26.7%	39.1%	58.3%	NMF	NMF	NMF	Return on Shr. Equity	71.5%
24.8%	20.2%	10.8%	13.5%	5.8%	10.5%	11.3%	20.2%	34.8%	NMF	82.5%	65.0%	Retained to Com Eq	43.0%
41%	44%	58%	47%	70%	58%	58%	48%	40%	43%	41%	40%	All Div'ds to Net Prof	40%

CURRENT POSITION ($MILL.)

	2018	2019	6/30/20
Cash Assets	8086.4	2438.5	2387.9
Receivables	5246.5	4547.3	4828.9
Inventory (LIFO)	4111.8	3190.7	3313.9
Other	3104.9	3533.1	4051.2
Current Assets	20549.6	13709.6	14581.9
Accts Payable	1412.3	1405.3	1247.2
Debt Due	1131.2	1499.3	1263.8
Other	9344.6	8870.6	9477.5
Current Liab.	11888.1	11775.2	11988.5

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	2.5%	3.0%	7.0%
"Cash Flow"	3.0%	7.0%	9.5%
Earnings	3.0%	9.0%	10.0%
Dividends	2.0%	3.5%	8.5%
Book Value	-1.5%	-12.0%	10.0%

QUARTERLY SALES ($ mill.)

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	5228	5824	5658	6161	22871
2018	5700	6355	6062	6439	24556
2019	5092	5637	5477	6114	22320
2020	5860	5499	6000	6641	24000
2021	6100	6600	6400	6900	26000

EARNINGS PER SHARE [A D]

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.98	1.11	1.05	1.14	4.28
2018	1.34	1.50	1.39	1.33	5.55
2019	1.33	1.50	1.48	1.73	6.04
2020	1.75	1.89	1.73	1.93	7.30
2021	1.89	2.03	2.00	2.08	8.00

QUARTERLY DIVIDENDS PAID [B]■

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.51	.51	.51	.51	2.04
2017	.52	.52	.52	.52	2.08
2018	.563	.563	.563	.563	2.25
2019	.645	.645	.645	.645	2.58
2020	.74	.74	.74		

BUSINESS: Eli Lilly and Company discovers, develops, manufactures, and markets human pharmaceutical products. Completed spinoff of Elanco Animal Health business (3/19). Pharmaceutical segments include Diabetes/Endocrinology, Neuroscience, Oncology, Immunology, and Other. Manufacturing and distribution facilities located in the U.S., Puerto Rico, and 8 other countries. Products sold in 120 countries. Top-grossing franchises in 2019: *Trulicity*, *Humalog*, *Alimta*, *Forteo* and *Taltz*. Has 33,625 employees. Lilly Endowment Inc. owns 11.9% of comm. stock; Vanguard, 7.3%; BlackRock, 6.3%; PNC Financial, 5.4% (3/20 proxy). Chairman/CEO: David A. Ricks. Inc.: IN. Addr.: Lilly Corporate Center, Indianapolis, IN 46285. Tel.: 317-276-2000. Internet: www.lilly.com.

Eli Lilly is faring relatively well amid the pandemic. The drugmaker's second-quarter share earnings ($1.89 adjusted) soared past analysts' expectations calling for about $1.60 on average, with some help from cost reductions and favorable mark-to-market adjustments on certain investment securities. While total sales ($5.5 billion) dipped 2% year over year, and also came in a bit light versus the consensus, Lilly did see resiliency across several of its core product lines, including blockbuster diabetes treatment *Trulicity* (sales +20%). Psoriasis drug *Taltz* (+13%) and highly-touted oncology asset *Verzenio* (+56%) were other key standouts.

Management increased its full-year guidance. Lilly is now targeting adjusted earnings of $7.20-$7.40 a share in 2020, up from its previous range of $6.70-$6.90. The revision reflected the better-than-expected Q2 results, higher projected other income (mostly from the mark-to-market adjustments), and a reduced cost outlook. While management also anticipates health care activity to align more closely with historical levels in the second half, and for prescription trends to improve, it decided to leave its 2020 sales guidance unchanged at $23.7 billion-$24.2 billion. This implies annual growth of 7% at the midpoint.

The COVID-19 program is a primary focus. Lilly is rapidly advancing the development of potential therapeutics for the treatment of COVID-19, including antibody therapies and *Olumiant*. The assets have shown promise in clinical studies and optimism seems to be building that a successful candidate could be brought to market. This would represent a significant revenue opportunity for Lilly, but expectations should be tempered somewhat as the COVID space is highly competitive with no obvious front runner at this juncture.

The stock holds an Above Average (2) rank for Timeliness. Based on our analysis, LLY shares are currently pegged to outperform the broader market in the year ahead. Our projections also suggest above-average price appreciation potential over the 18-month time frame, with a midpoint case of $181 a share (roughly 20% above recent levels). A favorable risk profile and decent dividend yield (2.0%) adds to the equity's overall investment appeal.

Michael Ratty *October 2, 2020*

(A) Diluted earnings (adjusted). Excludes nonrecurring gains/(losses): '08, ($5.91); '11, ($0.51); '12, $0.27; '13, $0.17; '14, ($0.55); '15, ($1.17); '16, ($0.94); '17, ($4.47); '18, ($2.42); '19, $2.85. Next earnings report due late Oct.
(B) Dividends historically paid in mid-March, June, Sept. and Dec. ■ Div'd reinvestment plan available.
(C) In millions.
(D) Earnings may not sum due to rounding.
(E) Data post-2018 reflect completed spinoff of Elanco Animal Health business.

Company's Financial Strength	A++
Stock's Price Stability	95
Price Growth Persistence	90
Earnings Predictability	70

LOCKHEED MARTIN NYSE-LMT

RECENT PRICE **369.00** | P/E RATIO **15.4** (Trailing: 16.7 / Median: 15.0) | RELATIVE P/E RATIO **0.83** | DIV'D YLD **2.7%** | VALUE LINE

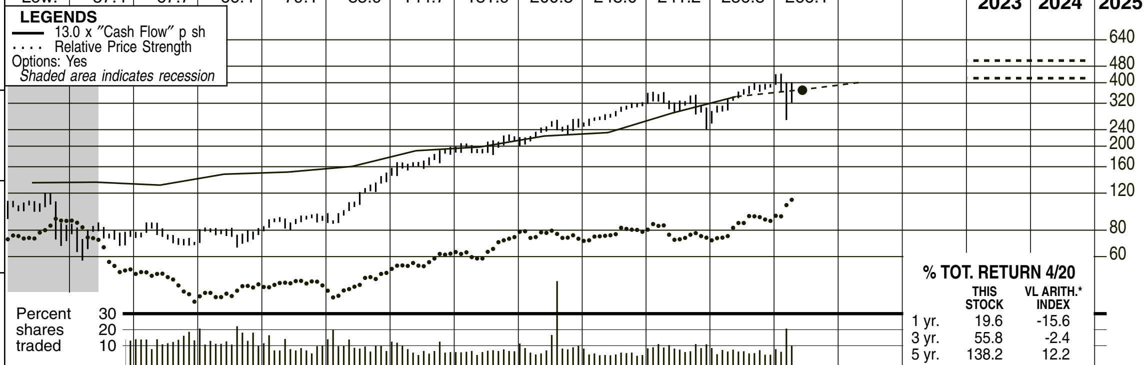
TIMELINESS	1	Raised 5/8/20
SAFETY	1	Raised 3/24/06
TECHNICAL	1	Raised 5/29/20

BETA .95 (1.00 = Market)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:							87.1	87.2	82.4	95.9	150.0	198.7	227.9	269.9	323.9	363.0	400.0	442.5
Low:							57.4	67.7	66.4	79.1	85.9	144.7	181.9	200.5	248.0	241.2	256.8	266.1

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 13.0 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$308-$631	$470 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	510	(+40%)	11%
Low	420	(+15%)	6%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	801	856	920
to Sell	654	624	688
Hld's(000)	225121	225204	229237

Percent shares traded 30 20 10

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	19.6	-15.6
3 yr.	55.8	-2.4
5 yr.	138.2	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
81.11	86.14	94.11	102.35	108.81	121.18	132.38	143.80	146.98	142.19	145.22	152.25	163.49	179.75	191.32	213.61	*230.20*	*248.75*	Sales per sh	*274.05*
4.39	5.60	7.36	9.10	10.34	10.41	10.08	11.36	11.63	12.35	14.68	15.28	17.19	17.85	22.09	26.50	*28.45*	*31.05*	"Cash Flow" per sh	*35.05*
2.83	3.85	5.36	6.86	7.86	7.78	7.23	7.82	8.36	9.57	11.21	11.46	12.38	13.33	17.59	21.95	*24.00*	*25.60*	Earnings per sh A	*29.00*
.91	1.05	1.25	1.47	1.83	2.34	2.64	3.25	4.15	4.78	5.49	6.15	6.77	7.46	8.20	9.00	*9.80*	*10.60*	Div'ds Decl'd per sh B■	*13.00*
1.76	2.00	2.12	2.30	2.36	2.28	2.37	2.52	2.93	2.62	2.69	3.10	3.68	4.14	4.55	5.30	*4.50*	*4.50*	Cap'l Spending per sh	*3.70*
16.03	18.21	16.35	23.97	7.30	11.07	10.72	3.10	.12	15.42	10.83	10.22	5.23	d2.41	4.96	11.17	*18.00*	*28.35*	Book Value per sh C	*66.65*
438.00	432.00	421.00	409.00	392.70	372.90	346.00	323.37	321.00	319.00	314.00	303.00	289.00	284.00	281.00	280.00	*278.00*	*275.00*	Common Shs Outst'g D	*270.00*
18.4	15.9	14.7	14.7	12.7	9.8	10.5	9.9	10.6	11.8	15.1	17.7	19.2	21.5	18.2	15.9	*Bold figures are*		Avg Ann'l P/E Ratio	*16.0*
.97	.85	.79	.78	.76	.65	.67	.62	.67	.66	.79	.89	1.01	1.08	.98	.87	*Value Line*		Relative P/E Ratio	*.90*
1.8%	1.7%	1.6%	1.5%	1.8%	3.1%	3.5%	4.2%	4.7%	4.2%	3.2%	3.0%	2.8%	2.6%	2.6%	2.6%	*estimates*		Avg Ann'l Div'd Yield	*2.8%*

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
45803	46499	47182	45358	45600	46132	47248	51048	53762	59812	*64000*	*68400*	Sales ($mill)	*74000*
12.3%	10.1%	11.0%	14.1%	13.7%	13.5%	13.3%	13.2%	12.8%	16.0%	*15.0%*	*15.0%*	Operating Margin	*15.5%*
841.0	1008.0	988.0	990.0	994.0	1026.0	1215.0	1195.0	1161.0	1189.0	*1210*	*1235*	Depreciation ($mill)	*1325*
2645.0	2667.0	2745.0	2950.0	3614.0	3605.0	3753.0	3873.0	5046.0	6230.0	*6700*	*7300*	Net Profit ($mill)	*8140*
30.9%	26.5%	32.6%	29.0%	31.3%	28.2%	23.2%	26.5%	13.6%	14.0%	*14.0%*	*14.0%*	Income Tax Rate	*14.0%*
5.8%	5.7%	5.8%	6.5%	7.9%	7.8%	7.9%	7.6%	9.4%	10.4%	*10.5%*	*10.7%*	Net Profit Margin	*11.0%*
1694.0	1964.0	1700.0	2209.0	1217.0	2141.0	2566.0	4824.0	1705.0	3123.0	*6200*	*8250*	Working Cap'l ($mill)	*14000*
5019.0	6460.0	6158.0	6152.0	6169.0	14305	14282	13513	12604	11404	*11000*	*10000*	Long-Term Debt ($mill)	*10000*
3708.0	1001.0	39.0	4918.0	3400.0	3097.0	1511.0	d683.0	1394.0	3127.0	*5000*	*7800*	Shr. Equity ($mill)	*18000*
32.3%	38.1%	47.4%	28.2%	39.5%	22.0%	25.9%	32.7%	38.4%	45.1%	*41.0%*	*42.5%*	Return on Total Cap'l	*30.0%*
71.3%	NMF	NMF	60.0%	NMF	NMF	NMF	- -	NMF	NMF	*NMF*	*93.5%*	Return on Shr. Equity	*45.0%*
45.2%	NMF	NMF	28.7%	54.5%	54.0%	NMF	- -	NMF	NMF	*79.0%*	*53.0%*	Retained to Com Eq	*24.0%*
37%	41%	49%	52%	49%	54%	55%	56%	47%	41%	*41%*	*41%*	All Div'ds to Net Prof	*45%*

CAPITAL STRUCTURE as of 3/29/20
Total Debt $12689 mill. **Due in 5 Yrs** $3400 mill.
LT Debt $11439 mill. **LT Interest** $592 mill.
(Total interest coverage '19: 10.5x)
(77% of Cap'l)
Leases, Uncapitalized Annual rentals $239 million

Pension Assets-12/19 $35.4 bill. **Oblig.** $48.7 bill.

Preferred Stock None

Common Stock 280,435,314 shares out.
as of 4/17/20
MARKET CAP: $103 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	3/29/20
Cash Assets	772	1514	1988
Receivables	11916	11431	13081
Inventory (FIFO)	2997	3619	3539
Other	418	531	614
Current Assets	16103	17095	19222
Accts Payable	2402	1281	3166
Debt Due	1500	1250	1250
Other	10496	11441	11236
Current Liab.	14398	13972	15652

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	6.0%	6.0%	*6.0%*
"Cash Flow"	8.5%	11.5%	*8.0%*
Earnings	9.0%	12.5%	*8.5%*
Dividends	16.0%	11.5%	*8.0%*
Book Value	-10.5%	-12.0%	*NMF*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	11057	12685	12169	15137	51048
2018	11635	13398	14318	14411	53762
2019	14336	14427	15171	15878	59812
2020	15651	*15500*	*16150*	*16699*	*64000*
2021	*16500*	*16600*	*17300*	*18000*	*68400*

Cal-endar	EARNINGS PER SHARE A Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	2.61	3.23	3.24	4.30	13.33
2018	4.02	4.05	5.14	4.39	17.59
2019	5.99	5.00	5.66	5.29	21.95
2020	6.08	*5.90*	*6.10*	*5.92*	*24.00*
2021	*5.75*	*6.25*	*6.60*	*7.00*	*25.60*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	1.65	1.65	1.65	1.82	6.77
2017	1.82	1.82	1.82	2.00	7.46
2018	2.00	2.00	2.00	2.20	8.20
2019	2.20	2.20	2.20	2.40	9.00
2020	2.40				

BUSINESS: Lockheed Martin provides a broad range of products and services to the world's governments and commercial customers. Areas of concentration include space and missile systems, electronics, and aeronautics. Program base includes F-16, F-22, F-35 aircraft, ballistic and other missile systems, C-130 transport, and Titan launch vehicles. Sold its IS&GS business to Leidos 8/16. In 2019, 71% of sales were to the U.S. Government. Has 110,000 empl. Off./dir. own less than 1% of the common stock; State Street, 15.4%; Capital World, 6.0%; BlackRock, 6.6%; Vanguard Group, 8.0% (3/20 Proxy). Chrmn., Pres. & CEO: Marillyn A. Hewson. Inc.: MD. Addr.: 6801 Rockledge Drive, Bethesda, MD 20817-1877. Tel.: (301) 897-6000. Internet: www.lockheedmartin.com.

Lockheed Martin continues to perform well. In fact, the company's March-quarter financial results came in better than our already bullish expectations, thanks to the continued success of its Aeronautics division. This segment manufactures the F-35 fighter aircraft and, during the quarter, delivered 22 of these aircraft to the U.S. military and international partner countries. The F-35 program now accounts for roughly 30% of Lockheed's total revenues and, when it is all said and done, it will be the largest (in terms of total dollars spent) military project in history (discussed further below).

COVID-19 will likely hurt the company going forward, but we think that the damage will be relatively minor. As a defense contractor, Lockheed's business has been deemed essential, and its manufacturing facilities have remained open during the pandemic. However, it may experience supply chain problems and other delays that could push back deliveries and/or receipt of payments from its government customers. All told, we think that the disruption will be rather mild and just a bump in the road for this historically excellently run company.

Our outlook for the business remains positive. Although defense spending by the United States and many of its allies may not increase materially over the next several years, we do not see this as much a problem for Lockheed. Several of its platfoms, in our view, are vital for the U.S. military and should remain fully funded. For instance, the Pentagon still plans to have 2,456 F-35 aircraft in its arsenal and this platform will fuel Lockheed's financial results for many years to come. For full-year 2020, we expect the top and bottom lines to come in at $64 billion and $24.00 per share, respectively. Our estimates are at the high end of management's recently updated guidance. Looking further out, we project steady annual revenue and profit advances in 2021 and to 2023–2025.

Although we don't expect wide appreciation, the stock has appeal. The issue is now trading 18% below its 52-week high. That, coupled with its defensive attributes, including a top rank for Safety, and the stock would make a fine core holding, especially for conservative accounts.

Ian Gendler *June 5, 2020*

(A) Diluted egs. Excl. nonrecur. gains/(losses): '05, 25¢; '06, 44¢; '07, 25¢; '10, 76¢; '11, (4¢); '13, ($0.44); '17, ($6.69). Excludes discontinued ops.: '16, $5.11. Earnings may not sum to total due to rounding. Next egs. rpt. due late July.
(B) Dividends historically paid in late March, June, September, and December.
■ Div'd reinvestment plan available.
(C) Incl. intang. In 2019: $13.8 bill., $49.35/sh.
(D) In millions.

Company's Financial Strength	A++
Stock's Price Stability	90
Price Growth Persistence	95
Earnings Predictability	90

MARSH & McLENNAN NYSE-MMC

RECENT PRICE 114.61 | P/E RATIO 25.8 (Trailing: 32.9 Median: 19.0) | RELATIVE P/E RATIO 1.17 | DIV'D YLD 1.6% | VALUE LINE

TIMELINESS 1 Raised 6/19/20
SAFETY 1 Raised 11/13/15
TECHNICAL 3 Lowered 8/7/20
BETA .95 (1.00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$88-$180 $134 (15%)

2023-25 PROJECTIONS

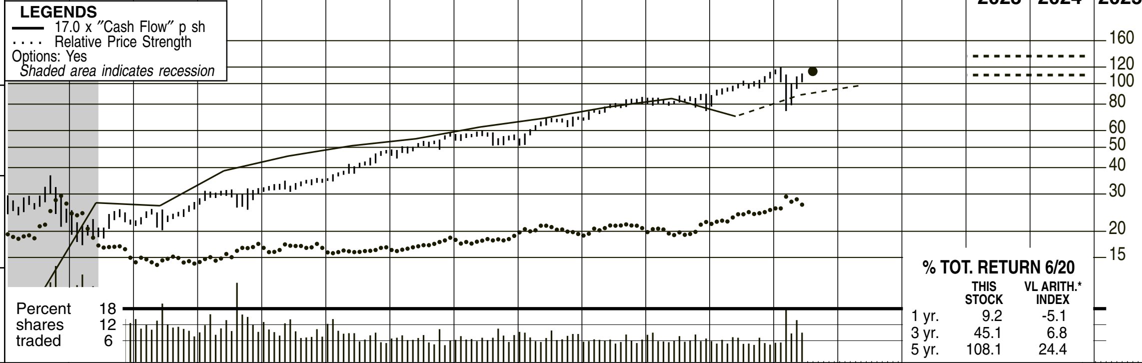
	Price	Gain	Ann'l Total Return
High	135	(+20%)	6%
Low	110	(-5%)	1%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	341	413	395
to Sell	380	357	432
Hld's(000)	447482	450578	444111

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	25.5	27.5	32.0	35.8	48.6	58.7	60.0	69.8	86.5	89.6	113.9	119.9
Low:	17.2	20.2	25.3	30.7	34.4	44.3	50.9	50.8	66.8	74.3	77.9	74.3

Target Price Range 2023 | 2024 | 2025



% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	9.2	-5.1
3 yr.	45.1	6.8
5 yr.	108.1	24.4

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
21.69	21.30	21.60	21.81	22.53	19.80	19.52	21.38	21.88	22.42	23.98	24.70	25.68	27.57	29.67	33.06	*33.35*	*36.35*	Revenues per sh A	*44.00*
1.13	2.03	2.37	1.88	.50	1.60	1.55	2.28	2.67	2.99	3.22	3.67	4.04	4.56	5.01	4.12	*5.20*	*5.80*	"Cash Flow" per sh	*7.45*
.33	1.33	1.45	.99	d.14	1.02	1.00	1.76	2.16	2.42	2.60	2.98	3.38	3.88	4.33	3.40	*4.45*	*5.00*	Earnings per sh B	*6.50*
1.30	.68	.68	.76	.80	.80	.81	.86	.90	.96	1.06	1.18	1.30	1.43	1.58	1.74	*1.85*	*1.90*	Div'ds Decl'd per sh C ■	*2.20*
.67	.63	.56	.73	.75	.58	.50	.52	.59	.73	.68	.62	.49	.59	.62	.84	*.65*	*.65*	Cap'l Spending per sh	*.70*
9.02	9.80	10.54	15.03	11.13	11.06	11.87	11.02	12.12	14.58	13.21	12.48	12.04	14.47	14.91	15.47	*18.50*	*21.70*	Book Value per sh D	*32.20*
560.64	547.00	551.91	520.39	514.27	530.00	540.51	539.18	545.00	547.00	540.00	521.90	514.49	508.71	503.84	503.63	*505.00*	*505.00*	Common Shs Outst'g E	*500.00*
NMF	22.4	20.1	28.7	- -	21.0	23.8	16.7	15.3	17.0	19.7	18.9	18.8	19.9	19.2	28.6	*Bold figures are*		Avg Ann'l P/E Ratio	*19.0*
NMF	1.19	1.09	1.52	- -	1.40	1.51	1.05	.97	.96	1.04	.95	.99	1.00	1.04	1.55	*Value Line*		Relative P/E Ratio	*1.05*
3.1%	2.3%	2.3%	2.7%	2.9%	3.7%	3.4%	2.9%	2.7%	2.3%	2.1%	2.1%	2.0%	1.9%	1.9%	1.8%	*estimates*		Avg Ann'l Div'd Yield	*1.8%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $13640 mill. **Due in 5 Yrs** $4762 mill.
LT Debt $11231 mill. **LT Int.** $520 mill.
(60% of Cap'l)

Leases, Uncapitalized Annual rentals $413 mill.

Pension Assets - 12/19 $17.0 bill.
Oblig. $17.4 bill.

Pfd Stock None
Common Stock 506,118,813 shs.
as of 4/24/20

MARKET CAP: $58.0 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
10550	11526	11924	12261	12951	12893	13211	14024	14950	16652	*16850*	*18350*	Revenues ($mill) A	*22000*
11.7%	16.5%	18.5%	19.3%	20.1%	20.0%	21.6%	22.1%	21.5%	19.2%	*21.5%*	*22.0%*	Operating Margin	*23.0%*
291.0	267.0	277.0	286.0	302.0	314.0	308.0	312.0	311.0	333.0	*355*	*370*	Depreciation ($mill)	*440*
549.0	960.0	1179.0	1351.0	1439.0	1599.0	1768.0	2008.1	2214.0	1742.0	*2285*	*2565*	Net Profit ($mill)	*3285*
26.5%	30.1%	29.0%	30.1%	28.5%	29.1%	27.6%	23.3%	24.2%	27.3%	*25.0%*	*25.0%*	Income Tax Rate	*25.0%*
5.2%	8.3%	9.9%	11.0%	11.1%	12.4%	13.4%	14.3%	14.8%	10.5%	*13.6%*	*14.0%*	Net Profit Margin	*14.9%*
2171.0	1909.0	2399.0	2491.0	2350.0	1336.0	802.0	1300.0	1010.0	389.0	*1975*	*3875*	Working Cap'l ($mill)	*9725*
3026.0	2668.0	2658.0	2621.0	3376.0	4402.0	4495.0	5225.0	5510.0	10741	*11500*	*11750*	Long-Term Debt ($mill)	*12000*
6415.0	5940.0	6606.0	7975.0	7133.0	6513.0	6192.0	7359.0	7511.0	7793.0	*9345*	*10955*	Shr. Equity ($mill) D	*16090*
7.0%	12.3%	13.7%	13.5%	14.5%	15.4%	17.4%	16.9%	18.1%	10.8%	*11.0%*	*11.5%*	Return on Total Cap'l	*11.5%*
8.6%	16.2%	17.8%	16.9%	20.2%	24.6%	28.6%	27.3%	29.5%	22.4%	*24.5%*	*23.5%*	Return on Shr. Equity	*20.5%*
1.5%	8.1%	10.3%	10.3%	12.0%	14.8%	17.5%	17.2%	18.7%	10.9%	*15.0%*	*14.5%*	Retained to Com Eq	*13.5%*
82%	50%	42%	39%	40%	40%	39%	37%	36%	51%	*41%*	*37%*	All Div'ds to Net Prof	*33%*

CURRENT POSITION ($MILL.)

	2018	2019	3/31/20
Cash Assets	1066	1155	1480
Receivables	4317	5236	5558
Other	551	677	711
Current Assets	5934	7068	7749
Accts Payable	2234	2746	2611
Debt Due	314	1215	2409
Other	2376	2718	1839
Current Liab.	4924	6679	6859

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	3.5%	6.0%	*6.5%*
"Cash Flow"	13.0%	9.0%	*8.5%*
Earnings	20.0%	10.0%	*9.0%*
Dividends	7.0%	10.0%	*5.5%*
Book Value	2.0%	2.5%	*13.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	3503	3495	3341	3685	14024
2018	4000	3734	3504	3712	14950
2019	4071	4349	3968	4264	16652
2020	4651	*4200*	*3800*	*4199*	*16850*
2021	*4800*	*4655*	*4265*	*4630*	*18350*

Cal-endar	EARNINGS PER SHARE B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.09	.96	.76	1.05	3.88
2018	1.34	1.04	.78	1.17	4.33
2019	1.40	.65	.59	.76	3.40
2020	1.48	*1.10*	*.70*	*1.17*	*4.45*
2021	*1.55*	*1.25*	*.85*	*1.35*	*5.00*

Cal-endar	QUARTERLY DIVIDENDS PAID C ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.31	.31	.34	.34	1.30
2017	.34	.34	.375	.375	1.43
2018	.375	.375	.415	.415	1.58
2019	.415	.415	.455	.455	1.74
2020	.455	.455	.465		

BUSINESS: Marsh & McLennan Companies, Inc. is a global professional services holding company. Its subsidiary, Marsh, is a leading insurance broker for corporations while taking no underwriting risk. Other subsidiaries include Guy Carpenter (Re-insurance), Mercer (Human Resources and Consulting), and Oliver Wyman (Management Consulting). 2019 revenue: Insurance Services, 58%; Consulting, 42%. Sold The Putnam Group in '07; Kroll Inc. (risk mitigation), 8/10. Has about 76,000 employees. Off./Dir. own less than 1.0% of common shares out.; BlackRock, 8.3%; The Vanguard Group, 7.7%; T.Rowe Price Assoc., 7.0% (4/20 Proxy). Pres./CEO: Daniel Glaser. Inc.: DE. Addr.: 1166 Ave. of the Americas, NY, NY 10036. Tel.: 212-345-5000. Internet: www.mmc.com.

Marsh McLennan likely posted mixed results in the June interim. The consulting business was probably a drag on the top line. However, the bottom line was likely bolstered by expense-reduction efforts and synergies from the Jardine Lloyd Thompson merger. Thus, we estimate revenues of $4.2 billion and share net of $1.10 for the second quarter.

We look for more of the same in the second half of 2020. Indeed, the challenging market conditions ought to persist owing to COVID-19's effect on the broader economy. Therefore, we expect weakness on the top line while the bottom line should exceed easy comparisons.

Acquisitions ought to remain a key part of Marsh's strategy. The Oliver Wyman unit acquired a minority stake in Corridor Platforms, a workflow governance and automation software provider. This addition follows the company's purchase of Assurance earlier this year and the sizable merger with JLT last year. Looking ahead, we expect Marsh to be opportunistic in the M&A arena, given the difficult market conditions.

The company should get back on track next year. The business environment should improve, assuming there is progress on the coronavirus front. Further, the JLT integration, as well as other recent purchases, should provide a boost to results. Thus, we estimate revenues of $18.35 billion and earnings of $5.00 a share for 2021. The long-term picture looks even more positive. Marsh's investment in growth opportunities will likely continue to bear fruit over this time frame.

Finances are no cause for concern. The company has plenty of capital available to weather the current challenges. Moreover, the debt load is manageable, given Marsh's steady cash flow. What's more, the board recently raised the quarterly dividend, which is a positive sign when many companies have suspended their payouts.

This issue holds our Highest ranks for Timeliness and Safety. Conservative investors may want to consider MMC stock. However, we recommend long-term investors look elsewhere. At the recent quotation, total return potential is unimpressive for the 3- to 5-year pull.

Richard J. Gallagher *August 7, 2020*

(A) Gross commissions, fees, & other income. **(B)** Diluted egs. Excludes nonrecurring gains/(losses): '05, (59¢); '06, 31¢; '07, $3.44; '09, (60¢); '10, 55¢; '11, 6¢. May not sum to total due to rounding. Next earnings report due late October. **(C)** Div'ds historically paid mid-Feb., May, Aug., and Nov. ■ Div'd reinvestment plan available. **(D)** Includes intangibles. In 2019: $17.4 billion, $34.55/sh. **(E)** In millions.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	100
Earnings Predictability	85

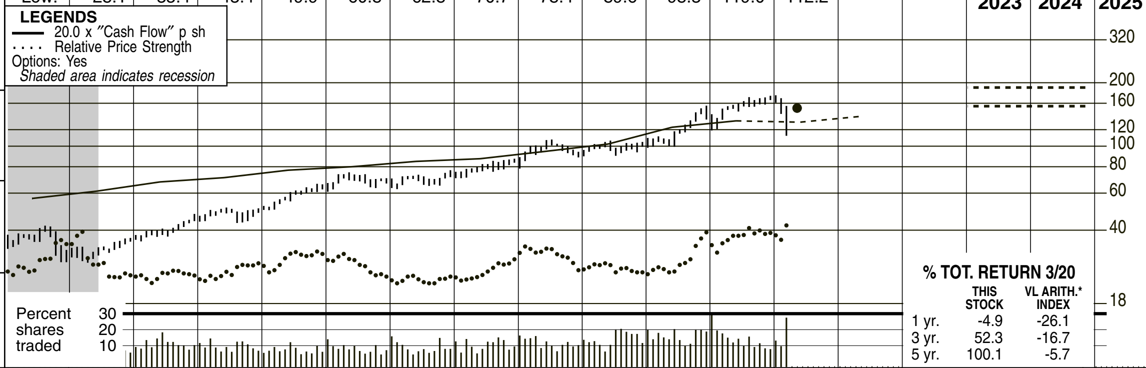
McCORMICK NYSE-MKC

RECENT PRICE 152.01 | P/E RATIO 29.1 (Trailing: 28.6 Median: 22.0) | RELATIVE P/E RATIO 2.17 | DIV'D YLD 1.6% | VALUE LINE

TIMELINESS 3 Lowered 5/17/19
SAFETY 1 Raised 5/1/09
TECHNICAL 3 Lowered 3/20/20
BETA .70 (1.00 = Market)

High:	36.8	47.8	51.3	66.4	75.3	77.1	87.5	107.8	106.5	156.0	173.3	174.6
Low:	28.1	35.4	43.4	49.9	60.8	62.8	70.7	78.4	89.6	98.3	119.0	112.2

LEGENDS
—— 20.0 x "Cash Flow" p sh
. . . . Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High Midpoint (% to Mid)
$148-$238 $193 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	190	(+25%)	7%
Low	155	(Nil)	2%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	335	360	384
to Sell	394	367	379
Hld's(000)	107102	106633	104121

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-4.9	-26.1
3 yr.	52.3	-16.7
5 yr.	100.1	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
18.60	19.55	20.88	22.82	24.42	24.22	25.07	27.79	30.26	31.44	33.08	33.75	35.21	36.90	40.95	40.24	*41.25*	*42.50*	Sales per sh A	*48.10*
2.10	2.24	2.45	2.64	2.83	3.06	3.39	3.55	3.85	4.00	4.24	4.36	4.73	5.13	6.16	6.59	*6.50*	*6.95*	"Cash Flow" per sh	*8.40*
1.51	1.61	1.72	1.92	2.14	2.34	2.65	2.79	3.04	3.13	3.37	3.48	3.78	4.26	4.97	5.35	*5.25*	*5.70*	Earnings per sh A B	*7.00*
.56	.64	.72	.80	.88	.96	1.04	1.12	1.24	1.36	1.48	1.60	1.72	1.88	2.08	2.28	*2.48*	*2.56*	Div'ds Decl'd per sh ■ C	*2.88*
.51	.56	.65	.61	.66	.63	.67	.73	.83	.76	1.03	1.01	1.23	1.39	1.28	1.31	*1.50*	*1.50*	Cap'l Spending per sh	*1.70*
6.55	6.03	7.17	8.49	8.11	10.13	10.99	12.16	12.81	14.85	14.11	13.12	12.98	19.54	24.00	25.92	*28.70*	*31.75*	Book Value per sh D	*41.80*
135.79	132.60	130.10	127.80	130.10	131.80	133.10	133.05	132.68	131.16	128.27	127.30	125.30	131.00	132.10	132.90	*133.00*	*133.50*	Common Shs Outst'g E	*133.00*
22.0	21.3	20.0	19.4	17.2	13.7	14.8	17.1	18.7	22.0	20.6	22.5	25.1	22.9	23.3	28.3	*Bold figures are*		Avg Ann'l P/E Ratio	*24.5*
1.16	1.13	1.08	1.03	1.04	.91	.94	1.07	1.19	1.24	1.08	1.13	1.32	1.15	1.26	1.54	*Value Line*		Relative P/E Ratio	*1.35*
1.7%	1.9%	2.1%	2.2%	2.4%	3.0%	2.6%	2.3%	2.2%	2.0%	2.1%	2.0%	1.8%	1.9%	1.8%	1.5%	*estimates*		Avg Ann'l Div'd Yield	*1.7%*

CAPITAL STRUCTURE as of 2/29/20
Total Debt $4441.8 mill. **Due in 5 Yrs** $2.74 bill.
LT Debt $3627.9 mill. **LT Interest** $146 mill.
(Long-term interest earned: 6.8x) (50% of Cap'l)
Leases, Uncapitalized Annual rentals $41.8 mill.
Pension Assets-11/19 $1012.8 mill.
Oblig. $1230.4 mill.

Pfd Stock None
Common Stock 132,903,891 shs.
(Includes 123,640,577 non-voting shs.)

MARKET CAP: $20.2 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
3336.8	3697.6	4014.2	4123.4	4243.2	4296.3	4411.5	4834.1	5408.9	5347.4	*5485*	*5675*	Sales ($mill) A	*6400*
18.1%	17.3%	17.0%	16.9%	16.8%	16.8%	17.4%	18.4%	20.2%	21.3%	*20.8%*	*21.3%*	Operating Margin	*22.5%*
95.1	98.3	102.8	106.0	102.7	105.9	108.7	125.2	150.7	158.8	*160*	*165*	Depreciation ($mill)	*180*
356.3	374.2	407.8	418.2	441.6	449.5	483.4	546.7	663.0	717.5	*705*	*765*	Net Profit ($mill)	*940*
28.5%	29.0%	26.6%	26.8%	26.3%	26.2%	25.8%	23.8%	15.3%	19.5%	*21.0%*	*21.0%*	Income Tax Rate	*22.0%*
10.7%	10.1%	10.2%	10.1%	10.4%	10.5%	11.0%	11.3%	12.3%	13.4%	*12.9%*	*13.5%*	Net Profit Margin	*14.7%*
181.1	229.6	97.8	307.1	294.2	166.3	d.9	d330.3	d521.8	d604.2	*d475*	*d275*	Working Cap'l ($mill)	*775*
779.9	1029.7	779.2	1019.0	1014.1	1052.7	1054.0	4443.9	4052.9	3625.8	*3600*	*3500*	Long-Term Debt ($mill)	*4000*
1462.7	1618.5	1700.2	1947.7	1809.4	1670.2	1626.6	2559.9	3170.9	3444.2	*3815*	*4235*	Shr. Equity ($mill)	*5560*
17.0%	15.1%	17.5%	15.0%	16.5%	17.5%	19.1%	8.5%	10.3%	11.2%	*10.5%*	*10.5%*	Return on Total Cap'l	*10.5%*
24.4%	23.1%	24.0%	21.5%	24.4%	26.9%	29.7%	21.4%	20.9%	20.8%	*18.5%*	*18.0%*	Return on Shr. Equity	*17.0%*
14.9%	13.9%	14.3%	12.2%	13.8%	14.6%	16.3%	12.1%	12.3%	12.1%	*9.5%*	*10.0%*	Retained to Com Eq	*10.0%*
39%	40%	40%	43%	44%	46%	45%	43%	41%	42%	*47%*	*45%*	All Div'ds to Net Prof	*41%*

CURRENT POSITION ($MILL.)	2018	2019	2/29/20
Cash Assets	96.6	155.4	170.8
Receivables	518.1	502.9	409.9
Inventory (FIFO)	786.3	801.2	835.6
Other	78.9	90.7	108.1
Current Assets	1479.9	1550.2	1524.4
Accts Payable	710.0	846.9	789.4
Debt Due	643.5	723.8	813.9
Other	648.2	583.7	469.1
Current Liab.	2001.7	2154.4	2072.4

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '23-'25
Sales	5.0%	5.0%	3.5%
"Cash Flow"	7.5%	7.0%	6.0%
Earnings	8.5%	7.5%	6.5%
Dividends	9.0%	9.0%	5.5%
Book Value	9.0%	7.5%	10.5%

Fiscal Year Ends	QUARTERLY SALES ($ mill.)A Feb.28	May 31	Aug.31	Nov.30	Full Fiscal Year
2017	1043.7	1114.3	1185.2	1490.9	4834.1
2018	1237.1	1327.3	1345.3	1499.2	5408.9
2019	1231.5	1301.9	1329.2	1484.8	5347.4
2020	1212.0	*1350*	*1370*	*1553*	*5485*
2021	*1300*	*1375*	*1400*	*1600*	*5675*

Fiscal Year Ends	EARNINGS PER SHARE A B Feb.28	May 31	Aug.31	Nov.30	Full Fiscal Year
2017	.76	.82	1.12	1.54	4.26
2018	1.00	1.02	1.28	1.67	4.97
2019	1.12	1.16	1.46	1.61	5.35
2020	1.08	*1.13*	*1.40*	*1.64*	*5.25*
2021	*1.15*	*1.25*	*1.52*	*1.78*	*5.70*

Cal-endar	QUARTERLY DIVIDENDS PAID C ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.43	.43	.43	.43	1.72
2017	.47	.47	.47	.47	1.88
2018	.52	.52	.52	.52	2.08
2019	.57	.57	.57	.57	2.28
2020	.62				

BUSINESS: McCormick & Company, Inc. is a leading manufacturer, marketer, and distributor of spices, seasonings, flavorings, mixes, condiments for the consumer, industrial, and foodservice markets. Has two segments: Consumer (accounted for 61% of total sales in fiscal 2019) and Flavor Solutions (39%). Acquired Reckitt Benckiser's Food Division (French's Mustard and Frank's RedHot lines) 8/17; Enrico Giotti SpA, 12/16. Foreign operations comprise 40% of sales in fiscal 2019. Has about 12,400 employees. Off./dir. own 12.7% of common stock; Lawrence E. Kurzius, 5.2% (2/20 Proxy). Chrmn., CEO & Pres.: Lawrence E. Kurzius. Inc.: MD. Addr.: 24 Schilling Road, Suite 1, Hunt Valley, Maryland 21031. Telephone: 410-771-7301. Internet: www.mccormick.com.

McCormick reported mostly disappointing fiscal first-quarter (ended February 29th) results. Specifically, the spice maker earned $1.08 a share, which fell short of our estimate of $1.10 and the previous-year tally of $1.12, on a 2% sales decline. The primarily culprit was reduced business in China, as that nation battled the COVID-19 virus. Given the growing uncertainty, as the coronavirus pandemic has spread across the United States and Europe, the company has pulled its guidance; MKC hopes to have an updated outlook at the end of the second quarter.

We are now estimating a bottom-line retreat for fiscal 2020. There is no doubt that the company will feel the ill effects of the COVID-19 pandemic, but we expect McCormick's business model to hold up better than those of many other industries. On its latest earnings conference call, CEO Lawrence Kurzuis noted that the company is experiencing an "unprecedented surge in demand," as the grocery stores and supermarkets McCormick serves are re-stocking shelves following the frantic rush by consumers to purchase products used to cook at home. Conversely, the company's Flavor Solutions unit will likely take a big hit, as it does a good deal of business with the ravished restaurants and foodservice industries. These two factors may well serve as offsets to each other over the next few quarters, as the nation battles the coronavirus.

Despite the pullback in price since our mid-January report, we think McCormick shares should still be viewed as a solid defensive investment during these turbulent times. The stock offers many of the attributes investors value during difficult stretches for the broader market. The company's Financial Strength rating is A+ and the stock, which has a less-than-market Beta coefficient of 0.70, is ranked 1 (Highest) for Safety. These scores reflect the company's financial strength, stable cash flow generation, and access to liquidity when needed. Investors should also note than during the 2001-2002 and 2008-2009 recessions, McCormick's consumer sales grew 4% and 3%, respectively, which, we think, provides a measure of downside operating risk protection during periods of economic stress.

William G. Ferguson *April 17, 2020*

(A) Fiscal year ends Nov. 30th. (B) Diluted earnings. Excl. nonrecurring gains/(losses): '04,(1¢); '05, (5¢); '06, (12¢), '07, (19¢); '13, (22¢); '14, (3¢); '17, (54¢); '18, $2.03; '19, (11¢). Next earnings report due late June. Earnings may not add due to rounding. (C) Divs. historically paid in mid-Jan., Apr., July & Oct. ■ Div'd reinvestment plan available. (D) Includes intangibles. In fiscal 2019: $7346.8 million, $54.10/sh. (E) In mill., adjusted for split.

Company's Financial Strength	A+
Stock's Price Stability	90
Price Growth Persistence	85
Earnings Predictability	100

MCDONALD'S CORP. NYSE-MCD

RECENT PRICE	P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
204.12	33.6 (Trailing: 32.9 / Median: 20.0)	1.53	2.4%	363

TIMELINESS 3 Lowered 5/4/18
SAFETY 1 New 7/27/90
TECHNICAL 5 Lowered 8/21/20
BETA .95 (1.00 = Market)

18-Month Target Price Range
Low-High: $154-$296 — Midpoint (% to Mid): $225 (10%)

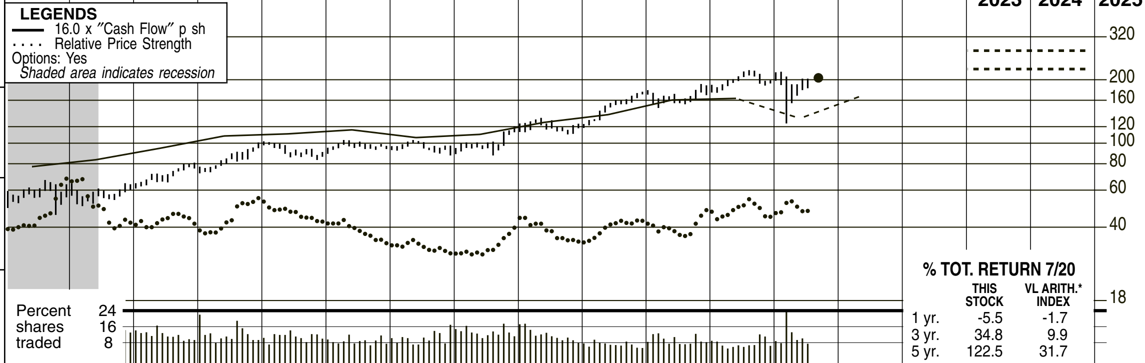
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	275	(+35%)	10%
Low	225	(+10%)	5%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	944	1133	986
to Sell	869	882	1069
Hld's(000)	512477	501159	501227

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	64.8	80.9	101.0	102.2	103.7	103.8	120.2	132.0	175.8	190.9	221.9	218.4
Low:	50.4	61.1	72.1	83.3	89.3	87.6	87.5	110.3	118.2	146.8	173.4	124.2



% TOT. RETURN 7/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-5.5	-1.7
3 yr.	34.8	9.9
5 yr.	122.5	31.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
15.01	16.20	17.93	19.55	21.09	21.12	22.85	26.44	27.49	28.38	28.50	28.03	30.05	28.74	27.41	28.24	*25.60*	*29.45*	Revenues per sh	*40.00*
2.88	2.98	3.43	4.06	4.85	5.22	5.92	6.77	6.93	7.24	6.65	6.89	7.86	8.54	10.02	10.20	*8.25*	*10.60*	"Cash Flow" per sh	*14.90*
1.93	1.97	2.30	2.91	3.67	3.98	4.60	5.27	5.36	5.55	4.82	4.97	5.71	6.66	7.90	7.84	*5.80*	*8.00*	Earnings per sh A	*12.00*
.55	.67	1.00	1.50	1.63	2.05	2.26	2.53	2.87	3.12	3.28	3.44	3.61	3.83	4.19	4.73	*5.00*	*5.20*	Div'ds Decl'd per sh B■	*6.75*
1.12	1.27	1.45	1.67	1.92	1.81	2.03	2.67	3.04	2.85	2.68	2.00	2.22	2.33	3.57	3.21	*2.15*	*3.30*	Cap'l Spending per sh	*3.40*
11.18	11.99	12.84	13.11	12.00	13.03	13.89	14.09	15.25	16.16	13.35	7.82	d2.69	d4.12	d8.16	d11.00	*d13.45*	*d14.40*	Book Value per sh C	*d20.00*
1269.9	1263.2	1203.7	1165.3	1115.3	1076.7	1053.6	1021.4	1002.7	990.40	962.90	906.80	819.30	794.10	767.10	746.30	*744.00*	*730.00*	Common Shs Outst'g D	*650.00*
14.4	16.2	16.0	17.6	15.8	14.4	15.4	15.9	17.3	17.5	20.0	20.2	21.1	22.3	21.1	25.2	*Bold figures are*		Avg Ann'l P/E Ratio	*21.0*
.76	.86	.86	.93	.95	.96	.98	1.00	1.10	.98	1.05	1.02	1.11	1.12	1.14	1.37	*Value Line*		Relative P/E Ratio	*1.15*
2.0%	2.1%	2.7%	2.9%	2.8%	3.6%	3.2%	3.0%	3.1%	3.2%	3.4%	3.4%	3.0%	2.6%	2.5%	2.4%	*estimates*		Avg Ann'l Div'd Yield	*2.7%*

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
24075	27006	27567	28106	27441	25413	24622	22820	21025	21077	*19050*	*21500*	Revenues ($mill)	*26000*
35.6%	35.9%	35.7%	35.9%	35.0%	35.1%	39.0%	42.7%	49.5%	49.8%	*47.0%*	*49.0%*	Operating Margin	*51.0%*
1276.2	1415.0	1488.5	1585.1	1644.5	1555.7	1516.5	1363.4	1482.0	1617.9	*1690*	*1750*	Depreciation ($mill)	*1875*
4961.9	5503.1	5464.8	5585.9	4757.8	4693.3	4920.2	5415.0	6205.3	5997.0	*4430*	*6000*	Net Profit ($mill)	*7800*
29.3%	31.3%	32.4%	31.9%	35.5%	30.5%	31.7%	31.2%	24.1%	25.9%	*24.0%*	*24.0%*	Income Tax Rate	*26.0%*
20.6%	20.4%	19.8%	19.9%	17.3%	18.5%	20.0%	23.7%	29.5%	28.5%	*23.3%*	*27.9%*	Net Profit Margin	*30.0%*
1443.8	893.8	1519.0	1880.1	1437.6	6692.6	1380.3	2436.6	1079.7	d63.1	*2000*	*1000*	Working Cap'l ($mill)	*1000*
11497	12134	13633	14130	14990	24122	25879	29536	31075	34118	*35000*	*37000*	Long-Term Debt ($mill)	*41000*
14634	14390	15294	16010	12853	7087.9	d2204	d3268	d6258	d8210	*d10000*	*d10500*	Shr. Equity ($mill)	*d13000*
19.8%	21.6%	19.8%	19.4%	18.1%	16.1%	22.7%	22.4%	27.0%	25.3%	*20.0%*	*25.0%*	Return on Total Cap'l	*29.5%*
33.9%	38.2%	35.7%	34.9%	37.0%	66.2%	- -	- -	- -	- -	*NMF*	*NMF*	Return on Shr. Equity	*NMF*
17.5%	20.1%	16.8%	15.4%	12.0%	20.6%	- -	- -	- -	- -	*NMF*	*NMF*	Retained to Com Eq	*NMF*
49%	47%	53%	56%	68%	69%	62%	57%	52%	60%	*86%*	*65%*	All Div'ds to Net Prof	*56%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $38762.2 mill **Due in 5 Yrs** $13267 mill
LT Debt $34675.6 mill **LT Interest** $1415 mill
(LT interest earned: 8.2x; total interest coverage: 8.2x) (138% of Cap'l)
Leases, Uncapitalized Annual rentals $1162 mill.

No Defined Benefit Pension Plan
Pfd Stock None

Common Stock 744,102,514 shs.

MARKET CAP: $152 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	6/30/20
Cash Assets	866.0	898.5	3255.7
Receivables	2441.5	2224.2	2852.6
Inventory (FIFO)	51.1	50.2	42.6
Other	694.6	385.0	458.5
Current Assets	4053.2	3557.9	6909.4
Accts Payable	1207.9	988.2	538.4
Debt Due	- -	59.1	4086.6
Other	1765.6	2573.7	2621.1
Current Liab.	2973.5	3621.0	7246.1

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	3.0%	- -	6.0%
"Cash Flow"	7.5%	6.5%	7.5%
Earnings	8.0%	7.5%	8.0%
Dividends	9.5%	6.5%	8.0%
Book Value	- -	- -	NMF

Cal-endar	QUARTERLY REVENUES ($ mill.) E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	5675	6049	5754	5340	22820
2018	5139	5354	5369	5163	21025
2019	4956	5341	5431	5349	21077
2020	4714	3762	*5225*	*5349*	*19050*
2021	*5050*	*5425*	*5525*	*5500*	*21500*

Cal-endar	EARNINGS PER SHARE AE Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.47	1.70	1.76	1.71	6.66
2018	1.79	1.99	2.10	1.97	7.90
2019	1.72	2.05	2.11	1.97	7.84
2020	1.47	.65	*1.80*	*1.88*	*5.80*
2021	*1.75*	*2.05*	*2.15*	*2.05*	*8.00*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.89	.89	.89	.94	3.61
2017	.94	.94	.94	1.01	3.83
2018	1.01	1.01	1.01	1.16	4.19
2019	1.16	1.16	1.16	1.25	4.73
2020	1.25	1.25			

BUSINESS: McDonald's Corporation operated, franchised, or licensed 39,020 fast-food restaurants in the United States, Canada, and overseas under the *McDonald's* banner (as of 6/30/20). About 93% are operated by franchisees or affiliates, with the remainder under the control of the company. Foreign operations contributed 63% of systemwide sales and 55% of consolidated operating income in 2019. The company sold a stake in *Pret A Manger* in 2008. Spun off *Chipotle Mexican Grill* in 2006 and *Boston Market* in 2007. Has about 205,000 employees. Officers/directors own less than 1% of common stock (4/20 Proxy). CEO: Chris Kempczinski. Inc.: Delaware. Address: 110 North Carpenter Street, Chicago, Illinois 60607. Telephone: 630-623-3000. Internet: www.mcdonalds.com.

McDonald's second-quarter results topped our estimates but fell a bit shy of consensus forecasts, which had risen in recent weeks, along with the equity's price. Specifically, the top line fell 30% from a year earlier. Global same-store sales tumbled 23.9%, but management noted that sales strengthened as the quarter progressed and economies reopened. Comps fell 39.0% in April, but only 12.3% in June. The U.S. was a relative bright spot, as comps were down just 2.3% in June and turned positive in July. International markets have been slower to rebound due to stricter lockdown measures and a less robust drive-through presence (nearly 95% of U.S. locations offer the service, while the number is closer to 70% in Europe). That said, breakfast sales took a hit as fewer people ventured out to work and school in the early morning hours. Along with lower sales, higher costs for items such as franchisee support (mostly in the form of marketing), obsolete inventory, and bad debt reserves also weighed on the bottom line. Adjusted share earnings fell 68% from a year earlier, to $0.65.

Results should improve moving forward. Despite a surge in COVID-19 cases in some parts of the Untied States, we don't envision another full-scale lockdown. At the end of June, 96% of the company's restaurants were open in some form. MCD has adapted well to changing consumer behavior during the pandemic. While drive-throughs have been a cornerstone for decades, simplified menus helped to shave 15-20 seconds off of the average drive-through order, enabling McDonald's to serve more customers. Investments made in recent years in delivery and mobile order/pay technology have also been paying off. Of course, challenges remain. In addition to the aforementioned weakness at breakfast, many dining rooms are still closed and locations that depend on foot traffic (malls, airports, etc.) are suffering, as are those in urban areas that rely on office workers. The surge in COVID-19 cases in parts of the U.S. is also concerning.

While capital gains potential appears somewhat limited at the recent quotation, these shares still have appeal for conservative income-oriented accounts, in our view.

Matthew E. Spencer, CFA *August 21, 2020*

(A) Based on diluted shares. Excl. nonrecur. gain/(loss): '04, (6¢); '05, 3¢; '06, 53¢; '07, (93¢); '08, 9¢; '09, 13¢; '10, (2¢); '15, (17¢); '16, (27¢); '17, (29¢); '18, (16¢); '19, 4¢; '20, (1¢). Excl. cum. effect of accting change: '04, (8¢). Incl. tax benefit: '04, 7¢. Excl. tax benefit '05, 4¢. Next egs. report due late Oct.
(B) Div'ds paid mid-Mar., Jun., Sep., Dec.
■ Div'd. reinvestment plan available.
(C) Incl. intang. At 12/31/19: $2,677.4 mill., $3.59/share. (D) In mill., adj. for splits.
(E) May not sum due to rounding.

Company's Financial Strength	A++
Stock's Price Stability	95
Price Growth Persistence	65
Earnings Predictability	85

MERCK & CO. NYSE-MRK

RECENT PRICE **83.13** | P/E RATIO **14.6** (Trailing: 15.0 Median: 15.0) | RELATIVE P/E RATIO **0.70** | DIV'D YLD **2.9%** | VALUE LINE **1622**

High:	38.4	41.6	37.9	48.0	50.4	62.2	63.6	65.5	66.8	80.2	92.6	92.1			Target Price Range		
Low:	20.0	30.7	29.5	36.9	40.8	49.3	45.7	48.0	53.6	52.8	72.1	65.3			2023	2024	2025

TIMELINESS 3 Lowered 10/2/20
SAFETY 1 Raised 4/15/11
TECHNICAL 3 Lowered 6/19/20
BETA .90 (1.00 = Market)

18-Month Target Price Range

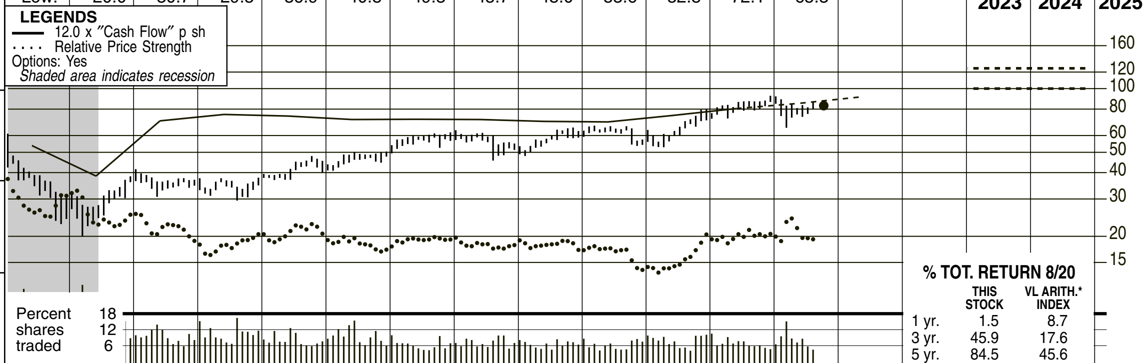
Low-High	Midpoint (% to Mid)
$71-$138	$105 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	125	(+50%)	*13%*
Low	100	(+20%)	*8%*

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	1274	1212	1252
to Sell	977	1100	967
Hld's(000)	1941253	1889036	1865061



2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
10.39	10.09	10.44	11.14	11.32	8.82	14.92	15.80	15.62	15.04	14.88	14.20	14.48	14.88	16.31	18.45	***19.05***	***20.75***	Sales per sh	***24.25***
3.29	3.34	3.59	2.42	4.48	3.21	5.87	6.29	6.19	5.95	5.98	5.96	5.83	5.79	6.23	6.71	***7.10***	***7.65***	"Cash Flow" per sh	***8.80***
2.61	2.53	2.52	1.49	3.64	3.25	3.42	3.77	3.82	3.49	3.49	3.59	3.78	3.98	4.34	5.19	***5.70***	***6.30***	Earnings per sh A	***7.50***
1.49	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.68	1.72	1.76	1.80	1.84	1.88	1.92	2.20	***2.44***	***2.60***	Div'ds Decl'd per sh B■	***3.08***
.78	.64	.45	.47	.62	.47	.54	.57	.65	.53	.46	.46	.59	.70	1.01	1.37	***1.35***	***1.35***	Cap'l Spending per sh	***1.45***
7.83	8.21	8.10	8.37	8.90	19.00	17.64	17.93	17.52	17.00	17.14	16.06	14.58	12.73	10.30	10.20	***11.10***	***12.10***	Book Value per sh	***15.30***
2208.6	2181.9	2167.8	2172.5	2107.7	3108.2	3082.1	3040.8	3026.6	2927.5	2838.1	2781.1	2748.7	2696.6	2592.6	2539.0	***2520.0***	***2480.0***	Common Shs Outst'g C	***2350.0***
16.2	12.1	15.2	34.1	10.2	9.1	10.5	9.1	10.8	13.3	16.4	15.8	15.2	15.6	14.8	15.9	*Bold figures are*		Avg Ann'l P/E Ratio	***15.0***
.86	.64	.82	1.81	.61	.61	.67	.57	.69	.75	.86	.80	.80	.78	.80	.86	*Value Line*		Relative P/E Ratio	***.85***
3.5%	5.0%	4.0%	3.0%	4.1%	5.1%	4.2%	4.4%	4.1%	3.7%	3.1%	3.2%	3.2%	3.0%	3.0%	2.7%	*estimates*		Avg Ann'l Div'd Yield	***2.7%***

CAPITAL STRUCTURE as of 6/30/20
Total Debt $30874 mill. **Due in 5 Yrs** $11210 mill.
LT Debt $26156 mill. **LT Interest** $893 mill.
(49% of Cap'l)

Leases, Uncapitalized Annual rentals $264 mill.

Pension Assets-12/19 $21.5 bill. **Oblig.** $23.6 bill.

Common Stock 2,529,241,070 shs.
as of 7/31/20

MARKET CAP: $210 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
45987	48047	47267	44033	42237	39498	39807	40122	42294	46840	***48000***	***51500***	Sales ($mill)	***57000***
23.3%	32.4%	32.9%	31.6%	32.4%	33.9%	34.4%	33.8%	32.9%	34.0%	***35.0%***	***35.5%***	Operating Margin	***36.0%***
7381.0	7427.0	6978.0	6988.0	6691.0	6375.0	5441.0	4637.0	4519.0	3652.0	***3500***	***3300***	Depreciation ($mill)	***3000***
10715	11697	11743	10443	10271	10195	10580	10981	11625	13382	***14360***	***15620***	Net Profit ($mill)	***17630***
20.0%	23.4%	23.8%	21.7%	24.3%	21.7%	22.3%	19.1%	19.8%	16.6%	***16.5%***	***16.5%***	Income Tax Rate	***17.0%***
23.3%	24.3%	24.8%	23.7%	24.3%	25.8%	26.6%	27.4%	27.5%	28.6%	***29.9%***	***30.3%***	Net Profit Margin	***30.9%***
13423	16936	16509	17817	14407	10561	13410	6152.0	3669.0	5263.0	***7000***	***8000***	Working Cap'l ($mill)	***10000***
15482	15525	16254	20539	18699	23929	24274	21353	19806	22736	***25000***	***23000***	Long-Term Debt ($mill)	***19000***
54376	54517	53020	49765	48647	44676	40088	34336	26701	25907	***28000***	***30000***	Shr. Equity ($mill)	***36000***
15.8%	17.2%	17.4%	15.4%	15.8%	15.3%	17.0%	20.4%	25.8%	28.4%	***28.0%***	***30.5%***	Return on Total Cap'l	***33.0%***
19.7%	21.5%	22.1%	21.0%	21.1%	22.8%	26.4%	32.0%	43.5%	51.7%	***51.5%***	***52.0%***	Return on Shr. Equity	***49.0%***
11.0%	12.9%	12.5%	10.6%	10.5%	11.4%	13.6%	16.9%	24.2%	29.7%	***29.5%***	***30.5%***	Retained to Com Eq	***29.0%***
44%	40%	44%	49%	50%	50%	48%	47%	44%	43%	***43%***	***41%***	All Div'ds to Net Prof	***41%***

CURRENT POSITION ($MILL.)	2018	2019	6/30/20
Cash Assets	8864	10450	11103
Receivables	7071	6778	7577
Inventory (LIFO)	5440	5978	6056
Other	4500	4277	4607
Current Assets	25875	27483	29343
Accts Payable	3318	3738	3448
Debt Due	5308	3610	4718
Other	13580	14872	14012
Current Liab.	22206	22220	22178

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	4.5%	1.5%	*6.5%*
"Cash Flow"	6.5%	.5%	*6.0%*
Earnings	5.0%	4.5%	*9.0%*
Dividends	3.0%	3.0%	*7.5%*
Book Value	-1.0%	-8.5%	*5.5%*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	9434	9930	10325	10433	40122
2018	10037	10465	10794	10998	42294
2019	10816	11760	12397	11868	46840
2020	12057	10872	***12200***	***12871***	***48000***
2021	***12400***	***12800***	***13100***	***13200***	***51500***

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.88	1.01	1.11	.98	3.98
2018	1.05	1.06	1.19	1.04	4.34
2019	1.22	1.30	1.51	1.16	5.19
2020	1.50	1.37	***1.42***	***1.41***	***5.70***
2021	***1.50***	***1.57***	***1.65***	***1.58***	***6.30***

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.46	.46	.46	.46	1.84
2017	.47	.47	.47	.47	1.88
2018	.48	.48	.48	.48	1.92
2019	.55	.55	.55	.55	2.20
2020	.61	.61	.61	.61	

BUSINESS: Merck & Co., Inc. is a global health care company that delivers innovative health solutions through its prescription medicines, vaccines, biologic therapies, and animal health products, which it markets directly and through joint ventures. Operations comprised of four segments: Pharmaceutical, Animal Health, Alliances and Healthcare Services. Top-grossing drugs in 2019 included *Keytruda* (cancer), *Januvia* (diabetes), and *Gardasil* (HPV). Acquired Schering-Plough, 11/09. Has 71,000 employees. Officers and directors own less than 1% of common stock; Vanguard, 8.3%; BlackRock, 7.5% (4/20 proxy). Chairman and CEO: Kenneth Frazier. Inc.: NJ. Address: 2000 Galloping Hill Road, Kenilworth, NJ 07033. Telephone: 908-740-4000. Internet: www.merck.com.

Merck's 2020 outlook has improved a bit since our last report. The drugmaker reported second-quarter adjusted earnings of $1.37 a share on sales of $10.9 billion, versus $1.30 on $11.8 billion in the comparable year-ago period. The tallies soared past analysts' expectations calling for about $1.04 a share and $10.4 billion on average, as cost-control initiatives (highlighted by a 12% year-over-year reduction in SG&A expenses) and continued strong momentum in the blockbuster *Keytruda* franchise (sales +29%, to $3.4 billion), helped to mitigate COVID-related pressures on several areas of the business. Due to the better-than-expected Q2 showing, we have upped our full-year adjusted earnings call to $5.70 a share (previously $5.30) and our total sales target to $48.0 billion (previously $47.5 billion).

We expect top-line comps to recover nicely over the back half of this year and into 2021. Worldwide sales declined 8% year over year in the June period, ending a streak of 10 consecutive quarters of positive comps. This was almost entirely due to the negative impact of COVID-19, as social-distancing measures and overwhelmed hospitals hurt demand across several of Merck's core product lines. On a positive note, conditions appeared to be improving toward the end of the quarter, and we believe that recovery trends likely gained further traction in July and August. In our view, pent up demand in the vaccines and hospital business segments should help to drive a meaningful top-line rebound over these next few quarters.

A COVID-19 vaccine candidate is in the works. Merck has three COVID-related programs in development, one of which just recently began human testing. While this could represent a significant opportunity, the space remains highly competitive and visibility is limited.

The stock's Timeliness rank was recently downgraded to 3 (Average). Based on our analysis, MRK shares are currently pegged to track the broader market in the year ahead. For longer-term investors, our projections reflect above-average price appreciation potential over the 18-month time frame, and on a risk-adjusted basis, prospects also appear to be pretty solid out to 2023-2025.

Michael Ratty *October 2, 2020*

(A) Diluted earnings (adjusted). Quarters may not sum due to rounding. Excludes nonrecurring gains (losses): '05, (43¢); '06, (13¢); '09, $2.40; '10, ($3.16); '11, ($1.75); '12, ($1.66); '13, ($2.02); '14, 58¢; '15, ($2.03); '16, ($2.37); '17, ($3.11); '18, ($2.02); '19, ($1.38). Next egs. report due late October.
(B) Dividends historically paid in early January, April, July, and October. ■ Dividend reinvestment plan available.
(C) In millions.

Company's Financial Strength	A++
Stock's Price Stability	95
Price Growth Persistence	55
Earnings Predictability	100

MICROSOFT NDQ-MSFT

RECENT PRICE 203.85 | P/E RATIO 34.0 (Trailing: 35.5 Median: 16.0) | RELATIVE P/E RATIO 1.55 | DIV'D YLD 1.0% | VALUE LINE

High:	31.5	31.6	29.5	32.9	39.0	50.0	56.8	64.1	87.5	116.2	159.5	216.4
Low:	14.9	22.7	23.7	26.3	26.3	34.6	39.7	48.0	61.9	83.8	97.2	132.5

TIMELINESS 1 Raised 8/16/19

SAFETY 1 Raised 5/26/06

TECHNICAL 2 Raised 5/8/20

BETA .95 (1.00 = Market)

18-Month Target Price Range

Low-High Midpoint (% to Mid)

$150-$288 $219 (5%)

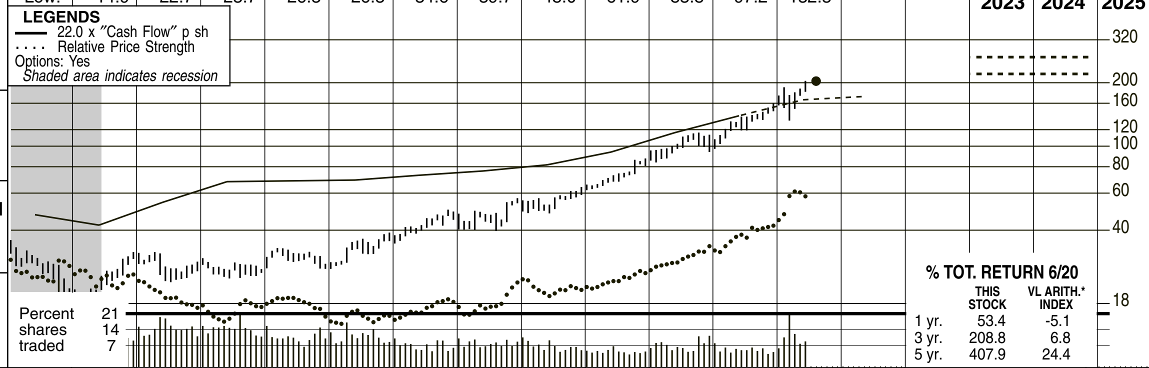
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	265	(+30%)	8%
Low	220	(+10%)	3%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	1347	1554	1608
to Sell	1548	1573	1723
Hld's(000)	5567498	5481673	5381967

LEGENDS
— 22.0 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	53.4	-5.1
3 yr.	208.8	6.8
5 yr.	407.9	24.4

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
3.39	3.72	4.40	5.45	6.60	6.56	7.21	8.35	8.80	9.34	10.54	11.66	11.78	12.54	14.38	16.47	18.89	*20.85*	Revenues per sh A	*29.00*
1.15	1.27	1.34	1.65	2.16	1.92	2.47	3.09	3.12	3.15	3.31	3.47	3.71	4.26	5.28	6.35	7.54	*7.85*	"Cash Flow" per sh	*11.00*
1.04	1.16	1.20	1.42	1.87	1.62	2.10	2.69	2.72	2.65	2.63	2.65	2.79	3.08	3.88	4.75	5.76	*6.45*	Earnings per sh B	*9.00*
.16	.32	.34	.40	.44	.52	.52	.64	.80	.89	1.12	1.24	1.44	1.56	1.68	1.80	1.99	*2.19*	Div'ds Decl'd per sh E■	*3.10*
.10	.08	.16	.24	.35	.35	.23	.28	.28	.51	.67	.74	1.07	1.05	1.52	1.82	2.04	*2.00*	Cap'l Spending per sh	*2.00*
6.89	4.49	3.99	3.32	3.97	4.44	5.33	6.82	7.92	9.48	10.90	9.98	9.22	9.39	10.77	13.39	15.63	*18.70*	Book Value per sh D	*27.00*
10862	10710	10062	9380.0	9151.0	8908.0	8668.0	8376.0	8381.0	8328.0	8239.0	8027.0	7808.0	7708.0	7677.0	7643.0	7571.0	*7525.0*	Common Shs Outst'g C	*7375.0*
25.8	22.9	21.7	19.9	16.3	13.4	13.1	9.6	10.4	11.2	14.0	17.0	18.1	20.2	22.1	23.7	27.4		Avg Ann'l P/E Ratio	*27.0*
1.36	1.22	1.17	1.06	.98	.89	.83	.60	.66	.63	.74	.86	.95	1.02	1.19	1.29	1.37		Relative P/E Ratio	*1.50*
.6%	1.2%	1.3%	1.4%	1.4%	2.4%	1.9%	2.5%	2.8%	3.0%	3.0%	2.7%	2.9%	2.5%	2.0%	1.6%	1.3%		Avg Ann'l Div'd Yield	*1.3%*

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
62484	69943	73723	77811	86833	93580	91964	96657	110360	125843	143015	*157000*	Revenues ($mill) A	*214725*
42.9%	42.8%	41.9%	40.3%	38.0%	36.5%	37.6%	39.4%	41.1%	43.4%	46.0%	*44.0%*	Operating Margin	*44.5%*
2673.0	2766.0	2967.0	3755.0	5212.0	5957.0	6622.0	8778.0	10261	11682	12796	*10000*	Depreciation ($mill)	*13750*
18760	23150	23171	22453	22074	21885	22329	24084	30267	36830	44281	*49050*	Net Profit ($mill)	*67900*
25.0%	17.5%	18.6%	19.6%	20.7%	23.3%	18.8%	20.2%	17.0%	15.7%	16.5%	*17.0%*	Income Tax Rate	*17.0%*
30.0%	33.1%	31.4%	28.9%	25.4%	23.4%	24.3%	24.9%	27.4%	29.3%	31.0%	*31.2%*	Net Profit Margin	*31.6%*
29529	46144	52396	64049	68621	74854	80303	95324	111174	106132	109605	*115000*	Working Cap'l ($mill)	*125000*
4939.0	11921	10713	12601	20645	27808	40783	76073	72242	66662	59578	*60000*	Long-Term Debt ($mill)	*75000*
46175	57083	66363	78944	89784	80083	71997	72394	82718	102330	118304	*140825*	Shr. Equity ($mill) D	*200000*
36.8%	33.8%	30.3%	24.7%	20.3%	20.6%	20.3%	17.0%	20.4%	22.6%	*25.5%*	*25.0%*	Return on Total Cap'l	*25.0%*
40.6%	40.6%	34.9%	28.4%	24.6%	27.3%	31.0%	33.3%	36.6%	36.0%	37.4%	*35.0%*	Return on Shr. Equity	*34.0%*
30.7%	31.5%	25.3%	19.0%	14.7%	15.0%	15.7%	16.9%	21.2%	22.5%	24.6%	*23.0%*	Retained to Com Eq	*22.5%*
24%	22%	28%	33%	40%	45%	49%	49%	42%	37%	34%	*34%*	All Div'ds to Net Prof	*34%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $63327 mill. **Due in 5 Yrs** $19720 mill.
LT Debt $59578 mill. **LT Interest** $2050 mill.
(34% of Cap'l)

Leases, Uncapitalized $1678 mill.

No Defined Benefit Pension Plan
Pfd Stock None

Common Stock 7,571,000,000 shs.

MARKET CAP: $1543 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	6/30/20
Cash Assets	133768	133819	136527
Receivables	26481	29524	32011
Inventory (Avg Cst)	2662	2063	1895
Other	6751	10146	11482
Current Assets	169662	175552	181915
Accts Payable	8617	9382	12530
Debt Due	3998	5516	3749
Unearned Revenue	28905	32676	36000
Other	16968	21846	20031
Current Liab.	58488	69420	72310

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '22-'24
Revenues	9.0%	8.5%	*12.5%*
"Cash Flow"	10.5%	10.5%	*13.0%*
Earnings	9.0%	8.0%	*15.0%*
Dividends	14.0%	12.5%	*10.5%*
Book Value	11.0%	3.5%	*16.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Sep.30	Dec.31	Mar.31	Jun.30	Full Fiscal Year
2017	22334	26066	23557	24700	96657
2018	24538	28918	26819	30085	110360
2019	29084	32471	30571	33717	125843
2020	33055	36906	35021	38033	143015
2021	*35650*	*40000*	*39500*	*41850*	*157000*

Fiscal Year Ends	EARNINGS PER SHARE AB Sep.30	Dec.31	Mar.31	Jun.30	Full Fiscal Year
2017	.76	.83	.73	.75	3.08
2018	.84	.96	.95	1.13	3.88
2019	1.14	1.10	1.14	1.37	4.75
2020	1.38	1.51	1.40	1.46	5.76
2021	*1.54*	*1.60*	*1.60*	*1.71*	*6.45*

Cal-endar	QUARTERLY DIVIDENDS PAID E■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.36	.36	.39	.39	1.50
2017	.39	.39	.42	.42	1.62
2018	.42	.42	.42	.46	1.72
2019	.46	.46	.46	.51	1.89
2020	.51	.51			

BUSINESS: Microsoft Corp. is the largest independent maker of software. It develops and sells software products for a wide range of computing environments in consumer and enterprise markets. Hardware products include the *Xbox* video game console and *Surface* laptops. Revenue sources in fiscal 2020: Productivity & Business Processes, 32%; Intelligent Cloud, 34%; More Personal Computing, 34%. R&D, 13.5% of 2020 revenues. Employed 144,000 at 6/30/19. Stock owners: William H. Gates, 1.34%;, other offs. & dirs., 0.05%; The Vanguard Group, 7.8%; BlackRock, Inc., 6.6%; (10/19 proxy). Chrmn: John W. Thompson. CEO: Satya Nadella. Inc.: Washington. Addr.: One Microsoft Way, Redmond, Washington 98052-6399. Tel.: 425-882-8080. Internet: www.microsoft.com.

Microsoft finished fiscal 2020 on a strong note. Revenues and earnings easily exceeded our estimates for the June period, once again benefiting from a strong performance from the company's commercial business and the move to cloud services. In addition, most of the important performance metrics continued showing improvement in the fourth quarter, making the latest financial report a good read, in our view. That said, although revenue growth from the Azure platform remained rapid, the pace took a step down in the fiscal fourth quarter. Leadership noted that consumption-based services were strong in the interim, suggesting that demand for Azure and related services was healthy. There are a number of factors at work here, including the mix of services and customer size, with small and midsize businesses often less able (willing) than larger enterprises to contract for a broad range of cloud services. Microsoft is working to meet the needs of small and midsize businesses, and we think it will continue to fare very well in the competitive public and hybrid cloud arena in coming quarters and over the longer term.

We like Microsoft's prospects for the year ahead and beyond. The rapid surge in contracting that was evident as companies rushed to conform with stay-at-home orders and to adopt a remote-work environment in the early stages of the coronavirus pandemic is probably best considered as a singular event. That said, businesses of all sizes have found that productivity was largely sustained as employees worked from home, and in many cases there were operating cost advantages to be had. As the economy reopens, businesses are likely to maintain the flexibility of work-from-home, benefiting companies such as Microsoft that have a strong position in cloud computing and cloud services. This reorganization of work should enhance the general adoption of cloud services, underpinning Microsoft's longer-term prospects.

What about Microsoft shares? The company's prospects have not gone unnoticed, with the stock's relative valuation moving up markedly so far this year. Accordingly, new commitments to these high-quality shares are best made carefully.

Charles Clark *August 7, 2020*

(A) Fiscal year ends June 30th.
(B) Diluted earnings. Quarters may not add to total. Excl. nonrec. items: '04, d29¢; '05, d4¢; '12, d72¢; '13, d7¢; '15, d$1.17; '16, d70¢; '17, d37¢; '18, d$1.75; '19, d33¢. Next earnings report late Oct. (C) In mill.
(D) Includes intangibles. In fiscal 2020: $43.4 billion, $5.73 a share.
(E) Dividends historically paid in March, June, Sept., and Dec. ■Dividend reinvestment plan available. Special dividend of $3.00 a share paid December 2, 2004.

Company's Financial Strength	A++
Stock's Price Stability	95
Price Growth Persistence	90
Earnings Predictability	85

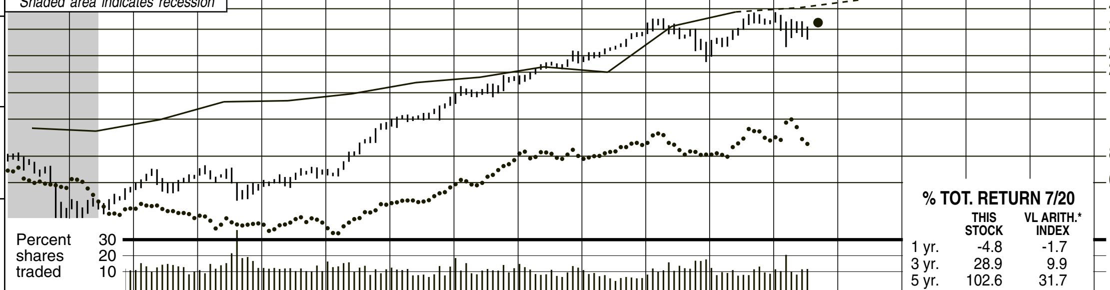
NORTHROP GRUMMAN NYSE-NOC

RECENT PRICE	344.42	P/E RATIO	14.8 (Trailing: 15.5 / Median: 14.0)	RELATIVE P/E RATIO	0.69	DIV'D YLD	1.7%	VALUE LINE

TIMELINESS **1** Raised 5/15/20
SAFETY **1** Raised 9/21/07
TECHNICAL **5** Lowered 9/4/20
BETA .85 (1.00 = Market)

High:	57.3	69.8	72.5	71.3	116.2	153.2	194.0	253.8	311.2	360.9	383.9	385.0
Low:	33.8	53.5	49.2	56.6	64.2	109.2	141.6	175.0	223.9	223.6	237.1	263.3

LEGENDS
— 14.0 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range 2023 | 2024 | 2025

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$277-$561	$419 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	590	(+70%)	*16%*
Low	480	(+40%)	*10%*

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	472	590	480
to Sell	452	417	564
Hld's(000)	141177	141278	140378

% TOT. RETURN 7/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-4.8	-1.7
3 yr.	28.9	9.9
5 yr.	102.6	31.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
81.92	88.44	87.15	94.77	103.63	110.00	119.46	104.03	106.35	113.78	120.86	129.76	139.99	148.22	176.40	201.87	***213.85***	***229.90***	Revenues per sh	***282.35***
4.95	5.83	6.50	7.30	7.77	7.52	8.52	10.36	10.49	11.29	12.76	13.55	15.17	14.30	23.62	27.58	***28.95***	***31.65***	"Cash Flow" per sh	***39.40***
2.99	3.52	4.44	5.04	5.32	4.87	5.80	7.41	7.81	8.35	9.75	10.39	12.19	11.47	18.49	21.21	***22.55***	***25.25***	Earnings per sh A	***31.50***
.89	1.01	1.16	1.48	1.57	1.69	1.84	1.97	2.15	2.38	2.71	3.10	3.50	3.90	4.70	5.16	***5.67***	***5.80***	Div'ds Decl'd per sh B■	***7.85***
1.84	2.37	2.13	2.03	2.08	2.13	2.65	1.92	1.40	1.68	2.83	2.60	5.26	5.33	7.32	7.54	***8.15***	***8.75***	Cap'l Spending per sh	***11.30***
45.83	48.45	48.03	52.35	36.45	41.34	46.59	40.71	40.12	49.00	36.47	30.46	30.04	40.49	47.99	52.61	***70.00***	***89.85***	Book Value per sh C	***160.45***
364.43	347.36	345.92	337.83	327.01	306.87	290.96	253.89	237.13	216.74	198.41	181.30	175.07	174.09	170.61	167.64	***166.00***	***165.00***	Common Shs Outst'g D	***160.00***
17.4	15.6	14.9	15.2	12.4	9.9	10.5	8.3	8.2	10.4	12.9	16.1	17.4	23.0	16.8	15.1	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	***17.0***
.92	.83	.80	.81	.75	.66	.67	.52	.52	.58	.68	.81	.91	1.16	.91	.82			Relative P/E Ratio	***.95***
1.7%	1.8%	1.8%	1.9%	2.4%	3.5%	3.0%	3.2%	3.4%	2.7%	2.1%	1.9%	1.6%	1.5%	1.5%	1.6%			Avg Ann'l Div'd Yield	***1.5%***
						34757	26412	25218	24661	23979	23526	24508	25803	30095	33841	***35500***	***37930***	Revenues ($mill)	***45175***
						11.0%	14.5%	14.4%	14.7%	15.3%	15.1%	14.9%	14.6%	15.2%	18.7%	***17.0%***	***17.5%***	Operating Margin	***18.0%***
						738.0	544.0	510.0	495.0	462.0	467.0	456.0	475.0	800.0	1018.0	***1065***	***1065***	Depreciation ($mill) E	***1265***
						1742.0	2086.0	1978.0	1952.0	2069.0	1990.0	2200.0	2015.0	3229.0	3606.0	***3740***	***4165***	Net Profit ($mill)	***5040***
						24.2%	32.3%	33.3%	31.8%	29.6%	28.7%	24.7%	33.9%	13.7%	7.7%	***17.0%***	***18.0%***	Income Tax Rate	***19.0%***
						5.0%	7.9%	7.8%	7.9%	8.6%	8.5%	9.0%	7.8%	10.7%	10.7%	***10.5%***	***11.0%***	Net Profit Margin	***11.2%***
						1518.0	1611.0	2336.0	3673.0	2292.0	877.0	1226.0	9384.0	1406.0	1251.0	***3195***	***2660***	Working Cap'l ($mill)	***2260***
						4045.0	3935.0	3930.0	5928.0	5925.0	6416.0	7058.0	14399	13883	12770	***13000***	***12600***	Long-Term Debt ($mill)	***10400***
						13557	10336	9514.0	10620	7235.0	5522.0	5259.0	7048.0	8187.0	8819.0	***11620***	***11620***	Shr. Equity ($mill)	***25670***
						10.7%	15.4%	15.5%	12.6%	16.8%	17.9%	19.1%	10.2%	15.9%	17.9%	***32.0%***	***28.0%***	Return on Total Cap'l	***19.5%***
						12.8%	20.2%	20.8%	18.4%	28.6%	36.0%	41.8%	28.6%	39.4%	40.9%	***32.0%***	***28.0%***	Return on Shr. Equity	***19.5%***
						8.8%	14.9%	15.2%	13.2%	20.8%	25.1%	29.7%	18.8%	29.4%	30.9%	***24.0%***	***21.5%***	Retained to Com Eq	***14.5%***
						31%	26%	27%	28%	27%	30%	29%	34%	25%	24%	***25%***	***23%***	All Div'ds to Net Prof	***25%***

CAPITAL STRUCTURE as of 6/30/20
Total Debt $14259 mill. **Due in 5 Yrs** $3303 mill.
LT Debt $14259 mill. **Total Interest** $528 mill.
(Total interest coverage: 10.1x)
(62% of Cap'l)

Leases, Uncapitalized $300 mill.
Pension Assets-12/19 $30.6 bill. **Oblig.** $36.9 bill.

Pfd Stock None

Common Stock 166,714,063 shs.
as of 7/27/20

MARKET CAP: $57.4 billion (Large Cap)

CURRENT POSITION ($MILL)	2018	2019	6/30/20
Cash Assets	1579	2245	4178
Receivables	1448	1326	1989
Inventory (Avg Cst)	654	783	832
Other	5999	6331	6180
Current Assets	9680	10685	13179
Accts Payable	2182	2226	2006
Debt Due	- -	- -	- -
Other	6092	7208	7721
Current Liab.	8274	9434	9727

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	5.5%	9.0%	*8.0%*
"Cash Flow"	11.0%	13.5%	*10.5%*
Earnings	13.0%	14.5%	*11.0%*
Dividends	11.0%	13.5%	*9.5%*
Book Value	1.0%	2.5%	*22.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	6267	6375	6527	6634	25803
2018	6735	7119	8085	8156	30095
2019	8189	8456	8475	8721	33841
2020	8620	8884	***8880***	***9116***	***35500***
2021	***9075***	***9450***	***9575***	***9830***	***37930***

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	3.63	3.15	3.68	1.01	11.47
2018	4.79	4.52	7.11	2.07	18.49
2019	5.06	5.06	5.49	5.61	21.21
2020	5.15	6.01	***5.60***	***5.79***	***22.55***
2021	***5.85***	***6.25***	***6.45***	***6.70***	***25.25***

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.80	.90	.90	.90	3.50
2017	.90	1.00	1.00	1.00	3.90
2018	1.10	1.20	1.20	1.20	4.70
2019	1.20	1.32	1.32	1.32	5.16
2020	1.32	1.45			

BUSINESS: Northrop Grumman Corporation operates in several main sectors. It is a leading maker of manned and unmanned airborne systems; a designer of electronic warfare items; makes space systems and provides advanced information systems. Acquired satellite and missile systems maker Orbital ATK in 2018. Has approximately 90,000 employees. Consolidated backlog at 12/31/19: $64.8 billion. U.S. Government accounted for 83% of total revenues in '19. Officers & directors control about .3% of stock; State Street Corp., 10.1%; Vanguard Group, 7.9%; BlackRock, 6.4% (4/20 Proxy). CEO & Pres.: Kathy Warden. Incorporated: DE. Address: 2980 Fairview Park Drive, Falls Church, VA 22042. Tele.: 703-280-2900. Internet: www.northropgrumman.com.

Northrop Grumman delivered solid margins in the second quarter. The company's bottom line came in well ahead of our expectation, owing to some favorable returns that it received on marketable securities. However, its operational performance was also impressive, as demand for autonomous systems and manned aircraft drove a 7% revenue gain in the Aeronautics division. Accelerated payments to suppliers remained ongoing, but the operating margin was kept relatively flat at 11.6% owing to stronger efficiency in Defense systems.

Bookings suggest the top line should remain healthy through the end of the year. Northrop Grumman has a number of Defense projects nearing completion, which has caused sales to wane in that segment, of late. However, with demand for mission readiness programs and battle management & missile systems continuing to grow, a quick turnaround there has become more likely. Total book-to-bill at the end of the second quarter remained healthy at 1.7 times sales, and backlog continued to rise past the $70 billion mark. These advances take into account new awards won in Space. Meanwhile, the company is also expecting to book a ground-based strategic deterrent project valued between $10 billion and $15 billion by the end of the third quarter.

Strength of the balance sheet remains a priority. The budgetary environment in the United States remains supportive, but this could change if funds need to be diverted to account for headwinds related to COVID-19. Therefore, since Northrop Grumman has generated such strong free cash flow, of late, it plans to pay down about $1 billion in long-term debt this fall. Notably, the company also recently boosted its dividend 10%, to $1.45 a share.

Northrop Grumman stock maintains our Highest rank (1) for Timeliness. The supply chain remains resilient, putting the company in a good position to address F-15 demand once COVID-19-related headwinds dissipate. Meanwhile, improving sales in aerospace systems and market-share gains in Space should continue to drive the top line. At the recent price, we think conservative investors would do well to consider a position here.

Robert J. Scrudato *September 4, 2020*

(A) Diluted earnings. Excl. nonrecur. (losses) gains.: '04, (2¢); '05, 33¢; '06, (7¢); '07, 11¢; '08, ($9.09); '09, 34¢; '10, $1.02; '19, $7.99. Next earnings report due late October.
(B) Div'd historically paid mid-March, June, Sept., and Dec. ■ Div'd reinvest. plan available.
(C) Incl. intang. assets. In 2019: $19.7 bill., $116.16/sh.
(D) In millions.
(E) Depr. on accel. basis.

Company's Financial Strength	A++
Stock's Price Stability	90
Price Growth Persistence	95
Earnings Predictability	80

ORACLE NYSE-ORCL

RECENT PRICE	55.34	P/E RATIO	13.7 (Trailing: 14.3 / Median: 14.0)	RELATIVE P/E RATIO	0.62	DIV'D YLD	1.7%	VALUE LINE

TIMELINESS 2 Lowered 7/3/20

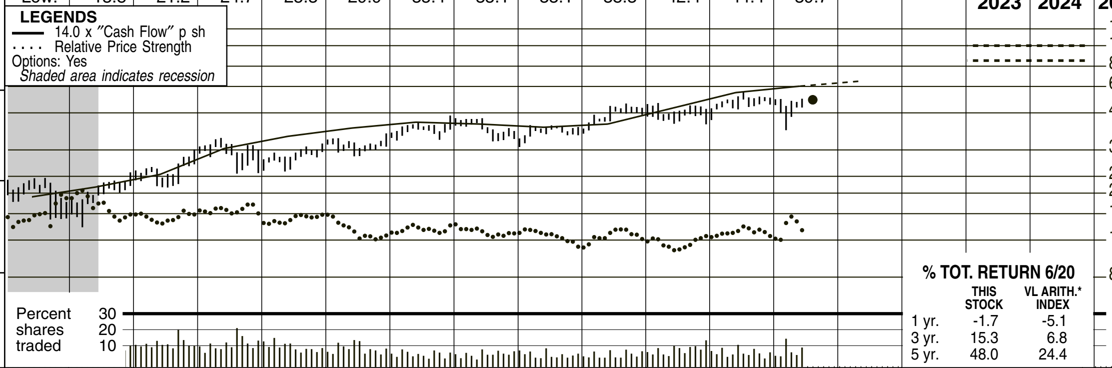
SAFETY 1 Raised 5/22/09

TECHNICAL 2 Raised 8/7/20

BETA .85 (1.00 = Market)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	25.1	32.3	36.5	34.3	38.3	46.7	45.3	42.0	53.1	53.5	60.5	57.8
Low:	13.8	21.2	24.7	25.3	29.9	35.4	35.1	33.1	38.3	42.4	44.4	39.7

LEGENDS
— 14.0 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$44-$77	$61 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	100	(+80%)	*17%*
Low	85	(+55%)	*13%*

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	720	790	637
to Sell	879	881	1076
Hld's(000)	1691805	1634613	1522233

% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-1.7	-5.1
3 yr.	15.3	6.8
5 yr.	48.0	24.4

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
1.96	2.36	2.82	3.57	4.39	4.69	5.38	7.07	7.59	8.02	8.58	8.81	8.97	9.16	9.98	11.77	12.74	*13.80*	Sales per sh A	*18.00*
.56	.73	.85	1.09	1.37	1.53	1.75	2.32	2.65	2.91	3.10	3.04	2.93	3.04	3.61	4.28	4.59	*4.85*	"Cash Flow" per sh	*6.75*
.50	.68	.80	1.01	1.30	1.44	1.67	2.22	2.46	2.68	2.87	2.77	2.61	2.74	3.13	3.52	3.85	*4.25*	Earnings per sh AB	*5.75*
- -	- -	- -	- -	- -	.05	.20	.20	.24	.30	.48	.51	.60	.64	.76	.81	.96	*1.00*	Div'ds Decl'd per sh E	*1.45*
.04	.04	.05	.06	.05	.11	.05	.09	.13	.14	.13	.32	.29	.49	.43	.49	.51	*.60*	Cap'l Spending per sh	*.60*
1.55	2.11	2.87	3.31	4.47	5.01	6.13	7.85	8.91	9.61	10.50	11.21	11.45	13.02	11.44	6.49	3.94	*4.00*	Book Value per sh D	*5.50*
5171.0	5145.0	5232.0	5107.0	5150.0	5005.0	5026.0	5068.0	4905.0	4646.0	4464.0	4343.0	4131.0	4137.0	3997.0	3359.0	3067.0	*2900.0*	Common Shs Outst'g C	*2500.0*
25.1	17.9	16.3	17.0	15.8	13.1	13.7	13.0	12.0	12.0	12.5	15.1	14.8	15.0	15.5	14.1	14.0		Avg Ann'l P/E Ratio	*16.0*
1.33	.95	.88	.90	.95	.87	.87	.82	.76	.67	.66	.76	.78	.75	.84	.75	.73		Relative P/E Ratio	*.90*
- -	- -	- -	- -	- -	.3%	.9%	.7%	.8%	.9%	1.3%	1.2%	1.6%	1.6%	1.6%	1.6%	1.8%		Avg Ann'l Div'd Yield	*1.6%*

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
27034	35850	37221	37253	38305	38253	37056	37900	39878	39526	39073	*40000*	Sales ($mill) A	*45000*
47.2%	45.3%	47.5%	48.7%	48.9%	47.3%	44.9%	45.3%	47.0%	47.1%	48.0%	*48.4%*	Operating Margin	*49.5%*
298.0	368.0	486.0	546.0	608.0	712.0	871.0	1000.0	1165.0	1230.0	1382.0	*1450*	Depreciation ($mill)	*1675*
8494.0	11395	12520	12958	13214	12489	11236	11560	13244	13137	12683	*12600*	Net Profit ($mill)	*15000*
27.1%	25.3%	24.0%	23.0%	22.5%	23.6%	23.2%	22.8%	21.1%	18.5%	18.4%	*20.0%*	Income Tax Rate	*20.0%*
31.4%	31.8%	33.6%	34.8%	34.5%	32.6%	30.3%	30.5%	33.2%	33.2%	32.5%	*31.5%*	Net Profit Margin	*33.3%*
12313	24982	24635	28820	33749	47892	47105	50337	56769	27756	34940	*30000*	Working Cap'l ($mill)	*40000*
11510	14772	13524	18494	22667	39959	40105	48112	56128	51673	69226	*65000*	Long-Term Debt ($mill)	*60000*
30798	39776	43688	44648	46878	48663	47289	53860	45726	21785	12074	*11575*	Shr. Equity ($mill)	*14000*
21.0%	21.6%	22.6%	21.2%	19.7%	14.7%	13.7%	12.2%	14.0%	19.3%	16.8%	*18.0%*	Return on Total Cap'l	*22.0%*
27.6%	28.6%	28.7%	29.0%	28.2%	25.7%	23.8%	21.5%	29.0%	NMF	NMF	*NMF*	Return on Shr. Equity	*NMF*
24.3%	26.0%	25.9%	25.8%	23.5%	21.0%	18.4%	16.6%	22.1%	46.8%	NMF	*NMF*	Retained to Com Eq	*NMF*
12%	9%	10%	11%	16%	18%	23%	23%	24%	22%	24%	*24%*	All Div'ds to Net Prof	*24%*

CAPITAL STRUCTURE as of 5/31/20
Total Debt $71857 mill. **Due in 5 Yrs** $28130 mill.
LT Debt $69226 mill. **LT Interest** $2375 mill.
(85% of Cap'l)
Leases, Uncapitalized Annual rentals $616.0 mill.

No Defined Benefit Pension Plan
Pfd Stock None

Common Stock 3,068,682,200 shs.
as of 6/16/20

MARKET CAP: $170 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	5/31/20
Cash Assets	67261	37827	43057
Receivables	5279	5134	5551
Other	3424	3425	3532
Current Assets	75964	46386	52140
Accts Payable	529	580	637
Debt Due	4491	4494	2631
Deferred Revenue	8429	8374	8002
Other	5746	5182	5930
Current Liab.	19195	18630	17200

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '18-'20 to '23-'25
Sales	9.0%	6.5%	*9.5%*
"Cash Flow"	10.5%	6.5%	*10.0%*
Earnings	9.0%	5.0%	*10.5%*
Dividends	26.0%	14.5%	*11.5%*
Book Value	3.5%	-7.0%	*-5.5%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.)A Aug.Per	Nov.Per	Feb.Per	May.Per	Full Fiscal Year
2017	8614	9070	9274	10942	37900
2018	9212	9630	9776	11260	39878
2019	9201	9567	9618	11140	39526
2020	9220	9615	9797	10441	39073
2021	*9250*	*9625*	*9825*	*11300*	*40000*

Fiscal Year Ends	EARNINGS PER SHARE AB Aug.Per	Nov.Per	Feb.Per	May.Per	Full Fiscal Year
2017	.55	.61	.69	.89	2.74
2018	.62	.70	.83	.99	3.13
2019	.71	.80	.87	1.16	3.52
2020	.81	.90	.97	1.20	3.85
2021	*.87*	*1.00*	*1.08*	*1.30*	*4.25*

Cal-endar	QUARTERLY DIVIDENDS PAID E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.15	.15	.15	.15	.60
2017	.15	.19	.19	.19	.72
2018	.19	.19	.19	.19	.76
2019	.19	.24	.24	.24	.91
2020	.24	.24	.24		

BUSINESS: Oracle Corporation provides products and services that adresss all aspects of corporate information technology environments. Oracle's products are delivered via a range of deployment models, including on-premise, cloud-based, and hybrid. 2020 revenue breakdown: cloud services and license support, 71.4%; cloud license and on-premise license, 13.1%; hardware systems, 8.8%; Services, 6.7%. Foreign sales, 44.8%. R&D, 15.5% of 2020 sales. Employed 135,000 at 5/31/20. Stock owners: Lawrence J. Ellison, 35.4%; other off. & dir., 1.2%; two fin'l inst.: 11.7%. (9/19 proxy). Exec Chrmn & CTO: Lawrence J. Ellison; CEO: Safra A. Catz. Inc.: DE. Addr.: 500 Oracle Parkway, Redwood City, CA 94065. Tele.: 650-506-7000. Internet: www.oracle.com.

On balance, Oracle ended fiscal 2020 with respectable results. (Year ended May 31st.) True, COVID-19 had an effect on business in the fourth quarter, particularly in those industries most affected by the lockdown orders (retail, hospitality, travel, etc.), and a stronger-than-expected dollar took its toll. Nonetheless, interest remained active in Oracle's latest database technology (Oracle Autonomous Database), its cloud infrastructure offering (Oracle Cloud Infrastructure), and its cloud-based enterprise applications (Fusion), suggesting continued progress in transforming its business to the cloud.

We have made minor adjustments to our estimates for fiscal 2021. The revenue target remains $40.0 billion. Our thinking is that the growth in Oracle's cloud businesses will work to offset declines in its legacy offerings and the potential for adverse foreign exchange, allowing for a modest top-line advance this year. Meanwhile, better margins in the cloud, as the company gains scale, and the traditional attention to operating expenses should result in a wider operating margin. The effect of higher interest expense (due to an increase in debt outstanding) should be more than offset by Oracle's active share-repurchase program, and an earnings advance of around 10.0% (versus the previous 8.0%) may be in the cards.

High-quality Oracle shares are a good choice for most conservative portfolios. Oracle has a vast roster of customers that utilize its database products and services as an important part of their information technology structure. Oracle Autonomous Database is gaining increasing attention with these enterprises, particularly now that it is available in a private cloud, giving large financial institutions, for example, the ability to partake in the new database's speed, security, and low cost of operation. Meanwhile, the company's enterprise applications business should continue advancing nicely, as large corporations increasingly embrace cloud architecture. Steady revenue growth and gradually widening profit margins should materialize over time, as a result. An active share-repurchase program should support earnings growth; a well-covered dividend completes the play.

Charles Clark *August 7, 2020*

(A) Fiscal year ends May 31st.
(B) Diluted earnings. Excl. nonrec. items: '05, d13¢; '06, d12¢; '07, d20¢; '08, d24¢; '09, d35¢; '10, d46¢; '11, d55¢; '12, d50¢; '13, d60¢; '14, d49¢; '15, d56¢; '16, d54¢; '17, d53¢; '18, d$2.23; '19, d55¢; '20, d77¢. Quarters may not sum to annual figure, due to changes in dliluted shares outstanding. Next earnings report due mid-Sept. **(C)** In millions.
(D) Incl. intang. In 2020, $43.8 bill., $14.28 a share. **(E)** Div'ds usually paid late January, April, July, and October.

Company's Financial Strength	A++
Stock's Price Stability	100
Price Growth Persistence	65
Earnings Predictability	95

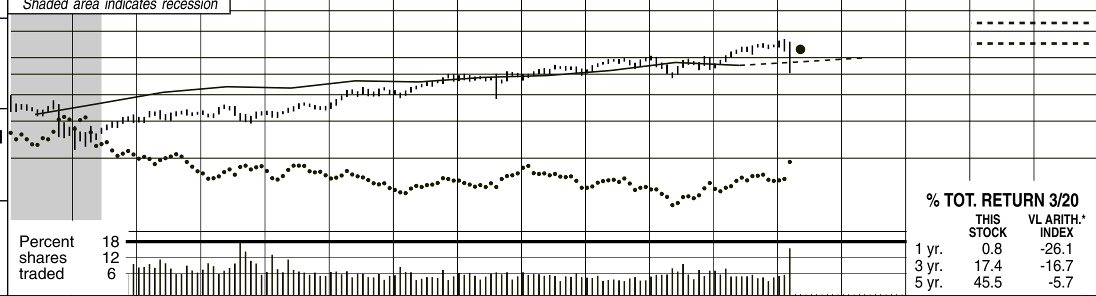
PEPSICO, INC. NDQ-PEP

RECENT PRICE 131.16 | P/E RATIO 22.8 (Trailing: 23.8 Median: 20.0) | RELATIVE P/E RATIO 1.70 | DIV'D YLD 3.1% | VALUE LINE

TIMELINESS 3 Lowered 8/23/19
SAFETY 1 Raised 5/11/01
TECHNICAL 3 Raised 3/13/20
BETA .75 (1.00 = Market)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	64.5	68.1	71.9	73.7	87.1	100.7	103.4	110.9	120.6	122.5	140.5	147.2
Low:	43.8	58.8	58.5	62.2	68.6	77.0	76.5	93.2	101.1	95.9	106.7	101.4

LEGENDS
—— 15.0 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range
2023 | 2024 | 2025

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$115-$156	$136 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	175	(+35%)	10%
Low	140	(+5%)	5%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	953	1039	1187
to Sell	1115	1042	1035
Hld's(000)	1007094	1004826	998245

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	0.8	-26.1
3 yr.	17.4	-16.7
5 yr.	45.5	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
17.43	19.66	21.45	24.59	27.85	27.62	36.58	42.52	42.42	43.44	44.81	43.55	43.98	44.74	45.89	48.28	*49.55*	*51.90*	Sales per sh A	*59.45*
3.14	3.65	3.95	4.38	4.30	4.84	5.47	5.83	5.74	6.20	6.14	6.45	6.59	6.96	7.58	7.34	*7.65*	*8.00*	"Cash Flow" per sh	*9.95*
2.32	2.69	3.00	3.34	3.21	3.77	3.91	3.98	3.92	4.37	4.27	4.66	4.85	5.23	5.81	5.53	*5.80*	*6.10*	Earnings per sh A B	*7.85*
.85	1.01	1.16	1.43	1.60	1.75	1.89	2.03	2.13	2.24	2.53	2.79	2.96	3.17	3.46	3.76	*3.82*	*4.09*	Div'ds Decl'd per sh C■	*4.40*
.83	1.05	1.26	1.51	1.58	1.36	2.06	2.14	1.76	1.83	1.92	1.90	2.13	2.09	2.33	3.04	*2.35*	*2.45*	Cap'l Spending per sh	*2.75*
8.03	8.58	9.36	10.71	7.77	11.12	13.56	13.34	14.41	15.85	11.69	8.28	7.81	7.64	10.30	10.63	*10.85*	*11.80*	Book Value per sh D	*14.80*
1679.0	1656.0	1638.0	1605.0	1553.0	1565.0	1581.0	1564.0	1544.0	1529.0	1488.0	1448.0	1428.0	1420.0	1409.0	1391.0	*1385.0*	*1375.0*	Common Shs Outst'g E	*1350.0*
22.1	20.6	20.4	20.5	20.5	14.7	16.5	16.4	17.4	18.4	20.8	20.7	21.4	21.6	19.1	23.1	Bold figures are		Avg Ann'l P/E Ratio	*20.0*
1.17	1.10	1.10	1.09	1.23	.98	1.05	1.03	1.11	1.03	1.09	1.04	1.12	1.09	1.03	1.25	Value Line		Relative P/E Ratio	*1.10*
1.7%	1.8%	1.9%	2.1%	2.4%	3.2%	2.9%	3.1%	3.1%	2.8%	2.8%	2.9%	2.9%	2.8%	3.1%	2.9%	estimates		Avg Ann'l Div'd Yield	*2.8%*

CAPITAL STRUCTURE as of 12/28/19
Total Debt $32068 mill. **Due in 5 Yrs** $3473 mill.
LT Debt $29148 mill. **LT Interest** $960 mill.
(Total interest coverage: 11.1x) (66% of Cap'l)
Leases, Uncapitalized $459 mill.

Pension Assets-12/19 $18.3 bill. **Oblig.** $19.9 bill.

Common Stock 1,389,544,618 shs.
as of 2/6/20
MARKET CAP: $182 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
57838	66504	65492	66415	66683	63056	62799	63525	64661	67161	*68650*	*71400*	Sales ($mill)	*80250*
18.4%	18.5%	18.0%	19.3%	18.4%	20.3%	21.0%	25.7%	28.2%	19.8%	*22.5%*	*23.0%*	Operating Margin	*22.5%*
2327.0	2737.0	2689.0	2663.0	2625.0	2416.0	2368.0	2369.0	2399.0	2432.0	*2500*	*2550*	Depreciation ($mill)	*2700*
6320.0	6379.1	6178.0	6823.0	6513.0	6922.0	7040.5	7517.0	8283.0	7778.3	*8125*	*8450*	Net Profit ($mill)	*10725*
23.0%	26.9%	25.2%	25.7%	25.1%	26.1%	25.4%	42.1%	42.0%	21.0%	*21.0%*	*22.0%*	Income Tax Rate	*25.0%*
10.9%	9.6%	9.4%	10.3%	9.8%	11.0%	11.2%	11.8%	12.8%	11.6%	*11.8%*	*11.8%*	Net Profit Margin	*13.3%*
1677.0	d713.0	1631.0	4364.0	2571.0	5453.0	5954.0	10525	d245.0	d2816	*7500*	*8200*	Working Cap'l ($mill)	*9000*
19999	20568	23544	24333	23821	29213	30053	33796	28295	29148	*28000*	*27500*	Long-Term Debt ($mill)	*20000*
21476	20899	22294	24279	17438	12030	11199	10889	14518	14786	*15000*	*16250*	Shr. Equity ($mill)	*20000*
16.3%	16.4%	14.5%	15.0%	16.9%	18.0%	18.7%	18.1%	21.1%	17.9%	*20.0%*	*20.5%*	Return on Total Cap'l	*27.5%*
29.4%	30.5%	27.7%	28.1%	37.3%	57.5%	62.9%	69.0%	57.1%	52.6%	*54.0%*	*52.0%*	Return on Shr. Equity	*53.5%*
15.6%	15.4%	12.9%	14.0%	16.0%	24.0%	25.2%	28.1%	23.1%	16.7%	*19.0%*	*18.0%*	Retained to Com Eq	*24.0%*
47%	49%	53%	50%	57%	58%	60%	59%	60%	68%	*65%*	*65%*	All Div'ds to Net Prof	*55%*

CURRENT POSITION ($MILL.)	2017	2018	12/28/19
Cash Assets	19510	10990	5738
Receivables	7024	7142	7822
Inventory (FIFO)	2947	3128	3338
Other	1546	633	747
Current Assets	31027	21893	17645
Accts Payable	6727	7213	8013
Debt Due	5485	4026	2920
Other	8290	10899	9528
Current Liab.	20502	22138	20461

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	5.5%	1.0%	4.5%
"Cash Flow"	5.0%	4.0%	5.5%
Earnings	5.0%	5.5%	6.0%
Dividends	8.0%	8.5%	4.0%
Book Value	-.5%	-7.5%	7.5%

Cal-endar	QUARTERLY SALES ($ mill.) A Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	12049	15710	16240	19526	63525
2018	12562	16090	16485	19524	64661
2019	12884	16449	17188	20640	67161
2020	*12900*	*16900*	*18150*	*20700*	*68650*
2021	*13500*	*17250*	*18500*	*22150*	*71400*

Cal-endar	EARNINGS PER SHARE A B Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	.94	1.50	1.48	1.31	5.23
2018	.96	1.61	1.75	1.49	5.81
2019	.97	1.54	1.56	1.45	5.53
2020	*1.00*	*1.60*	*1.70*	*1.50*	*5.80*
2021	*1.05*	*1.70*	*1.80*	*1.55*	*6.10*

Cal-endar	QUARTERLY DIVIDENDS PAID C ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	1.41	.752	.752	- -	2.91
2017	1.51	.805	.805	- -	3.12
2018	1.61	.927	.927	- -	3.46
2019	1.85	.955	.955	- -	3.76
2020	1.91				

BUSINESS: PepsiCo, Inc. operates four major businesses: Frito-Lay North America, 25% of sales and 51% of operating profits in '19; PepsiCo Beverages NA, 32% and 21%; Quaker Foods NA, 4% and 5%; and PepsiCo Int'l. (snacks and beverages), 39% and 23%. Quaker Oats acq., 8/01; Pepsi Bottling Group and PepsiAmericas acq. 2/10. Beverages: *Pepsi-Cola*, *Gatorade*, and *Tropicana*. Snack foods: *Frito-Lay* (brand names include *Doritos, Ruffles,* and *Lay's*), *Walker's, Smith's, Sabritas*. Has about 267,000 employees, Insiders own less than 1% of stock, The Vanguard Group; 8.3%, BlackRock Inc.; 7.7% (3/20 Proxy). Chairman and CEO: Ramon Laguarta. Inc.: NC. Add.: 700 Anderson Hill Road, Purchase, NY 10577. Telephone: 914-253-2000. Internet: www.pepsico.com.

PepsiCo delivered a mixed 2019 performance. For the full year, the company generated a 3.8% sales increase, versus the previous year's result. Top-line progress was driven by pockets of strength in a well-diversified snack and drink portfolio, which was created through a combination of product innovation and acquisitions. Earnings, however, did not fare as well. In, fact, share net of $5.53 (on an adjusted basis) represented a 5% decline in 2019. Although sales were decent, higher operating costs, particularly in the Quaker Foods and Pepsi Beverages segments, weighed on profitability.

We remain optimistic that the company's bottom-line results will improve over the next two years. Sales are estimated to grow at a single-digit pace in 2020 and 2021. PepsiCo's vast array of well-established snack and drink offerings, alongside ongoing innovation efforts and acquisition targets (more below), should help offset weakness in core markets such as sodas. Healthy revenue expansion combined with higher-margin products, cost-containment programs, and share repurchases ought to enhance near-term profitability, too. This is reflected in our forecasts for roughly 5% share-net growth over this year and next.

PepsiCo intends to acquire *Rockstar* energy drinks in a deal valued at roughly $3.85 billion. Acquisitions are a favored expansion strategy, and it is a good approach to Pepsi's intentions to focus on the creation of a more consumer-centric business. The pending deal for *Rockstar* would give the company a more competitive presence in the energy drink market, which is currently dominated by industry rivals Monster Beverage and Red Bull. Assuming regulatory approval is achieved, the deal is expected to close during the second half of 2020.

Although COVID-19 has led to investor caution, shares of PepsiCo have held up relatively well during the market correction, declining nominally since our January report. Still, capital appreciation potential over the 2023-2025 pull is unexciting and investors may want to wait for a better entry point. However, the dividend may entice income-oriented accounts.

Nira Maharaj *April 17, 2020*

(A) Qrtrs. are 12, 12, 12 and 16 wks. (B) Dil. egs. Excl. nonrecur. gains (losses): '04, (12¢); '05, (27¢); '06, 34¢; '07, 7¢; '11, 4¢; '13, (5¢); '15, (99¢); '16, (49¢); '17, ($1.85); '18, $2.97; '19, (33¢). May not sum due to rounding. '10 egs. reflect costs associated with the acquisitions of its two largest bottlers. Next egs. report due mid-May. (C) Div'ds. hist. paid Jan., Mar., Jun., and Sept. ■ Reinvest. plan. avail. (D) Incl. intang. In '19: $31.55 bill., $22.68/sh. (E) In mill.

Company's Financial Strength	A++
Stock's Price Stability	100
Price Growth Persistence	60
Earnings Predictability	100

PFIZER INC. NYSE-PFE

RECENT PRICE 36.02 | P/E RATIO 15.1 (Trailing: 14.3 Median: 19.0) | RELATIVE P/E RATIO 0.73 | DIV'D YLD 4.2% | VALUE LINE 1631

TIMELINESS – Suspended 8/9/19
SAFETY 1 Raised 4/17/09
TECHNICAL – Suspended 8/9/19
BETA .85 (1.00 = Market)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	19.0	20.4	21.9	26.1	32.5	33.1	36.5	37.4	37.3	46.5	44.6	41.0
Low:	11.6	14.0	16.6	20.8	25.3	27.5	28.5	28.3	30.9	33.2	34.0	27.9

18-Month Target Price Range

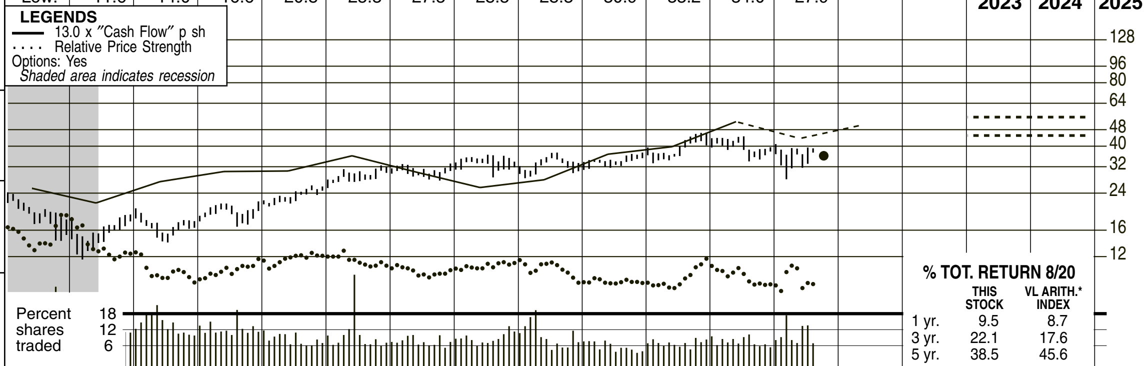
Low-High	Midpoint (% to Mid)
$29-$53	$41 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+55%)	14%
Low	45	(+25%)	10%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	1251	1082	1172
to Sell	1016	1250	1081
Hld's(000)	3974051	3891158	3853696



% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	9.5	8.7
3 yr.	22.1	17.6
5 yr.	38.5	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
7.03	6.97	6.79	7.16	7.16	6.20	8.46	8.90	8.11	8.06	7.89	7.91	8.70	8.79	9.38	9.35	**9.00**	**9.45**	Sales per sh	**10.35**
2.84	2.80	2.85	3.03	1.94	1.66	2.09	2.34	2.35	2.77	2.32	1.96	2.13	2.82	3.07	4.03	**3.35**	**3.90**	"Cash Flow" per sh	**4.50**
2.12	2.02	2.06	2.20	1.18	1.23	1.03	1.11	1.26	1.65	1.41	1.11	1.17	1.73	1.87	2.87	**2.30**	**2.90**	Earnings per sh A	**3.50**
.68	.76	.96	1.16	1.28	.80	.72	.80	.88	.96	1.04	1.12	1.20	1.28	1.36	1.44	**1.52**	**1.60**	Div'ds Decl'd per sh B■	**1.84**
.35	.29	.29	.28	.25	.15	.19	.22	.18	.19	.19	.23	.30	.33	.36	.39	**.40**	**.40**	Cap'l Spending per sh	**.50**
9.10	8.88	9.98	9.60	8.52	11.15	10.95	10.84	11.16	11.92	11.33	10.48	9.81	11.92	11.09	11.41	**12.00**	**12.55**	Book Value per sh C	**14.35**
7473.0	7361.0	7124.0	6761.0	6746.0	8070.0	8012.0	7575.0	7276.0	6399.0	6291.0	6175.0	6070.0	5979.0	5717.0	5534.0	**5500.0**	**5500.0**	Common Shs Outst'g D	**5500.0**
15.6	12.7	12.5	11.5	16.4	12.8	16.3	17.6	18.4	17.6	21.5	30.3	28.1	19.7	20.9	13.9	*Bold figures are*		Avg Ann'l P/E Ratio	**14.0**
.82	.68	.67	.61	.99	.85	1.04	1.10	1.17	.99	1.13	1.53	1.47	.99	1.13	.75	*Value Line*		Relative P/E Ratio	**.80**
2.1%	3.0%	3.7%	4.6%	6.6%	5.1%	4.3%	4.1%	3.8%	3.3%	3.4%	3.3%	3.7%	3.8%	3.5%	3.6%	*estimates*		Avg Ann'l Div'd Yield	**3.8%**

CAPITAL STRUCTURE as of 6/30/20
Total Debt $63613 mill. **Due in 5 Yrs** $26238 mill.
LT Debt $50529 mill. **LT Interest** $1574 mill.
(44% of Cap'l)

Leases, Uncapitalized Annual rentals $323.0 mill.

Pension Assets-12/19 $23.5 bill. **Oblig.** $28.9 bill.

Common Stock 5,556,879,807 shs.
as of 8/3/20

MARKET CAP: $200 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
67809	67425	58986	51584	49605	48851	52824	52546	53647	51750	**49500**	**52000**	Sales ($mill)	**57000**
45.5%	48.6%	52.2%	53.1%	46.5%	44.8%	44.6%	47.8%	49.1%	47.4%	**44.0%**	**47.0%**	Operating Margin	**49.0%**
8487.0	9026.0	7611.0	6410.0	5537.0	5157.0	5757.0	6269.0	6384.0	6010.0	**5700**	**5600**	Depreciation ($mill)	**5400**
8266.0	8697.0	9490.0	11341	9088.0	6949.0	7198.0	10606	11143	16269	**12650**	**15950**	Net Profit ($mill)	**19250**
11.9%	31.5%	21.2%	27.4%	25.5%	22.2%	13.4%	13.4%	5.9%	7.8%	**15.0%**	**15.0%**	Income Tax Rate	**15.0%**
12.2%	12.9%	16.1%	22.0%	18.3%	14.2%	13.6%	20.2%	20.8%	31.4%	**25.6%**	**30.7%**	Net Profit Margin	**33.8%**
31859	29659	32796	32878	36071	14405	7834	10714	18068	d4501	**12000**	**14000**	Working Cap'l ($mill)	**20000**
38410	34931	31036	30462	31541	28818	31398	33538	32909	35955	**45000**	**40000**	Long-Term Debt ($mill)	**32000**
87813	82190	81260	76307	71301	64720	59544	71308	63407	63143	**66000**	**69000**	Shr. Equity ($mill)	**79000**
7.1%	8.0%	9.0%	11.2%	9.4%	8.0%	8.6%	10.7%	12.3%	17.2%	**12.0%**	**15.0%**	Return on Total Cap'l	**18.0%**
9.4%	10.6%	11.7%	14.9%	12.7%	10.7%	12.1%	14.9%	17.6%	25.8%	**19.0%**	**23.0%**	Return on Shr. Equity	**24.5%**
2.5%	3.0%	3.6%	6.2%	3.5%	.0%	NMF	4.1%	5.0%	13.0%	**6.5%**	**10.5%**	Retained to Com Eq	**11.5%**
74%	72%	69%	58%	73%	100%	102%	72%	72%	49%	**66%**	**55%**	All Div'ds to Net Prof	**53%**

CURRENT POSITION ($MILL.)

	2018	2019	6/30/20
Cash Assets	18833	9830	11382
Receivables	8025	8724	9128
Inventory (LIFO)	7508	8283	8564
Other	15560	5966	17350
Current Assets	49926	32803	46424
Accts Payable	4674	4220	3872
Debt Due	8831	16195	13084
Other	18353	16889	15767
Current Liab.	31858	37304	32723

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	3.0%	2.5%	2.0%
"Cash Flow"	4.0%	6.0%	5.5%
Earnings	3.5%	8.5%	8.5%
Dividends	2.5%	7.0%	5.0%
Book Value	1.5%	- -	4.0%

QUARTERLY SALES ($ mill.)

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	12779	12896	13168	13703	52546
2018	12906	13466	13298	13976	53647
2019	13118	13264	12680	12688	51750
2020	12028	11801	**12400**	**13271**	**49500**
2021	**12500**	**12700**	**13100**	**13700**	**52000**

EARNINGS PER SHARE A

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.51	.51	.47	.23	1.73
2018	.59	.65	.69	d.07	1.87
2019	.68	.89	1.36	d.06	2.87
2020	.61	.61	**.60**	**.48**	**2.30**
2021	**.69**	**.78**	**.83**	**.60**	**2.90**

QUARTERLY DIVIDENDS PAID B■

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.30	.30	.30	.30	1.20
2017	.32	.32	.32	.32	1.28
2018	.34	.34	.34	.34	1.36
2019	.36	.36	.36	.36	1.44
2020	.38	.38	.38		

BUSINESS: Pfizer Inc. is a research-based, global biopharmaceutical company. It is engaged in the discovery, development, manufacture, and distribution of healthcare products, including innovative medicines and vaccines. Manages commercial operations through two business segments: Biopharma (83% of revenue) and Upjohn (17%). Completed spinoff of Consumer Healthcare division (8/19). Highest-grossing products in 2019: *Prevnar*, *Ibrance*, *Eliquis*, *Lyrica*, *Xeljanz*, *Lipitor* and *Enbrel*. Has 88,300 employees. Officers and directors own less than 1% of common stock; Vanguard, 8.1%; BlackRock, 7.7%; State Street, 5.3% (3/20 proxy). Chairman and CEO: Albert Bourla. Inc.: DE. Addr.: 235 East 42nd St., New York, NY 10017. Tel.: 212-733-2323. Internet: www.pfizer.com

Pfizer has held up relatively well against a challenging backdrop. The drugmaker's second-quarter results beat consensus expectations on both earnings and sales, as cost-cutting initiatives (SG&A expenses declined 14% year over year) and stronger growth in the oncology portfolio (sales +20%) helped to mitigate COVID-related pressures on several areas of the business. In total, the pandemic shaved about $500 million off Pfizer's June-period sales tally, due to a combination of travel restrictions and lower patient volume, but the overall impact was, for the most part, lighter than many had anticipated. With recovery trends seemingly gaining traction in July and August, we look for strong sequential top-line improvement over these next few quarters.

The Biopharma business (83% of total sales) should remain a key catalyst. Pfizer's Biopharma unit delivered sales growth of 4% in Q2, despite COVID-fueled headwinds across the vaccines and hospital portfolios. Oncology was the primary driver, highlighted by lead breast cancer drug *Ibrance* (sales +7% year over year) and strong contributions from several complementary assets, including *Inlyta* (+89%) and *Xtandi* (+32%). A good showing from blood thinner medication *Eliquis* (+19%) provided additional support.

The company has emerged as one of the front-runners in the race for a COVID-19 vaccine. Pfizer is developing a candidate in partnership with Germany-based BioNTech, and early data from clinical trials has been largely positive. If successful, management indicated that it could seek regulatory review of the vaccine as early as this month. If approved, the current plan is to supply up to 100 million doses worldwide by the end of 2020, and 1.3 billion doses by the end of 2021.

The stock's Timeliness rank remains suspended due to restructuring. This includes last year's spinoff of the consumer healthcare business and a pending deal to shed its Upjohn generics unit. All in all, we view the transformation favorably and believe it will better position the company for sustainable long-term growth. On a risk-adjusted basis, the equity offers decent total-return potential over the 18-month and 2023-2025 time frames.

Michael Ratty *October 2, 2020*

(A) Diluted earnings (GAAP). May not sum due to change in share count. Excludes one-time gain of $1.79 a share in Q4, 2017. Next earnings report due late October.
(B) Dividends paid in early Mar., Jun, Sep., Dec.■ Div'd reinvest. plan.
(C) Includes intangibles. In '19: $94.0 bill., $16.99/sh.
(D) In millions.

Company's Financial Strength	A++
Stock's Price Stability	100
Price Growth Persistence	80
Earnings Predictability	60

PROCTER & GAMBLE NYSE-PG

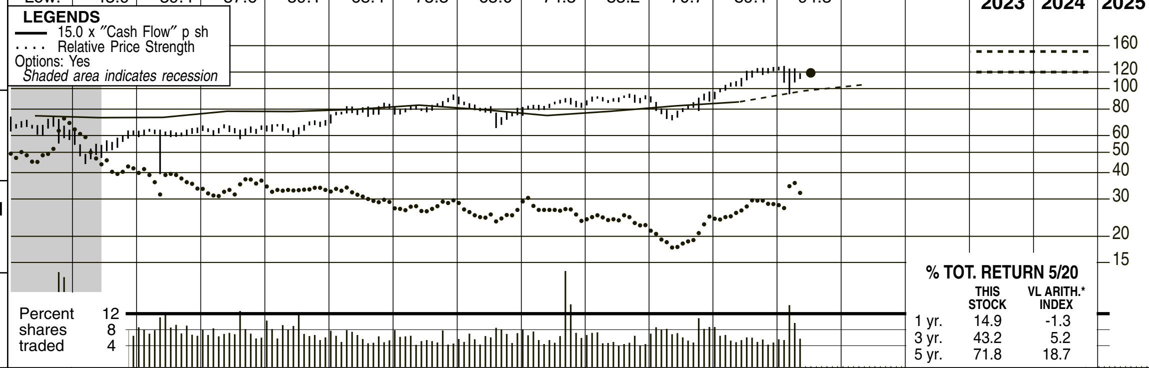
RECENT PRICE 119.05 | P/E RATIO 23.1 (Trailing: 23.5, Median: 19.0) | RELATIVE P/E RATIO 1.07 | DIV'D YLD 2.7% | VALUE LINE 1194

TIMELINESS 1 Raised 3/8/19
SAFETY 1 Raised 1/11/02
TECHNICAL 2 Lowered 6/19/20
BETA .75 (1.00 = Market)

High:	63.5	65.4	67.7	71.0	85.8	93.9	91.8	90.3	94.7	96.9	126.6	128.1
Low:	43.9	39.4	57.6	59.1	68.4	75.3	65.0	74.5	83.2	70.7	89.1	94.3

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 15.0 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High: $96-$169 Midpoint (% to Mid): $133 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	150	(+25%)	8%
Low	120	(Nil)	3%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	983	1181	1115
to Sell	1223	1207	1342
Hld's(000)	1591798	1585880	1575249

Percent shares traded 12 8 4

% TOT. RETURN 5/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	14.9	-1.3
3 yr.	43.2	5.2
5 yr.	71.8	18.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
20.21	22.95	21.46	24.42	27.53	27.09	27.81	29.85	30.45	30.69	30.64	28.10	24.47	25.48	26.75	27.02	***29.00***	***30.95***	Sales per sh A	***37.50***
3.18	3.51	3.51	4.25	4.97	4.86	4.87	5.21	5.20	5.33	5.57	5.31	4.97	5.21	5.52	5.76	***6.50***	***7.00***	"Cash Flow" per sh	***8.40***
2.32	2.53	2.64	3.04	3.64	3.58	3.53	3.93	3.85	4.05	4.22	4.02	3.67	3.92	4.22	4.52	***5.00***	***5.25***	Earnings per sh AB	***6.80***
.93	1.03	1.15	1.28	1.45	1.64	1.80	1.97	2.14	2.29	2.45	2.59	2.66	2.70	2.79	2.90	***3.12***	***3.20***	Div'ds Decl'd per sh C■	***3.50***
.80	.88	.84	.94	1.00	1.11	1.08	1.20	1.44	1.46	1.42	1.38	1.24	1.33	1.49	1.34	***1.50***	***1.50***	Cap'l Spending per sh	***1.50***
6.19	6.47	19.33	20.87	22.46	21.18	21.20	24.14	22.87	24.64	25.40	22.83	21.34	21.45	20.78	18.47	***18.70***	***20.35***	Book Value per sh D	***28.40***
2543.8	2472.9	3178.8	3131.9	3032.7	2917.0	2838.5	2765.7	2748.0	2742.3	2710.8	2714.5	2668.1	2553.3	2498.1	2504.8	***2450.0***	***2400.0***	Common Shs Outst'g E	***2200.0***
21.3	21.5	21.5	20.5	18.6	16.4	17.0	16.0	16.7	17.8	19.0	20.9	21.4	22.3	20.1	20.7	*Bold figures are*		Avg Ann'l P/E Ratio	***20.0***
1.13	1.14	1.16	1.09	1.12	1.09	1.08	1.00	1.06	1.00	1.00	1.05	1.12	1.12	1.09	1.13	*Value Line*		Relative P/E Ratio	***1.10***
1.9%	1.9%	2.0%	2.1%	2.1%	2.8%	3.0%	3.1%	3.3%	3.2%	3.1%	3.1%	3.4%	3.1%	3.3%	3.1%	*estimates*		Avg Ann'l Div'd Yield	***2.6%***

CAPITAL STRUCTURE as of 3/31/20
Total Debt $36.011 bill. **Due in 5 Yrs** $20.40 bill.
LT Debt $23.310 bill. **LT Interest** $1.250 bill.
(Tot. Int. Coverage: 30.1x)
(34% of Tot. Cap'l)
Leases, Uncapitalized Annual Rentals $255 mill.
Pension Assets-6/19 $11.382 bill. **Oblig.** $17.037 bill.
Pfd Stock $928 mill. **Pfd Div'd** $64 mill.
(ESOP owns 49.3 mill Class A shares and 57.2 mill Class B shares; convertible into common stock.)
Common Stock 2,475,642,613 shares

MARKET CAP: $295 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
78938	82559	83680	84167	83062	76279	65299	65058	66832	67684	***71065***	***74250***	Sales ($mill) A	***82500***
24.2%	22.6%	22.6%	22.3%	23.7%	23.4%	26.2%	26.4%	25.9%	25.2%	***25.0%***	***25.0%***	Operating Margin	***28.0%***
3108.0	2838.0	3204.0	2982.0	3141.0	3134.0	3078.0	2820.0	2834.0	2824.0	***2950***	***3200***	Depreciation ($mill)	***3500***
10946	11797	11344	11869	12220	11535	10441	10733	11205	11877	***13000***	***13650***	Net Profit ($mill)	***15000***
27.3%	22.3%	24.2%	23.2%	23.5%	20.2%	24.6%	23.8%	21.5%	19.4%	***22.0%***	***22.0%***	Income Tax Rate	***21.0%***
13.9%	14.3%	13.6%	14.1%	14.7%	15.1%	16.0%	16.5%	16.8%	17.5%	***18.3%***	***18.4%***	Net Profit Margin	***18.2%***
d5500	d5323	d2997	d6047	d2109	d144.0	3012.0	d3716	d4917	d7538	***d6500***	***d5250***	Working Cap'l ($mill)	***1500***
21360	22033	21080	19111	19811	18329	18945	18038	20863	20395	***23000***	***20000***	Long-Term Debt ($mill)	***15000***
61439	68001	64035	68709	69976	63050	57983	55778	52883	47194	***45800***	***48800***	Shr. Equity ($mill)	***62500***
13.8%	13.5%	13.8%	13.9%	14.0%	14.6%	13.9%	14.9%	15.5%	17.9%	***19.0%***	***20.0%***	Return on Total Cap'l	***16.5%***
17.8%	17.3%	17.7%	17.3%	17.5%	18.3%	18.0%	19.2%	21.2%	25.2%	***28.5%***	***28.0%***	Return on Shr. Equity	***20.0%***
9.1%	9.0%	8.3%	7.9%	7.7%	6.9%	5.3%	6.4%	7.5%	8.9%	***11.5%***	***12.0%***	Retained to Com Eq	***9.5%***
50%	49%	54%	55%	57%	63%	71%	67%	65%	65%	***59%***	***56%***	All Div'ds to Net Prof	***51%***

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	11850	10287	15393
Receivables	4686	4951	4640
Inventory (FIFO)	4738	5017	5330
Other	2046	2218	1777
Current Assets	23320	22473	27140
Accts Payable	10344	11260	10464
Debt Due	10423	9697	12701
Other	7470	9054	9731
Current Liab.	28237	30011	32896

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	- -	-3.0%	6.0%
"Cash Flow"	1.5%	.5%	7.5%
Earnings	2.0%	1.0%	8.5%
Dividends	6.5%	4.0%	4.0%
Book Value	-.5%	-3.5%	6.0%

Fiscal Year Ends	QUARTERLY SALES ($ mill.) A Sep.30	Dec.31	Mar.31	Jun.30	Full Fiscal Year
2017	16518	16856	15605	16079	65058
2018	16653	17395	16281	16503	66832
2019	16690	17438	16462	17094	67684
2020	17798	18240	17214	***17813***	***71065***
2021	***18825***	***18850***	***18125***	***18450***	***74250***

Fiscal Year Ends	EARNINGS PER SHARE AB Sep.30	Dec.31	Mar.31	Jun.30	Full Fiscal Year
2017	1.03	1.08	.96	.85	3.92
2018	1.09	1.19	1.00	.94	4.22
2019	1.12	1.25	1.06	1.10	4.52
2020	1.37	1.42	1.17	***1.04***	***5.00***
2021	***1.45***	***1.50***	***1.20***	***1.10***	***5.25***

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.663	.67	.67	.67	2.67
2017	.67	.69	.69	.69	2.74
2018	.69	.72	.72	.72	2.85
2019	.72	.746	.746	.746	2.96
2020	.746	.791			

BUSINESS: The Procter & Gamble Company makes branded consumer packaged goods, which are marketed and sold in more than 180 countries around the world. Has five reportable segments: Beauty (19% of fiscal 2019 sales, 22% of earnings); Grooming (9%, 13%); Health Care (12%, 13%); Fabric & Home Care (33%, 29%); Baby, Feminine & Family Care (27%, 23%). Walmart accounted for 15% of 2019 sales. 58% of sales came from outside the United States. Divested battery business in 2/16. Has 97,000 employees. Officers/directors own 1.75% of stock; BlackRock, 6.8%; Vanguard, 7.8% (8/19 proxy). Chairman/President/CEO: David S. Taylor. Inc.: Ohio. Address: 1 Procter & Gamble Plaza, Cincinnati, Ohio 45202. Telephone: 513-983-1100. Internet: www.pg.com.

Procter & Gamble gained traction during the fiscal third quarter. (Year ends June 30th.) In all, share earnings climbed 10% for the March period, on a 5% revenue advance. The onset of the global pandemic during the interim led to a surge in demand for many of the consumer products giant's offerings, including health, hygiene, and cleaning products, especially in North America and Europe. Moreover, higher volume and favorable pricing spurred organic sales. These factors more than offset the negative impact of foreign currency effects and global supply-chain disruptions.

The company ought to build momentum in the near term. We imagine P&G will show positive comparisons in the coming months. Core earnings per share will likely increase 11%, on a 5% sales advance for the full year. Ongoing productivity improvements and careful cost controls ought to aid near-term margin expansion. Meanwhile, management has been focused on increasing the availability of its much-needed hygiene products, and may shift operations to produce household essentials. Moreover, it has been strengthening its distribution networks and bolstering its e-commerce arm, as well as investing in the product pipeline, which should better position the company moving forward. As such, the top and bottom lines may well climb at a low- to mid-single-digit clip through fiscal 2021.

Still, the company may face some headwinds. Market-share growth and demand for its products may decelerate as the severity of the pandemic lessens. Too, it will likely experience rising input costs, and higher shipment and distribution expenses, combined with negative currency effects. And should other economic or geopolitical tensions arise, these may weigh on its business development.

This issue is favorably ranked for the year ahead. These shares have held up pretty well during recent market turbulence. And the blue chip's defensive properties, worthwhile dividend yield, and solid finances add to its investment appeal. Still, PG is trading just below our 2023-2025 Target Price Range, so much of the good news we expect over that span is already factored into the recent quotation.

Orly Seidman *June 19, 2020*

(A) Fiscal years end June 30th. (B) Diluted core earnings. Excludes n/r gains/losses: '09, (68¢); '10, 58¢; '12, (73¢); '13, (19¢); '14, (24¢); '15, (96¢); '16, (18¢); '17, (23¢) '18, (55¢); '19 ($3.09). EPS may not sum. Next earnings report due late July.
(C) Dividends historically paid in Feb., May, Aug., and Nov. ■ DRIP available.
(D) Includes intangibles. In Fiscal '19: $64.5 bill., $25.75 a share.
(E) In millions.

Company's Financial Strength	A++
Stock's Price Stability	100
Price Growth Persistence	30
Earnings Predictability	95

PUBLIC STORAGE NYSE-PSA

RECENT PRICE 216.29 | P/E RATIO 28.8 (Trailing: 30.9; Median: NMF) | RELATIVE P/E RATIO 1.38 | DIV'D YLD 3.7% | VALUE LINE 1539

High:	85.1	106.1	136.7	152.7	176.7	190.2	253.9	277.6	232.2	234.9	266.8	233.4
Low:	45.3	74.7	100.0	129.0	144.4	148.0	182.1	200.6	192.1	180.5	193.9	155.4

TIMELINESS 3 Lowered 6/14/19

SAFETY 1 Raised 1/10/14

TECHNICAL 5 Lowered 10/2/20

BETA .85 (1.00 = Market)

18-Month Target Price Range

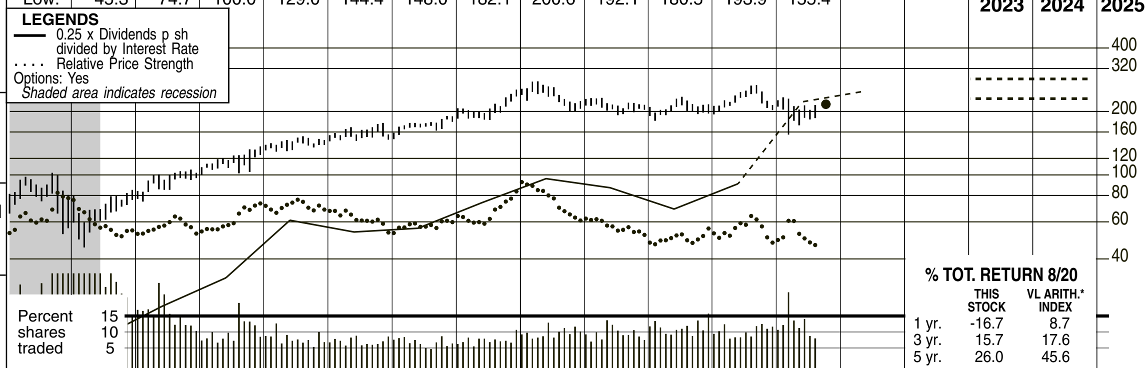
Low-High	Midpoint (% to Mid)
$149-$296	$223 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	285	(+30%)	10%
Low	230	(+5%)	5%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	367	303	331
to Sell	326	373	336
Hld's(000)	139010	139552	138231



% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-16.7	8.7
3 yr.	15.7	17.6
5 yr.	26.0	45.6

Public Storage was formed and qualified as a real estate investment trust (REIT) in 1980. It reorganized into its current form in June of 2007. It offers storage spaces for lease, generally on a month-to-month basis, for personal and business use, and also has interest in commercial facilities.

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
31.20	30.41	30.62	30.44	29.90	29.58	29.11	28.27	29.26	28.65	*28.80*	*28.95*	Book Value per sh D	*33.35*
5.22	5.93	6.31	7.53	7.98	8.79	9.70	9.70	10.45	10.58	*10.50*	*11.10*	Funds from Ops per sh AE	*12.85*
2.31	3.29	3.83	4.89	5.25	6.07	6.81	6.73	8.54	7.29	*7.50*	*7.70*	Earnings per sh A	*9.50*
3.05	3.65	4.40	5.15	5.60	6.50	7.30	8.00	8.00	8.00	*8.00*	*8.00*	Div'ds Decl'd per sh B	*9.00*
44.51	43.35	42.71	47.97	49.20	49.49	51.49	53.09	54.22	56.23	*57.70*	*59.25*	Real Estate per sh	*67.80*
169.25	170.24	171.66	171.78	172.45	172.92	173.29	173.85	174.13	174.42	*175.00*	*175.50*	Common Shs Outst'g C	*177.00*
200%	282%	357%	428%	475%	600%	721%	651%	610%	704%			Premium Over Book	*670%*
39.8	35.3	35.9	32.8	34.1	34.1	35.1	31.5	24.3	31.6	*Bold figures are*		Avg Ann'l P/E Ratio	*NMF*
17.9	19.6	22.2	21.3	23.6	23.6	24.6	21.9	19.9	21.8	*Value Line*		Avg Ann'l P/FFO Ratio E	*20.0*
3.3%	3.1%	3.1%	3.2%	3.1%	3.1%	3.1%	3.8%	3.9%	3.5%	*estimates*		Avg Ann'l Div'd Yield	*3.5%*
1646.7	1752.1	1826.7	1981.7	2195.4	2381.7	2560.5	2668.5	2754.3	2846.8	*2900*	*3000*	Revenues ($mill)	*3500*
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	*Nil*	*Nil*	Other Income($mill)	*Nil*
63.6%	64.6%	67.3%	68.1%	69.6%	69.6%	70.6%	70.4%	67.7%	67.9%	*68.0%*	*68.0%*	Operating Margin	*70.0%*
672.0	823.8	669.7	844.7	908.2	1053.1	1183.9	1171.6	1488.9	1272.8	*1315*	*1350*	Net Profit($mill)	*1680*
40.8%	47.0%	36.7%	42.6%	41.4%	44.2%	46.2%	43.9%	54.1%	44.7%	*45.3%*	*45.0%*	Net Profit Margin	*48.0%*
7.5	2.4	12.9	- -	- -	- -	- -	- -	- -	- -	*Nil*	*Nil*	Capital Gains(mill)	*Nil*
7532.8	7379.2	7331.9	8239.8	8485.3	8557.7	8922.6	9230.1	9442.1	9807.6	*10100*	*10400*	Real Estate($mill)	*12000*
568.4	398.3	468.8	839.1	64.4	319.0	390.7	1431.3	1412.3	1902.5	*1955*	*2010*	Total Debt ($mill)	*2325*
8676.6	8288.2	8093.8	8791.7	9480.8	9170.6	9411.9	8940.0	9119.5	9062.9	*9100*	*9150*	Shr. Equity ($mill)	*10600*
43.7%	61.6%	69.7%	68.4%	70.2%	73.9%	75.3%	82.5%	76.6%	75.6%	*76.0%*	*72.0%*	Div'ds Decl'd to FFO	*70.0%*
10.0%	10.0%	10.9%	10.3%	11.5%	8.5%	8.5%	8.6%	9.4%	9.3%	*9.5%*	*9.5%*	Expenses to Assets	*9.5%*
7.4%	9.5%	11.0%	8.8%	9.6%	11.1%	12.1%	11.4%	14.3%	11.8%	*12.0%*	*12.5%*	Return on Total Cap'l	*13.0%*
7.7%	9.9%	11.5%	9.6%	9.6%	11.5%	12.6%	13.1%	16.3%	14.0%	*14.5%*	*15.0%*	Return on Shr. Equity	*16.0%*

CAPITAL STRUCTURE as of 6/30/20
Tot. Debt $2457.9 mill. **Due in 5 Years** $638.0 mill.
Total Interest $55.0 mill.
(Total interest coverage: over 25x)
(21% of Cap'l)

No Defined Benefit Pension Plan
Pfd. Stock $4135.0 mill. **Pfd. Div'd** $242.9 mill.
(36% of Cap'l)

Common Stock 174,802,792 shares

MARKET CAP: $37.8 billion (Large Cap)

FUNDS FLOW ($mill.)	2018	2019	6/30/20
Net Profit Plus Noncash Charges	2200.9	2038.6	682.9
Investments Repaid	146.1	12.4	17.1
Net New Debt	-19.0	490.2	555.4
New Equity	179.5	-56.6	-70.2
Investments Funded	659.9	909.8	441.9
Dividends Declared	1612.7	1608.7	804.6

FINANCIAL POSITION	6/30/19	6/30/20
Senior Debt ($mill.)	1908.1	2457.9
Subordinated Debt ($mill.)	- -	- -
Sr Debt/Cap'l Funds	.18:1	.21:1
Total Debt/Equity	.22:1	.27:1

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	645.5	664.3	686.4	672.3	2668.5
2018	669.9	685.5	706.4	692.5	2754.3
2019	689.0	711.0	729.3	717.5	2846.8
2020	716.1	709.3	*744.6*	*730*	*2900*
2021	*730*	*745*	*770*	*755*	*3000*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	1.62	1.59	1.61	1.92	6.73
2018	1.65	2.00	1.85	3.04	8.54
2019	1.73	1.76	1.93	1.87	7.29
2020	1.79	1.41	*2.20*	*2.10*	*7.50*
2021	*1.80*	*1.90*	*2.05*	*1.95*	*7.70*

Cal-endar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	1.70	1.80	1.80	2.00	7.30
2017	2.00	2.00	2.00	2.00	8.00
2018	2.00	2.00	2.00	2.00	8.00
2019	2.00	2.00	2.00	2.00	8.00
2020	2.00	2.00	2.00		

Cal-endar	QUARTERLY FFO PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	2.34	2.31	2.35	2.70	9.70
2018	2.37	2.65	2.66	2.77	10.45
2019	2.52	2.57	2.76	2.72	10.58
2020	2.62	2.28	*2.81*	*2.79*	*10.50*
2021	*2.64*	*2.70*	*2.90*	*2.86*	*11.10*

BUSINESS: Public Storage, an equity real estate investment trust (REIT), is the largest owner and operator of self-storage space in the U.S. Had interests in 2,483 facilities in 2019 with 169 mill. sq. ft. of net rentable space (vs 2,429 in '18 with 162 mill. sq. ft.), and a 49% stake in Shurgard Europe with 234 locations and 13 mill. sq. ft. (vs 232 in '18 with 13 mill. sq. ft.). Has 42% interest in PS Business Parks, Inc., which owns commercial sites (about 27.6 mill. sq. feet). Acqd. Shurgard Storage, 8/06. Has 5,900 emp. Org.: CA. Chairman: Ronald L. Havner, Jr. CEO: Joe Russell. Off./dir. and their families control 13.8% of common shares; Vanguard Group, 11.7%; BlackRock, 9.4% (3/20 proxy). Addr.: 701 Western Ave., Glendale, CA 91201. Tel.: 818-244-8080. Internet: www.publicstorage.com.

Public Storage posted mixed results in the first half of 2020. Occupancy improved 20 basis points in the second quarter, from the prior-year period, to a solid 94.2%. However, the weighted average realized rent regressed 2% in the June term, to $17.10 per square foot, revenues were flattish, and funds from operations (FFO) declined 11%, to $2.28 per share.

The operating environment remains a challenge. The United States economy is mired in a recession, and the recovery will likely be uneven. Too, the jobless rate is liable to be elevated for the near term because of the disruption caused by the COVID-19 pandemic. All told, demand for self-storage facilities, which is driven in part by turnover in the job market, will probably suffer for now.

In all likelihood, portfolio growth will be modest in the next two years. At the midpoint of 2020, the number of properties in service and total square footage expanded 2% and 3%, respectively, to 2,500 facilities and 171 million square feet. We expect the REIT to be more judicious with the use of capital for the time being, with the number of properties in service likely increasing an average of 1%–2% annually.

We look for FFO of $10.50 and $11.10 per share, respectively, in 2020 and 2021. Revenues may well advance 1%–2% and 3%–4%, respectively, in the current and following years, to $2.9 billion and $3 billion. Meanwhile, FFO might take a small step back in 2020, before improving 6%–7% in 2021, contingent on top-line growth and more-favorable operating conditions for the real estate sector.

The primary appeal here is the secure, well-covered dividend yield. Public Storage should pique the interest of conservative, income-oriented investors, in particular, owing to the stock's top mark for Safety (1) and the company's excellent rank for Financial Strength (A+). In addition, the shares rank favorably on a number of metrics, including Price Stability (90 out of 100) and Earnings Predictability (85), as well as a well-below-market Beta (0.85). The REIT's finances remain sound, with debt-to-total capital at 21% in the June period. That said, total return potential, both near- and long-term, is underwhelming at the recent quotation.

Sharif Abdou *October 2, 2020*

(A) Dil. shares. Egs. and FFO may not add due to rounding and/or change in share count. Excludes disc. ops.: '10, 3¢. Next egs. rep. due late October.
(B) Div'ds historically paid in late Mar., Jun., Sep., and Dec.
(C) In millions.
(D) Excludes preferred equity.
(E) Target Price Range calculated using Funds From Operations (FFO).

Company's Financial Strength	A+
Stock's Price Stability	90
Price Growth Persistence	65
Earnings Predictability	85

TEXAS INSTR. NDQ-TXN

RECENT PRICE 138.53 | P/E RATIO 25.6 (Trailing: 26.0 Median: 19.0) | RELATIVE P/E RATIO 1.20 | DIV'D YLD 2.6% | VALUE LINE

TIMELINESS 1 Raised 9/25/20
SAFETY 1 Raised 7/8/11
TECHNICAL 3 Lowered 4/3/20
BETA .90 (1.00 = Market)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	27.0	33.9	36.7	34.2	44.1	56.0	60.0	75.3	105.3	120.8	132.2	148.4
Low:	13.7	22.3	24.3	26.1	31.4	40.3	43.5	46.7	72.5	87.7	88.7	93.1

Target Price Range 2023 | 2024 | 2025

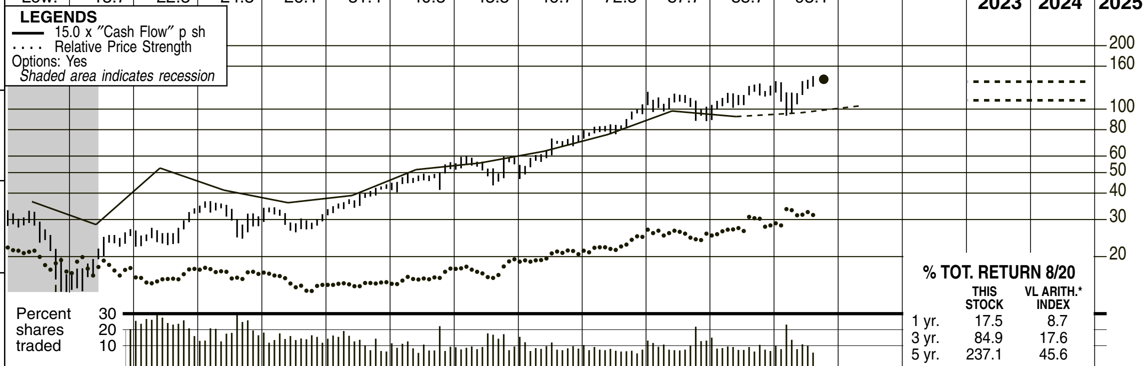
18-Month Target Price Range
Low-High: $104-$175 Midpoint (% to Mid): $140 (0%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	135	(-5%)	2%
Low	110	(-20%)	-2%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	806	676	736
to Sell	633	810	706
Hld's(000)	795368	772303	761878



% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	17.5	8.7
3 yr.	84.9	17.6
5 yr.	237.1	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
7.32	8.37	9.83	10.30	9.78	8.41	11.96	12.05	11.33	11.12	12.25	12.86	13.42	15.22	16.70	15.43	*15.25*	*16.20*	Sales per sh	*18.85*
1.94	2.25	2.54	2.73	2.43	1.89	3.51	2.76	2.40	2.60	3.45	3.71	4.22	5.06	6.53	6.14	*6.40*	*6.95*	"Cash Flow" per sh	*8.20*
1.05	1.34	1.69	1.83	1.57	1.15	2.62	1.88	1.51	1.75	2.57	2.82	3.48	4.35	5.59	5.24	*5.30*	*5.75*	Earnings per sh B	*6.50*
.09	.11	.13	.30	.40	.45	.49	.56	.72	1.07	1.24	1.40	1.64	2.12	2.63	3.21	*3.60*	*3.64*	Div'ds Decl'd per sh C	*3.84*
.76	.83	.88	.51	.60	.61	1.03	.72	.44	.38	.36	.54	.53	.71	1.20	.91	*.55*	*.55*	Cap'l Spending per sh	*.55*
7.60	7.46	7.83	7.43	7.30	7.84	8.94	9.61	9.68	9.84	9.76	9.84	10.52	10.51	9.52	9.56	*9.35*	*11.05*	Book Value per sh	*18.40*
1718.1	1600.3	1450.0	1343.2	1277.9	1240.1	1167.4	1139.5	1132.0	1098.0	1065.0	1011.3	995.98	983.16	945.15	932.03	*915.00*	*910.00*	Common Shs Outst'g A	*905.00*
24.0	21.4	18.4	18.3	16.0	18.0	10.0	16.9	19.9	21.6	18.5	19.1	18.1	19.4	19.0	22.1	*Bold figures are*		Avg Ann'l P/E Ratio	*19.0*
1.27	1.14	.99	.97	.96	1.20	.64	1.06	1.27	1.21	.97	.96	.95	.98	1.03	1.20	*Value Line*		Relative P/E Ratio	*1.05*
.3%	.4%	.4%	.9%	1.6%	2.2%	1.9%	1.8%	2.4%	2.8%	2.6%	2.6%	2.6%	2.5%	2.5%	2.8%	*estimates*		Avg Ann'l Div'd Yield	*2.5%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $6.8 bill. **Due in 5 Years** 3.1 bill.
LT Debt $6.2 bill. **LT Interest** $170 mill.
(45% of capital)

Leases, Uncapitalized: Annual Rentals: $75 mill.
Pension Assets-12/19 $4004 mill. **Oblig.** $3900 mill.
Pfd Stock None

Common Stock 915,943,779 shs.
as of 7/14/20
MARKET CAP: $127 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
13966	13735	12825	12205	13045	13000	13370	14961	15784	14383	*13950*	*14750*	Sales ($mill)	*17075*
37.5%	31.5%	28.4%	30.1%	38.9%	40.8%	42.7%	44.3%	46.3%	44.7%	*48.2%*	*49.40*	Operating Margin	*49.5%*
865.0	904.0	957.0	879.0	850.0	766.0	605.0	539.0	590.0	708.0	*750*	*850*	Depreciation ($mill)	*1250*
3228.0	2236.0	1759.0	1971.0	2821.0	2986.0	3595.0	4437.3	5580.0	5017.0	*5090*	*5490*	Net Profit ($mill)	*6155*
29.1%	24.3%	9.1%	23.1%	27.2%	29.2%	27.1%	27.0%	16.5%	12.4%	*12.0%*	*12.0%*	Income Tax Rate	*12.0%*
23.1%	16.3%	13.7%	16.1%	21.6%	23.0%	26.9%	29.7%	35.4%	34.9%	*36.5%*	*37.2%*	Net Profit Margin	*36.1%*
5079.0	4329.0	4800.0	5272.0	5106.0	4519.0	5193.0	6476.0	5623.0	6638.0	*7425*	*9365*	Working Cap'l ($mill)	*18090*
- -	4211.0	4186.0	4158.0	3641.0	3120.0	2978.0	3577.0	4319.0	5303.0	*6200*	*6300*	Long-Term Debt ($mill)	*6500*
10437	10952	10961	10807	10390	9946.0	10473	10337	8994.0	8907.0	*8545*	*10035*	Shr. Equity ($mill)	*16665*
30.9%	14.9%	11.9%	13.5%	20.4%	23.2%	27.0%	32.2%	42.4%	35.9%	*34.5%*	*33.5%*	Return on Total Cap'l	*26.5%*
30.9%	20.4%	16.0%	18.2%	27.2%	30.0%	34.3%	42.9%	62.0%	56.3%	*59.5%*	*54.5%*	Return on Shr. Equity	*37.0%*
25.3%	14.5%	8.6%	7.4%	14.4%	15.5%	18.6%	22.6%	33.6%	22.6%	*21.0%*	*21.5%*	Retained to Com Eq	*16.0%*
18%	29%	47%	60%	47%	48%	46%	47%	46%	60%	*65%*	*60%*	All Div'ds to Net Prof	*56%*

CURRENT POSITION ($MILL.)	2018	2019	6/30/20
Cash Assets	4233	5387	4960
Receivables	1207	1074	1176
Inventory (Avg Cst)	2217	2001	2136
Other	440	299	216
Current Assets	8097	8761	8488
Accts Payable	478	388	409
Debt Due	749	500	600
Other	1247	1235	1154
Current Liab.	2474	2123	2163

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	5.0%	6.5%	*3.0%*
"Cash Flow"	9.5%	16.0%	*4.5%*
Earnings	13.0%	21.0%	*4.0%*
Dividends	21.5%	21.5%	*6.5%*
Book Value	2.5%	- -	*11.0%*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	3402	3693	4116	3750	14961
2018	3789	4017	4261	3717	15784
2019	3594	3668	3771	3350	14383
2020	3329	3239	*3800*	*3582*	*13950*
2021	*3530*	*3440*	*4000*	*3780*	*14750*

Cal-endar	EARNINGS PER SHARE B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.97	1.03	1.26	1.09	4.35
2018	1.35	1.40	1.58	1.27	5.59
2019	1.26	1.36	1.49	1.12	5.24
2020	1.24	1.48	*1.40*	*1.18*	*5.30*
2021	*1.35*	*1.60*	*1.50*	*1.30*	*5.75*

Cal-endar	QUARTERLY DIVIDENDS PAID C Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.38	.38	.38	.50	1.64
2017	.50	.50	.50	.62	2.12
2018	.62	.62	.62	.77	2.63
2019	.77	.77	.77	.90	3.21
2020	.90	.90	.90		

BUSINESS: Texas Instruments Incorporated is a global manufacturer of semiconductors and electronic products. The company is the leading supplier of digital signal processors and analog devices. Markets electrical controls, educational and productivity solutions, and metallurgical materials. Royalty income from licensing proprietary technology is significant. Acquired Burr-Brown, 8/00; Unitrode, 10/99. Sold DRAM business, 10/1/98; defense business, 7/11/97. R&D, 10.7% of 2019 revenues. Has 29,768 empls. The Vanguard Group owns 9.5% of common stock; Off. and dir. own less than 1% of stock (3/20 proxy). CEO & Pres.: Richard K. Templeton. Inc.: DE. Address: 12500 TI Boulevard, P.O. Box 660199, Dallas, TX 75266-0199. Telephone: 972-995-3773. Internet: www.ti.com.

Since our June review, shares of Texas Instruments have trended higher. In fact, over that time frame, the stock's price increased more than 10%, due to the general uptrend in the financial markets along with a solid first half of 2020 for TXN.

The second-quarter results were better than expected. Weakness in the automotive markets weighed on the company's overall results. In fact, the embedded processing unit and analog division registered volume declines of 31% and 4%, respectively. All told, these factors drove the June-quarter top line 11.7% lower, to $3.239 billion. That said, although it was down on a year-over-year basis, the company's sales still bested our estimate of $3.1 billion. Meanwhile, on the profitability front, operating expenses increased 200 basis points as a percentage of sales. After accounting for the antidilutive benefits of stock buybacks, TXN's bottom line advanced 8.8%, to $1.48 per share, handily besting our call of $1.00.

We have raised our 2020 sales and earnings estimates by $150 million and $0.50, to $13.95 billion and $5.30 a share, respectively. In the current year, this would represent a sales decline of roughly 3%, due to the widespread economic slowdown as a result of the coronavirus pandemic. We look for reduced volumes in Texas Instruments' Signal Chain, High Volume, Connected Microcontrollers, Processors, and other offerings. Alternatively, the company has been experiencing solid demand from its Power products line. Despite the drop in volumes, the board completed significant stock repurchases over the past 12 months that should bolster share net. All told, the bottom line appears well positioned to advance 1% this year, to $5.30 a share.

These shares have improved two notches in Timeliness since our last review. TXN is now ranked to outace the broader market averages in the coming year (Timeliness: 1). This may appeal to short-term accounts. That said, the stock's price has advanced nearly 50% since the lows experienced earlier in the year. At this point, the equity is trading above our Target Price Range, suggesting it has limited 3- to 5-year upside potential.

Bryan J. Fong *September 25, 2020*

(A) In mill.
(B) Diluted earnings. Excl. nonrecur. gains (losses) & amort. of purchased intang.: '05, 6¢; '17, (75¢). Excl. disc. operations: '06, $1.09.
Next egs. rpt. due late Oct. Qtly egs. may not sum to total due to change in shares outstanding.
(C) Dividends historically paid mid-February, May, August, and November.

Company's Financial Strength	A++
Stock's Price Stability	90
Price Growth Persistence	90
Earnings Predictability	80

THE TRAVELERS CO NYSE-TRV

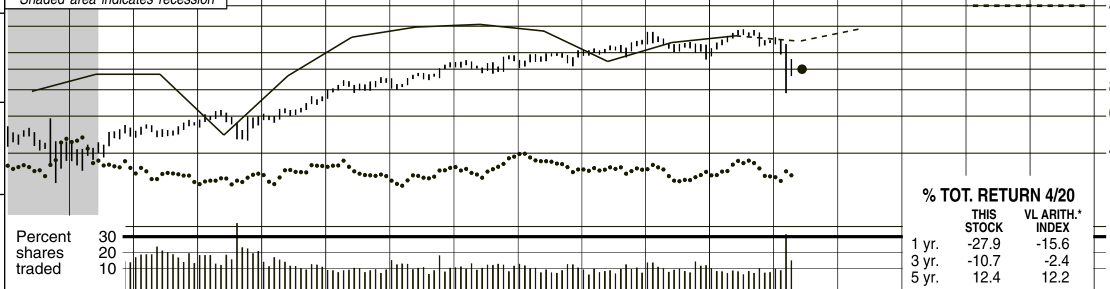
RECENT PRICE 100.10 | P/E RATIO 11.1 (Trailing: 10.7 / Median: 11.0) | RELATIVE P/E RATIO 0.60 | DIV'D YLD 3.4% | VALUE LINE

TIMELINESS 3 Lowered 5/29/20
SAFETY 1 Raised 9/16/11
TECHNICAL 3 Raised 5/15/20
BETA .95 (1.00 = Market)

High:	54.5	57.6	64.2	74.7	91.7	107.9	116.5	123.1	138.0	150.5	155.1	141.9
Low:	33.1	47.3	46.0	55.9	72.5	79.9	95.2	101.2	113.8	111.1	115.1	77.0

Target Price Range 2023 | 2024 | 2025

LEGENDS
—— 15.0 x Earnings p sh
· · · · Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High **Midpoint (% to Mid)**
$84-$174 $129 (30%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	240	(+140%)	*26%*
Low	200	(+100%)	*21%*

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	464	450	446
to Sell	490	501	562
Hld's(000)	213693	210153	204253

Percent shares traded 30 20 10

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-27.9	-15.6
3 yr.	-10.7	-2.4
5 yr.	12.4	12.2

2004	2005	2006	2007F	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
28.40	29.34	30.61	34.20	36.88	41.16	49.31	56.24	59.24	64.04	73.60	80.68	87.75	94.63	102.61	110.65	***114.15***	***118.15***	**P/C Prem Earned per sh A**	***140.00***
3.97	4.56	5.19	5.99	4.77	5.34	7.04	7.33	7.66	7.68	8.65	8.04	8.23	8.83	9.38	9.66	***10.25***	***11.00***	**Investment Inc per sh**	***13.00***
d2.75	d.82	3.01	3.68	3.06	4.19	3.06	d3.59	1.10	6.54	7.44	8.43	4.98	1.99	.93	3.01	***Nil***	***1.90***	**Underwriting Inc per sh**	***4.90***
1.93	2.90	5.88	6.72	5.24	6.32	6.31	3.25	6.21	9.46	10.56	10.87	10.13	7.27	8.94	9.60	***9.05***	***10.45***	**Earnings per sh B**	***14.65***
.95	.91	1.01	1.13	1.19	1.26	1.44	1.64	1.79	1.96	2.15	2.38	2.68	2.83	3.03	3.23	***3.37***	***3.41***	**Div'ds Decl'd per sh C■**	***3.60***
31.35	31.94	36.87	42.22	43.12	52.54	58.39	62.31	67.32	70.14	77.08	79.75	83.05	87.44	86.82	101.54	***105.90***	***115.70***	**Book Value per sh D**	***136.05***
670.30	693.40	678.30	627.80	585.10	520.30	434.60	392.80	377.40	353.50	322.20	295.90	279.60	271.40	263.70	255.50	***255.00***	***255.00***	**Common Shs Outst'g E**	***250.00***
122%	127%	125%	124%	105%	84%	89%	91%	95%	119%	120%	132%	137%	143%	151%	137%			**Price to Book Value**	***160%***
19.9	14.0	7.8	7.8	8.7	7.0	8.2	17.4	10.3	8.8	8.8	9.7	11.2	17.2	14.7	14.5	*Bold figures are*		**Avg Ann'l P/E Ratio**	***15.0***
1.05	.75	.42	.41	.52	.47	.52	1.09	.66	.49	.46	.49	.59	.87	.79	.78	*Value Line*		**Relative P/E Ratio**	***.85***
2.5%	2.2%	2.2%	2.2%	2.6%	2.8%	2.8%	2.9%	2.8%	2.3%	2.3%	2.3%	2.4%	2.3%	2.3%	2.3%	*estimates*		**Avg Ann'l Div'd Yield**	***1.5%***

CAPITAL STRUCTURE as of 3/31/20
Total Debt $6,559 mill. **Due in 5 Yrs** $2,555 mill.
(21% of Cap'l)
Leases, Uncapitalized $108 mill.
Pension Assets 12/19-$4,270 mill.
Oblig. $3954 mill.
Pfd Stock None

Common Stock 252,835,833 shs.
as of 4/17/20
MARKET CAP: $25.3 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
21432	22090	22357	22637	23713	23874	24534	25683	27059	28272	***29115***	***30125***	**P/C Premiums Earned A**	***35000***
61.1%	73.7%	65.6%	58.8%	58.5%	57.5%	61.4%	67.2%	70.0%	67.7%	***72.0%***	***71.0%***	**Loss to Prem Earned**	***70.0%***
32.7%	32.7%	32.5%	31.0%	31.4%	32.1%	32.9%	30.7%	29.1%	29.6%	***28.0%***	***27.5%***	**Expense to Prem Writ**	***26.5%***
6.2%	-6.4%	1.9%	10.2%	10.1%	10.4%	5.7%	2.1%	.9%	2.7%	***Nil***	***1.5%***	**Underwriting Margin**	***3.5%***
24.1%	- -	21.7%	25.7%	27.3%	27.6%	25.7%	24.1%	14.1%	18.0%	***15.0%***	***16.0%***	**Income Tax Rate**	***18.0%***
3066.0	1379.2	2439.0	3549.5	3644.6	3429.7	2972.0	2039.7	2523.0	2531.6	***2310***	***2665***	**Net Profit ($mill)**	***3880***
4.6%	4.2%	4.1%	3.9%	4.0%	3.6%	3.5%	3.5%	3.6%	3.4%	***3.6%***	***3.8%***	**Inv Inc/Total Inv**	***5.0%***
105181	104602	104938	103812	103078	100184	100245	103483	104233	110122	***112500***	***114000***	**Total Assets ($mill)**	***120000***
25445	24477	25405	24796	24836	23598	23221	23731	22894	25943	***27000***	***29500***	**Shr. Equity ($mill)**	***34000***
12.0%	5.6%	9.6%	14.3%	14.7%	14.5%	12.8%	8.6%	11.0%	9.8%	***8.5%***	***9.0%***	**Return on Shr. Equity**	***11.5%***
9.4%	2.9%	6.9%	11.4%	11.7%	11.4%	9.5%	5.3%	7.5%	6.5%	***5.5%***	***6.0%***	**Retained to Com Eq**	***8.5%***
22%	48%	28%	21%	20%	22%	25%	38%	32%	33%	***37%***	***33%***	**All Div'ds to Net Prof**	***25%***

FINANCIAL POSITION ($MILL.)

	2018	2019	3/31/20
Fixed Maturities	53464	68134	67897
Stocks	368	425	342
Premiums Due	7506	7909	8202
Other	32895	33654	32995
Total Assets	104233	110122	109436
Unearned Prems	13555	14604	14941
Reserves	50668	51849	51957
Other	17116	17726	17334
Total Liabilities	81339	84179	84232

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Premium Inc	10.5%	9.5%	*5.5%*
Invest Income	5.5%	3.0%	*6.0%*
Earnings	3.5%	.5%	*9.5%*
Dividends	10.0%	9.0%	*3.0%*
Book Value	7.0%	5.0%	*7.0%*

Cal-endar	NET PREMIUMS EARNED ($ mill.) A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	6183	6351	6523	6626	25683
2018	6537	6695	6882	6945	27059
2019	6855	6988	7179	7250	28272
2020	7229	***7250***	***7300***	***7336***	***29115***
2021	***7400***	***7475***	***7550***	***7700***	***30125***

Cal-endar	EARNINGS PER SHARE B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	2.16	1.92	.91	2.28	7.27
2018	2.46	1.81	2.54	2.13	8.94
2019	2.83	2.02	1.43	3.32	9.60
2020	2.62	***1.55***	***2.35***	***2.53***	***9.05***
2021	***2.55***	***2.70***	***2.45***	***2.75***	***10.45***

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.67	.67	.67	.67	2.68
2018	.67	.72	.72	.72	2.83
2019	.72	.77	.77	.77	3.03
2020	.77	.82	.82	.82	3.23
2021	.82	.85			

BUSINESS: The Travelers Companies, Inc. (formerly St. Paul Travelers) is a leading provider of commercial property/casualty insurance and asset management services. Following the April 1, 2004 acquisition of Travelers, the company is now a leading underwriter of homeowners insurance and automobile insurance through independent agents. Has approximately 30,800 employees. Officers and directors own approximately .8% of common stock outstanding; The Vanguard Group, 8.7%; BlackRock, 8.6%; State Street Corporation, 6.8% (4/20 Proxy). Chief Executive Officer: Alan D. Schnitzer. Chairman: John H. Dasburg. Incorporated: Minnesota. Address: 485 Lexington Ave, New York, NY 10017. Telephone: 917-778-6000. Internet: www.travelers.com.

Travelers posted decent results during the March quarter. Looking at it with more granularity, operating earnings per share, which excludes capital gains and losses from the investment portfolio, dialed in at $2.62 during the interim. While this represented a decline from the year-ago tally and our $2.75 estimate, it was a solid showing on an absolute basis, nevertheless. The combined ratio checked in at 95.5%, which was a 180-basis-point deterioration from the previous year's figure. This was still quite profitable, however, and implied that the industry leader generated $4.50 in pretax profits for every $100 in policies insured. Management notes that it did have some COVID-related exposure ($68 million aftertax), though it considers the company to be in a position to support those affected by the pandemic.

We look for a moderate bottom-line decline this year, before earnings growth resumes in 2021. Rate increases will likely be difficult to come by, at least through the remainder of 2020, due to a sputtering domestic economy. What's more, investment income is a variable that's worth keeping an eye on. Not only have equity markets been quite volatile over the past few months due to COVID-related concerns, very low interest rates have also constrained bond reinvestment rates. Conditions ought to improve next year, as the coronavirus is hopefully largely behind us.

Share earnings ought to climb at a mid- to high single-digit rate over the 3 to 5 years ahead. Our optimism is based on a decent economic backdrop over that period.

These shares are neutrally ranked for the year ahead. Too, price recovery potential is above the *Value Line* median out to 2023-2025, following the sharp price decrease since our March review. The P/C industry, in aggregate, has been fairly hard hit by COVID-19-related fears. We believe that some of the pricing pressure appears to be an overreaction. The insurance industry as a whole should be spared the worst of COVID-related losses. Indeed, TRV stock offers solid risk-adjusted total return potential over the 3 to 5 years ahead. Conservative accounts should note the solid and increasing dividend.

Alan G. House *June 5, 2020*

(A) P/C only. (B) Dil. egs. Excl. cap gains and losses after '02. Excl. nonrec. (charges)/gains in '06, 3¢; '07, 14¢; '08, (42¢); '09, 1¢; '10, 31¢; '11, 11¢; '12, 9¢; '13, 28¢; '14, 14¢; '15, 3¢; '16, 15¢; '17, 6¢; '19, 35¢. Excl. losses from disc. ops.: '03, 7¢; '04, 62¢. Next egs. rpt. late July. (C) Div'ds. paid in late March, June, Sept., Dec. Excl. spec. div'ds of 21¢/sh. paid 3/04 and 4/04. ■ Div'd reinv. plan avail. (D) Intang. '19: $4,291 mill., $16.76/sh. (E) In mill. (F) St. Paul only until '04.

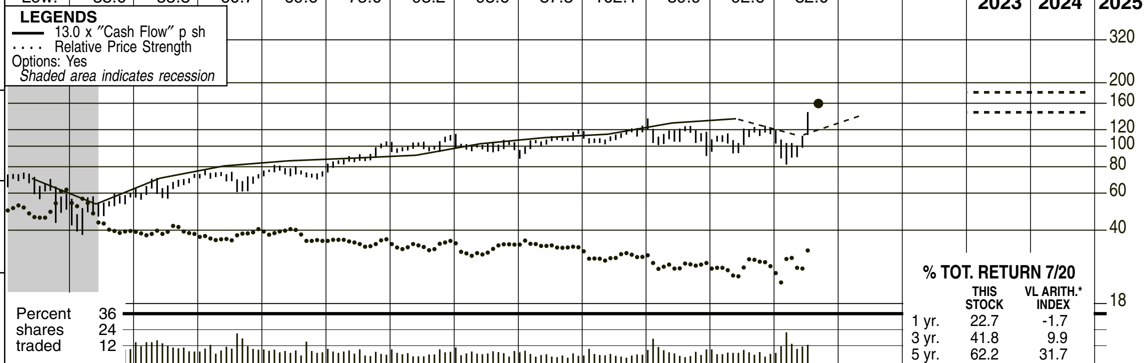
Company's Financial Strength	A++
Stock's Price Stability	100
Price Growth Persistence	80
Earnings Predictability	70

UNITED PARCEL SVC. NYSE-UPS

RECENT PRICE **159.59** | P/E RATIO **21.7** (Trailing: 21.4 / Median: 18.0) | RELATIVE P/E RATIO **0.99** | DIV'D YLD **2.5%** | VALUE LINE 316

TIMELINESS 2 Raised 8/21/20
SAFETY 1 Raised 5/15/20
TECHNICAL 4 Raised 8/21/20
BETA .80 (1.00 = Market)

High:	59.8	73.9	77.0	81.8	105.4	113.1	114.4	120.4	125.2	135.5	125.3	162.7
Low:	38.0	55.8	60.7	69.6	75.0	93.2	93.6	87.3	102.1	89.9	92.6	82.0



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$79-$153	$116 (-25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	180	(+15%)	*6%*
Low	145	(-10%)	*1%*

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	663	836	844
to Sell	703	608	705
Hld's(000)	485440	487413	474883

% TOT. RETURN 7/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	22.7	-1.7
3 yr.	41.8	9.9
5 yr.	62.2	31.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
32.40	38.82	44.44	48.04	51.72	45.62	50.19	55.15	56.80	60.00	64.34	65.87	70.17	76.68	83.75	86.50	*85.85*	*91.15*	Revenues per sh	*103.75*
4.23	5.03	5.56	5.91	5.42	4.09	5.43	6.20	6.56	6.75	6.97	7.91	8.44	8.78	9.92	10.39	*8.60*	*10.90*	"Cash Flow" per sh	*13.15*
2.85	3.47	3.86	4.11	3.50	2.31	3.56	4.23	4.53	4.61	4.75	5.43	5.75	6.01	7.24	7.53	*7.00*	*7.70*	Earnings per sh A	*9.50*
1.12	1.32	1.52	1.64	1.77	1.80	1.88	2.08	2.28	2.48	2.68	2.92	3.12	3.12	3.64	3.84	*4.04*	*4.20*	Div'ds Decl'd per sh B■	*5.15*
1.88	1.99	2.88	2.73	2.65	1.61	1.41	2.08	2.26	2.23	2.57	2.69	3.42	6.09	7.32	7.45	*6.25*	*7.00*	Cap'l Spending per sh	*8.25*
14.51	15.39	14.47	11.78	6.81	7.69	8.08	7.31	4.88	7.01	2.37	2.79	.47	1.16	3.52	3.81	*5.35*	*6.30*	Book Value per sh C	*9.70*
1129.0	1097.0	1070.0	1034.4	995.44	992.85	987.12	963.00	953.00	924.00	905.00	886.00	868.00	859.00	858.00	856.60	*862.00*	*860.00*	Common Shs Outst'g D	*850.00*
26.1	21.1	19.8	17.8	18.4	22.6	18.1	16.7	16.7	19.3	21.2	18.5	18.4	18.6	15.6	14.7	*Bold figures are*		Avg Ann'l P/E Ratio	*17.0*
1.38	1.12	1.07	.94	1.11	1.51	1.15	1.05	1.06	1.08	1.12	.93	.97	.94	.84	.79	*Value Line*		Relative P/E Ratio	*.95*
1.5%	1.8%	2.0%	2.2%	2.7%	3.5%	2.9%	2.9%	3.0%	2.8%	2.7%	2.9%	2.9%	2.8%	3.2%	3.5%	*estimates*		Avg Ann'l Div'd Yield	*3.1%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $26948 mill. **Due in 5 Yrs** $11730 mill.
LT Debt $23199 mill. **LT Interest** $675 mill.
(84% of Cap'l)
Leases, Uncapitalized: Annual rentals $454 mill.
Pension Assets-12/19 $47730 mill.
Oblig. $57553 mill.

Pfd Stock None
Common Stock 862,176,537 shs.
156,294,266 class A shares (10 votes each)
707,081,218 class B shares (1 vote each)
as of 7/20/20
MARKET CAP: $138.0 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
49545	53105	54127	55438	58232	58363	60906	65872	71861	74094	*74000*	*78400*	Revenues ($mill)	*88200*
16.1%	15.9%	16.5%	16.1%	15.5%	16.9%	17.0%	16.1%	13.3%	14.2%	*13.5%*	*14.0%*	Operating Margin	*14.5%*
1792.0	1782.0	1858.0	1867.0	1923.0	2084.0	2224.0	2282.0	2207.0	2360.0	*2600*	*2750*	Depreciation ($mill)	*3080*
3570.0	4193.0	4389.0	4372.0	4389.0	4923.0	5104.0	5259.0	6301.0	6543.0	*6035*	*6625*	Net Profit ($mill)	*8100*
35.0%	34.3%	34.5%	34.5%	35.5%	34.0%	34.5%	33.8%	21.3%	22.0%	*23.0%*	*23.0%*	Income Tax Rate	*23.0%*
7.2%	7.9%	8.1%	7.9%	7.5%	8.4%	8.4%	8.0%	8.8%	8.8%	*8.2%*	*8.5%*	Net Profit Margin	*9.2%*
5667.0	5770.0	7201.0	6256.0	3169.0	2512.0	2119.0	2840.0	2123.0	1690.0	*850*	*450*	Working Cap'l ($mill)	*1000*
10491	11095	11089	10824	9864.0	11316	12394	20278	19931	21818	*24200*	*24000*	Long-Term Debt ($mill)	*20500*
7979.0	7035.0	4653.0	6474.0	2141.0	2470.0	405.0	1000.0	3021.0	3267.0	*4600*	*5400*	Shr. Equity ($mill)	*8250*
20.2%	24.0%	28.9%	26.4%	38.0%	36.9%	41.4%	25.8%	28.8%	27.4%	*21.0%*	*22.5%*	Return on Total Cap'l	*28.0%*
44.7%	59.6%	NMF	67.5%	NMF	NMF	NMF	NMF	208.6%	200.3%	*NMF*	*NMF*	Return on Shr. Equity	*NMF*
22.0%	31.2%	NMF	32.6%	NMF	NMF	NMF	NMF	108.9%	102.5%	*55%*	*55%*	Retained to Com Eq	*44.5%*
51%	48%	49%	52%	54%	51%	52%	53%	48%	49%	*60%*	*55%*	All Div'ds to Net Prof	*54%*

CURRENT POSITION ($MILL.)	2018	2019	6/30/20
Cash Assets	5035	5741	9216
Receivables	8958	9645	9383
Other	2217	1717	1627
Current Assets	16210	17103	20226
Accts Payable	5188	5555	5271
Debt Due	2805	3420	3749
Other	6094	6438	7251
Current Liab.	14087	15413	16271

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	5.5%	6.5%	*6.5%*
"Cash Flow"	6.5%	7.5%	*6.5%*
Earnings	7.5%	8.5%	*6.0%*
Dividends	7.5%	7.5%	*6.5%*
Book Value	-10.5%	-10.0%	*35.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	15315	15750	15978	18829	65872
2018	17113	17456	17444	19848	71861
2019	17160	18048	18318	20568	74094
2020	18035	20549	*18100*	*18316*	*75000*
2021	*18500*	*19200*	*19700*	*21000*	*78400*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	1.32	1.58	1.45	1.67	6.01
2018	1.55	1.94	1.82	1.94	7.24
2019	1.39	1.96	2.07	2.11	7.53
2020	1.15	2.13	*1.80*	*1.92*	*7.00*
2021	*1.50*	*2.00*	*2.05*	*2.15*	*7.70*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.78	.78	.78	.78	3.12
2017	.83	.83	.83	.83	3.32
2018	.91	.91	.91	.91	3.64
2019	.96	.96	.96	.96	3.84
2020	1.01	1.01			

BUSINESS: United Parcel Service, Inc. is the world's largest integrated air and ground package delivery carrier. Also provides specialized transportation and logistics services. Service is offered throughout the U.S. and in over 220 other countries and territories. Domestic package operations accounted for 61% of '19 revenues; international (20%); supply chain & freight (19%). Fleet owned and leased (at 12/31/19): 572 planes and 125,000 ground vehicles. Has about 495,000 employees (over 62% unionized). Officers and directors own less than 1.0% of common stock; BlackRock Inc., 6.3%; Vanguard, 8.1% (3/20 Proxy). Chairman and CEO: David Abney. Incorporated: Delaware. Address: 55 Glenlake Pkwy., NE, Atlanta GA 30328. Telephone: 404-828-6000. Internet: www.ups.com.

United Parcel Service experienced unprecedented demand and record high volume in the second quarter. The company managed to push the top and bottom lines up 13.4% and 8.7%, respectively, in the quarter. The impressive results were driven by ongoing coronavirus-related sheltering-in-place activity, retail store closures, and economic stimulus measures. This helped the U.S. e-commerce market jump 34.3%, propelling total average daily volume up 22.8% to 21.1 million packages. Too, the company's ability to shift air capacity enabled it to meet a demand surge out of Asia. *SurePost* (last-mile residential service) volume increased 96.6% and represented 53% of total U.S. domestic growth. Ground residential volume excluding *SurePost* was up 63.8%. Business-to-consumer volume jumped 65.2% and represented 69% of total volume versus 54% in 2019. Given the downturn in the industrial sector, business-to-business volume declined 21.9%, but UPS did see this begin to ease toward the end of the quarter.

The near-term outlook is mostly favorable. Residential demand ought to remain healthy, but domestic average daily volume growth is expected to be lower in the second half compared to the second quarter due to difficult comparisons. Asian outbound demand and yields ought to be positive, but should moderate versus the second quarter. It's difficult to predict exactly how the B2B market will unfold, but most likely scenarios suggest a gradual recovery along with the global economy.

UPS wants to become "better not bigger." Plans are under way to make the U.S. ground network faster in thousands of lanes by the end of this year. Meanwhile, UPS will continue to expand weekend operations, *SurePost*, and commercial delivery and pickup services. We expect prices to also rise in the quarters ahead, as underlying demand remains strong and capacity is tight.

These timely shares no longer possess compelling long-term price appreciation potential. The stock price has risen 70% since our last report, and the price-to-earnings multiple is now nearly 50% higher compared to this time a year ago. Thus, value investors should probably pass.

Kevin Downing *August 21, 2020*

(A) Diluted earnings. Excludes nonrecurring gains (losses): '04, $0.08; '07, ($3.77); '08, ($0.56); '09, ($0.17); '10, ($0.08); '12, ($3.70). May not sum due to changes in share count. Next earnings report due late October.
(B) Dividends historically paid February, May, August, and November. ■ Dividend reinvestment plan available.
(C) Includes intangibles. In 2019: $5980 mill., $6.92 per share.
(D) In millions.

Company's Financial Strength	A+
Stock's Price Stability	95
Price Growth Persistence	65
Earnings Predictability	100

VERIZON NYSE-VZ

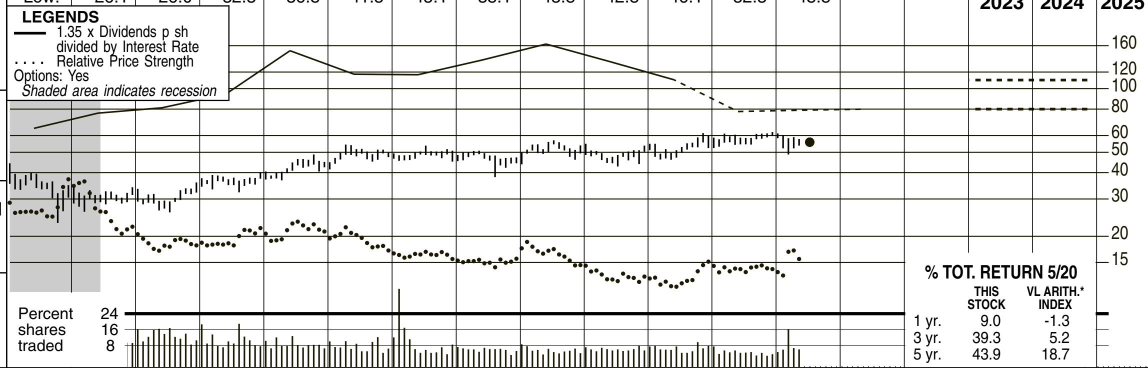
RECENT PRICE 55.78 | P/E RATIO 11.4 (Trailing: 11.5 / Median: 13.0) | RELATIVE P/E RATIO 0.58 | DIV'D YLD 4.5% | VALUE LINE

TIMELINESS 3 Lowered 6/12/20
SAFETY 1 Raised 9/28/07
TECHNICAL 2 Raised 6/5/20
BETA .65 (1.00 = Market)

High:	34.8	36.0	40.3	48.8	54.3	53.7	50.9	56.9	54.8	61.6	62.2	61.4
Low:	26.1	26.0	32.3	36.8	41.5	45.1	38.1	43.8	42.8	46.1	52.3	48.8

Target Price Range 2023 | 2024 | 2025

LEGENDS
—— 1.35 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$48-$76	$62 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	110	(+95%)	21%
Low	80	(+45%)	13%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	1249	1440	1345
to Sell	968	933	1112
Hld's(000)	2738299	2766476	2720314

Percent shares traded 24 16 8

% TOT. RETURN 5/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	9.0	-1.3
3 yr.	39.3	5.2
5 yr.	43.9	18.7

2004	2005	2006E	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
25.73	25.59	30.29	32.56	34.27	38.02	37.68	39.10	40.53	29.11	30.58	32.31	30.90	30.89	31.67	31.88	**31.80**	**32.90**	Revenues per sh	**34.95**
7.64	7.24	7.07	7.40	7.65	8.12	8.01	7.96	7.85	6.79	7.19	7.94	7.79	7.91	8.88	8.85	**9.00**	**9.05**	"Cash Flow" per sh	**9.25**
2.59	2.56	2.54	2.34	2.54	2.40	2.21	2.15	2.32	4.00	3.35	3.99	3.87	3.74	4.71	4.81	**4.90**	**5.05**	Earnings per sh (A)	**5.55**
1.54	1.62	1.62	1.65	1.78	1.87	1.93	1.96	2.02	2.08	2.16	2.23	2.29	2.29	2.37	2.42	**2.47**	**2.52**	Div'ds Decl'd per sh (B) ■	**2.62**
4.79	5.24	5.88	6.11	6.07	6.01	5.82	5.73	5.66	4.01	4.14	4.36	4.18	4.23	4.03	4.34	**4.25**	**4.25**	Cap'l Spending per sh	**4.40**
13.56	13.56	16.68	17.62	14.68	14.67	13.64	12.69	11.60	9.38	2.96	4.03	5.53	10.95	12.86	14.84	**15.25**	**15.25**	Book Value per sh	**13.65**
2770.0	2926.8	2909.9	2871.0	2840.6	2835.7	2828.1	2835.5	2858.3	4141.1	4155.4	4073.2	4076.7	4079.5	4132.0	4135.8	**4140.0**	**4145.0**	Common Shs Outst'g (C)	**4000.0**
14.8	13.2	13.4	17.6	13.7	12.7	13.8	17.1	18.1	12.2	14.5	11.8	13.3	12.9	11.1	12.1	*Bold figures are*	*Value Line*	Avg Ann'l P/E Ratio	**17.5**
.78	.70	.72	.93	.82	.85	.88	1.07	1.15	.69	.76	.59	.70	.65	.60	.65	*estimates*		Relative P/E Ratio	**.95**
4.0%	4.8%	4.8%	4.0%	5.1%	6.1%	6.3%	5.3%	4.8%	4.3%	4.4%	4.7%	4.5%	4.7%	4.5%	4.2%			Avg Ann'l Div'd Yield	**2.8%**

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
106565	110875	115846	120550	127079	131620	125980	126034	130863	131868	**131550**	**136275**	Revenues ($mill)	**139750**
6256.6	6086.8	5970.4	11497	13337	16324	15809	15297	19279	19920	**20285**	**20930**	Net Profit ($mill)	**22200**
19.5%	2.7%	- -	19.6%	29.9%	34.6%	33.7%	32.9%	18.3%	23.3%	**25.0%**	**25.0%**	Income Tax Rate	**25.0%**
5.9%	5.5%	5.2%	9.5%	10.5%	12.4%	12.5%	12.1%	14.7%	15.1%	**15.4%**	**15.4%**	Net Profit Margin	**16.0%**
34.2%	36.9%	35.8%	48.4%	89.0%	85.3%	81.4%	71.1%	65.9%	61.6%	**80.0%**	**80.0%**	Long-Term Debt Ratio	**79.0%**
29.2%	26.4%	24.9%	21.0%	9.9%	13.5%	17.4%	27.9%	33.1%	37.5%	**20.0%**	**20.0%**	Common Equity Ratio	**21.0%**
132164	136211	133151	185074	124212	121547	129465	159920	160583	163547	**122250**	**122500**	Total Capital ($mill)	**126000**
87711	88434	88642	88956	89947	83541	84751	88568	89286	91915	**86700**	**86900**	Net Plant ($mill)	**89000**
7.6%	7.2%	7.5%	9.0%	11.0%	13.7%	12.4%	9.7%	12.2%	12.4%	**17.0%**	**17.0%**	Return on Total Cap'l	**16.0%**
16.2%	16.9%	18.0%	29.6%	108.4%	99.4%	70.2%	34.2%	36.3%	32.4%	**37.0%**	**37.0%**	Return on Shr. Equity	**40.0%**
16.2%	16.9%	18.0%	29.6%	108.4%	99.4%	70.2%	34.2%	36.3%	32.4%	**37.0%**	**37.0%**	Return on Com Equity	**40.0%**
2.2%	1.5%	2.2%	14.3%	45.0%	47.4%	29.1%	13.0%	17.9%	16.1%	**37.0%**	**37.0%**	Retained to Com Eq	**40.0%**
87%	91%	88%	52%	59%	52%	59%	62%	51%	50%	**50%**	**50%**	All Div'ds to Net Prof	**50%**

CAPITAL STRUCTURE as of 3/31/20
Total Debt $117736 mill. **Due in 5 Yrs** $36704mill.
LT Debt $106561 mill. **LT Interest** $3725 mill.
Incl. $366.0 mill. capitalized leases.
(Total interest coverage: 7.1x)
(63% of Total Cap'l.)
Leases, Uncapitalized Annual rentals $4099 mill.
Pension Assets-12/19 $19.4 bill.
Oblig. $21.2 bill.

Pfd Stock None

Common Stock 4,137,995,405 shs.
MARKET CAP: $231 billion (Large Cap)

CURRENT POSITION ($MILL.)	2017	2018	3/31/20
Cash Assets	2079	2745	7047
Other	27834	31891	33658
Current Assets	29913	34636	40705
Accts Payable	21232	22501	17419
Debt Due	3453	7190	11175
Other	8352	8239	12463
Current Liab.	33037	37930	41057

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-1.0%	-1.0%	1.5%
"Cash Flow"	1.0%	3.5%	2.0%
Earnings	6.0%	6.5%	4.0%
Dividends	3.0%	2.5%	2.0%
Book Value	-2.0%	10.0%	5.5%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	29814	30548	31717	33955	126034
2018	31772	32203	32607	34281	130863
2019	32128	32071	32894	34775	131868
2020	31610	*31490*	*33450*	*35000*	*131550*
2021	*33330*	*33330*	*34020*	*35595*	*136275*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.95	.96	.98	.85	3.74
2018	1.17	1.20	1.22	1.12	4.71
2019	1.20	1.23	1.25	1.13	4.81
2020	1.26	*1.18*	*1.30*	*1.16*	*4.90*
2021	*1.24*	*1.29*	*1.32*	*1.20*	*5.05*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.565	.565	.58	.58	2.29
2017	.58	.58	.58	.59	2.33
2018	.59	.59	.59	.6025	2.37
2019	.6025	.6025	.6025	.615	2.42
2020	.615	.615			

BUSINESS: Verizon Communications was created by the merger of Bell Atlantic and GTE in June of 2000. It is a diversified telecom company with a network that covers a population of about 298 million and provides service to nearly 98.2 million. Acquired MCI, 1/06; Alltel, 1/09; Verizon Wireless, 2/14. Also the largest provider of print and on-line directory information. Has a wireline presence in 28 states & Washington, D.C.; a wireless presence in 50 states & D.C.; operations in 19 countries. 2019 revenue breakdown: Consumer Group, 69%; Business Group, 24%; corporate & other, 7%. Has about 135,000 employees. Chairman: Lowell McAdam; CEO: Hans Vestberg. Inc.: Delaware. Addr.: 1095 Avenue of the Americas, NY, NY 10036. Tel.: 212-395-1000. Internet: www.verizon.com.

Verizon's first-quarter performance was better than expected. The telecommunications giant and Dow-30 component reported first-quarter earnings of $1.26 a share, four cents above our estimate and a 5% improvement versus the year-ago figure, on a 1.6% drop in the top line. Management estimated that first-quarter earnings were tempered by about four cents a share due to COVID-19-related net impacts, mostly driven by an increase in its bad debt reserve. Bad debt expense increases in the March quarter were the result of changing expectations around customer payments due to the coronavirus pandemic. Notably, Verizon upped its bad debt reserve in the March quarter by $228 million, based on the expected number of customers who would seek payment relief under the Keep Americans Connected pledge. In addition, the decrease in year-over-year revenues came about due to sharp reductions in equipment revenue, after social distancing measures were adopted in March, which significantly curtailed in-store customer interaction.

But we have reined in our top- and bottom-line expectations for the year. Indeed, in light of the ongoing coronavirus pandemic, Verizon updated its sales and earnings guidance, and now looks for share-net growth of -2% to +2%, versus its earlier expectation of growth of 2% to 4% for the year, with significant headwinds expected in the June interim. Additionally, the company has withdrawn its consolidated revenues guidance for the time being. All told, we have pared our 2020 earnings call by a nickel, to $4.90 a share, and we are cautiously optimistic that Verizon will post earnings of $5.05 a share next year.

The investment community seems enthused by the company's long-term prospects. To wit, VZ stock is currently trading more or less on par with where it was at the time of our mid-March review, versus a modest 1.4% uptick in the S&P 500 Index over the same period.

At the recent quotation, this blue-chip equity offers worthwhile capital-appreciation potential through the early years of this decade. Moreover, VZ stock could well be the darling of the income-seeking set, as its dividend yield is well above that of the *Value Line* median.

Kenneth A. Nugent *June 12, 2020*

(A) Based diluted shares. Excl. n/r gains (losses): '04, $0.08; '06, ($0.42). Next earnings report late July. **(B)** Div'd paid in early Feb., May, Aug. & Nov. ■ Div'd reinv. plan avail. **(C)** In mill. **(D)** Including financial subsidiary. **(E)** '06 MCI pro forma.

Company's Financial Strength	A++
Stock's Price Stability	100
Price Growth Persistence	35
Earnings Predictability	70

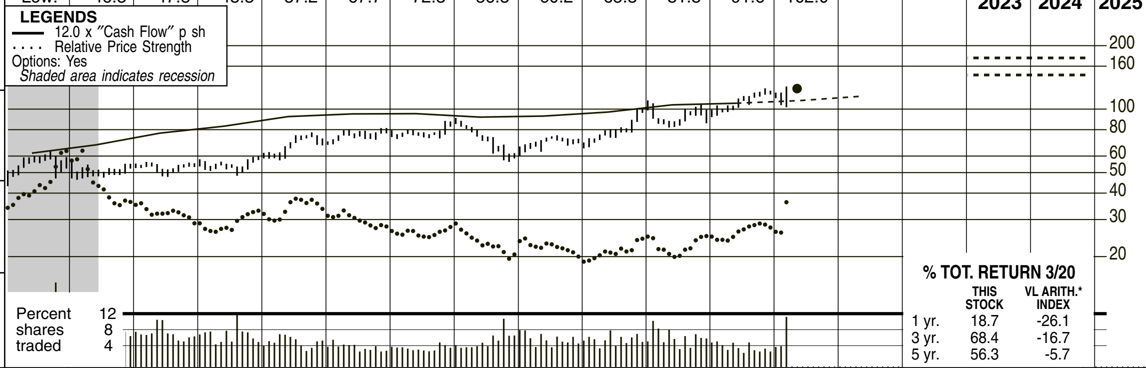
WALMART INC. NYSE-WMT

RECENT PRICE 125.30 | P/E RATIO 24.2 (Trailing: 25.4 Median: 15.0) | RELATIVE P/E RATIO 1.66 | DIV'D YLD 1.7% | VALUE LINE

TIMELINESS 3 Lowered 4/3/20
SAFETY 1 Raised 2/15/02
TECHNICAL 3 Raised 4/24/20
BETA .75 (1.00 = Market)

High:	57.5	56.3	60.0	77.6	81.4	88.1	91.0	75.2	100.1	110.0	125.4	128.1
Low:	46.3	47.8	48.3	57.2	67.7	72.3	56.3	60.2	65.3	81.8	91.6	102.0

LEGENDS
— 12.0 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range 2023 | 2024 | 2025

18-Month Target Price Range
Low-High: $88-$129 | Midpoint (% to Mid): $109 (-15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	175	(+40%)	10%
Low	145	(+15%)	6%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	878	894	1026
to Sell	835	832	847
Hld's(000)	868976	874047	877252

Percent shares traded 12 8 4

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	18.7	-26.1
3 yr.	68.4	-16.7
5 yr.	56.3	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
68.02	75.79	84.40	95.34	103.34	107.82	119.98	130.76	141.57	147.32	150.45	152.48	159.41	169.49	178.74	185.02	**193.40**	**200.90**	Sales per sh A	**217.50**
3.47	3.78	4.27	4.83	5.16	5.64	6.42	6.92	7.69	7.92	7.93	7.64	7.72	8.07	8.73	8.90	**9.15**	**9.60**	"Cash Flow" per sh	**11.50**
2.41	2.63	2.92	3.16	3.42	3.66	4.07	4.45	5.02	5.11	5.07	4.57	4.32	4.42	4.91	4.93	**5.30**	**5.45**	Earnings per sh A B	**7.20**
.52	.60	.67	.88	.95	1.09	1.21	1.46	1.59	1.88	1.92	1.96	2.00	2.04	2.08	2.12	**2.16**	**2.20**	Div'ds Decl'd per sh ■C	**2.90**
11.67	12.77	14.91	16.26	16.63	18.69	19.49	20.86	23.04	23.59	25.22	25.47	25.52	26.38	25.19	26.37	**28.05**	**28.55**	Book Value per sh	**34.00**
4234.0	4165.0	4131.0	3973.0	3925.0	3786.0	3516.0	3418.0	3314.0	3233.0	3228.0	3162.0	3048.0	2952.0	2878.0	2832.0	**2800.0**	**2765.0**	Common Shs Outst'g D	**2600.0**
22.8	18.3	16.0	14.9	16.2	13.9	13.1	12.4	13.5	14.9	15.4	15.5	16.2	18.6	18.7	22.3	*Bold figures are*		Avg Ann'l P/E Ratio	**22.0**
1.20	.97	.86	.79	.97	.93	.83	.78	.86	.84	.81	.78	.85	.94	1.01	1.21	*Value Line*		Relative P/E Ratio	**1.20**
.9%	1.2%	1.4%	1.9%	1.7%	2.1%	2.3%	2.7%	2.3%	2.5%	2.5%	2.8%	2.9%	2.5%	2.3%	1.9%	*estimates*		Avg Ann'l Div'd Yield	**1.8%**

CAPITAL STRUCTURE as of 1/31/20
Total Debt $54469 mill. **Due in 5 Yrs** $20220 mill.
LT Debt $48021 mill. **LT Interest** $2340 mill.
Incl. $4307 mill. property under capital lease.
(Total interest coverage: 9.5x) (39% of Cap'l)

Leases, Uncapitalized Annual rentals $2587 mill.

No Defined Benefit Pension Plan
Pfd Stock None

Common Stock 2,832,277,220 shs.
as of 3/18/20

MARKET CAP: $355 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
421849	446950	469162	476294	485651	482130	485873	500343	514405	523964	**541530**	**555500**	Sales ($mill) A	**565500**
25.3%	25.0%	24.9%	24.8%	24.8%	25.1%	25.6%	25.4%	25.1%	24.7%	**24.5%**	**24.5%**	Gross Margin	**25.0%**
7.9%	7.7%	7.7%	7.7%	7.6%	7.0%	6.7%	6.7%	6.3%	6.2%	**6.2%**	**6.3%**	Operating Margin	**6.5%**
8970	10130	10773	10942	11453	11528	11695	11718	11361	11501	**11640**	**11700**	Number of Stores	**12000**
14921	15523	16999	16728	16426	14694	13452	13283	14460	14135	**14550**	**15165**	Net Profit ($mill)	**18750**
34.0%	33.4%	31.0%	32.2%	31.9%	30.3%	30.6%	31.4%	24.5%	24.4%	**25.0%**	**25.0%**	Income Tax Rate	**25.0%**
3.5%	3.5%	3.6%	3.5%	3.4%	3.0%	2.8%	2.7%	2.8%	2.7%	**2.7%**	**2.7%**	Net Profit Margin	**3.3%**
d6591	d7325	d11878	d8160	d1994	d4380	d9239	d18857	d15580	d15984	**d14860**	**d18610**	Working Cap'l ($mill)	**d9200**
43842	47079	41417	44559	43692	44030	42018	36825	50203	48021	**45500**	**45000**	Long-Term Debt ($mill)	**40000**
68542	71315	76343	76255	81394	80546	77798	77869	72496	74669	**78500**	**79000**	Shr. Equity ($mill)	**88400**
14.1%	14.0%	15.3%	14.7%	14.0%	12.6%	12.1%	12.1%	12.7%	11.5%	**11.5%**	**12.0%**	Return on Total Cap'l	**14.5%**
21.8%	21.8%	22.3%	21.9%	20.2%	18.2%	17.3%	17.1%	19.9%	18.9%	**19.0%**	**19.0%**	Return on Shr. Equity	**21.0%**
15.3%	14.7%	15.2%	13.9%	12.6%	10.4%	9.3%	9.2%	11.5%	10.7%	**11.0%**	**11.5%**	Retained to Com Eq	**12.5%**
30%	33%	32%	37%	38%	43%	46%	46%	42%	43%	**41%**	**40%**	All Div'ds to Net Prof	**40%**

CURRENT POSITION ($MILL.)	2017	2018	1/31/20
Cash Assets	6756	7722	9465
Receivables	5614	6283	6284
Inventory (LIFO)	43783	44269	44435
Other	3511	3623	1622
Current Assets	59664	61897	61806
Accts Payable	46092	47060	46973
Debt Due	9662	2605	6448
Other	22767	27812	24369
Current Liab.	78521	77477	77790

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '23-'25
Sales	6.0%	4.0%	4.5%
"Cash Flow"	5.5%	1.5%	5.5%
Earnings	3.5%	-1.5%	7.5%
Dividends	9.5%	4.5%	4.0%
Book Value	5.0%	2.5%	3.5%

Fiscal Year Begins	QUARTERLY SALES ($ mill.) A Apr.30	Jul.31	Oct.31	Jan.31	Full Fiscal Year
2017	117542	123355	123179	136267	500343
2018	122690	128028	124894	138793	514405
2019	123925	130377	127991	141671	523964
2020	**128600**	**134400**	**131815**	**146715**	**541530**
2021	**130000**	**137500**	**135850**	**152150**	**555500**

Fiscal Year Begins	EARNINGS PER SHARE A B Apr.30	Jul.31	Oct.31	Jan.31	Full Fiscal Year
2017	1.00	1.08	1.00	1.33	4.42
2018	1.14	1.29	1.08	1.41	4.91
2019	1.13	1.27	1.16	1.38	4.93
2020	**1.25**	**1.35**	**1.20**	**1.50**	**5.30**
2021	**1.20**	**1.40**	**1.27**	**1.58**	**5.45**

Cal-endar	QUARTERLY DIVIDENDS PAID ■ C Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.50	.50	.50	.50	2.00
2017	.51	.51	.51	.51	2.04
2018	.52	.52	.52	.52	2.08
2019	.53	.53	.53	.53	2.12
2020	.54				

BUSINESS: Walmart Inc. owns the world's largest retail chain, operating 3,570 supercenters (includes grocery departments), 386 discount stores, 599 Sam's Clubs, and 813 Neighborhood Markets in the U.S., plus 5,993 foreign stores, many in Latin America, with the rest in Asia, Canada, and the U.K. as of 1/31/19. Total store space: 1.129 billion square feet. Retail space is largely owned, and most stores are within 400 miles of a distribution center. Groceries accounted for 56% of U.S. sales; sales per square foot in 2018: about $455. Has 2,200,000 employees. Off./dir. own 50.2% of shares (4/19 proxy). Chairman: Gregory B. Penner. CEO and Pres.: Doug McMillon. Inc.: DE. Addr.: 702 S.W. 8th St., Bentonville, AR 72716. Tel.: 479-273-4000. Internet: www.walmart.com.

Walmart's stock has held up well amid the broader market selloff. The general merchandise retailer has seen its shares rise 4% over the past three months, even as its counterparts in the Dow Jones Industrial Average have fallen more than 14% on concerns over the economic impact that the coronavirus pandemic is having in the United States. This makes sense since shoppers have been stocking up on groceries and other consumer staples as they stay at home to avoid contracting or spreading the virus. Too, Walmart shares have always been viewed as a safe haven due to the essential nature of its products and sustainability of its business model. As a result, the forward price-to-earnings ratio is around four points higher than the year-ago multiple.

The company has made some operational changes to keep its associates and shoppers safe. First and foremost, sanitation efforts have been stepped up. The company is also taking the temperatures of its associates when they arrive at work, and are asking them to stay home if they don't feel well. Mask and gloves are also being provided to those who wish to wear them, and Walmart is encouraging its employees to stay at least six feet from each other and customers. We think these efforts will provide reassurance to customers and potentially encourage them to shop at Walmart instead of smaller grocers with less stringent procedures.

The company's guidance may prove conservative. The fact that most retailers have temporarily closed their stores to slow the spread of the virus will likely provide a tailwind to Walmart's market share. Too, as job losses mount and wages are cut, more consumers may "trade down" and start shopping more at Walmart to take advantage of its relatively low prices. Too, Walmart's grocery pick-up/delivery options will likely be even more popular as shoppers try to minimize interaction with others. Management has not cut guidance, and we think its fiscal 2020 same-store sales estimate of 2.5% may well prove conservative.

These shares may interest conservative investors. Although the shares are not trading at a discount, they provide relative safety in this turbulent market.

Kevin Downing *April 24, 2020*

(A) Fiscal year ends Jan. 31st of following calendar year. Sales exclude rentals from licensed depts. (B) Based on diluted shares. May not sum due to rounding. Excls. n/r (losses)/gains: '05, $0.03; '08, ($0.07); '09, $0.04; '10, $0.40; '11, $0.03; '13, ($0.23); '15 ($0.08). Next earnings report due May 19th. (C) Divds. historically paid in early Mar., May, Aug., and Dec.■ Dividend reinvestment plan available. (D) In millions.

Company's Financial Strength	A++
Stock's Price Stability	95
Price Growth Persistence	40
Earnings Predictability	95

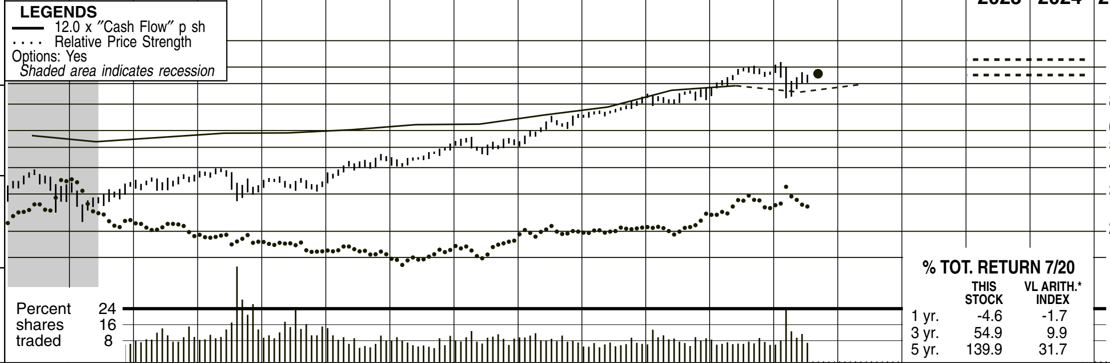
WASTE MANAGEMENT NYSE-WM

RECENT PRICE 111.61 | P/E RATIO 29.2 (Trailing: 26.6 Median: 20.0) | RELATIVE P/E RATIO 1.33 | DIV'D YLD 2.0% | VALUE LINE 414

TIMELINESS 2 raised 8/21/20
SAFETY 1 Raised 11/28/14
TECHNICAL 4 Lowered 8/21/20
BETA .80 (1.00 = Market)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	34.2	37.3	39.7	36.3	46.4	51.9	55.9	71.8	86.9	95.5	121.8	126.8
Low:	22.1	31.1	27.8	30.8	33.7	40.3	45.9	50.4	69.0	78.4	87.3	85.3

LEGENDS
12.0 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range 2023 2024 2025

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$89-$157 $123 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	130	(+15%)	6%
Low	110	(Nil)	2%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	586	642	595
to Sell	530	549	628
Hld's(000)	312537	314447	311577

Percent shares traded 24 16 8

% TOT. RETURN 7/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-4.6	-1.7
3 yr.	54.9	9.9
5 yr.	139.9	31.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
21.95	23.67	25.04	26.61	27.28	24.26	26.34	29.05	29.40	30.12	30.52	28.98	30.98	33.43	35.18	36.42	*35.05*	*37.65*	Revenues per sh	*40.50*
3.78	4.05	4.36	4.68	4.74	4.43	4.64	4.86	4.87	5.04	5.34	5.36	5.91	6.46	7.76	8.14	*7.60*	*8.30*	"Cash Flow" per sh	*9.50*
1.41	1.55	1.82	2.07	2.19	2.00	2.10	2.14	2.08	2.15	2.48	2.53	2.91	3.22	4.20	4.40	*3.80*	*4.35*	Earnings per sh A	*5.45*
.75	.85	.88	.96	1.08	1.16	1.26	1.36	1.42	1.46	1.50	1.54	1.64	1.70	1.86	2.05	*2.18*	*2.40*	Div'ds Decl'd per sh B	*2.70*
2.21	2.14	2.49	2.42	2.49	2.43	2.32	2.88	3.25	2.74	2.51	2.76	3.05	3.48	4.00	4.28	*3.90*	*3.90*	Cap'l Spending per sh	*4.40*
10.47	11.08	11.66	11.58	12.03	12.93	13.18	13.18	13.69	12.29	12.79	11.95	12.06	13.89	14.80	16.66	*16.55*	*17.05*	Book Value per sh C	*18.45*
570.21	552.25	533.68	500.12	490.74	486.12	475.05	460.53	464.22	464.32	458.54	447.18	439.32	433.32	423.98	424.33	*422.40*	*422.40*	Common Shs Outst'g D	*420.00*
20.4	18.7	19.4	17.7	15.4	14.6	16.3	16.4	16.2	18.9	18.2	20.4	21.3	23.4	20.7	24.8	*Bold figures are*		Avg Ann'l P/E Ratio	*22.0*
1.08	1.00	1.05	.94	.93	.97	1.04	1.03	1.03	1.06	.96	1.03	1.12	1.18	1.12	1.34	*Value Line*		Relative P/E Ratio	*1.20*
2.6%	2.9%	2.5%	2.6%	3.2%	4.0%	3.7%	3.9%	4.2%	3.6%	3.3%	3.0%	2.6%	2.3%	2.1%	1.9%	*estimates*		Avg Ann'l Div'd Yield	*2.2%*

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
12515	13378	13649	13983	13996	12961	13609	14485	14914	15455	*14800*	*15900*	Revenues ($mill)	*17000*
25.8%	24.9%	24.7%	24.3%	25.1%	26.1%	27.3%	27.6%	28.2%	28.0%	*28.0%*	*28.5%*	Operating Margin	*29.5%*
1194.0	1229.0	1297.0	1333.0	1292.0	1245.0	1301.0	1376.0	1477.0	1574.0	*1600*	*1670*	Depreciation ($mill)	*1700*
1011.0	1007.0	966.0	1008.0	1155.0	1153.0	1297.3	1425.0	1813.0	1881.0	*1605*	*1840*	Net Profit ($mill)	*2300*
35.0%	33.6%	34.0%	30.0%	29.8%	32.7%	34.3%	36.0%	22.1%	20.2%	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
8.1%	7.5%	7.1%	7.2%	8.3%	8.9%	9.5%	9.8%	12.2%	12.2%	*10.8%*	*11.6%*	Net Profit Margin	*13.5%*
d3.0	d689.0	d613.0	d515.0	156.0	d165.0	d418.0	d638.0	d463.0	3065.0	*d650*	*d500*	Working Cap'l ($mill)	*500*
8674.0	9125.0	9173.0	9500.0	8345.0	8728.0	8893.0	8752.0	9594.0	13280	*9500*	*9000*	Long-Term Debt ($mill)	*8500*
6260.0	6070.0	6354.0	5707.0	5866.0	5345.0	5297.0	6019.0	6275.0	7068.0	*7000*	*7200*	Shr. Equity ($mill)	*7750*
8.4%	8.2%	7.8%	8.2%	9.8%	9.6%	10.5%	10.9%	12.6%	10.3%	*11.0%*	*12.5%*	Return on Total Cap'l	*15.5%*
16.2%	16.6%	15.2%	17.7%	19.7%	21.6%	24.5%	23.7%	28.9%	26.6%	*23.0%*	*25.5%*	Return on Shr. Equity	*29.5%*
6.5%	6.1%	4.8%	5.7%	7.9%	8.6%	10.8%	11.2%	16.1%	14.2%	*10.0%*	*11.5%*	Retained to Com Eq	*15.0%*
60%	63%	68%	68%	60%	60%	56%	53%	44%	47%	*57%*	*55%*	All Div'ds to Net Prof	*49%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $12788 mill. **Due in 5 Yrs** $3500 mill.
LT Debt $9598 mill. **LT Interest** $450 mill.
(LT int. earned: 6.4x)
(58% of Cap'l)

Leases, Uncapitalized Annual rentals $63.0 mill.

No Defined Benefit Pension Plan

Pfd Stock None.

Common Stock 422,461,187 shs.
as of 7/27/20
MARKET CAP: $47.2 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	6/30/20
Cash Assets	61	3561	2663
Receivables	1931	2319	1888
Other	653	329	555
Current Assets	2645	6209	5106
Accts Payable	1037	903	904
Debt Due	432	218	3190
Other	1639	2023	1678
Current Liab.	3108	3144	5772

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	3.0%	3.0%	2.5%
"Cash Flow"	5.0%	8.0%	4.0%
Earnings	6.5%	12.0%	5.5%
Dividends	6.0%	5.0%	6.5%
Book Value	2.0%	3.0%	3.5%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	3440	3677	3716	3652	14485
2018	3511	3739	3822	3842	14914
2019	3696	3946	3967	3846	15455
2020	3729	3561	*3700*	*3810*	*14800*
2021	*3750*	*3850*	*4000*	*4300*	*15900*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.66	.82	.90	.85	3.22
2018	.91	1.01	1.15	1.13	4.20
2019	.94	1.11	1.19	1.19	4.40
2020	.93	.88	*.95*	*1.04*	*3.80*
2021	*.95*	*1.05*	*1.10*	*1.25*	*4.35*

Cal-endar	QUARTERLY DIVIDENDS PAID ■B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.41	.41	.41	.41	1.64
2017	.425	.425	.425	.425	1.70
2018	.465	.465	.465	.465	1.86
2019	.5125	.5125	.5125	.5125	2.05
2020	.545	.545			

BUSINESS: Waste Management is North America's largest provider of comprehensive waste management environmental services. It serves residential, commercial, industrial, & municipal customers. Sold waste-to-energy service business in 12/14. Owns/operates about 249 landfills, 103 material recovery facilities (MRFs), and 302 transfer stations; '19 sales mix consisted of collection (66%), landfill fees (25%), and recycling and transfer (9%); commercial and industrial customers account for approximately 46% of revenues. Has 44,900 employees. Off./Dirs. control less than 1.0% of stock (3/20 proxy). Chairman.: Thomas Weidemeyer. CEO: James Fish. Inc.: DE. Addr.: 1001 Fannin St., Ste 4000, Houston, TX 77002. Tel.: 713-512-6200. Internet: www.wm.com.

Waste Management posted modest results for the second quarter. While the top and bottom lines declined about 10% and 21% year over year, to $3.56 billion and $0.88 per share, respectively, these figures topped our expectations and consensus forecasts. Total company volumes declined over 10% in the second quarter, mostly pressured by the pandemic. The commercial business line experienced an 11% drop in volumes, along with 16% in industrial, and 18% in landfill operations. Meanwhile, core pricing also remained weak, as the company halted price increases amid the health crisis. On the cost side, management adopted tight expense controls. Some initiatives included labor and route optimization in response to reduced volumes, along with the elimination of nonessential spending.

The trash hauler's near-term profit picture looks favorable. Overall operations seem to be recovering. According to the latest report, commercial volumes are picking up, albeit slowly. The company noted healthy rebounds across the board. We think Waste Management will likely continue to navigate this challenging operating environment well, owing to its resilient business model. All told, share net for 2020 will probably take a step back before improving next year.

The company remains on track to close its Advanced Disposal acquisition. The transaction is expected to be finalized in the third quarter. These waste companies have decided to revise the terms of the agreement and sell all anticipated divestitures to GFL Environmental. Waste Management recently entered into an additional $3 billion revolving credit facility to fund a portion of the aforesaid acquisition.

Shares of Waste Management have risen a notch on the Timeliness scale and are now ranked 2 (Above Average) for year-ahead relative price performance. At the recent quotation, WM has limited long-term capital appreciation potential. On the bright side, the company continues to pay dividends amid the pandemic when many businesses have suspended payments. Plus, it appears that management will continue to reward shareholders through these distributions.

Emma Jalees *August 21, 2020*

(A) Based on diluted shares. Next earnings report due mid-Oct. Egs. may not sum due to rdg./shs. out. Excludes extraord. losses: '10, $0.12; '11, $0.10; '12, $0.22; '13, $1.94; '15, $0.88. Excl. extraord. gains: '04, $0.20; '05, $0.54; '06, $0.28; '07, $0.16; '09, $0.01; '14, $0.31; '15, $0.10; '16, $0.26; '17, $1.19; '18, $0.25; '19, $0.49.
(B) Dividends usually paid in late March, June, Sept., and Dec. ■ Div. reinvestment plan avail.
(C) Incl. intangs. At '19; 7.053 bill., $16.62/sh.
(D) In millions.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	75
Earnings Predictability	100

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	2	1	2	2
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	APD	Industry	Sector(s)	S&P 500
Current Qtr.	-3.50%	N/A	N/A	N/A
Next Qtr.	11.20%	N/A	N/A	N/A
Current Year	2.10%	N/A	N/A	N/A
Next Year	17.30%	N/A	N/A	N/A
Next 5 Years (per annum)	10.33%	N/A	N/A	N/A
Past 5 Years (per annum)	4.80%	N/A	N/A	N/A

2.5

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (23) ›

Average 302.39

Low 215.00 High 364.00

Current 300.60

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	DOX	Industry	Sector(s)	S&P 500
Current Qtr.	9.30%	N/A	N/A	N/A
Next Qtr.	7.50%	N/A	N/A	N/A
Current Year	2.10%	N/A	N/A	N/A
Next Year	7.30%	N/A	N/A	N/A
Next 5 Years (per annum)	4.40%	N/A	N/A	N/A
Past 5 Years (per annum)	6.34%	N/A	N/A	N/A

Low 67.00 High 80.00
Current 59.40

Upgrades & Downgrades

Maintains	Citigroup: to Buy	5/11/2020
Maintains	Baird: to Neutral	2/5/2020
Maintains	Citigroup: to Buy	1/15/2020
Maintains	JP Morgan: to Neutral	11/13/2019
Maintains	JP Morgan: to Neutral	8/8/2019
Maintains	Citigroup: Buy to Buy	8/2/2018

More Upgrades & Downgrades

Up Last 7 Days	1	1	1	1
Up Last 30 Days	2	1	3	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	1

Growth Estimates	AMGN	Industry	Sector(s)	S&P 500
Current Qtr.	3.80%	N/A	N/A	N/A
Next Qtr.	-1.90%	N/A	N/A	N/A
Current Year	6.40%	N/A	N/A	N/A
Next Year	7.20%	N/A	N/A	N/A
Next 5 Years (per annum)	6.87%	N/A	N/A	N/A
Past 5 Years (per annum)	10.84%	N/A	N/A	N/A

2.3

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (24) ›

Average 263.50

Low 185.00 | Current 236.70 | High 308.00

Upgrades & Downgrades ›

Downgrade	Bernstein: Outperform to Market Perform	10/9/2020
Downgrade	Truist Securities: Buy to Hold	10/9/2020
Maintains	Oppenheimer: to Outperform	10/6/2020
Maintains	SunTrust Robinson Humphrey: to Buy	7/30/2020
Maintains	JP Morgan: to Neutral	7/29/2020
Maintains	Piper Sandler: to Overweight	7/29/2020

More Upgrades & Downgrades

Up Last 7 Days	1	1	1	1
Up Last 30 Days	3	3	3	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	APH	Industry	Sector(s)	S&P 500
Current Qtr.	-8.40%	N/A	N/A	N/A
Next Qtr.	-2.00%	N/A	N/A	N/A
Current Year	-10.70%	N/A	N/A	N/A
Next Year	20.10%	N/A	N/A	N/A
Next 5 Years (per annum)	3.00%	N/A	N/A	N/A
Past 5 Years (per annum)	12.84%	N/A	N/A	N/A

2.2

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (14) >

Average 117.00

Low 101.00 High 140.00
Current 113.49

Upgrades & Downgrades >

Downgrade	Morgan Stanley: Overweight to Equal-Weight	8/24/2020
Maintains	Morgan Stanley: to Overweight	7/23/2020
Maintains	Stifel: to Hold	6/23/2020
Maintains	Morgan Stanley: to Overweight	6/16/2020
Maintains	JP Morgan: to Neutral	4/23/2020
Maintains	Wells Fargo: to Overweight	4/23/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	1	N/A	2
Up Last 30 Days	3	2	3	5
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	AAPL	Industry	Sector(s)	S&P 500
Current Qtr.	-7.90%	N/A	N/A	N/A
Next Qtr.	8.80%	N/A	N/A	N/A
Current Year	9.10%	N/A	N/A	N/A
Next Year	19.40%	N/A	N/A	N/A
Next 5 Years (per annum)	12.46%	N/A	N/A	N/A
Past 5 Years (per annum)	8.42%	N/A	N/A	N/A

2.2

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (38) >

Average 119.38

Low 48.86 High 150.00

Current 116.97

Upgrades & Downgrades >

Maintains	Wedbush: to Outperform	9/24/2020
Downgrade	Pacific Crest: Overweight to Sector Weight	9/23/2020
Maintains	JMP Securities: to Outperform	9/23/2020
Maintains	FBR Capital: to Outperform	9/23/2020
Maintains	FBN Securities: to Outperform	9/23/2020
Maintains	CLSA: to Buy	9/23/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	1	N/A	1
Up Last 30 Days	N/A	1	1	2
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	3	1	2	2

Growth Estimates	T	Industry	Sector(s)	S&P 500
Current Qtr.	-19.10%	N/A	N/A	N/A
Next Qtr.	-15.70%	N/A	N/A	N/A
Current Year	-11.20%	N/A	N/A	N/A
Next Year	1.90%	N/A	N/A	N/A
Next 5 Years (per annum)	0.29%	N/A	N/A	N/A
Past 5 Years (per annum)	8.93%	N/A	N/A	N/A

2.7

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (25) >

Average 32.02

Low 17.00 High 43.00

Current 28.32

Upgrades & Downgrades >

Downgrade	KeyBanc: Sector Weight to Underweight	10/5/2020
Downgrade	ScotiaBank: Sector Perform to Sector Underperform	8/31/2020
Maintains	Deutsche Bank: to Buy	8/4/2020
Maintains	ScotiaBank: to Sector Perform	7/24/2020
Maintains	Morgan Stanley: to Overweight	7/1/2020
Maintains	Deutsche Bank: to Buy	4/28/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	1	1

Growth Estimates	BAX	Industry	Sector(s)	S&P 500
Current Qtr.	-2.70%	N/A	N/A	N/A
Next Qtr.	-9.30%	N/A	N/A	N/A
Current Year	-7.60%	N/A	N/A	N/A
Next Year	20.30%	N/A	N/A	N/A
Next 5 Years (per annum)	10.00%	N/A	N/A	N/A
Past 5 Years (per annum)	-4.79%	N/A	N/A	N/A

1.9

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (16) >

Average 96.25

Low 90.00 High 105.00

Current 78.50

Upgrades & Downgrades >

Maintains	UBS: to Buy	10/9/2020
Upgrade	Citigroup: Neutral to Buy	10/1/2020
Downgrade	Argus Research: Buy to Hold	9/4/2020
Maintains	Raymond James: to Outperform	7/31/2020
Maintains	Morgan Stanley: to Equal-Weight	7/31/2020
Maintains	UBS: to Buy	5/1/2020

More Upgrades & Downgrades

Up Last 7 Days	1	N/A	N/A	N/A
Up Last 30 Days	2	N/A	2	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	1	1	3

Growth Estimates	BMY	Industry	Sector(s)	S&P 500
Current Qtr.	27.40%	N/A	N/A	N/A
Next Qtr.	17.20%	N/A	N/A	N/A
Current Year	33.70%	N/A	N/A	N/A
Next Year	18.20%	N/A	N/A	N/A
Next 5 Years (per annum)	22.20%	N/A	N/A	N/A
Past 5 Years (per annum)	21.58%	N/A	N/A	N/A

1.9

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (13) >

Average 73.69

Low 64.00 High 88.00

Current 61.82

Upgrades & Downgrades >

Maintains	Raymond James: to Outperform	9/22/2020
Maintains	Morgan Stanley: to Overweight	8/14/2020
Maintains	Morgan Stanley: to Overweight	8/12/2020
Maintains	CFRA: to Buy	5/7/2020
Maintains	B of A Securities: to Buy	4/2/2020
Downgrade	Societe Generale: Buy to Hold	3/23/2020

More Upgrades & Downgrades

Up Last 7 Days	2	N/A	1	N/A
Up Last 30 Days	2	N/A	1	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	1	1	1

Growth Estimates	BRO	Industry	Sector(s)	S&P 500
Current Qtr.	7.70%	N/A	N/A	N/A
Next Qtr.	N/A	N/A	N/A	N/A
Current Year	10.00%	N/A	N/A	N/A
Next Year	5.80%	N/A	N/A	N/A
Next 5 Years (per annum)	8.64%	N/A	N/A	N/A
Past 5 Years (per annum)	12.70%	N/A	N/A	N/A

Recommendation Rating ›

2.8

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (9) ›

Average 46.56

Low 43.00 High 53.00

Current 47.22

Upgrades & Downgrades ›

Maintains	Morgan Stanley: to Equal-Weight	7/29/2020
Maintains	Morgan Stanley: to Equal-Weight	5/18/2020
Maintains	Morgan Stanley: to Equal-Weight	5/1/2020
Maintains	Morgan Stanley: to Equal-Weight	4/23/2020
Maintains	Wells Fargo: to Equal-Weight	4/2/2020
Maintains	Raymond James: to Outperform	3/24/2020

More Upgrades & Downgrades

Up Last 7 Days	1	N/A	1	1
Up Last 30 Days	1	N/A	1	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	BF-B	Industry	Sector(s)	S&P 500
Current Qtr.	-13.60%	N/A	N/A	N/A
Next Qtr.	-4.20%	N/A	N/A	N/A
Current Year	13.40%	N/A	N/A	N/A
Next Year	-1.50%	N/A	N/A	N/A
Next 5 Years (per annum)	6.85%	N/A	N/A	N/A
Past 5 Years (per annum)	5.47%	N/A	N/A	N/A

3.2

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (16) ›

Average 72.94

Low 61.00 High 100.00

Current 78.42

Upgrades & Downgrades ›

Maintains	Morgan Stanley: to Underweight	9/3/2020
Maintains	B of A Securities: to Underperform	8/27/2020
Maintains	Morgan Stanley: to Underweight	6/10/2020
Maintains	Deutsche Bank: to Hold	6/10/2020
Maintains	Morgan Stanley: to Underweight	6/8/2020
Downgrade	UBS: Neutral to Sell	5/27/2020

More Upgrades & Downgrades

Up Last 7 Days	1	N/A	1	N/A
Up Last 30 Days	1	N/A	1	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	1

Growth Estimates	CHD	Industry	Sector(s)	S&P 500
Current Qtr.	1.50%	N/A	N/A	N/A
Next Qtr.	N/A	N/A	N/A	N/A
Current Year	13.80%	N/A	N/A	N/A
Next Year	6.40%	N/A	N/A	N/A
Next 5 Years (per annum)	9.48%	N/A	N/A	N/A
Past 5 Years (per annum)	10.93%	N/A	N/A	N/A

2.4

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (15) >

Average 94.73

Low 75.00 | Current 92.76 | High 111.00

Upgrades & Downgrades >

Maintains	Citigroup: to Neutral	8/4/2020
Maintains	Deutsche Bank: to Hold	8/3/2020
Maintains	Jefferies: to Buy	8/3/2020
Maintains	Morgan Stanley: to Equal-Weight	8/3/2020
Maintains	Credit Suisse: to Outperform	8/3/2020
Maintains	RBC Capital: to Sector Perform	8/3/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	1	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	CSCO	Industry	Sector(s)	S&P 500
Current Qtr.	-16.70%	N/A	N/A	N/A
Next Qtr.	-5.20%	N/A	N/A	N/A
Current Year	-3.40%	N/A	N/A	N/A
Next Year	7.40%	N/A	N/A	N/A
Next 5 Years (per annum)	6.18%	N/A	N/A	N/A
Past 5 Years (per annum)	7.76%	N/A	N/A	N/A

2.4

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (21)

Average 48.17

Low 41.00 High 55.00

Current 39.85

Upgrades & Downgrades

Downgrade	Wolfe Research: Outperform to Peer Perform	9/18/2020
Maintains	B of A Securities: to Buy	9/16/2020
Maintains	Credit Suisse: to Neutral	8/13/2020
Upgrade	Morgan Stanley: Equal-Weight to Overweight	7/9/2020
Downgrade	Baird: Outperform to Neutral	6/10/2020
Maintains	Citigroup: to Buy	5/14/2020

More Upgrades & Downgrades

Up Last 7 Days	1	N/A	N/A	1
Up Last 30 Days	1	N/A	N/A	2
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	1	2	1

Growth Estimates	KO	Industry	Sector(s)	S&P 500
Current Qtr.	-17.90%	N/A	N/A	N/A
Next Qtr.	-6.80%	N/A	N/A	N/A
Current Year	-14.20%	N/A	N/A	N/A
Next Year	14.40%	N/A	N/A	N/A
Next 5 Years (per annum)	2.93%	N/A	N/A	N/A
Past 5 Years (per annum)	1.91%	N/A	N/A	N/A

2

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (20) >

Average 54.00

Low 48.00 High 61.00
Current 50.81

Upgrades & Downgrades >

Upgrade	Morgan Stanley: Equal-Weight to Overweight	7/22/2020
Maintains	Morgan Stanley: to Equal-Weight	6/8/2020
Maintains	Citigroup: to Neutral	4/22/2020
Maintains	Jefferies: to Hold	4/22/2020
Maintains	UBS: to Buy	4/22/2020
Maintains	RBC Capital: to Outperform	4/22/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	1
Up Last 30 Days	N/A	N/A	N/A	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	1	1	N/A

Growth Estimates	CL	Industry	Sector(s)	S&P 500
Current Qtr.	-1.40%	N/A	N/A	N/A
Next Qtr.	4.10%	N/A	N/A	N/A
Current Year	4.60%	N/A	N/A	N/A
Next Year	5.70%	N/A	N/A	N/A
Next 5 Years (per annum)	5.91%	N/A	N/A	N/A
Past 5 Years (per annum)	0.22%	N/A	N/A	N/A

2.5

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (19) ›

Average 80.24

Low 65.50 High 88.00

Current 79.77

Upgrades & Downgrades ›

Maintains	Deutsche Bank: to Hold	8/3/2020
Maintains	Morgan Stanley: to Equal-Weight	8/3/2020
Maintains	Deutsche Bank: to Hold	7/27/2020
Downgrade	Morgan Stanley: Overweight to Equal-Weight	7/22/2020
Maintains	SunTrust Robinson Humphrey: to Buy	5/15/2020
Maintains	Stifel: to Buy	5/4/2020

More Upgrades & Downgrades

Up Last 7 Days	4	2	3	3
Up Last 30 Days	16	9	15	10
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	1	1	1

Growth Estimates	CMCSA	Industry	Sector(s)	S&P 500
Current Qtr.	-36.70%	N/A	N/A	N/A
Next Qtr.	-31.60%	N/A	N/A	N/A
Current Year	-22.40%	N/A	N/A	N/A
Next Year	22.20%	N/A	N/A	N/A
Next 5 Years (per annum)	5.24%	N/A	N/A	N/A
Past 5 Years (per annum)	16.90%	N/A	N/A	N/A

2.1

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (28) >

Average 51.32

Low 40.00 Current 44.85 High 60.00

Upgrades & Downgrades >

Maintains	Credit Suisse: to Outperform	9/23/2020
Maintains	Citigroup: to Buy	8/4/2020
Maintains	Morgan Stanley: to Overweight	7/31/2020
Maintains	Rosenblatt: to Buy	7/31/2020
Upgrade	Bernstein: Market Perform to Outperform	7/1/2020
Maintains	Wells Fargo: to Overweight	6/24/2020

More Upgrades & Downgrades

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McKenzie

Up Last 7 Days	2	2	2	3
Up Last 30 Days	3	4	3	4
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	1	1	1

Growth Estimates	CBSH	Industry	Sector(s)	S&P 500
Current Qtr.	-25.80%	N/A	N/A	N/A
Next Qtr.	-9.40%	N/A	N/A	N/A
Current Year	-36.00%	N/A	N/A	N/A
Next Year	35.70%	N/A	N/A	N/A
Next 5 Years (per annum)	-8.70%	N/A	N/A	N/A
Past 5 Years (per annum)	15.37%	N/A	N/A	N/A

3.4

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (8) >

Average 56.00

Low 35.00 | High 70.00

Current 60.51

Upgrades & Downgrades >

Maintains	Piper Sandler: to Neutral	9/29/2020
Maintains	Morgan Stanley: to Underweight	6/8/2020
Maintains	Piper Sandler: to Neutral	4/29/2020
Maintains	Morgan Stanley: to Underweight	4/7/2020
Upgrade	Raymond James: Underperform to Market Perform	4/6/2020
Maintains	Wells Fargo: to Underweight	3/30/2020

More Upgrades & Downgrades

Up Last 7 Days	7	4	8	6
Up Last 30 Days	17	14	25	18
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	2	2	2	2

Growth Estimates	COST	Industry	Sector(s)	S&P 500
Current Qtr.	13.30%	N/A	N/A	N/A
Next Qtr.	10.50%	N/A	N/A	N/A
Current Year	10.30%	N/A	N/A	N/A
Next Year	9.90%	N/A	N/A	N/A
Next 5 Years (per annum)	7.04%	N/A	N/A	N/A
Past 5 Years (per annum)	11.80%	N/A	N/A	N/A

2.2

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (27) ›

Average 368.07

Low 235.00 High 412.00
Current 369.46

Upgrades & Downgrades ›

Maintains	Deutsche Bank: to Hold	10/8/2020
Maintains	Credit Suisse: to Neutral	10/6/2020
Upgrade	Barclays: Equal-Weight to Overweight	10/6/2020
Maintains	RBC Capital: to Outperform	9/25/2020
Maintains	MKM Partners: to Neutral	9/25/2020
Maintains	Morgan Stanley: to Overweight	9/25/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	1	N/A	1
Up Last 30 Days	N/A	1	N/A	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	N/A	1	N/A

Growth Estimates	CVS	Industry	Sector(s)	S&P 500
Current Qtr.	-28.30%	N/A	N/A	N/A
Next Qtr.	-21.40%	N/A	N/A	N/A
Current Year	2.10%	N/A	N/A	N/A
Next Year	4.10%	N/A	N/A	N/A
Next 5 Years (per annum)	6.34%	N/A	N/A	N/A
Past 5 Years (per annum)	10.62%	N/A	N/A	N/A

2.1

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (25) >

Average 79.44

Low 63.00 High 104.00

Current 59.40

Upgrades & Downgrades >

Maintains	Credit Suisse: to Outperform	8/7/2020
Maintains	SVB Leerink: to Market Perform	8/6/2020
Upgrade	Credit Suisse: Neutral to Outperform	5/14/2020
Maintains	Citigroup: to Buy	5/7/2020
Maintains	UBS: to Buy	5/7/2020
Maintains	Baird: to Neutral	5/7/2020

More Upgrades & Downgrades

Up Last 7 Days	3	3	2	2
Up Last 30 Days	3	3	2	2
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	1

Growth Estimates	DHR	Industry	Sector(s)	S&P 500
Current Qtr.	28.30%	N/A	N/A	N/A
Next Qtr.	27.30%	N/A	N/A	N/A
Current Year	24.40%	N/A	N/A	N/A
Next Year	16.90%	N/A	N/A	N/A
Next 5 Years (per annum)	13.06%	N/A	N/A	N/A
Past 5 Years (per annum)	2.93%	N/A	N/A	N/A

1.7

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (15) >

Average 223.93

Low 205.00 High 240.00

Current 226.06

Upgrades & Downgrades >

Maintains	UBS: to Buy	7/27/2020
Maintains	Needham: to Buy	7/27/2020
Maintains	Stifel: to Hold	7/24/2020
Maintains	Jefferies: to Buy	7/24/2020
Maintains	B of A Securities: to Buy	7/20/2020
Maintains	Credit Suisse: to Outperform	5/21/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	4	8	18	15
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	GIS	Industry	Sector(s)	S&P 500
Current Qtr.	2.10%	N/A	N/A	N/A
Next Qtr.	6.50%	N/A	N/A	N/A
Current Year	0.60%	N/A	N/A	N/A
Next Year	1.70%	N/A	N/A	N/A
Next 5 Years (per annum)	5.05%	N/A	N/A	N/A
Past 5 Years (per annum)	2.86%	N/A	N/A	N/A

Recommendation Rating ›

2.8

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (19) ›

Average 64.33

Low 51.00 High 73.00

Current 61.87

Upgrades & Downgrades ›

Upgrade	Credit Suisse: Neutral to Outperform	9/25/2020
Maintains	Piper Sandler: to Overweight	9/24/2020
Maintains	Morgan Stanley: to Equal-Weight	9/24/2020
Maintains	Morgan Stanley: to Equal-Weight	7/2/2020
Downgrade	Bernstein: Market Perform to Underperform	6/11/2020
Maintains	Piper Sandler: to Overweight	5/19/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	HRL	Industry	Sector(s)	S&P 500
Current Qtr.	-6.40%	N/A	N/A	N/A
Next Qtr.	-2.20%	N/A	N/A	N/A
Current Year	-4.00%	N/A	N/A	N/A
Next Year	9.00%	N/A	N/A	N/A
Next 5 Years (per annum)	1.00%	N/A	N/A	N/A
Past 5 Years (per annum)	7.98%	N/A	N/A	N/A

3

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (9)

Average 46.44

Low 42.00 High 50.00

Current 48.96

Upgrades & Downgrades

Maintains	CFRA: to Hold	5/21/2020
Downgrade	Piper Sandler: Overweight to Neutral	4/29/2020
Maintains	Barclays: to Equal-Weight	3/31/2020
Upgrade	Goldman Sachs: Sell to Neutral	3/26/2020
Upgrade	CFRA: Sell to Hold	3/9/2020
Reiterates	Stephens & Co.: to Equal-Weight	11/27/2019

More Upgrades & Downgrades

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Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	INTC	Industry	Sector(s)	S&P 500
Current Qtr.	-22.50%	N/A	N/A	N/A
Next Qtr.	-30.30%	N/A	N/A	N/A
Current Year	-0.40%	N/A	N/A	N/A
Next Year	-2.90%	N/A	N/A	N/A
Next 5 Years (per annum)	8.62%	N/A	N/A	N/A
Past 5 Years (per annum)	19.01%	N/A	N/A	N/A

3

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (35) ›

Average 56.50

Low 42.00 Current 52.82 High 82.00

Upgrades & Downgrades ›

Maintains	BMO Capital: to Market Perform	7/24/2020
Maintains	Morgan Stanley: to Equal-Weight	7/24/2020
Maintains	Credit Suisse: to Outperform	7/24/2020
Downgrade	Northland Capital Markets: Market Perform to Underperform	7/24/2020
Downgrade	B of A Securities: Buy to Neutral	7/24/2020
Downgrade	Deutsche Bank: Buy to Hold	7/24/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	1
Up Last 30 Days	N/A	N/A	N/A	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	1	N/A

Growth Estimates	IFF	Industry	Sector(s)	S&P 500
Current Qtr.	-5.20%	N/A	N/A	N/A
Next Qtr.	-7.50%	N/A	N/A	N/A
Current Year	-6.80%	N/A	N/A	N/A
Next Year	8.50%	N/A	N/A	N/A
Next 5 Years (per annum)	0.38%	N/A	N/A	N/A
Past 5 Years (per annum)	4.94%	N/A	N/A	N/A

2.5

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (14) >

Average 137.36

Low 111.00 | Current 119.41 | High 156.00

Upgrades & Downgrades >

Maintains	Stifel: to Hold	8/12/2020
Downgrade	Exane BNP Paribas: Neutral to Underperform	6/22/2020
Maintains	CFRA: to Buy	5/13/2020
Maintains	Citigroup: to Neutral	5/13/2020
Maintains	UBS: to Buy	5/12/2020
Upgrade	Wells Fargo: Equal-Weight to Overweight	4/29/2020

More Upgrades & Downgrades

Up Last 7 Days	2	2	2	N/A
Up Last 30 Days	2	2	2	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	2

Growth Estimates	JNJ	Industry	Sector(s)	S&P 500
Current Qtr.	-7.50%	N/A	N/A	N/A
Next Qtr.	3.20%	N/A	N/A	N/A
Current Year	-9.20%	N/A	N/A	N/A
Next Year	14.70%	N/A	N/A	N/A
Next 5 Years (per annum)	5.09%	N/A	N/A	N/A
Past 5 Years (per annum)	9.93%	N/A	N/A	N/A

1.9

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (17) >

Average 164.59

Low 142.00 High 180.00
Current 150.97

Upgrades & Downgrades >

Upgrade	Independent Research: Hold to Buy	7/20/2020
Maintains	Barclays: to Overweight	4/29/2020
Maintains	Morgan Stanley: to Overweight	4/29/2020
Downgrade	UBS: Buy to Neutral	4/28/2020
Upgrade	B of A Securities: Neutral to Buy	4/22/2020
Maintains	Stifel: to Hold	4/15/2020

More Upgrades & Downgrades

Up Last 7 Days	1	N/A	1	1
Up Last 30 Days	1	N/A	1	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	1

Growth Estimates	K	Industry	Sector(s)	S&P 500
Current Qtr.	-16.50%	N/A	N/A	N/A
Next Qtr.	-6.60%	N/A	N/A	N/A
Current Year	N/A	N/A	N/A	N/A
Next Year	0.50%	N/A	N/A	N/A
Next 5 Years (per annum)	1.85%	N/A	N/A	N/A
Past 5 Years (per annum)	3.73%	N/A	N/A	N/A

2.6

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (19) >

Average 71.53

Low 54.00 High 79.00

Current 65.85

Upgrades & Downgrades >

Downgrade	Goldman Sachs: Buy to Neutral	7/31/2020
Maintains	Credit Suisse: to Outperform	7/31/2020
Maintains	Morgan Stanley: to Equal-Weight	7/31/2020
Downgrade	Bernstein: Market Perform to Underperform	6/11/2020
Maintains	Morgan Stanley: to Equal-Weight	5/1/2020
Maintains	JP Morgan: to Neutral	4/17/2020

More Upgrades & Downgrades

Up Last 7 Days	2	1	2	2
Up Last 30 Days	2	2	3	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	KMB	Industry	Sector(s)	S&P 500
Current Qtr.	-5.40%	N/A	N/A	N/A
Next Qtr.	-5.30%	N/A	N/A	N/A
Current Year	11.60%	N/A	N/A	N/A
Next Year	2.60%	N/A	N/A	N/A
Next 5 Years (per annum)	6.36%	N/A	N/A	N/A
Past 5 Years (per annum)	3.89%	N/A	N/A	N/A

2.5

1 Strong Buy	2 Buy	3 Hold	4 Under-perform	5 Sell

Analyst Price Targets (12) >

Average 159.58

Low 137.00 High 181.00
Current 152.49

Upgrades & Downgrades >

Maintains	Jefferies: to Buy	7/24/2020
Maintains	Morgan Stanley: to Equal-Weight	7/24/2020
Maintains	Morgan Stanley: to Equal-Weight	4/23/2020
Maintains	Deutsche Bank: to Hold	4/23/2020
Maintains	Jefferies: to Buy	4/22/2020
Maintains	Deutsche Bank: to Hold	4/16/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	1	1
Up Last 30 Days	2	4	4	4
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	1	N/A	N/A

Growth Estimates	LLY	Industry	Sector(s)	S&P 500
Current Qtr.	16.20%	N/A	N/A	N/A
Next Qtr.	11.60%	N/A	N/A	N/A
Current Year	20.50%	N/A	N/A	N/A
Next Year	10.60%	N/A	N/A	N/A
Next 5 Years (per annum)	13.30%	N/A	N/A	N/A
Past 5 Years (per annum)	16.66%	N/A	N/A	N/A

2.3

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (15) >

Average 165.13

Low 120.00 | Current 156.88 | High 189.00

Upgrades & Downgrades >

Upgrade	Morgan Stanley: Equal-Weight to Overweight	9/3/2020
Maintains	Morgan Stanley: to Equal-Weight	8/14/2020
Maintains	JP Morgan: to Overweight	6/17/2020
Maintains	CFRA: to Hold	4/24/2020
Downgrade	UBS: Buy to Neutral	4/21/2020
Maintains	Cowen & Co.: to Outperform	4/15/2020

More Upgrades & Downgrades

	LMT	Industry	Sector(s)	S&P 500
Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	LMT	Industry	Sector(s)	S&P 500
Current Qtr.	7.40%	N/A	N/A	N/A
Next Qtr.	18.10%	N/A	N/A	N/A
Current Year	10.10%	N/A	N/A	N/A
Next Year	10.30%	N/A	N/A	N/A
Next 5 Years (per annum)	9.11%	N/A	N/A	N/A
Past 5 Years (per annum)	15.84%	N/A	N/A	N/A

2.1

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (20) >

Average 435.95

Low 400.00 High 509.00
Current 385.93

Upgrades & Downgrades >

Maintains	Argus Research: to Buy	7/24/2020
Maintains	UBS: to Buy	6/11/2020
Maintains	Credit Suisse: to Neutral	4/22/2020
Maintains	Morgan Stanley: to Equal-Weight	4/14/2020
Maintains	Morgan Stanley: to Equal-Weight	3/25/2020
Upgrade	DZ Bank: Hold to Buy	3/25/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	MMC	Industry	Sector(s)	S&P 500
Current Qtr.	-6.50%	N/A	N/A	N/A
Next Qtr.	-5.90%	N/A	N/A	N/A
Current Year	2.80%	N/A	N/A	N/A
Next Year	6.70%	N/A	N/A	N/A
Next 5 Years (per annum)	4.87%	N/A	N/A	N/A
Past 5 Years (per annum)	11.29%	N/A	N/A	N/A

2.6

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (16) >

Average 121.25

Low 109.00
Current 115.71
High 135.00

Upgrades & Downgrades >

Downgrade	B of A Securities: Neutral to Underperform	8/21/2020
Maintains	Raymond James: to Outperform	8/3/2020
Maintains	Morgan Stanley: to Equal-Weight	7/31/2020
Maintains	Morgan Stanley: to Equal-Weight	5/18/2020
Upgrade	Atlantic Equities: Neutral to Overweight	5/12/2020
Maintains	Raymond James: to Outperform	5/4/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	1	1
Up Last 30 Days	N/A	4	3	8
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	MKC	Industry	Sector(s)	S&P 500
Current Qtr.	0.60%	N/A	N/A	N/A
Next Qtr.	6.50%	N/A	N/A	N/A
Current Year	6.70%	N/A	N/A	N/A
Next Year	-3.00%	N/A	N/A	N/A
Next 5 Years (per annum)	4.80%	N/A	N/A	N/A
Past 5 Years (per annum)	10.39%	N/A	N/A	N/A

2.9

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (10) >

Average 175.50

Low 134.00 High 205.00
Current 196.11

Upgrades & Downgrades >

Upgrade	Jefferies: Underperform to Hold	6/22/2020
Maintains	Deutsche Bank: to Hold	6/1/2020
Upgrade	Credit Suisse: Neutral to Outperform	5/14/2020
Maintains	JP Morgan: to Underweight	4/17/2020
Maintains	Credit Suisse: to Neutral	4/2/2020
Maintains	Stifel: to Hold	4/1/2020

More Upgrades & Downgrades

Up Last 7 Days	7	6	9	10
Up Last 30 Days	11	11	13	13
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	MCD	Industry	Sector(s)	S&P 500
Current Qtr.	-13.30%	N/A	N/A	N/A
Next Qtr.	-3.00%	N/A	N/A	N/A
Current Year	-25.00%	N/A	N/A	N/A
Next Year	39.50%	N/A	N/A	N/A
Next 5 Years (per annum)	3.98%	N/A	N/A	N/A
Past 5 Years (per annum)	13.35%	N/A	N/A	N/A

Recommendation Rating ›

2

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (30) ›

Average 229.40

Low 185.00 | High 265.00

Current 224.83

Upgrades & Downgrades ›

Maintains	Truist Securities: to Buy	10/9/2020
Maintains	BTIG: to Buy	10/9/2020
Maintains	BMO Capital: to Outperform	10/9/2020
Maintains	Jefferies: to Buy	10/9/2020
Maintains	Wells Fargo: to Overweight	10/1/2020
Maintains	UBS: to Neutral	9/14/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	1	N/A	N/A
Up Last 30 Days	1	2	1	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	2	N/A	1	1

Growth Estimates	MRK	Industry	Sector(s)	S&P 500
Current Qtr.	-6.00%	N/A	N/A	N/A
Next Qtr.	21.60%	N/A	N/A	N/A
Current Year	10.00%	N/A	N/A	N/A
Next Year	10.90%	N/A	N/A	N/A
Next 5 Years (per annum)	6.83%	N/A	N/A	N/A
Past 5 Years (per annum)	8.65%	N/A	N/A	N/A

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (18) >

Average 95.50

Low 84.00 High 107.00
Current 80.36

Upgrades & Downgrades >

Maintains	SVB Leerink: to Outperform	8/25/2020
Upgrade	Goldman Sachs: Neutral to Buy	8/3/2020
Downgrade	Wolfe Research: Outperform to Peer Perform	6/12/2020
Maintains	Guggenheim: to Buy	4/29/2020
Maintains	Barclays: to Overweight	4/29/2020
Maintains	SVB Leerink: to Outperform	4/29/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	1
Up Last 30 Days	1	N/A	2	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	MSFT	Industry	Sector(s)	S&P 500
Current Qtr.	11.60%	N/A	N/A	N/A
Next Qtr.	6.60%	N/A	N/A	N/A
Current Year	12.20%	N/A	N/A	N/A
Next Year	13.80%	N/A	N/A	N/A
Next 5 Years (per annum)	15.25%	N/A	N/A	N/A
Past 5 Years (per annum)	18.17%	N/A	N/A	N/A

1.7

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (30) ›

Average 229.83

Low 169.49 High 260.00

Current 215.81

Upgrades & Downgrades ›

Maintains	Morgan Stanley: to Overweight	9/9/2020
Downgrade	Oppenheimer: Outperform to Perform	7/23/2020
Maintains	Piper Sandler: to Overweight	7/23/2020
Maintains	Raymond James: to Strong Buy	7/20/2020
Maintains	Jefferies: to Buy	7/20/2020
Maintains	Barclays: to Overweight	7/20/2020

More Upgrades & Downgrades

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McKenzie

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	NOC	Industry	Sector(s)	S&P 500
Current Qtr.	2.70%	N/A	N/A	N/A
Next Qtr.	2.30%	N/A	N/A	N/A
Current Year	6.00%	N/A	N/A	N/A
Next Year	12.30%	N/A	N/A	N/A
Next 5 Years (per annum)	8.62%	N/A	N/A	N/A
Past 5 Years (per annum)	20.00%	N/A	N/A	N/A

Recommendation Rating ›

1.9

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (19) ›

Average 395.63

Low 281.00 High 470.00
Current 315.28

Upgrades & Downgrades ›

Upgrade	RBC Capital: Sector Perform to Outperform	10/6/2020
Maintains	Bernstein: to Outperform	7/31/2020
Maintains	UBS: to Neutral	6/11/2020
Upgrade	Cowen & Co.: Market Perform to Outperform	5/15/2020
Maintains	Morgan Stanley: to Overweight	4/14/2020
Upgrade	Bernstein: Market Perform to Outperform	3/30/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	17	13	22	20
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	1

Growth Estimates	ORCL	Industry	Sector(s)	S&P 500
Current Qtr.	11.10%	N/A	N/A	N/A
Next Qtr.	7.20%	N/A	N/A	N/A
Current Year	9.60%	N/A	N/A	N/A
Next Year	8.10%	N/A	N/A	N/A
Next 5 Years (per annum)	9.18%	N/A	N/A	N/A
Past 5 Years (per annum)	7.95%	N/A	N/A	N/A

2.5

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (22) ›

Average 62.99

Low 50.00 Current 61.15 High 70.00

Upgrades & Downgrades ›

Upgrade	RBC Capital: Sector Perform to Outperform	9/21/2020
Maintains	B of A Securities: to Neutral	9/11/2020
Maintains	Credit Suisse: to Outperform	9/11/2020
Maintains	Stifel: to Hold	9/11/2020
Maintains	Morgan Stanley: to Equal-Weight	9/11/2020
Maintains	Piper Sandler: to Neutral	9/11/2020

More Upgrades & Downgrades

Up Last 7 Days	3	2	9	4
Up Last 30 Days	5	5	18	14
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	5	5	1	4

Growth Estimates	PEP	Industry	Sector(s)	S&P 500
Current Qtr.	N/A	N/A	N/A	N/A
Next Qtr.	6.50%	N/A	N/A	N/A
Current Year	-0.20%	N/A	N/A	N/A
Next Year	9.20%	N/A	N/A	N/A
Next 5 Years (per annum)	5.90%	N/A	N/A	N/A
Past 5 Years (per annum)	5.28%	N/A	N/A	N/A

2.2

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (19) >

Average 150.86

Low 135.00 Current 138.44 High 162.00

Upgrades & Downgrades >

Maintains	Truist Securities: to Hold	10/2/2020
Maintains	Morgan Stanley: to Overweight	10/2/2020
Maintains	Jefferies: to Hold	7/9/2020
Maintains	SunTrust Robinson Humphrey: to Hold	4/29/2020
Maintains	Citigroup: to Neutral	4/29/2020
Maintains	Morgan Stanley: to Overweight	4/29/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	1	N/A	N/A
Up Last 30 Days	1	2	2	4
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	1	1	1

Growth Estimates	PFE	Industry	Sector(s)	S&P 500
Current Qtr.	-4.00%	N/A	N/A	N/A
Next Qtr.	10.90%	N/A	N/A	N/A
Current Year	-1.40%	N/A	N/A	N/A
Next Year	11.30%	N/A	N/A	N/A
Next 5 Years (per annum)	5.37%	N/A	N/A	N/A
Past 5 Years (per annum)	8.67%	N/A	N/A	N/A

2.6

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (15) >

Average 41.67

Low 35.00 High 53.00
Current 36.79

Upgrades & Downgrades >

Maintains	Morgan Stanley: to Equal-Weight	7/30/2020
Maintains	UBS: to Neutral	7/29/2020
Maintains	SVB Leerink: to Market Perform	7/29/2020
Maintains	JP Morgan: to Neutral	6/1/2020
Maintains	Barclays: to Equal-Weight	4/29/2020
Maintains	Morgan Stanley: to Equal-Weight	4/2/2020

More Upgrades & Downgrades

Up Last 7 Days	3	1	2	3
Up Last 30 Days	3	1	3	4
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	PG	Industry	Sector(s)	S&P 500
Current Qtr.	2.90%	N/A	N/A	N/A
Next Qtr.	4.20%	N/A	N/A	N/A
Current Year	5.50%	N/A	N/A	N/A
Next Year	6.90%	N/A	N/A	N/A
Next 5 Years (per annum)	7.15%	N/A	N/A	N/A
Past 5 Years (per annum)	3.97%	N/A	N/A	N/A

2.2

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (19) >

Average 140.22

Low 110.00 High 159.00
Current 142.92

Upgrades & Downgrades >

Maintains	Morgan Stanley: to Overweight	10/5/2020
Maintains	Morgan Stanley: to Overweight	7/31/2020
Maintains	Jefferies: to Buy	7/27/2020
Maintains	Deutsche Bank: to Buy	7/27/2020
Maintains	Morgan Stanley: to Overweight	4/21/2020
Maintains	Stifel: to Buy	4/20/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	2	2	2	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	1	1	1

Growth Estimates	PSA	Industry	Sector(s)	S&P 500
Current Qtr.	-12.40%	N/A	N/A	N/A
Next Qtr.	1.60%	N/A	N/A	N/A
Current Year	-4.50%	N/A	N/A	N/A
Next Year	2.70%	N/A	N/A	N/A
Next 5 Years (per annum)	17.00%	N/A	N/A	N/A
Past 5 Years (per annum)	6.41%	N/A	N/A	N/A

2.9

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (11) >

Average 205.27

Low 175.00 High 254.00
Current 234.01

Upgrades & Downgrades >

Downgrade	Raymond James: Market Perform to Underperform	10/6/2020
Upgrade	Morgan Stanley: Underweight to Equal-Weight	9/21/2020
Maintains	Stifel: to Buy	8/6/2020
Maintains	Morgan Stanley: to Underweight	7/8/2020
Maintains	Wells Fargo: to Underweight	6/19/2020
Upgrade	Evercore ISI Group: Underperform to In-Line	6/15/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	TXN	Industry	Sector(s)	S&P 500
Current Qtr.	-15.40%	N/A	N/A	N/A
Next Qtr.	5.40%	N/A	N/A	N/A
Current Year	-1.30%	N/A	N/A	N/A
Next Year	5.40%	N/A	N/A	N/A
Next 5 Years (per annum)	10.00%	N/A	N/A	N/A
Past 5 Years (per annum)	20.33%	N/A	N/A	N/A

2.6

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (28) >

Average 139.71

Low 85.00 High 165.00

Current 150.91

Upgrades & Downgrades >

Upgrade	DZ Bank: Hold to Buy	7/23/2020
Maintains	Jefferies: to Buy	7/22/2020
Maintains	Deutsche Bank: to Hold	7/22/2020
Maintains	Morgan Stanley: to Underweight	7/22/2020
Maintains	Credit Suisse: to Outperform	7/22/2020
Maintains	UBS: to Neutral	7/22/2020

More Upgrades & Downgrades

Up Last 7 Days	1	1	1	N/A
Up Last 30 Days	1	1	1	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	2	N/A	1	1

Growth Estimates	TRV	Industry	Sector(s)	S&P 500
Current Qtr.	128.70%	N/A	N/A	N/A
Next Qtr.	-10.80%	N/A	N/A	N/A
Current Year	-9.50%	N/A	N/A	N/A
Next Year	18.90%	N/A	N/A	N/A
Next 5 Years (per annum)	3.05%	N/A	N/A	N/A
Past 5 Years (per annum)	-7.55%	N/A	N/A	N/A

2.6

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (15) ›

Average 123.00

Low 110.00 High 140.00
Current 115.83

Upgrades & Downgrades ›

Maintains	Morgan Stanley: to Underweight	8/19/2020
Maintains	UBS: to Neutral	7/27/2020
Maintains	Deutsche Bank: to Hold	7/27/2020
Maintains	MKM Partners: to Buy	7/24/2020
Upgrade	William Blair: Market Perform to Outperform	7/20/2020
Maintains	Morgan Stanley: to Underweight	5/18/2020

More Upgrades & Downgrades

Up Last 7 Days	4	3	3	3
Up Last 30 Days	8	5	8	8
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	UPS	Industry	Sector(s)	S&P 500
Current Qtr.	-10.60%	N/A	N/A	N/A
Next Qtr.	-6.60%	N/A	N/A	N/A
Current Year	-5.70%	N/A	N/A	N/A
Next Year	13.10%	N/A	N/A	N/A
Next 5 Years (per annum)	7.31%	N/A	N/A	N/A
Past 5 Years (per annum)	9.08%	N/A	N/A	N/A

2.5

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (24) >

Average 156.42

Low 70.00 High 195.00

Current 174.69

Upgrades & Downgrades >

Maintains	Morgan Stanley: to Underweight	10/5/2020
Maintains	Raymond James: to Strong Buy	9/29/2020
Upgrade	KeyBanc: Sector Weight to Overweight	9/28/2020
Maintains	B of A Securities: to Buy	9/23/2020
Upgrade	Credit Suisse: Neutral to Outperform	9/21/2020
Downgrade	Berenberg: Hold to Sell	9/3/2020

More Upgrades & Downgrades

Up Last 7 Days	1	4	2	2
Up Last 30 Days	4	4	4	5
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	3	1	2	1

Growth Estimates	VZ	Industry	Sector(s)	S&P 500
Current Qtr.	-3.20%	N/A	N/A	N/A
Next Qtr.	-0.90%	N/A	N/A	N/A
Current Year	-0.80%	N/A	N/A	N/A
Next Year	3.40%	N/A	N/A	N/A
Next 5 Years (per annum)	1.64%	N/A	N/A	N/A
Past 5 Years (per annum)	6.87%	N/A	N/A	N/A

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	1	1	3	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	1

Growth Estimates	WMT	Industry	Sector(s)	S&P 500
Current Qtr.	1.70%	N/A	N/A	N/A
Next Qtr.	2.90%	N/A	N/A	N/A
Current Year	8.10%	N/A	N/A	N/A
Next Year	4.90%	N/A	N/A	N/A
Next 5 Years (per annum)	6.41%	N/A	N/A	N/A
Past 5 Years (per annum)	0.53%	N/A	N/A	N/A

1.9

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (32) ›

Average 147.20

Low 105.00 High 175.00

Current 142.78

Upgrades & Downgrades ›

Upgrade	DZ Bank: Hold to Buy	10/2/2020
Maintains	Oppenheimer: to Outperform	9/22/2020
Downgrade	R5 Capital: Buy to Hold	8/31/2020
Maintains	Guggenheim: to Buy	8/19/2020
Maintains	RBC Capital: to Sector Perform	8/19/2020
Maintains	BMO Capital: to Outperform	8/19/2020

More Upgrades & Downgrades

Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	1	2

Growth Estimates	WM	Industry	Sector(s)	S&P 500
Current Qtr.	-16.00%	N/A	N/A	N/A
Next Qtr.	-13.40%	N/A	N/A	N/A
Current Year	-12.70%	N/A	N/A	N/A
Next Year	13.80%	N/A	N/A	N/A
Next 5 Years (per annum)	-1.26%	N/A	N/A	N/A
Past 5 Years (per annum)	13.97%	N/A	N/A	N/A

2.3

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (14) ›

Average 119.29

Low 106.00 | Current 115.35 | High 139.00

Upgrades & Downgrades ›

Downgrade	JP Morgan: Neutral to Underweight	9/23/2020
Maintains	Raymond James: to Outperform	7/29/2020
Maintains	Argus Research: to Buy	5/15/2020
Maintains	Stifel: to Buy	5/11/2020
Maintains	Deutsche Bank: to Hold	5/4/2020
Maintains	Oppenheimer: to Outperform	4/27/2020

More Upgrades & Downgrades

$300.60 USD
+0.94 (0.31%)
Updated Oct 9, 2020 04:00 PM ET

Style Scores:
D Value | C Growth | B Momentum | C VGM
Industry Rank:
Top 34% (86 out of 253)
Industry: Chemical - Diversified

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	302.29	Earnings ESP	0.00%
Day Low	299.23	Most Accurate Est	2.20
Day High	303.46	Current Qtr Est	2.20
52 Wk Low	167.43	Current Yr Est	9.85
52 Wk High	310.74	Exp Earnings Date	11/5/20
Avg. Volume	853,291	Prior Year EPS	8.21
Market Cap	66.40 B	Exp EPS Growth (3-5yr)	8.77%
Dividend	5.36 (1.78%)	Forward PE	30.50
Beta	0.85	PEG Ratio	3.48

Basic Materials » Chemical - Diversified

Research Reports For APD

Analyst | Snapshot | All Zacks' Analyst Reports »

News For APD

Zacks News for APD | Other News for APD

Air Products Up 53% in 6 Months: What's Behind the Rally?
10/05/20-6:01AM EST Zacks

Eastman Chemical (EMN) Inks Distribution Deal With DKSH
10/02/20-7:58AM EST Zacks

APD: What are Zacks experts saying now?
Zacks Private Portfolio Services

Air Products (APD) Joins ECH2A to Build Hydrogen Ecosystem
09/28/20-10:44AM EST Zacks

Eastman Chemical and DuPont Unveil New Sustainable Fabrics
09/25/20-9:22AM EST Zacks

Air Products (APD) to Increase Product Prices in North America
09/23/20-10:15AM EST Zacks

More Zacks News for APD»

Premium Research for APD

Zacks Rank	**Hold 3**
Zacks Industry Rank	Top 34% (86 out of 253)
Zacks Sector Rank	Top 31% (5 out of 16)
Style Scores	D Value | C Growth | B Momentum | C VGM
Earnings ESP	0.00%
Research Reports for APD	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Air Products and Chemicals Inc	**APD**	
Air Liquide	**AIQUY**	
Akzo Nobel NV	**AKZOY**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$59.40 USD
+0.50 (0.85%)
Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
B Value | B Growth | D Momentum | B VGM
Industry Rank:
Bottom 24% (192 out of 253)
Industry: Computers - IT Services

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	58.99	Earnings ESP	0.00%
Day Low	58.62	Most Accurate Est	1.19
Day High	59.57	Current Qtr Est	1.19
52 Wk Low	44.05	Current Yr Est	4.71
52 Wk High	77.29	Exp Earnings Date	11/10/20
Avg. Volume	639,809	Prior Year EPS	4.31
Market Cap	8.01 B	Exp EPS Growth (3-5yr)	8.50%
Dividend	1.31 (2.21%)	Forward PE	12.61
Beta	0.67	PEG Ratio	1.48

Computer and Technology » Computers - IT Services

Research Reports For DOX

Analyst Snapshot All Zacks' Analyst Reports »

News For DOX

Zacks News for DOX Other News for DOX

Why Is Amdocs (DOX) Down 1.5% Since Last Earnings Report?
09/04/20-10:31AM EST Zacks

Amdocs (DOX) Tops Q3 Earnings & Revenue Estimates, Ups View
08/06/20-9:04AM EST Zacks

DOX: What are Zacks experts saying now?
Zacks Private Portfolio Services

Amdocs (DOX) Tops Q3 Earnings and Revenue Estimates
08/05/20-6:55PM EST Zacks

Earnings Preview: Amdocs (DOX) Q3 Earnings Expected to Decline
07/29/20-11:33AM EST Zacks

Amdocs (DOX) Acquires Openet to Strengthen 5G Capabilities
07/24/20-8:14AM EST Zacks

More Zacks News for DOX»

Premium Research for DOX

Zacks Rank	**Hold** 3
Zacks Industry Rank	Bottom 24% (192 out of 253)
Zacks Sector Rank	Bottom 19% (13 out of 16)
Style Scores	B Value | B Growth | D Momentum | B VGM
Earnings ESP	0.00%
Research Reports for DOX	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Amdocs Limited	**DOX**	
SecureWorks Corp	**SCWX**	
ASGN Incorporated	**ASGN**	

$236.70 USD

-3.39 (-1.41%)

Updated Oct 9, 2020 04:00 PM ET

Style Scores:
B Value | B Growth | A Momentum | A VGM
Industry Rank:
Bottom 26% (186 out of 253)
Industry: Medical - Biomedical and Genetics

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	238.50	Earnings ESP	3.79%
Day Low	234.02	Most Accurate Est	3.90
Day High	239.58	Current Qtr Est	3.75
52 Wk Low	177.05	Current Yr Est	15.65
52 Wk High	264.97	Exp Earnings Date	*AMC 10/28/20
Avg. Volume	2,714,793	Prior Year EPS	14.82
Market Cap	138.63 B	Exp EPS Growth (3-5yr)	7.23%
Dividend	6.40 (2.70%)	Forward PE	15.12
Beta	0.81	PEG Ratio	2.09

Medical » Medical - Biomedical and Genetics

*BMO = Before Market Open *AMC = After Market Close

Research Reports For AMGN

Analyst Snapshot All Zacks' Analyst Reports »

News For AMGN

Zacks News for AMGN Other News for AMGN

Amgen Down on Unsatisfactory Heart Failure Drug Study Results
10/09/20-11:46AM EST Zacks

Signs That Your Trading Will Ruin Your Retirement - October 08, 2020
10/08/20-7:58AM EST Zacks

AMGN: What are Zacks experts saying now?
Zacks Private Portfolio Services

The Zacks Analyst Blog Highlights: Amgen, Exxon Mobil, S&P Global, HSBC and LULU
10/06/20-12:19PM EST Zacks

Stock Market News for Oct 6, 2020
10/06/20-7:44AM EST Zacks

Top Stock Reports for Amgen, Exxon Mobil & S&P Global
10/05/20-12:36PM EST Zacks

More Zacks News for AMGN»

Premium Research for AMGN

Zacks Rank	Hold 3
Zacks Industry Rank	Bottom 26% (186 out of 253)
Zacks Sector Rank	Bottom 6% (15 out of 16)
Style Scores	B Value | B Growth | A Momentum | A VGM
Earnings ESP	3.79%
Research Reports for AMGN	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Amgen Inc	**AMGN**	
Emergent Biosolutions Inc	**EBS**	
QIAGEN NV	**QGEN**	

$113.49 USD

-0.01 (-0.01%)

Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
D Value | B Growth | A Momentum | C VGM
Industry Rank:
Top 2% (6 out of 253)
Industry: Electronics - Connectors

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	114.53	Earnings ESP	0.83%
Day Low	113.12	Most Accurate Est	0.87
Day High	115.26	Current Qtr Est	0.86
52 Wk Low	63.05	Current Yr Est	3.33
52 Wk High	115.26	Exp Earnings Date	*BMO 10/21/20
Avg. Volume	1,375,268	Prior Year EPS	3.74
Market Cap	33.86 B	Exp EPS Growth (3-5yr)	7.51%
Dividend	1.00 (0.88%)	Forward PE	34.07
Beta	1.25	PEG Ratio	4.53

Computer and Technology » Electronics - Connectors

*BMO = Before Market Open *AMC = After Market Close

Research Reports For APH

Analyst Snapshot All Zacks' Analyst Reports »

News For APH

Zacks News for APH Other News for APH

All You Need to Know About Amphenol (APH) Rating Upgrade to Buy
10/08/20-11:00AM EST Zacks

Amphenol (APH): Strong Industry, Solid Earnings Estimate Revisions
09/02/20-7:41AM EST Zacks

APH: What are Zacks experts saying now?
Zacks Private Portfolio Services

Amphenol (APH) Upgraded to Strong Buy: What Does It Mean for the Stock?
08/24/20-11:00AM EST Zacks

Amphenol (APH) Up 1.6% Since Last Earnings Report: Can It Continue?
08/21/20-10:30AM EST Zacks

KLA (KLAC) Hits Fresh High: Is There Still Room to Run?
08/14/20-8:15AM EST Zacks

More Zacks News for APH»

Premium Research for APH

Zacks Rank	**Buy 2**
Zacks Industry Rank	Top 2% (6 out of 253)
Zacks Sector Rank	Bottom 19% (13 out of 16)
Style Scores	**D Value | B Growth | A Momentum | C VGM**
Earnings ESP	0.83%
Research Reports for APH	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Amphenol Corporation	**APH**	
EnSync Inc	**ESNC**	NA
IEH Corp	**IEHC**	NA

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$116.97 USD

+2.00 (1.74%)

Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
D Value | B Growth | A Momentum | B VGM
Industry Rank:
Top 28% (71 out of 253)
Industry: Computer - Mini computers

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	115.28	Earnings ESP	1.81%
Day Low	114.92	Most Accurate Est	0.70
Day High	117.00	Current Qtr Est	0.69
52 Wk Low	53.15	Current Yr Est	4.01
52 Wk High	137.98	Exp Earnings Date	*AMC 10/29/20
Avg. Volume	153,114,240	Prior Year EPS	2.97
Market Cap	2,027.95 B	Exp EPS Growth (3-5yr)	11.00%
Dividend	0.82 (0.70%)	Forward PE	29.21
Beta	1.31	PEG Ratio	2.66

Computer and Technology » Computer - Mini computers

*BMO = Before Market Open *AMC = After Market Close

Research Reports For AAPL

Analyst Snapshot All Zacks' Analyst Reports »

News For AAPL

Zacks News for AAPL Other News for AAPL

3 Cloud-Focused Tech Stocks to Buy Now and Hold for Years
10/09/20-4:59PM EST Zacks

Disney (DIS) to Release Pixar's Soul Exclusively on Disney+
10/09/20-10:07AM EST Zacks

AAPL: What are Zacks experts saying now?
Zacks Private Portfolio Services

Self-Driving Perks Up With Alphabet's Move: What are Others Doing?
10/09/20-8:21AM EST Zacks

Should Invesco Defensive Equity ETF (DEF) Be on Your Investing Radar?
10/09/20-5:20AM EST Zacks

Buy Netflix (NFLX) Stock for Long-Term and Stay-at-Home Growth?
10/09/20-5:00AM EST Zacks

More Zacks News for AAPL»

Premium Research for AAPL

Zacks Rank	Hold 3
Zacks Industry Rank	Top 28% (71 out of 253)
Zacks Sector Rank	Bottom 19% (13 out of 16)
Style Scores	D Value | B Growth | A Momentum | B VGM
Earnings ESP	1.81%
Research Reports for AAPL	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Apple Inc	**AAPL**	
Lenovo Group Ltd	**LNVGY**	
3D Systems Corporation	**DDD**	

$28.32 USD

-0.29 (-1.01%)

Updated Oct 9, 2020 04:02 PM ET

Style Scores:
A Value | B Growth | B Momentum | A VGM
Industry Rank:
Top 49% (124 out of 253)
Industry: Wireless National

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	28.63	Earnings ESP	-0.89%
Day Low	28.23	Most Accurate Est	0.77
Day High	28.69	Current Qtr Est	0.77
52 Wk Low	26.08	Current Yr Est	3.20
52 Wk High	39.70	Exp Earnings Date	*BMO 10/22/20
Avg. Volume	33,883,480	Prior Year EPS	3.57
Market Cap	201.78 B	Exp EPS Growth (3-5yr)	5.53%
Dividend	2.08 (7.34%)	Forward PE	8.84
Beta	0.69	PEG Ratio	1.60

Computer and Technology » Wireless National

*BMO = Before Market Open *AMC = After Market Close

Research Reports For T

Analyst Snapshot All Zacks' Analyst Reports »

News For T

Zacks News for T Other News for T

Buy Netflix (NFLX) Stock for Long-Term and Stay-at-Home Growth?
10/09/20-5:00AM EST Zacks

2 Highly-Ranked Stocks to Buy and Hold Despite All the Market Noise
10/07/20-6:18PM EST Zacks

T: What are Zacks experts saying now?
Zacks Private Portfolio Services

What Makes Altice (ATUS) a Promising Investment Option?
10/07/20-7:27AM EST Zacks

IBM Rolls Out New AI Products for Enhancing Advertising Reach
10/06/20-5:42PM EST Zacks

AT&T Offers 5G+ Service in Milwaukee to Boost User Experience
10/06/20-8:08AM EST Zacks

More Zacks News for T»

Premium Research for T

Zacks Rank	Sell 4
Zacks Industry Rank	Top 49% (124 out of 253)
Zacks Sector Rank	Bottom 19% (13 out of 16)
Style Scores	A Value | B Growth | B Momentum | A VGM
Earnings ESP	-0.89%
Research Reports for T	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
ATT Inc	**T**	
GCI Liberty Inc	**GLIBA**	
Cambium Networks Corporation	**CMBM**	

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Our Research. Your Success.

Quote & News
Quote Overview

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Zacks Research
More Research
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Financials
Options

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Baxter International Inc. (BAX)
(Delayed Data from NYSE)

$78.50 USD

-0.35 (-0.44%)

Updated Oct 9, 2020 04:00 PM ET

Add to portfo Trades from $1

Zacks Rank:
4-Sell 4

Style Scores:
C Value | B Growth | A Momentum | B VGM

Industry Rank:
Top 48% (122 out of 253)
Industry: Medical - Products

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity	
Open	78.85
Day Low	77.73
Day High	79.04
52 Wk Low	69.10
52 Wk High	95.19
Avg. Volume	2,817,055
Market Cap	39.74 B
Dividend	0.98 (1.25%)
Beta	0.77

Key Earnings Data	
Earnings ESP	0.00%
Most Accurate Est	0.72
Current Qtr Est	0.72
Current Yr Est	3.05
Exp Earnings Date	*BMO 10/29/20
Prior Year EPS	3.31
Exp EPS Growth (3-5yr)	9.75%
Forward PE	25.72
PEG Ratio	2.64

Medical » Medical - Products

*BMO = Before Market Open *AMC = After Market Close

Research Reports For BAX

Analyst Snapshot All Zacks' Analyst Reports »

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$61.82 USD
+0.20 (0.32%)
Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
B Value | B Growth | B Momentum | A VGM
Industry Rank:
Bottom 26% (186 out of 253)
Industry: Medical - Biomedical and Genetics

Quote Overview

View All Zacks #1 Ranked Stocks

Enter Symbol

Stock Activity		Key Earnings Data	
Open	61.80	Earnings ESP	0.81%
Day Low	61.61	Most Accurate Est	1.50
Day High	62.30	Current Qtr Est	1.49
52 Wk Low	45.76	Current Yr Est	6.24
52 Wk High	68.34	Exp Earnings Date	*BMO 11/5/20
Avg. Volume	10,498,894	Prior Year EPS	4.69
Market Cap	139.88 B	Exp EPS Growth (3-5yr)	8.63%
Dividend	1.80 (2.91%)	Forward PE	9.90
Beta	0.71	PEG Ratio	1.15

Medical » Medical - Biomedical and Genetics

*BMO = Before Market Open *AMC = After Market Close

Research Reports For BMY

Analyst Snapshot All Zacks' Analyst Reports »

News For BMY

Zacks News for BMY Other News for BMY

Top Analyst Reports for Mastercard, JPMorgan & Eli Lilly
10/09/20-2:08PM EST Zacks

Bristol Myers (BMY) Gains on Positive Opdivo Data in NSCLC
10/08/20-10:39AM EST Zacks

BMY: What are Zacks experts saying now?
Zacks Private Portfolio Services

Signs That Your Trading Will Ruin Your Retirement - October 08, 2020
10/08/20-7:58AM EST Zacks

The Zacks Analyst Blog Highlights: Gilead, JNJ, Sanofi, BMY and MyoKardia
10/07/20-11:57AM EST Zacks

Biotech Stock Roundup: ALXN to Raise Guidance, BMY to Buy MYOK & Other Updates
10/07/20-9:39AM EST Zacks

More Zacks News for BMY»

Premium Research for BMY

Zacks Rank	Hold 3
Zacks Industry Rank	Bottom 26% (186 out of 253)
Zacks Sector Rank	Bottom 6% (15 out of 16)
Style Scores	B Value | B Growth | B Momentum | A VGM
Earnings ESP	0.81%
Research Reports for BMY	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Bristol Myers Squibb Company	BMY	
Emergent Biosolutions Inc	EBS	
QIAGEN NV	QGEN	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$47.22 USD

+0.51 (1.09%)

Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
D Value | B Growth | F Momentum | D VGM
Industry Rank:
Bottom 29% (179 out of 253)
Industry: Insurance - Brokerage

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity	
Open	47.00
Day Low	46.84
Day High	47.50
52 Wk Low	30.70
52 Wk High	48.69
Avg. Volume	1,025,525
Market Cap	13.35 B
Dividend	0.34 (0.72%)
Beta	0.68
Finance » Insurance - Brokerage	

Key Earnings Data	
Earnings ESP	-5.21%
Most Accurate Est	0.40
Current Qtr Est	0.42
Current Yr Est	1.54
Exp Earnings Date	*AMC 10/26/20
Prior Year EPS	1.40
Exp EPS Growth (3-5yr)	NA
Forward PE	30.70
PEG Ratio	NA

*BMO = Before Market Open *AMC = After Market Close

Research Reports For BRO

Analyst Snapshot All Zacks' Analyst Reports »

News For BRO

Zacks News for BRO Other News for BRO

Why Should You Retain Marsh & McLennan in Your Portfolio?
10/01/20-12:48PM EST Zacks

Marsh & McLennan's (MMC) Arm Ties Up With Triterras Fintech
09/24/20-12:23PM EST Zacks

BRO: What are Zacks experts saying now?
Zacks Private Portfolio Services

Arthur J. Gallagher Completes Acquisition of Merriam Agency
09/22/20-10:16AM EST Zacks

Arthur J. Gallagher (AJG) Expands in Southwest With Buyout
09/21/20-10:17AM EST Zacks

Brown & Brown's (BRO) Subsidiary Buys Assets of Brookstone
09/18/20-11:02AM EST Zacks

More Zacks News for BRO»

Premium Research for BRO

Zacks Rank	Hold 3
Zacks Industry Rank	Bottom 29% (179 out of 253)
Zacks Sector Rank	Bottom 13% (14 out of 16)
Style Scores	D Value | B Growth | F Momentum | D VGM
Earnings ESP	-5.21%
Research Reports for BRO	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Brown Brown Inc	**BRO**	
Aon plc	**AON**	
Arthur J Gallagher Co	**AJG**	

$78.42 USD
+0.42 (0.54%)
Updated Oct 9, 2020 04:02 PM ET

1-Strong Buy
Style Scores:
F Value | F Growth | B Momentum | F VGM
Industry Rank:
Top 27% (69 out of 253)
Industry: Beverages - Alcohol

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	78.17	Earnings ESP	8.95%
Day Low	78.04	Most Accurate Est	0.56
Day High	78.66	Current Qtr Est	0.51
52 Wk Low	44.68	Current Yr Est	1.78
52 Wk High	83.40	Exp Earnings Date	12/3/20
Avg. Volume	859,541	Prior Year EPS	1.72
Market Cap	37.52 B	Exp EPS Growth (3-5yr)	NA
Dividend	0.70 (0.89%)	Forward PE	43.97
Beta	0.72	PEG Ratio	NA

Consumer Staples » Beverages - Alcohol

Research Reports For BF.B

Analyst | Snapshot | All Zacks' Analyst Reports »

News For BF.B

Zacks News for BF.B | Other News for BF.B

BrownForman Corporation (BF.B) Down 4.9% Since Last Earnings Report: Can It Rebound?
10/02/20-10:30AM EST Zacks

Here's Why AB InBev (BUD) Possesses a Robust Upside Story
09/18/20-6:51AM EST Zacks

BF.B: What are Zacks experts saying now?
Zacks Private Portfolio Services

Molson Coors (TAP) Fortifies Brands, Signs JV With Yuengling
09/16/20-8:34AM EST Zacks

Off-Premise & Brand Investments to Drive Brown-Forman's Growth
09/14/20-7:34AM EST Zacks

Molson Coors to Expand Non-Alcohol Line With 4 New Brands
09/10/20-6:25AM EST Zacks

More Zacks News for BF.B»

Premium Research for BF.B

Zacks Rank	Strong Buy 1
Zacks Industry Rank	Top 27% (69 out of 253)
Zacks Sector Rank	Top 50% (8 out of 16)
Style Scores	F Value | F Growth | B Momentum | F VGM
Earnings ESP	8.95%
Research Reports for BF.B	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
BrownForman Corporation	**BF.B**	
The Boston Beer Company Inc	**SAM**	
Tsingtao Brewery Co	**TSGTY**	

Case Nos. 2020-00349 and 2020-00350
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$92.76 USD
+1.62 (1.78%)
Updated Oct 9, 2020 04:02 PM ET

Trades from $1

Style Scores:
D Value | A Growth | D Momentum | B VGM
Industry Rank:
Top 42% (105 out of 253)
Industry: Soap and Cleaning Materials

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	91.46	Earnings ESP	0.00%
Day Low	91.34	Most Accurate Est	0.66
Day High	93.46	Current Qtr Est	0.66
52 Wk Low	47.98	Current Yr Est	2.82
52 Wk High	98.96	Exp Earnings Date	*BMO 10/29/20
Avg. Volume	1,344,344	Prior Year EPS	2.47
Market Cap	22.94 B	Exp EPS Growth (3-5yr)	8.86%
Dividend	0.96 (1.03%)	Forward PE	32.95
Beta	0.39	PEG Ratio	3.72

Consumer Staples » Soap and Cleaning Materials

*BMO = Before Market Open *AMC = After Market Close

Research Reports For CHD

Analyst | Snapshot | All Zacks' Analyst Reports »

News For CHD

Zacks News for CHD | Other News for CHD

Church & Dwight (CHD) Gains on High Demand & Online Strength
09/15/20-8:53AM EST Zacks

Why Is Church & Dwight (CHD) Up 5.4% Since Last Earnings Report?
08/30/20-10:30AM EST Zacks

CHD: What are Zacks experts saying now?
Zacks Private Portfolio Services

Should First Trust Capital Strength ETF (FTCS) Be on Your Investing Radar?
08/21/20-5:20AM EST Zacks

Church & Dwight Gains 30% in 3 Months on Pandemic-Led Demand
08/13/20-10:13AM EST Zacks

Company News for Aug 3, 2020
08/03/20-11:54AM EST Zacks

More Zacks News for CHD»

Premium Research for CHD

Zacks Rank	**Hold** 3
Zacks Industry Rank	Top 42% (105 out of 253)
Zacks Sector Rank	Top 50% (8 out of 16)
Style Scores	D Value | A Growth | D Momentum | B VGM
Earnings ESP	0.00%
Research Reports for CHD	Analyst | Snapshot

(= Change in last 30 days)
View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Church Dwight Co Inc	**CHD**	
Henkel AG Co	**HENKY**	
Reckitt Benckiser Group PLC	**RBGLY**	

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McKenzie

$39.85 USD
+0.06 (0.15%)
Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
C Value | B Growth | D Momentum | B VGM
Industry Rank:
Bottom 29% (179 out of 253)
Industry: Computer - Networking

Enter Symbol

Quote Overview

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	40.15	Earnings ESP	0.00%
Day Low	39.72	Most Accurate Est	0.71
Day High	40.23	Current Qtr Est	0.71
52 Wk Low	32.40	Current Yr Est	3.11
52 Wk High	50.28	Exp Earnings Date	11/11/20
Avg. Volume	24,236,076	Prior Year EPS	3.21
Market Cap	168.70 B	Exp EPS Growth (3-5yr)	6.67%
Dividend	1.44 (3.61%)	Forward PE	12.82
Beta	0.87	PEG Ratio	1.92

Computer and Technology » Computer - Networking

Research Reports For CSCO

Analyst | Snapshot | All Zacks' Analyst Reports »

News For CSCO

Zacks News for CSCO | Other News for CSCO

Harmonic Boosts Broadband Expansion With CableOS Deployments
10/09/20-8:58AM EST Zacks

The Zacks Analyst Blog Highlights: Cisco, Intel, AMD, TSMC and IBM
10/08/20-1:27PM EST Zacks

CSCO: What are Zacks experts saying now?
Zacks Private Portfolio Services

Cisco Teams Up With Verizon to Boost Fan Experience On-Site
10/08/20-9:39AM EST Zacks

Value In Legacy Tech: 3 Stocks To Watch
10/07/20-2:37PM EST Zacks

Bull Of The Day: Jabil Inc. (JBL)
10/07/20-4:49AM EST Zacks

More Zacks News for CSCO»

Premium Research for CSCO

Zacks Rank	**Hold** 3
Zacks Industry Rank	Bottom 29% (179 out of 253)
Zacks Sector Rank	Bottom 19% (13 out of 16)
Style Scores	C Value | B Growth | D Momentum | B VGM
Earnings ESP	0.00%
Research Reports for CSCO	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Cisco Systems Inc	**CSCO**	
Radcom Ltd	**RDCM**	
Allot Communications Ltd	**ALLT**	

$50.81 USD

+0.35 (0.69%)

Updated Oct 9, 2020 04:00 PM ET

Style Scores:

D Value | C Growth | F Momentum | D VGM

Industry Rank:

Top 49% (124 out of 253)

Industry: Beverages - Soft drinks

Quote Overview

Enter Symbol

Stock Activity		Key Earnings Data	
Open	50.67	Earnings ESP	1.26%
Day Low	50.60	Most Accurate Est	0.46
Day High	51.23	Current Qtr Est	0.45
52 Wk Low	36.27	Current Yr Est	1.80
52 Wk High	60.13	Exp Earnings Date	*BMO 10/22/20
Avg. Volume	14,255,715	Prior Year EPS	2.11
Market Cap	218.25 B	Exp EPS Growth (3-5yr)	4.81%
Dividend	1.64 (3.23%)	Forward PE	28.29
Beta	0.55	PEG Ratio	5.88

Consumer Staples » Beverages - Soft drinks

*BMO = Before Market Open *AMC = After Market Close

Research Reports For KO

Analyst Snapshot

All Zacks' Analyst Reports »

News For KO

Zacks News for KO Other News for KO

Will Coke (KO) Beat Estimates Again in Its Next Earnings Report?
10/08/20-11:10AM EST Zacks

Zacks Investment Ideas feature highlights: PepsiCo and Coca-Cola
10/06/20-11:44AM EST Zacks

KO: What are Zacks experts saying now?
Zacks Private Portfolio Services

Coca-Cola to Exit Zico Coconut Water Brand, Reforms Portfolio
10/06/20-8:12AM EST Zacks

Coke Vs. Pepsi: Has COVID Changed The Odds?
10/05/20-4:51PM EST Zacks

Coca-Cola (KO) Gains But Lags Market: What You Should Know
10/05/20-4:45PM EST Zacks

More Zacks News for KO»

Premium Research for KO

Zacks Rank	**Hold** 3
Zacks Industry Rank	Top 49% (124 out of 253)
Zacks Sector Rank	Top 50% (8 out of 16)
Style Scores	**D Value | C Growth | F Momentum | D VGM**
Earnings ESP	1.26%
Research Reports for KO	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
CocaCola Company The	**KO**	
Britvic PLC Sponsored ADR	**BTVCY**	
COCACOLA HBC	**CCHGY**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$79.77 USD
+1.03 (1.31%)
Updated Oct 9, 2020 04:00 PM ET

Style Scores:
C Value | A Growth | D Momentum | B VGM
Industry Rank:
Top 42% (105 out of 253)
Industry: Soap and Cleaning Materials

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	79.09	Earnings ESP	0.00%
Day Low	78.89	Most Accurate Est	0.70
Day High	80.13	Current Qtr Est	0.70
52 Wk Low	58.49	Current Yr Est	2.96
52 Wk High	80.13	Exp Earnings Date	*BMO 10/30/20
Avg. Volume	2,832,578	Prior Year EPS	2.83
Market Cap	68.39 B	Exp EPS Growth (3-5yr)	5.89%
Dividend	1.76 (2.21%)	Forward PE	26.97
Beta	0.59	PEG Ratio	4.58

Consumer Staples » Soap and Cleaning Materials

*BMO = Before Market Open *AMC = After Market Close

Research Reports For CL

Analyst Snapshot All Zacks' Analyst Reports »

News For CL

Zacks News for CL Other News for CL

This is Why Colgate-Palmolive (CL) is a Great Dividend Stock
10/07/20-10:45AM EST Zacks

Coronavirus-Led Pet Boom Puts the Spotlight on These 7 Stocks
10/01/20-7:49AM EST Zacks

CL: What are Zacks experts saying now?
Zacks Private Portfolio Services

Colgate Up More Than 10% YTD on Demand: Will It Move Higher?
09/28/20-9:10AM EST Zacks

Why Colgate-Palmolive (CL) is a Top Dividend Stock for Your Portfolio
09/21/20-10:45AM EST Zacks

5 Industry ETFs Set to Beat Slowing Retail Sales
09/18/20-12:00PM EST Zacks

More Zacks News for CL»

Premium Research for CL

Zacks Rank	**Hold** 3
Zacks Industry Rank	Top 42% (105 out of 253)
Zacks Sector Rank	Top 50% (8 out of 16)
Style Scores	C Value | A Growth | D Momentum | B VGM
Earnings ESP	0.00%
Research Reports for CL	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
ColgatePalmolive Company	**CL**	
Henkel AG Co	**HENKY**	
Reckitt Benckiser Group PLC	**RBGLY**	

$44.85 USD
-0.45 (-0.99%)
Updated Oct 9, 2020 04:00 PM ET

Style Scores:
B Value | B Growth | A Momentum | A VGM
Industry Rank:
Bottom 23% (196 out of 253)
Industry: Cable Television

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	45.38	Earnings ESP	4.33%
Day Low	44.68	Most Accurate Est	0.52
Day High	45.63	Current Qtr Est	0.49
52 Wk Low	31.71	Current Yr Est	2.44
52 Wk High	47.74	Exp Earnings Date	*BMO 10/29/20
Avg. Volume	20,028,882	Prior Year EPS	3.13
Market Cap	204.88 B	Exp EPS Growth (3-5yr)	9.76%
Dividend	0.92 (2.05%)	Forward PE	18.40
Beta	0.93	PEG Ratio	1.89

Consumer Discretionary » Cable Television

*BMO = Before Market Open *AMC = After Market Close

Research Reports For CMCSA

Analyst | Snapshot

All Zacks' Analyst Reports »

News For CMCSA

Zacks News for CMCSA | Other News for CMCSA

Disney (DIS) to Release Pixar's Soul Exclusively on Disney+
10/09/20-10:07AM EST Zacks

The Zacks Analyst Blog Highlights: Comcast, BHP, Shopify, BlackRock and Enbridge
10/08/20-1:11PM EST Zacks

CMCSA: What are Zacks experts saying now?
Zacks Private Portfolio Services

Will Disney (DIS) Bow to Investor Pressure to Scrap Dividend?
10/08/20-7:46AM EST Zacks

Top Research Reports for Comcast, BHP & Shopify
10/07/20-11:49AM EST Zacks

Will Comcast (CMCSA) Beat Estimates Again in Its Next Earnings Report?
10/07/20-11:10AM EST Zacks

More Zacks News for CMCSA»

Premium Research for CMCSA

Zacks Rank	**Hold 3**
Zacks Industry Rank	Bottom 23% (196 out of 253)
Zacks Sector Rank	Bottom 44% (9 out of 16)
Style Scores	**B Value | B Growth | A Momentum | A VGM**
Earnings ESP	4.33%
Research Reports for CMCSA	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Comcast Corporation	**CMCSA**	
Shaw Communications Inc	**SJR**	
Cable One Inc	**CABO**	

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McKenzie

$60.51 USD
-0.54 (-0.88%)
Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
C Value | F Growth | D Momentum | F VGM
Industry Rank:
Top 39% (98 out of 253)
Industry: Banks - Midwest

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	61.35	Earnings ESP	-5.66%
Day Low	60.14	Most Accurate Est	0.67
Day High	61.37	Current Qtr Est	0.71
52 Wk Low	45.51	Current Yr Est	2.33
52 Wk High	71.92	Exp Earnings Date	*BMO 10/20/20
Avg. Volume	425,586	Prior Year EPS	3.58
Market Cap	6.75 B	Exp EPS Growth (3-5yr)	NA
Dividend	1.08 (1.78%)	Forward PE	25.97
Beta	1.01	PEG Ratio	NA

Finance » Banks - Midwest

*BMO = Before Market Open *AMC = After Market Close

Research Reports For CBSH

Analyst Snapshot All Zacks' Analyst Reports »

News For CBSH

Zacks News for CBSH Other News for CBSH

Why Is Commerce (CBSH) Up 4.1% Since Last Earnings Report?
08/20/20-10:30AM EST Zacks

Commerce Bancshares (CBSH) Up 4.2% Despite Q2 Earnings Miss
07/22/20-8:23AM EST Zacks

CBSH: What are Zacks experts saying now?
Zacks Private Portfolio Services

Commerce Bancshares (CBSH) Lags Q2 Earnings Estimates
07/21/20-6:30AM EST Zacks

Should You Buy Commerce Bancshares (CBSH) Ahead of Earnings?
07/20/20-7:54AM EST Zacks

5 Bank Stocks Set for Q2 Earnings Surprise Amid Virus Woes
07/16/20-8:26AM EST Zacks

More Zacks News for CBSH»

Premium Research for CBSH

Zacks Rank	**Hold** 3
Zacks Industry Rank	Top 39% (98 out of 253)
Zacks Sector Rank	Bottom 13% (14 out of 16)
Style Scores	C Value | F Growth | D Momentum | F VGM
Earnings ESP	-5.66%
Research Reports for CBSH	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Commerce Bancshares Inc	**CBSH**	
Civista Bancshares Inc	**CIVB**	
First Financial Bancorp	**FFBC**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$369.46 USD
+4.37 (1.20%)
Updated Oct 9, 2020 04:00 PM ET

Style Scores:
C Value | A Growth | A Momentum | A VGM
Industry Rank:
Top 42% (105 out of 253)
Industry: Retail - Discount Stores

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	366.00	Earnings ESP	0.00%
Day Low	365.70	Most Accurate Est	1.95
Day High	369.75	Current Qtr Est	1.95
52 Wk Low	271.28	Current Yr Est	9.57
52 Wk High	369.75	Exp Earnings Date	12/10/20
Avg. Volume	2,738,973	Prior Year EPS	8.85
Market Cap	163.02 B	Exp EPS Growth (3-5yr)	8.37%
Dividend	2.80 (0.76%)	Forward PE	38.62
Beta	0.69	PEG Ratio	4.61

Retail-Wholesale » Retail - Discount Stores

Research Reports For COST

Analyst Snapshot All Zacks' Analyst Reports »

News For COST

Zacks News for COST Other News for COST

The Zacks Analyst Blog Highlights: Adobe, Costco, Union Pacific, NextEra Energy and Altria Group
10/09/20-8:00AM EST Zacks

Top Stock Reports for Adobe, Costco & Union Pacific
10/08/20-12:20PM EST Zacks

COST: What are Zacks experts saying now?
Zacks Private Portfolio Services

Costco's Sturdy Sales Performance Continues in September
10/08/20-7:43AM EST Zacks

The Zacks Analyst Blog Highlights: Target, Big Lots, Dollar General and Costco
10/07/20-11:45AM EST Zacks

4 Stocks to Tap Rising Demand in Retail Discount Stores Space
10/06/20-8:03AM EST Zacks

More Zacks News for COST»

Premium Research for COST

Zacks Rank	Hold 3
Zacks Industry Rank	Top 42% (105 out of 253)
Zacks Sector Rank	Top 19% (3 out of 16)
Style Scores	C Value | A Growth | A Momentum | A VGM
Earnings ESP	0.00%
Research Reports for COST	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Costco Wholesale Corporation	COST	
Target Corporation	TGT	
Big Lots Inc	BIG	

$59.40 USD

-1.07 (-1.77%)

Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
A Value | A Growth | F Momentum | A VGM
Industry Rank:
Bottom 18% (208 out of 253)
Industry: Retail - Pharmacies and Drug Stores

Quote Overview

View All Zacks #1 Ranked Stocks

Enter Symbol

Stock Activity		Key Earnings Data	
Open	60.80	Earnings ESP	-1.07%
Day Low	59.21	Most Accurate Est	1.30
Day High	60.80	Current Qtr Est	1.31
52 Wk Low	52.04	Current Yr Est	7.23
52 Wk High	77.03	Exp Earnings Date	*BMO 11/6/20
Avg. Volume	8,349,735	Prior Year EPS	7.08
Market Cap	77.74 B	Exp EPS Growth (3-5yr)	5.59%
Dividend	2.00 (3.37%)	Forward PE	8.22
Beta	0.68	PEG Ratio	1.47

Retail-Wholesale » Retail - Pharmacies and Drug Stores

*BMO = Before Market Open *AMC = After Market Close

Research Reports For CVS

Analyst Snapshot All Zacks' Analyst Reports »

News For CVS

Zacks News for CVS Other News for CVS

How to Maximize Your Retirement Portfolio with These Top-Ranked Dividend Stocks - October 06, 2020
10/06/20-9:24AM EST Zacks

CVS Health (CVS) Outpaces Stock Market Gains: What You Should Know
10/05/20-4:45PM EST Zacks

CVS: What are Zacks experts saying now?
Zacks Private Portfolio Services

CVS Health (CVS) Dips More Than Broader Markets: What You Should Know
09/29/20-4:45PM EST Zacks

How to Maximize Your Retirement Portfolio with These Top-Ranked Dividend Stocks - September 29, 2020
09/29/20-8:26AM EST Zacks

CVS Health (CVS) Stock Moves -1.27%: What You Should Know
09/23/20-4:45PM EST Zacks

More Zacks News for CVS»

Premium Research for CVS

Zacks Rank	**Buy** 2
Zacks Industry Rank	Bottom 18% (208 out of 253)
Zacks Sector Rank	Top 19% (3 out of 16)
Style Scores	A Value | A Growth | F Momentum | A VGM
Earnings ESP	-1.07%
Research Reports for CVS	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
CVS Health Corporation	**CVS**	
Herbalife LTD	**HLF**	
Rite Aid Corporation	**RAD**	

$226.06 USD

+5.35 (2.42%)

Updated Oct 9, 2020 04:03 PM ET

Style Scores:
D Value | C Growth | B Momentum | D VGM

Industry Rank:
Top 32% (82 out of 253)

Industry: Diversified Operations

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	221.60	Earnings ESP	2.56%
Day Low	221.17	Most Accurate Est	1.41
Day High	226.17	Current Qtr Est	1.37
52 Wk Low	119.60	Current Yr Est	5.48
52 Wk High	226.17	Exp Earnings Date	*BMO 10/22/20
Avg. Volume	2,014,590	Prior Year EPS	4.42
Market Cap	160.37 B	Exp EPS Growth (3-5yr)	11.71%
Dividend	0.72 (0.32%)	Forward PE	41.22
Beta	0.88	PEG Ratio	3.52

Conglomerates » Diversified Operations

*BMO = Before Market Open *AMC = After Market Close

Research Reports For DHR

Analyst Snapshot All Zacks' Analyst Reports »

News For DHR

Zacks News for DHR Other News for DHR

Should You Buy Stocks Going into This Earnings Season?
10/09/20-12:27PM EST Zacks

Why the Earnings Surprise Streak Could Continue for Danaher (DHR)
10/07/20-11:10AM EST Zacks

DHR: What are Zacks experts saying now?
Zacks Private Portfolio Services

Danaher Restructure Debt With Senior Notes Issue & Redemption
10/07/20-9:40AM EST Zacks

3 Top Stocks From the Booming Diversified Operations Industry
10/06/20-7:54AM EST Zacks

ITT vs. DHR: Which Stock Should Value Investors Buy Now?
10/02/20-10:40AM EST Zacks

More Zacks News for DHR»

Premium Research for DHR

Zacks Rank	**Buy** 2
Zacks Industry Rank	Top 32% (82 out of 253)
Zacks Sector Rank	Top 25% (4 out of 16)
Style Scores	D Value | C Growth | B Momentum | D VGM
Earnings ESP	2.56%
Research Reports for DHR	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Danaher Corporation	**DHR**	
HC2 Holdings Inc	**HCHC**	
3M Company	**MMM**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$61.87 USD
+0.48 (0.78%)
Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
C Value | C Growth | C Momentum | C VGM
Industry Rank:
Top 40% (100 out of 253)
Industry: Food - Miscellaneous

Quote Overview

View All Zacks #1 Ranked Stocks

Enter Symbol

Stock Activity	
Open	61.51
Day Low	61.13
Day High	62.23
52 Wk Low	46.59
52 Wk High	66.14
Avg. Volume	3,965,934
Market Cap	37.82 B
Dividend	2.04 (3.30%)
Beta	0.60

Key Earnings Data	
Earnings ESP	0.00%
Most Accurate Est	0.95
Current Qtr Est	0.95
Current Yr Est	3.60
Exp Earnings Date	12/16/20
Prior Year EPS	3.61
Exp EPS Growth (3-5yr)	7.50%
Forward PE	17.19
PEG Ratio	2.29

Consumer Staples » Food - Miscellaneous

Research Reports For GIS

Analyst | Snapshot

All Zacks' Analyst Reports »

News For GIS

Zacks News for GIS Other News for GIS

Flowers Foods Worth Binging on: Up More than 10% in 3 Months
10/06/20-10:04AM EST Zacks

Can Rising Demand, Brand Strength Aid Kellogg Amid High Costs?
10/06/20-10:03AM EST Zacks

GIS: What are Zacks experts saying now?
Zacks Private Portfolio Services

TreeHouse Foods Looks Poised on Solid Demand, Growth Plans
10/02/20-7:59AM EST Zacks

Conagra (CAG) Tops Q1 Earnings Estimates, Hikes Dividend
10/01/20-11:35AM EST Zacks

Coronavirus-Led Pet Boom Puts the Spotlight on These 7 Stocks
10/01/20-7:49AM EST Zacks

More Zacks News for GIS»

Premium Research for GIS

Zacks Rank	Buy 2
Zacks Industry Rank	Top 40% (100 out of 253)
Zacks Sector Rank	Top 50% (8 out of 16)
Style Scores	C Value | C Growth | C Momentum | C VGM
Earnings ESP	0.00%
Research Reports for GIS	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
General Mills Inc	**GIS**	
The Hain Celestial Group Inc	**HAIN**	
United Natural Foods Inc	**UNFI**	

$48.96 USD

-0.14 (-0.29%)

Updated Oct 9, 2020 04:02 PM ET

Trades from $1

Style Scores:
D Value | A Growth | B Momentum | B VGM
Industry Rank:
Top 49% (124 out of 253)
Industry: Food - Meat Products

Enter Symbol

Quote Overview

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	49.11	Earnings ESP	0.00%
Day Low	48.77	Most Accurate Est	0.45
Day High	49.41	Current Qtr Est	0.45
52 Wk Low	39.01	Current Yr Est	1.68
52 Wk High	52.97	Exp Earnings Date	11/24/20
Avg. Volume	1,368,215	Prior Year EPS	1.74
Market Cap	26.42 B	Exp EPS Growth (3-5yr)	7.50%
Dividend	0.93 (1.90%)	Forward PE	29.14
Beta	0.00	PEG Ratio	3.89

Consumer Staples » Food - Meat Products

Research Reports For HRL

Analyst Snapshot

All Zacks' Analyst Reports »

News For HRL

Zacks News for HRL   Other News for HRL

Hormel Foods Gains on Retail Demand Amid Foodservice Declines
09/01/20-8:59AM EST Zacks

Stock Futures Mostly Higher on Trade Talks, Dow's Shake-Up in Focus
08/25/20-9:52AM EST Zacks

HRL: What are Zacks experts saying now?
Zacks Private Portfolio Services

Strong Market Momentum Continues
08/25/20-9:31AM EST Zacks

Hormel Foods (HRL) Q3 Earnings Top Estimates Amid High Costs
08/25/20-8:59AM EST Zacks

Hormel Foods (HRL) Beats Q3 Earnings and Revenue Estimates
08/25/20-6:45AM EST Zacks

More Zacks News for HRL»

Premium Research for HRL

Zacks Rank	**Hold 3**
Zacks Industry Rank	Top 49% (124 out of 253)
Zacks Sector Rank	Top 50% (8 out of 16)
Style Scores	**D Value | A Growth | B Momentum | B VGM**
Earnings ESP	0.00%
Research Reports for HRL	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Hormel Foods Corporation	**HRL**	
Beyond Meat Inc	**BYND**	
Pilgrims Pride Corporation	**PPC**	

$52.82 USD
-0.55 (-1.03%)
Updated Oct 9, 2020 04:00 PM ET

Style Scores:
A Value | A Growth | B Momentum | A VGM
Industry Rank:
Bottom 4% (243 out of 253)
Industry: Semiconductor - General

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	53.55	Earnings ESP	0.00%
Day Low	52.67	Most Accurate Est	1.10
Day High	53.85	Current Qtr Est	1.10
52 Wk Low	43.63	Current Yr Est	4.86
52 Wk High	69.29	Exp Earnings Date	*AMC 10/22/20
Avg. Volume	26,968,528	Prior Year EPS	4.87
Market Cap	224.64 B	Exp EPS Growth (3-5yr)	7.50%
Dividend	1.32 (2.50%)	Forward PE	10.87
Beta	0.72	PEG Ratio	1.45

Computer and Technology » Semiconductor - General

*BMO = Before Market Open *AMC = After Market Close

Research Reports For INTC

Analyst Snapshot All Zacks' Analyst Reports »

News For INTC

Zacks News for INTC Other News for INTC

Self-Driving Perks Up With Alphabet's Move: What are Others Doing?
10/09/20-8:21AM EST Zacks

The Zacks Analyst Blog Highlights: Cisco, Intel, AMD, TSMC and IBM
10/08/20-1:27PM EST Zacks

INTC: What are Zacks experts saying now?
Zacks Private Portfolio Services

Silicon Motion's Upbeat Preliminary Q3 Results Lift NAND Peers
10/08/20-9:25AM EST Zacks

Apple (AAPL) Set to Unveil iPhone 5G at Oct 13 Virtual Event
10/07/20-3:09PM EST Zacks

Value In Legacy Tech: 3 Stocks To Watch
10/07/20-2:37PM EST Zacks

More Zacks News for INTC»

Premium Research for INTC

Zacks Rank	**Hold** 3
Zacks Industry Rank	Bottom 4% (243 out of 253)
Zacks Sector Rank	Bottom 19% (13 out of 16)
Style Scores	A Value | A Growth | B Momentum | A VGM
Earnings ESP	0.00%
Research Reports for INTC	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Intel Corporation	**INTC**	
STMicroelectronics NV	**STM**	
Amtech Systems Inc	**ASYS**	

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McKenzie

$119.41 USD

+3.21 (2.76%)

Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
C Value | B Growth | A Momentum | A VGM
Industry Rank:
Top 17% (43 out of 253)
Industry: Consumer Products - Staples

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	117.75	Earnings ESP	0.00%
Day Low	117.75	Most Accurate Est	1.43
Day High	121.72	Current Qtr Est	1.43
52 Wk Low	92.14	Current Yr Est	5.78
52 Wk High	143.87	Exp Earnings Date	11/2/20
Avg. Volume	959,862	Prior Year EPS	6.17
Market Cap	12.77 B	Exp EPS Growth (3-5yr)	NA
Dividend	3.08 (2.58%)	Forward PE	20.67
Beta	0.97	PEG Ratio	NA

Consumer Staples » Consumer Products - Staples

Research Reports For IFF

Analyst Snapshot All Zacks' Analyst Reports »

News For IFF

Zacks News for IFF Other News for IFF

International Flavors (IFF) Down 2.9% Since Last Earnings Report: Can It Rebound?
09/09/20-10:30AM EST Zacks

International Flavors (IFF) Q2 Earnings Top Estimates, Down Y/Y
08/11/20-8:25AM EST Zacks

IFF: What are Zacks experts saying now?
Zacks Private Portfolio Services

International Flavors (IFF) Q2 Earnings Surpass Estimates
08/10/20-4:25PM EST Zacks

What's in Store for International Flavors (IFF) Q2 Earnings?
08/05/20-9:22AM EST Zacks

International Flavors (IFF) Reports Next Week: Wall Street Expects Earnings Growth
08/03/20-11:31AM EST Zacks

More Zacks News for IFF»

Premium Research for IFF

Zacks Rank	Sell 4
Zacks Industry Rank	Top 17% (43 out of 253)
Zacks Sector Rank	Top 50% (8 out of 16)
Style Scores	C Value | B Growth | A Momentum | A VGM
Earnings ESP	0.00%
Research Reports for IFF	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
International Flavors Fragrances Inc	**IFF**	
Ahold NV	**ADRNY**	
Grocery Outlet Holding Corp	**GO**	

$150.97 USD
+2.08 (1.40%)
Updated Oct 9, 2020 04:00 PM ET

Style Scores:
B Value | C Growth | A Momentum | B VGM
Industry Rank:
Top 49% (124 out of 253)
Industry: Large Cap Pharmaceuticals

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	149.65	Earnings ESP	7.19%
Day Low	149.45	Most Accurate Est	2.13
Day High	151.48	Current Qtr Est	1.99
52 Wk Low	109.16	Current Yr Est	7.86
52 Wk High	157.00	Exp Earnings Date	*BMO 10/13/20
Avg. Volume	5,995,109	Prior Year EPS	8.68
Market Cap	397.48 B	Exp EPS Growth (3-5yr)	5.75%
Dividend	4.04 (2.68%)	Forward PE	19.22
Beta	0.68	PEG Ratio	3.34

Medical » Large Cap Pharmaceuticals

*BMO = Before Market Open *AMC = After Market Close

Research Reports For JNJ

Analyst Snapshot All Zacks' Analyst Reports »

News For JNJ

Zacks News for JNJ Other News for JNJ

Are Bank Stocks Cheap or Value Traps?
10/09/20-3:50PM EST Zacks

Pharma Stock Roundup: LLY, AZN, PFE, GSK Progress on Coronavirus Programs
10/09/20-12:41PM EST Zacks

JNJ: What are Zacks experts saying now?
Zacks Private Portfolio Services

Here's How J&J (JNJ) Will Roll Out Drug Sector Q3 Earnings
10/08/20-6:58AM EST Zacks

The Zacks Analyst Blog Highlights: Gilead, JNJ, Sanofi, BMY and MyoKardia
10/07/20-11:57AM EST Zacks

Here's Why Small-Cap ETFs Are Hitting New Highs
10/07/20-9:10AM EST Zacks

More Zacks News for JNJ»

Premium Research for JNJ

Zacks Rank	Hold 3
Zacks Industry Rank	Top 49% (124 out of 253)
Zacks Sector Rank	Bottom 6% (15 out of 16)
Style Scores	B Value | C Growth | A Momentum | B VGM
Earnings ESP	7.19%
Research Reports for JNJ	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Johnson Johnson	JNJ	
Eli Lilly and Company	LLY	
H Lundbeck AS	HLUYY	

Case Nos. 2020-00349 and 2020-00350
WP-39
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McKenzie

$65.85 USD

+0.63 (0.97%)

Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
B Value | B Growth | C Momentum | B VGM
Industry Rank:
Top 40% (100 out of 253)
Industry: Food - Miscellaneous

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	65.56	Earnings ESP	-7.69%
Day Low	65.15	Most Accurate Est	0.81
Day High	66.22	Current Qtr Est	0.88
52 Wk Low	52.66	Current Yr Est	3.95
52 Wk High	72.88	Exp Earnings Date	*BMO 10/29/20
Avg. Volume	2,336,792	Prior Year EPS	3.94
Market Cap	22.58 B	Exp EPS Growth (3-5yr)	6.00%
Dividend	2.28 (3.46%)	Forward PE	16.65
Beta	0.63	PEG Ratio	2.78

Consumer Staples » Food - Miscellaneous

*BMO = Before Market Open *AMC = After Market Close

Research Reports For K

Analyst Snapshot All Zacks' Analyst Reports »

News For K

Zacks News for K Other News for K

K vs. MKC: Which Stock Should Value Investors Buy Now?
10/08/20-10:40AM EST Zacks

Retirees Should Know These 3 Facts About Required Minimum Distributions - October 08, 2020
10/08/20-8:03AM EST Zacks

K: What are Zacks experts saying now?
Zacks Private Portfolio Services

3 Top-Ranked Dividend Stocks: A Smarter Way to Boost Your Retirement Income - October 07, 2020
10/07/20-8:18AM EST Zacks

Flowers Foods Worth Binging on: Up More than 10% in 3 Months
10/06/20-10:04AM EST Zacks

Can Rising Demand, Brand Strength Aid Kellogg Amid High Costs?
10/06/20-10:03AM EST Zacks

More Zacks News for K»

Premium Research for K

Zacks Rank	Buy 2
Zacks Industry Rank	Top 40% (100 out of 253)
Zacks Sector Rank	Top 50% (8 out of 16)
Style Scores	B Value | B Growth | C Momentum | B VGM
Earnings ESP	-7.69%
Research Reports for K	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Kellogg Company	**K**	
The Hain Celestial Group Inc	**HAIN**	
United Natural Foods Inc	**UNFI**	

News For KMB

Zacks News for KMB   Other News for KMB

Coty to Gain From Kylie Skin International DTC Website Launch
10/08/20-10:33AM EST Zacks

Why Kimberly-Clark (KMB) is Poised to Beat Earnings Estimates Again
10/07/20-11:10AM EST Zacks

KMB: What are Zacks experts saying now?
Zacks Private Portfolio Services

Kimberly-Clark Looks Buoyant on Acquisitions & Saving Efforts
10/06/20-10:01AM EST Zacks

ADRNY vs. KMB: Which Stock Should Value Investors Buy Now?
10/05/20-10:40AM EST Zacks

All You Should Know Before Helen of Troy's (HELE) Q2 Earnings
10/05/20-9:21AM EST Zacks

More Zacks News for KMB»

Premium Research for KMB

Zacks Rank	Buy 2
Zacks Industry Rank	Top 17% (43 out of 253)
Zacks Sector Rank	Top 50% (8 out of 16)
Style Scores	C Value | A Growth | A Momentum | A VGM
Earnings ESP	-0.58%
Research Reports for KMB	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
KimberlyClark Corporation	**KMB**	
Ahold NV	**ADRNY**	
Grocery Outlet Holding Corp	**GO**	
Liberty Tax Inc	**FRG**	
LION CORP	**LIOPF**	
Newell Brands Inc	**NWL**	
Ollies Bargain Outlet Holdings Inc	**OLLI**	

See all Consumer Products - Staples Peers »

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$156.88 USD
+3.38 (2.20%)
Updated Oct 9, 2020 04:02 PM ET

Trades from $1

Style Scores:
B Value | B Growth | B Momentum | A VGM
Industry Rank:
Top 49% (124 out of 253)
Industry: Large Cap Pharmaceuticals

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	154.09	Earnings ESP	2.21%
Day Low	154.07	Most Accurate Est	1.82
Day High	157.15	Current Qtr Est	1.78
52 Wk Low	101.36	Current Yr Est	7.32
52 Wk High	170.75	Exp Earnings Date	*BMO 10/27/20
Avg. Volume	3,914,277	Prior Year EPS	6.04
Market Cap	150.05 B	Exp EPS Growth (3-5yr)	15.69%
Dividend	2.96 (1.89%)	Forward PE	21.43
Beta	0.19	PEG Ratio	1.37

Medical » Large Cap Pharmaceuticals

*BMO = Before Market Open *AMC = After Market Close

Research Reports For LLY

Analyst Snapshot All Zacks' Analyst Reports »

News For LLY

Zacks News for LLY Other News for LLY

Top Analyst Reports for Mastercard, JPMorgan & Eli Lilly
10/09/20-2:08PM EST Zacks

Pharma Stock Roundup: LLY, AZN, PFE, GSK Progress on Coronavirus Programs
10/09/20-12:41PM EST Zacks

LLY: What are Zacks experts saying now?
Zacks Private Portfolio Services

Regeneron Gains on EUA Request for Coronavirus Treatment
10/09/20-11:35AM EST Zacks

Best COVID Drug Stocks to Buy on Trump Recovery
10/08/20-2:50PM EST Zacks

Company News for Oct 8, 2020
10/08/20-8:34AM EST Zacks

More Zacks News for LLY»

Premium Research for LLY

Zacks Rank	Buy 2
Zacks Industry Rank	Top 49% (124 out of 253)
Zacks Sector Rank	Bottom 6% (15 out of 16)
Style Scores	B Value | B Growth | B Momentum | A VGM
Earnings ESP	2.21%
Research Reports for LLY	Analyst | Snapshot

(= Change in last 30 days)
View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Eli Lilly and Company	**LLY**	
H Lundbeck AS	**HLUYY**	
AbbVie Inc	**ABBV**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$385.93 USD

-2.66 (-0.68%)

Updated Oct 9, 2020 04:03 PM ET

Trades from $1

Style Scores:
B Value | A Growth | C Momentum | A VGM
Industry Rank:
Bottom 11% (225 out of 253)
Industry: Aerospace - Defense

Enter Symbol

Quote Overview

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	388.41	Earnings ESP	0.00%
Day Low	385.29	Most Accurate Est	6.07
Day High	390.10	Current Qtr Est	6.07
52 Wk Low	266.11	Current Yr Est	24.13
52 Wk High	442.53	Exp Earnings Date	*BMO 10/20/20
Avg. Volume	1,164,648	Prior Year EPS	21.95
Market Cap	107.88 B	Exp EPS Growth (3-5yr)	6.93%
Dividend	9.60 (2.49%)	Forward PE	16.00
Beta	0.95	PEG Ratio	2.31

Aerospace » Aerospace - Defense

*BMO = Before Market Open *AMC = After Market Close

Research Reports For LMT

Analyst Snapshot All Zacks' Analyst Reports »

News For LMT

Zacks News for LMT Other News for LMT

Boeing (BA) Wins $150M Deal to Support KC-46 Aircraft Program
10/08/20-12:01PM EST Zacks

The Zacks Analyst Blog Highlights: Facebook, Tesla, Lockheed, Starbucks and American Express
10/07/20-12:15PM EST Zacks

LMT: What are Zacks experts saying now?
Zacks Private Portfolio Services

Lockheed Martin (LMT) Wins $79M Deal to Support LCS Program
10/07/20-9:41AM EST Zacks

Top Analyst Reports for Facebook, Tesla & Lockheed Martin
10/06/20-11:56AM EST Zacks

Lockheed Martin (LMT) Gains But Lags Market: What You Should Know
10/05/20-4:45PM EST Zacks

More Zacks News for LMT»

Premium Research for LMT

Zacks Rank	**Hold 3**
Zacks Industry Rank	Bottom 11% (225 out of 253)
Zacks Sector Rank	Bottom 0% (16 out of 16)
Style Scores	**B Value | A Growth | C Momentum | A VGM**
Earnings ESP	0.00%
Research Reports for LMT	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Lockheed Martin Corporation	**LMT**	
L3Harris Technologies Inc	**LHX**	
Northrop Grumman Corporation	**NOC**	

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McKenzie

$115.71 USD

+1.45 (1.27%)

Updated Oct 9, 2020 04:02 PM ET

Trades from $1

Style Scores:
D Value | A Growth | A Momentum | B VGM
Industry Rank:
Bottom 29% (179 out of 253)
Industry: Insurance - Brokerage

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	115.19	Earnings ESP	0.00%
Day Low	114.23	Most Accurate Est	0.72
Day High	116.51	Current Qtr Est	0.72
52 Wk Low	74.34	Current Yr Est	4.81
52 Wk High	120.97	Exp Earnings Date	*BMO 10/29/20
Avg. Volume	1,844,537	Prior Year EPS	4.66
Market Cap	58.61 B	Exp EPS Growth (3-5yr)	3.05%
Dividend	1.86 (1.61%)	Forward PE	24.07
Beta	0.83	PEG Ratio	7.89
Finance » Insurance - Brokerage			

*BMO = Before Market Open *AMC = After Market Close

Research Reports For MMC

Analyst Snapshot All Zacks' Analyst Reports »

News For MMC

Zacks News for MMC Other News for MMC

Why Should You Retain Marsh & McLennan in Your Portfolio?
10/01/20-12:48PM EST Zacks

Marsh & McLennan's (MMC) Arm Ties Up With Triterras Fintech
09/24/20-12:23PM EST Zacks

MMC: What are Zacks experts saying now?
Zacks Private Portfolio Services

MMC vs. AJG: Which Insurance Brokerage Stock Should You Hold?
09/09/20-11:21AM EST Zacks

Marsh & McLennan (MMC): Strong Industry, Solid Earnings Estimate Revisions
09/04/20-7:46AM EST Zacks

Brown & Brown Inks Deal to Acquire VAS-Affiliated Companies
09/03/20-9:24AM EST Zacks

More Zacks News for MMC»

Premium Research for MMC

Zacks Rank	Sell 4
Zacks Industry Rank	Bottom 29% (179 out of 253)
Zacks Sector Rank	Bottom 13% (14 out of 16)
Style Scores	D Value | A Growth | A Momentum | B VGM
Earnings ESP	0.00%
Research Reports for MMC	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Marsh McLennan Companies Inc	**MMC**	
Aon plc	**AON**	
Arthur J Gallagher Co	**AJG**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$196.11 USD
+1.78 (0.92%)
Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
D Value | B Growth | F Momentum | D VGM
Industry Rank:
Top 40% (100 out of 253)
Industry: Food - Miscellaneous

Enter Symbol

Quote Overview

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	195.79	Earnings ESP	0.00%
Day Low	195.27	Most Accurate Est	1.63
Day High	197.03	Current Qtr Est	1.63
52 Wk Low	112.23	Current Yr Est	5.72
52 Wk High	211.07	Exp Earnings Date	1/26/21
Avg. Volume	734,025	Prior Year EPS	5.35
Market Cap	26.16 B	Exp EPS Growth (3-5yr)	5.54%
Dividend	2.48 (1.26%)	Forward PE	34.31
Beta	0.43	PEG Ratio	6.19

Consumer Staples » Food - Miscellaneous

Research Reports For MKC

Analyst | Snapshot | All Zacks' Analyst Reports »

News For MKC

Zacks News for MKC | Other News for MKC

K vs. MKC: Which Stock Should Value Investors Buy Now?
10/08/20-10:40AM EST Zacks

McCormick (MKC) Looks Poised on High Demand, Saving Efforts
10/07/20-9:26AM EST Zacks

MKC: What are Zacks experts saying now?
Zacks Private Portfolio Services

McCormick's (MKC) Q3 Earnings Beat Estimates, Sales Up Y/Y
09/29/20-9:56AM EST Zacks

McCormick (MKC) Surpasses Q3 Earnings and Revenue Estimates
09/29/20-6:45AM EST Zacks

All You Need to Note Before McCormick's (MKC) Q3 Earnings
09/25/20-8:27AM EST Zacks

More Zacks News for MKC»

Premium Research for MKC

Zacks Rank	Hold 3
Zacks Industry Rank	Top 40% (100 out of 253)
Zacks Sector Rank	Top 50% (8 out of 16)
Style Scores	D Value | B Growth | F Momentum | D VGM
Earnings ESP	0.00%
Research Reports for MKC	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
McCormick Company Incorporated	**MKC**	
The Hain Celestial Group Inc	**HAIN**	
United Natural Foods Inc	**UNFI**	

$224.83 USD
-0.97 (-0.43%)
Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
D Value | F Growth | A Momentum | F VGM
Industry Rank:
Top 25% (63 out of 253)
Industry: Retail - Restaurants

Quote Overview

View All Zacks #1 Ranked Stocks

Enter Symbol

Stock Activity		Key Earnings Data	
Open	226.94	Earnings ESP	2.02%
Day Low	223.12	Most Accurate Est	1.91
Day High	227.22	Current Qtr Est	1.87
52 Wk Low	124.23	Current Yr Est	5.91
52 Wk High	228.66	Exp Earnings Date	10/27/20
Avg. Volume	2,760,234	Prior Year EPS	7.84
Market Cap	167.30 B	Exp EPS Growth (3-5yr)	7.04%
Dividend	5.00 (2.22%)	Forward PE	38.03
Beta	0.67	PEG Ratio	5.41

Retail-Wholesale » Retail - Restaurants

Research Reports For MCD

Analyst Snapshot All Zacks' Analyst Reports »

News For MCD

Zacks News for MCD Other News for MCD

McDonald's Posts Improved Q3 US Comps, Declares Dividend Hike
10/09/20-7:26AM EST Zacks

Factor & Smart Beta ETFs: What You Should Know
10/08/20-3:16PM EST Zacks

MCD: What are Zacks experts saying now?
Zacks Private Portfolio Services

McDonald's Spruces Up Menu With New McCafe Bakery Line-up
10/08/20-7:41AM EST Zacks

McDonald's (MCD) Gains But Lags Market: What You Should Know
10/05/20-4:50PM EST Zacks

McDonald's (MCD) Gains But Lags Market: What You Should Know
09/28/20-4:50PM EST Zacks

More Zacks News for MCD»

Premium Research for MCD

Zacks Rank	Buy 2
Zacks Industry Rank	Top 25% (63 out of 253)
Zacks Sector Rank	Top 19% (3 out of 16)
Style Scores	D Value | F Growth | A Momentum | F VGM
Earnings ESP	2.02%
Research Reports for MCD	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
McDonalds Corporation	**MCD**	
BJs Restaurants Inc	**BJRI**	
Brinker International Inc	**EAT**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$80.36 USD
-0.12 (-0.15%)
Updated Oct 9, 2020 04:02 PM ET

Trades from $1

Style Scores:
B Value | B Growth | B Momentum | A VGM
Industry Rank:
Top 49% (124 out of 253)
Industry: Large Cap Pharmaceuticals

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	80.88	Earnings ESP	3.35%
Day Low	80.05	Most Accurate Est	1.47
Day High	81.09	Current Qtr Est	1.42
52 Wk Low	65.25	Current Yr Est	5.68
52 Wk High	92.64	Exp Earnings Date	*BMO 10/27/20
Avg. Volume	8,305,027	Prior Year EPS	5.19
Market Cap	203.25 B	Exp EPS Growth (3-5yr)	6.74%
Dividend	2.44 (3.04%)	Forward PE	14.14
Beta	0.43	PEG Ratio	2.10

Medical » Large Cap Pharmaceuticals

*BMO = Before Market Open *AMC = After Market Close

Research Reports For MRK

Analyst | Snapshot

All Zacks' Analyst Reports »

News For MRK

Zacks News for MRK | Other News for MRK

Bristol Myers (BMY) Gains on Positive Opdivo Data in NSCLC
10/08/20-10:39AM EST Zacks

Here's How J&J (JNJ) Will Roll Out Drug Sector Q3 Earnings
10/08/20-6:58AM EST Zacks

MRK: What are Zacks experts saying now?
Zacks Private Portfolio Services

Merck (MRK) Gains But Lags Market: What You Should Know
10/07/20-4:50PM EST Zacks

Here's Why Small-Cap ETFs Are Hitting New Highs
10/07/20-9:10AM EST Zacks

3 Top-Ranked Dividend Stocks: A Smarter Way to Boost Your Retirement Income - October 07, 2020
10/07/20-8:18AM EST Zacks

More Zacks News for MRK»

Premium Research for MRK

Zacks Rank	Hold 3
Zacks Industry Rank	Top 49% (124 out of 253)
Zacks Sector Rank	Bottom 6% (15 out of 16)
Style Scores	B Value | B Growth | B Momentum | A VGM
Earnings ESP	3.35%
Research Reports for MRK	Analyst | Snapshot

(▲ ▼ = Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Merck Co Inc	**MRK**	
Eli Lilly and Company	**LLY**	
H Lundbeck AS	**HLUYY**	

$215.81 USD
+5.23 (2.48%)
Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
D Value | B Growth | C Momentum | B VGM
Industry Rank:
Top 34% (87 out of 253)
Industry: Computer - Software

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	211.23	Earnings ESP	0.00%
Day Low	211.23	Most Accurate Est	1.53
Day High	215.86	Current Qtr Est	1.53
52 Wk Low	132.52	Current Yr Est	6.39
52 Wk High	232.86	Exp Earnings Date	10/28/20
Avg. Volume	30,616,598	Prior Year EPS	5.76
Market Cap	1,633.18 B	Exp EPS Growth (3-5yr)	13.71%
Dividend	2.04 (0.95%)	Forward PE	33.77
Beta	0.92	PEG Ratio	2.46

Computer and Technology » Computer - Software

Research Reports For MSFT

Analyst Snapshot All Zacks' Analyst Reports »

News For MSFT

Zacks News for MSFT Other News for MSFT

3 Cloud-Focused Tech Stocks to Buy Now and Hold for Years
10/09/20-4:59PM EST Zacks

Next Generation of Gaming: Microsoft Vs. Sony
10/09/20-2:35PM EST Zacks

MSFT: What are Zacks experts saying now?
Zacks Private Portfolio Services

IBM Bets Big on $1T Hybrid Cloud Market With Business Spin-off
10/09/20-8:34AM EST Zacks

GameStop's Multi-Year Deal With Microsoft Drives Stock
10/09/20-7:51AM EST Zacks

Lowe's, Madison Square Garden Sports, Nike, Salesforce and Microsoft highlighted as Zacks Bull and Bear of the Day
10/09/20-7:37AM EST Zacks

More Zacks News for MSFT»

Premium Research for MSFT

Zacks Rank	Hold 3
Zacks Industry Rank	Top 34% (87 out of 253)
Zacks Sector Rank	Bottom 19% (13 out of 16)
Style Scores	D Value | B Growth | C Momentum | B VGM
Earnings ESP	0.00%
Research Reports for MSFT	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Microsoft Corporation	**MSFT**	
Aspen Technology Inc	**AZPN**	
Intuit Inc	**INTU**	

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McKenzie

$315.28 USD
-4.40 (-1.38%)
Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
B Value | A Growth | D Momentum | A VGM
Industry Rank:
Bottom 11% (225 out of 253)
Industry: Aerospace - Defense

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	320.00	Earnings ESP	1.23%
Day Low	313.63	Most Accurate Est	5.67
Day High	322.47	Current Qtr Est	5.60
52 Wk Low	263.31	Current Yr Est	22.46
52 Wk High	385.01	Exp Earnings Date	*BMO 10/22/20
Avg. Volume	785,110	Prior Year EPS	21.21
Market Cap	52.56 B	Exp EPS Growth (3-5yr)	NA
Dividend	5.80 (1.84%)	Forward PE	14.04
Beta	0.81	PEG Ratio	NA

Aerospace » Aerospace - Defense

*BMO = Before Market Open *AMC = After Market Close

Research Reports For NOC

Analyst Snapshot All Zacks' Analyst Reports »

News For NOC

Zacks News for NOC Other News for NOC

Boeing (BA) Wins $150M Deal to Support KC-46 Aircraft Program
10/08/20-12:01PM EST Zacks

Boeing Wins Deal for Trident II Missile Navigation Subsystem
10/05/20-9:53AM EST Zacks

NOC: What are Zacks experts saying now?
Zacks Private Portfolio Services

Lockheed Martin Wins $36M Deal to Aid Japan's Aegis System
10/05/20-6:48AM EST Zacks

Top Research Reports for NVIDIA, Intel & Broadcom
10/02/20-12:02PM EST Zacks

Lockheed Arm Wins $498M Deal to Produce Trident II Missiles
10/02/20-8:15AM EST Zacks

More Zacks News for NOC»

Premium Research for NOC

Zacks Rank	Buy 2
Zacks Industry Rank	Bottom 11% (225 out of 253)
Zacks Sector Rank	Bottom 0% (16 out of 16)
Style Scores	B Value | A Growth | D Momentum | A VGM
Earnings ESP	1.23%
Research Reports for NOC	Analyst | Snapshot

(= Change in last 30 days)
View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Northrop Grumman Corporation	NOC	
L3Harris Technologies Inc	LHX	
Air Industries Group	AIRI	

$61.15 USD

+0.26 (0.43%)

Updated Oct 9, 2020 04:03 PM ET

Style Scores:
B Value | C Growth | A Momentum | B VGM
Industry Rank:
Top 34% (87 out of 253)
Industry: Computer - Software

Enter Symbol

Quote Overview

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	61.15	Earnings ESP	0.00%
Day Low	60.86	Most Accurate Est	1.00
Day High	61.38	Current Qtr Est	1.00
52 Wk Low	39.71	Current Yr Est	4.19
52 Wk High	62.60	Exp Earnings Date	12/10/20
Avg. Volume	18,420,098	Prior Year EPS	3.85
Market Cap	184.12 B	Exp EPS Growth (3-5yr)	11.00%
Dividend	0.96 (1.57%)	Forward PE	14.59
Beta	0.79	PEG Ratio	1.33

Computer and Technology » Computer - Software

Research Reports For ORCL

Analyst | Snapshot

All Zacks' Analyst Reports »

News For ORCL

Zacks News for ORCL Other News for ORCL

Why Is Oracle (ORCL) Up 6.7% Since Last Earnings Report?
10/10/20-10:30AM EST Zacks

Tiktok, Snapchat Beat Facebook's (FB) Instagram Popularity
10/08/20-9:56AM EST Zacks

ORCL: What are Zacks experts saying now?
Zacks Private Portfolio Services

Oracle's POS Chosen by Paytronix to Boost Digital Experience
10/07/20-9:55AM EST Zacks

SAP's Emarsys Buyout to Improve Customer Experience Portfolio
10/06/20-5:57PM EST Zacks

Zacks Earnings Trends Highlights: Micron Technology, Costco, NIKE, Oracle and FedEx
10/01/20-8:11AM EST Zacks

More Zacks News for ORCL»

Premium Research for ORCL

Zacks Rank	Hold 3
Zacks Industry Rank	Top 34% (87 out of 253)
Zacks Sector Rank	Bottom 19% (13 out of 16)
Style Scores	B Value | C Growth | A Momentum | B VGM
Earnings ESP	0.00%
Research Reports for ORCL	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Oracle Corporation	**ORCL**	
Aspen Technology Inc	**AZPN**	
Intuit Inc	**INTU**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$138.44 USD

+0.59 (0.43%)

Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
C Value | A Growth | D Momentum | B VGM
Industry Rank:
Top 49% (124 out of 253)
Industry: Beverages - Soft drinks

Quote Overview

View All Zacks #1 Ranked Stocks

Enter Symbol

Stock Activity		Key Earnings Data	
Open	138.70	Earnings ESP	0.00%
Day Low	137.90	Most Accurate Est	1.45
Day High	139.26	Current Qtr Est	1.45
52 Wk Low	101.42	Current Yr Est	5.51
52 Wk High	147.20	Exp Earnings Date	2/11/21
Avg. Volume	4,890,677	Prior Year EPS	5.53
Market Cap	191.32 B	Exp EPS Growth (3-5yr)	6.49%
Dividend	4.09 (2.95%)	Forward PE	25.13
Beta	0.57	PEG Ratio	3.87

Consumer Staples » Beverages - Soft drinks

Research Reports For PEP

Analyst Snapshot All Zacks' Analyst Reports »

News For PEP

Zacks News for PEP Other News for PEP

Zacks Investment Ideas feature highlights: PepsiCo and Coca-Cola
10/06/20-11:44AM EST Zacks

Coke Vs. Pepsi: Has COVID Changed The Odds?
10/05/20-4:51PM EST Zacks

PEP: What are Zacks experts saying now?
Zacks Private Portfolio Services

Company News for Oct 2, 2020
10/02/20-8:50AM EST Zacks

Should You Invest in the Fidelity MSCI Consumer Staples Index ETF (FSTA)?
10/02/20-5:20AM EST Zacks

PepsiCo (PEP) Q3 Earnings & Sales Top Estimates, Stock Up
10/01/20-11:54AM EST Zacks

More Zacks News for PEP»

Premium Research for PEP

Zacks Rank	Hold 3
Zacks Industry Rank	Top 49% (124 out of 253)
Zacks Sector Rank	Top 50% (8 out of 16)
Style Scores	C Value | A Growth | D Momentum | B VGM
Earnings ESP	0.00%
Research Reports for PEP	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
PepsiCo Inc	**PEP**	
Britvic PLC Sponsored ADR	**BTVCY**	
COCACOLA HBC	**CCHGY**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$36.79 USD

-0.10 (-0.27%)

Updated Oct 9, 2020 04:02 PM ET

Trades from $1

Style Scores:
B Value | D Growth | B Momentum | B VGM
Industry Rank:
Top 49% (124 out of 253)
Industry: Large Cap Pharmaceuticals

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	36.83	Earnings ESP	-4.59%
Day Low	36.59	Most Accurate Est	0.68
Day High	37.12	Current Qtr Est	0.71
52 Wk Low	27.88	Current Yr Est	2.85
52 Wk High	40.97	Exp Earnings Date	*BMO 10/27/20
Avg. Volume	20,636,276	Prior Year EPS	2.95
Market Cap	204.44 B	Exp EPS Growth (3-5yr)	4.29%
Dividend	1.52 (4.13%)	Forward PE	12.92
Beta	0.66	PEG Ratio	3.01

Medical » Large Cap Pharmaceuticals

*BMO = Before Market Open *AMC = After Market Close

Research Reports For PFE

Analyst Snapshot All Zacks' Analyst Reports »

News For PFE

Zacks News for PFE Other News for PFE

Pharma Stock Roundup: LLY, AZN, PFE, GSK Progress on Coronavirus Programs
10/09/20-12:41PM EST Zacks

Here's Why Small-Cap ETFs Are Hitting New Highs
10/07/20-9:10AM EST Zacks

PFE: What are Zacks experts saying now?
Zacks Private Portfolio Services

Pfizer, BioNTech Begin EU Rolling Filing of Coronavirus Vaccine
10/07/20-8:40AM EST Zacks

SpringWorks Inks Deal With Pfizer for Nirogacestat Combo
10/06/20-11:50AM EST Zacks

Pfizer (PFE) Gains But Lags Market: What You Should Know
10/05/20-4:45PM EST Zacks

More Zacks News for PFE»

Premium Research for PFE

Zacks Rank	**Hold 3**
Zacks Industry Rank	Top 49% (124 out of 253)
Zacks Sector Rank	Bottom 6% (15 out of 16)
Style Scores	**B Value | D Growth | B Momentum | B VGM**
Earnings ESP	-4.59%
Research Reports for PFE	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Pfizer Inc	**PFE**	
Eli Lilly and Company	**LLY**	
H Lundbeck AS	**HLUYY**	

$142.92 USD

+1.27 (0.90%)

Updated Oct 9, 2020 04:02 PM ET

Style Scores:
D Value | A Growth | A Momentum | B VGM

Industry Rank:
Top 42% (105 out of 253)

Industry: Soap and Cleaning Materials

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	141.84	Earnings ESP	2.11%
Day Low	141.70	Most Accurate Est	1.45
Day High	143.64	Current Qtr Est	1.42
52 Wk Low	94.34	Current Yr Est	5.41
52 Wk High	143.64	Exp Earnings Date	*BMO 10/20/20
Avg. Volume	5,769,147	Prior Year EPS	5.12
Market Cap	355.82 B	Exp EPS Growth (3-5yr)	6.53%
Dividend	3.16 (2.21%)	Forward PE	26.43
Beta	0.43	PEG Ratio	4.04

Consumer Staples » Soap and Cleaning Materials

*BMO = Before Market Open *AMC = After Market Close

Research Reports For PG

Analyst Snapshot All Zacks' Analyst Reports »

News For PG

Zacks News for PG Other News for PG

Why P&G (PG) is Poised to Beat Earnings Estimates Again
10/07/20-11:10AM EST Zacks

Is Fidelity High Dividend ETF (FDVV) a Strong ETF Right Now?
10/07/20-5:20AM EST Zacks

PG: What are Zacks experts saying now?
Zacks Private Portfolio Services

Procter & Gamble (PG) Gains But Lags Market: What You Should Know
10/05/20-4:50PM EST Zacks

Hibbett, American Airlines, PG and Palantir as Zacks Bull and Bear of the Day
10/05/20-12:03PM EST Zacks

SPACs and Direct Offerings Are Becoming More Common
10/02/20-12:51PM EST Zacks

More Zacks News for PG»

Premium Research for PG

Zacks Rank	Hold 3
Zacks Industry Rank	Top 42% (105 out of 253)
Zacks Sector Rank	Top 50% (8 out of 16)
Style Scores	D Value | A Growth | A Momentum | B VGM
Earnings ESP	2.11%
Research Reports for PG	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Procter Gamble Company The	**PG**	
Henkel AG Co	**HENKY**	
Reckitt Benckiser Group PLC	**RBGLY**	

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McKenzie

$234.01 USD

+1.99 (0.86%)

Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
D Value | C Growth | C Momentum | D VGM
Industry Rank:
Bottom 16% (213 out of 253)
Industry: REIT and Equity Trust - Other

Quote Overview

View All Zacks #1 Ranked Stocks

Enter Symbol

Stock Activity		Key Earnings Data	
Open	232.45	Earnings ESP	0.29%
Day Low	230.66	Most Accurate Est	2.60
Day High	234.25	Current Qtr Est	2.59
52 Wk Low	155.37	Current Yr Est	10.39
52 Wk High	248.23	Exp Earnings Date	*AMC 11/3/20
Avg. Volume	747,409	Prior Year EPS	10.75
Market Cap	40.91 B	Exp EPS Growth (3-5yr)	3.36%
Dividend	8.00 (3.42%)	Forward PE	22.52
Beta	0.13	PEG Ratio	6.71

Finance » REIT and Equity Trust - Other

*BMO = Before Market Open *AMC = After Market Close

Research Reports For PSA

Analyst Snapshot All Zacks' Analyst Reports »

News For PSA

Zacks News for PSA Other News for PSA

IRM or PSA: Which Is the Better Value Stock Right Now?
10/06/20-10:40AM EST Zacks

Is it Wise to Hold on to Public Storage (PSA) Stock Now?
09/09/20-8:19AM EST Zacks

PSA: What are Zacks experts saying now?
Zacks Private Portfolio Services

Public Storage (PSA) Up 8.6% Since Last Earnings Report: Can It Continue?
09/04/20-10:31AM EST Zacks

Public Storage (PSA) Q2 FFO Lags Estimates on Rent & Cost Woes
08/06/20-11:01AM EST Zacks

Public Storage (PSA) Q2 FFO Miss Estimates
08/05/20-4:35PM EST Zacks

More Zacks News for PSA»

Premium Research for PSA

Zacks Rank	Hold 3
Zacks Industry Rank	Bottom 16% (213 out of 253)
Zacks Sector Rank	Bottom 13% (14 out of 16)
Style Scores	D Value | C Growth | C Momentum | D VGM
Earnings ESP	0.29%
Research Reports for PSA	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Public Storage	**PSA**	
American Tower Corporation REIT	**AMT**	
Brandywine Realty Trust	**BDN**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$150.91 USD
+2.85 (1.92%)
Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
D Value | A Growth | A Momentum | A VGM
Industry Rank:
Bottom 4% (243 out of 253)
Industry: Semiconductor - General

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	150.08	Earnings ESP	0.00%
Day Low	148.85	Most Accurate Est	1.25
Day High	151.52	Current Qtr Est	1.25
52 Wk Low	93.09	Current Yr Est	5.05
52 Wk High	151.52	Exp Earnings Date	*AMC 10/20/20
Avg. Volume	3,919,619	Prior Year EPS	5.24
Market Cap	138.23 B	Exp EPS Growth (3-5yr)	9.33%
Dividend	3.60 (2.39%)	Forward PE	29.87
Beta	1.14	PEG Ratio	3.20

Computer and Technology » Semiconductor - General

*BMO = Before Market Open *AMC = After Market Close

Research Reports For TXN

Analyst Snapshot All Zacks' Analyst Reports »

News For TXN

Zacks News for TXN Other News for TXN

Texas Instruments (TXN) Stock Moves -0.16%: What You Should Know
10/06/20-4:50PM EST Zacks

Texas Instruments (TXN) Stock Moves -0.31%: What You Should Know
09/29/20-4:50PM EST Zacks

TXN: What are Zacks experts saying now?
Zacks Private Portfolio Services

Texas Instruments (TXN) Outpaces Stock Market Gains: What You Should Know
09/22/20-4:50PM EST Zacks

4 Reasons for Wall Street to Stay Bullish Amid Recent Turmoil
09/21/20-6:33AM EST Zacks

Texas Instruments to Reward Investors With 13% Dividend Hike
09/21/20-6:08AM EST Zacks

More Zacks News for TXN»

Premium Research for TXN

Zacks Rank	Sell 4
Zacks Industry Rank	Bottom 4% (243 out of 253)
Zacks Sector Rank	Bottom 19% (13 out of 16)
Style Scores	D Value | A Growth | A Momentum | A VGM
Earnings ESP	0.00%
Research Reports for TXN	Analyst | Snapshot

(= Change in last 30 days)
View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Texas Instruments Incorporated	TXN	
STMicroelectronics NV	STM	
Amtech Systems Inc	ASYS	

$115.83 USD

+0.21 (0.18%)

Updated Oct 9, 2020 04:00 PM ET

5- Trades from $1

Style Scores:
A Value | C Growth | F Momentum | B VGM
Industry Rank:
Bottom 14% (217 out of 253)
Industry: Insurance - Property and Casualty

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	116.44	Earnings ESP	-10.06%
Day Low	115.23	Most Accurate Est	2.90
Day High	116.98	Current Qtr Est	3.22
52 Wk Low	76.99	Current Yr Est	8.27
52 Wk High	144.50	Exp Earnings Date	*BMO 10/20/20
Avg. Volume	1,456,265	Prior Year EPS	9.60
Market Cap	29.33 B	Exp EPS Growth (3-5yr)	6.66%
Dividend	3.40 (2.94%)	Forward PE	14.01
Beta	0.85	PEG Ratio	2.10

Finance » Insurance - Property and Casualty

*BMO = Before Market Open *AMC = After Market Close

Research Reports For TRV

Analyst | Snapshot | All Zacks' Analyst Reports »

News For TRV

Zacks News for TRV Other News for TRV

Stock Market News for Oct 6, 2020
10/06/20-7:44AM EST Zacks

New Strong Sell Stocks for August 28th
09/28/20-7:11AM EST Zacks

TRV: What are Zacks experts saying now?
Zacks Private Portfolio Services

Will August Weather Losses Mar Allstate's (ALL) Profitability?
09/18/20-12:00PM EST Zacks

Here's Why You Should Hold Travelers Stock in Your Portfolio
09/16/20-8:54AM EST Zacks

Will Hurricane Laura Dent Allstate's Underwriting Margins?
08/28/20-12:17PM EST Zacks

More Zacks News for TRV»

Premium Research for TRV

Zacks Rank	**Strong Sell** 5
Zacks Industry Rank	Bottom 14% (217 out of 253)
Zacks Sector Rank	Bottom 13% (14 out of 16)
Style Scores	A Value | C Growth | F Momentum | B VGM
Earnings ESP	-10.06%
Research Reports for TRV	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
The Travelers Companies Inc	**TRV**	
Fidelity National Financial Inc	**FNF**	
First American Financial Corporation	**FAF**	

$174.69 USD

+0.48 (0.28%)

Updated Oct 9, 2020 04:02 PM ET

Trades from $1

Style Scores:
C Value | B Growth | B Momentum | B VGM
Industry Rank:
Top 2% (6 out of 253)
Industry: Transportation - Air Freight and Cargo

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	174.51	Earnings ESP	5.40%
Day Low	172.86	Most Accurate Est	1.90
Day High	175.38	Current Qtr Est	1.80
52 Wk Low	82.00	Current Yr Est	6.98
52 Wk High	175.98	Exp Earnings Date	*BMO 10/28/20
Avg. Volume	3,943,736	Prior Year EPS	7.53
Market Cap	150.82 B	Exp EPS Growth (3-5yr)	7.90%
Dividend	4.04 (2.31%)	Forward PE	25.02
Beta	0.98	PEG Ratio	3.17

Transportation » Transportation - Air Freight and Cargo

*BMO = Before Market Open *AMC = After Market Close

Research Reports For UPS

Analyst Snapshot All Zacks' Analyst Reports »

News For UPS

Zacks News for UPS Other News for UPS

4 Transportation Stocks to Buy Ahead of Q3 Earnings Season
10/09/20-11:50AM EST Zacks

Should Invesco Defensive Equity ETF (DEF) Be on Your Investing Radar?
10/09/20-5:20AM EST Zacks

UPS: What are Zacks experts saying now?
Zacks Private Portfolio Services

United Parcel Service (UPS) Stock Moves -0.41%: What You Should Know
10/02/20-4:50PM EST Zacks

Should Franklin LibertyQ U.S. Equity ETF (FLQL) Be on Your Investing Radar?
10/02/20-5:20AM EST Zacks

5 Stocks in S&P 500 ETF That Have Powered Best Q3 Since 2010
10/01/20-9:40AM EST Zacks

More Zacks News for UPS»

Premium Research for UPS

Zacks Rank	**Buy 2**
Zacks Industry Rank	Top 2% (6 out of 253)
Zacks Sector Rank	Top 38% (6 out of 16)
Style Scores	**C Value | B Growth | B Momentum | B VGM**
Earnings ESP	5.40%
Research Reports for UPS	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
United Parcel Service Inc	**UPS**	
FedEx Corporation	**FDX**	
Air Transport Services Group Inc	**ATSG**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$59.33 USD
+0.14 (0.24%)
Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
B Value | B Growth | F Momentum | B VGM
Industry Rank:
Top 49% (124 out of 253)
Industry: Wireless National

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	59.25	Earnings ESP	0.57%
Day Low	59.08	Most Accurate Est	1.22
Day High	59.54	Current Qtr Est	1.22
52 Wk Low	48.84	Current Yr Est	4.78
52 Wk High	62.22	Exp Earnings Date	*BMO 10/21/20
Avg. Volume	13,255,039	Prior Year EPS	4.81
Market Cap	245.51 B	Exp EPS Growth (3-5yr)	3.41%
Dividend	2.51 (4.23%)	Forward PE	12.41
Beta	0.44	PEG Ratio	3.64

Computer and Technology » Wireless National

*BMO = Before Market Open *AMC = After Market Close

Research Reports For VZ

Analyst Snapshot All Zacks' Analyst Reports »

News For VZ

Zacks News for VZ Other News for VZ

Cisco Teams Up With Verizon to Boost Fan Experience On-Site
10/08/20-9:39AM EST Zacks

Verizon Communications (VZ) Gains But Lags Market: What You Should Know
10/05/20-4:45PM EST Zacks

VZ: What are Zacks experts saying now?
Zacks Private Portfolio Services

Will Verizon (VZ) Beat Estimates Again in Its Next Earnings Report?
10/05/20-11:10AM EST Zacks

Nokia (NOK) Secures 100 5G Deals on Technological Prowess
10/05/20-7:43AM EST Zacks

U.S. Cellular Revamps Failover Solution for Enterprises
10/02/20-8:13AM EST Zacks

More Zacks News for VZ»

Premium Research for VZ

Zacks Rank	**Hold** 3
Zacks Industry Rank	Top 49% (124 out of 253)
Zacks Sector Rank	Bottom 19% (13 out of 16)
Style Scores	B Value | B Growth | F Momentum | B VGM
Earnings ESP	0.57%
Research Reports for VZ	Analyst | Snapshot

(= Change in last 30 days)
View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Verizon Communications Inc	**VZ**	
GCI Liberty Inc	**GLIBA**	
Cambium Networks Corporation	**CMBM**	

Case Nos. 2020-00349 and 2020-00350
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McKenzie

$142.78 USD
+1.42 (1.00%)
Updated Oct 9, 2020 04:00 PM ET

Trades from $1

1-

Style Scores:
C Value | A Growth | D Momentum | B VGM
Industry Rank:
Top 11% (28 out of 253)
Industry: Retail - Supermarkets

Quote Overview

View All Zacks #1 Ranked Stocks

Enter Symbol

Stock Activity		Key Earnings Data	
Open	141.66	Earnings ESP	-4.91%
Day Low	141.56	Most Accurate Est	1.13
Day High	143.34	Current Qtr Est	1.18
52 Wk Low	102.00	Current Yr Est	5.35
52 Wk High	151.33	Exp Earnings Date	11/12/20
Avg. Volume	9,990,649	Prior Year EPS	4.93
Market Cap	404.60 B	Exp EPS Growth (3-5yr)	5.63%
Dividend	2.16 (1.51%)	Forward PE	26.70
Beta	0.27	PEG Ratio	4.74

Retail-Wholesale » Retail - Supermarkets

Research Reports For WMT

Analyst Snapshot

All Zacks' Analyst Reports »

News For WMT

Zacks News for WMT Other News for WMT

DICK'S Sporting Rolls Out Hiring Plans for Holiday Season
10/09/20-8:07AM EST Zacks

Kroger (KR) Rolls Out On-Premise Kitchens With ClusterTruck
10/09/20-7:52AM EST Zacks

WMT: What are Zacks experts saying now?
Zacks Private Portfolio Services

Walmart (WMT) Gains But Lags Market: What You Should Know
10/08/20-4:45PM EST Zacks

Forget Amazon & Shopify and Buy Cheaper E-Commerce Stock Etsy?
10/08/20-3:29PM EST Zacks

Reasons to Retain Green Dot (GDOT) Stock in Your Portfolio
10/08/20-1:34PM EST Zacks

More Zacks News for WMT»

Premium Research for WMT

Zacks Rank	**Strong Buy** 1
Zacks Industry Rank	Top 11% (28 out of 253)
Zacks Sector Rank	Top 19% (3 out of 16)
Style Scores	C **Value** | A **Growth** | D **Momentum** | B **VGM**
Earnings ESP	-4.91%
Research Reports for WMT	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Walmart Inc	**WMT**	
The Kroger Co	**KR**	
J Sainsbury PLC	**JSAIY**	

Case Nos. 2020-00349 and 2020-00350
WP-39
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McKenzie

$115.35 USD
+0.65 (0.57%)
Updated Oct 9, 2020 04:00 PM ET

Trades from $1

Style Scores:
C Value | C Growth | B Momentum | B VGM
Industry Rank:
Top 25% (63 out of 253)
Industry: Waste Removal Services

Quote Overview

Enter Symbol

View All Zacks #1 Ranked Stocks

Stock Activity		Key Earnings Data	
Open	115.13	Earnings ESP	0.00%
Day Low	114.68	Most Accurate Est	1.01
Day High	115.70	Current Qtr Est	1.01
52 Wk Low	85.34	Current Yr Est	3.83
52 Wk High	126.79	Exp Earnings Date	*BMO 11/2/20
Avg. Volume	1,599,664	Prior Year EPS	4.40
Market Cap	48.73 B	Exp EPS Growth (3-5yr)	6.29%
Dividend	2.18 (1.89%)	Forward PE	30.12
Beta	0.72	PEG Ratio	4.79

Business Services » Waste Removal Services

*BMO = Before Market Open *AMC = After Market Close

Research Reports For WM

Analyst Snapshot All Zacks' Analyst Reports »

News For WM

Zacks News for WM Other News for WM

Paychex (PAYX) Q1 Earnings & Revenues Beat, Decline Y/Y
10/06/20-1:26PM EST Zacks

IHS Markit's (INFO) Q3 Earnings Beat Estimates, Increase Y/Y
09/29/20-10:00AM EST Zacks

WM: What are Zacks experts saying now?
Zacks Private Portfolio Services

FactSet (FDS) Surpasses Q4 Earnings and Revenue Estimates
09/28/20-9:40AM EST Zacks

Accenture's (ACN) Q4 Earnings & Revenues Miss Estimates
09/24/20-9:58AM EST Zacks

Waste Management (WM) Up 4.2% Since Last Earnings Report: Can It Continue?
08/29/20-10:32AM EST Zacks

More Zacks News for WM»

Premium Research for WM

Zacks Rank	Hold 3
Zacks Industry Rank	Top 25% (63 out of 253)
Zacks Sector Rank	Top 38% (6 out of 16)
Style Scores	C Value | C Growth | B Momentum | B VGM
Earnings ESP	0.00%
Research Reports for WM	Analyst | Snapshot

(= Change in last 30 days)

View All Zacks Rank #1 Strong Buys

More Premium Research » »

Premium Research: Industry Analysis

Top Peers	Symbol	Zacks Rank
Waste Management Inc	WM	
Quest Resource Holding Corporation	QRHC	
CHINA EVERBRIHT	CHFFF	

AVANGRID, INC. NYSE-AGR

RECENT PRICE 49.46 | P/E RATIO 19.6 (Trailing: 25.8 Median: NMF) | RELATIVE P/E RATIO 1.13 | DIV'D YLD 3.6% | VALUE LINE

TIMELINESS 3 Lowered 3/22/19
SAFETY 2 Raised 2/17/17
TECHNICAL 2 Raised 11/8/19
BETA .40 (1.00 = Market)

18-Month Target Price Range

Low-High Midpoint (% to Mid)
$45-$65 $55 (10%)

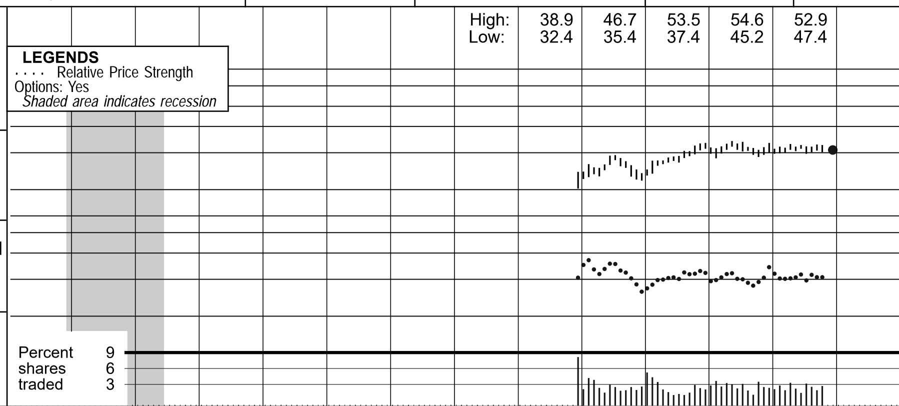
2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	60	(+20%)	9%
Low	45	(-10%)	2%

Institutional Decisions

	4Q2018	1Q2019	2Q2019
to Buy	118	140	114
to Sell	133	121	138
Hld's(000)	45361	44712	43692

	2015	2016	2017	2018	2019
High:	38.9	46.7	53.5	54.6	52.9
Low:	32.4	35.4	37.4	45.2	47.4



Target Price Range 2022 | 2023 | 2024
120 100 80 64 48 32 24 20 16 12 8

% TOT. RETURN 10/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	10.2	4.9
3 yr.	41.7	30.2
5 yr.	—	36.8

AVANGRID, Inc. was formed through a merger between Iberdrola USA, Inc. and UIL Holdings Corporation in December of 2015. Iberdrola S.A., a worldwide leader in the energy industry, owns 81.5% of AVANGRID. The predecessor company was founded in 1852 and is headquartered in New Gloucester, Maine. It was incorportated in 1997 in New York under the name NGE Resources, Inc. AVANGRID began trading on the NYSE on December 17, 2015.

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
--	--	--	--	--	--	14.14	19.48	19.30	20.96	*20.70*	*21.35*	Revenues per sh	*23.50*
--	--	--	--	--	--	3.44	4.74	4.49	4.89	*5.45*	*5.65*	"Cash Flow" per sh	*6.75*
--	--	--	--	--	--	1.05	1.98	1.67	1.92	*2.40*	*2.45*	Earnings per sh A	*3.00*
--	--	--	--	--	--	--	1.73	1.73	1.74	*1.76*	*1.78*	Div'd Decl'd per sh B ■	*2.10*
--	--	--	--	--	--	3.50	5.52	7.82	5.78	*7.75*	*10.05*	Cap'l Spending per sh	*9.75*
--	--	--	--	--	--	48.74	48.90	48.79	48.88	*49.50*	*50.20*	Book Value per sh C	*52.50*
--	--	--	--	--	--	308.86	308.99	309.01	309.01	*309.00*	*309.00*	Common Shs Outst'g D	*309.00*
--	--	--	--	--	--	33.5	20.5	27.3	26.1	*Bold figures are*		Avg Ann'l P/E Ratio	*17.0*
--	--	--	--	--	--	1.69	1.08	1.37	1.41	*Value Line*		Relative P/E Ratio	*.95*
--	--	--	--	--	--	--	4.3%	3.8%	3.5%	*estimates*		Avg Ann'l Div'd Yield	*4.1%*
--	--	--	--	--	4594.0	4367.0	6018.0	5963.0	6478.0	*6400*	*6600*	Revenues ($mill)	*7250*
--	--	--	--	--	424.0	267.0	611.0	516.0	595.0	*740*	*760*	Net Profit ($mill)	*930*
--	--	--	--	--	39.9%	11.3%	37.4%	32.4%	22.1%	*18.5%*	*19.5%*	Income Tax Rate	*19.5%*
--	--	--	--	--	6.8%	12.7%	7.5%	12.4%	9.4%	*8.0%*	*8.0%*	AFUDC % to Net Profit	*6.0%*
--	--	--	--	--	16.8%	23.1%	23.0%	25.6%	26.2%	*28.5%*	*31.5%*	Long-Term Debt Ratio	*38.0%*
--	--	--	--	--	83.2%	76.9%	77.0%	74.4%	73.8%	*71.5%*	*68.5%*	Common Equity Ratio	*62.0%*
--	--	--	--	--	14956	19583	19619	20273	20472	*21325*	*22600*	Total Capital ($mill)	*26300*
--	--	--	--	--	17099	20711	21548	22669	23459	*24900*	*27025*	Net Plant ($mill)	*33000*
--	--	--	--	--	3.7%	2.1%	3.8%	3.1%	3.5%	*4.0%*	*4.0%*	Return on Total Cap'l	*4.5%*
--	--	--	--	--	3.4%	1.8%	4.0%	3.4%	3.9%	*5.0%*	*5.0%*	Return on Shr. Equity	*5.5%*
--	--	--	--	--	3.4%	1.8%	4.0%	3.4%	3.9%	*5.0%*	*5.0%*	Return on Com Equity E	*5.5%*
--	--	--	--	--	3.4%	1.8%	1.4%	NMF	.4%	*1.5%*	*1.5%*	Retained to Com Eq	*1.5%*
--	--	--	--	--	--	--	66%	104%	90%	*73%*	*72%*	All Div'ds to Net Prof	*70%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $7571 mill. **Due in 5 Yrs** $2415 mill.
LT Debt $6718 mill. **LT Interest** $270 mill.
Incl. $89 mill. capitalized leases.
(LT interest earned: 3.9x)
Leases, Uncapitalized Annual rentals $31 mill.

Pension Assets-12/18 $2544 mill. **Oblig** $3374 mill.
Pfd Stock None

Common Stock 309,005,272 shs.
as of 10/30/19
MARKET CAP: $15 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	NA	NA	NA
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.5	+.6	+.5
Fixed Charge Cov. (%)	415	333	343

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	--	--	3.0%
"Cash Flow"	--	--	6.0%
Earnings	--	--	8.5%
Dividends	--	--	3.0%
Book Value	--	--	1.0%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	1670	1439	1418	1491	6018.0
2017	1758	1331	1341	1533	5963.0
2018	1865	1402	1546	1665	6478.0
2019	1842	1400	1487	*1671*	*6400*
2020	*1950*	*1450*	*1500*	*1700*	*6600*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.63	.33	.35	.67	1.98
2017	.77	.39	.32	.19	1.67
2018	.79	.34	.40	.38	1.92
2019	.70	.36	.48	*.86*	*2.40*
2020	*.78*	*.40*	*.50*	*.77*	*2.45*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2015	--	--	--	--	--
2016	--	.432	.432	.432	1.30
2017	.432	.432	.432	.432	1.73
2018	.432	.432	.432	.44	1.74
2019	.44	.44	.44	.44	

BUSINESS: AVANGRID, Inc. (formerly Iberdrola USA, Inc.), is a diversified energy and utility company that serves 2.2 million electric customers in New York, Connecticut, and Maine and 1 million gas customers in New York, Connecticut, Massachusetts and Maine. Has a nonregulated generating subsidiary focused on wind power, with 7.2 gigawatts of capacity. Revenue breakdown by customer class not available. Generating sources not available. Fuel costs: 26% of revenues. '18 depr. rate: 2.9%. Iberdrola owns 81.5% of stock. Has 6,400 employees. Chairman: José Ignacio Sanchez Galan. CEO: James P. Torgerson. Deputy CEO & President: Robert Kump. Inc.: NY. Address: 180 Marsh Hill Road, Orange, CT 06477. Tel.: 207-629-1200. Internet: www.avangrid.com.

We raised our 2019 earnings estimate for AVANGRID by $0.20 a share, to $2.40. Third-quarter profits were a bit better than we expected, thanks to mark-to-market accounting credits that added $0.10 to the bottom line. Additional mark-to-market credits, along with a gain on the sale of a 50% stake in two renewable-energy projects, should produce a fourth-quarter tally that is greater than we had estimated. Our revised estimate is within AVANGRID's guidance (GAAP) of $2.36-$2.46 a share. We assume no mark-to-market items in 2020, so we are sticking with our $2.45-a-share estimate. The company should benefit from rate relief and growth in its renewable-energy subsidiary.

The company's utilities in New York are trying to reach a settlement of their rate cases. They requested electric and gas increases of $188.4 million and $12.1 million, respectively, based on a return of 9.5% on a common-equity ratio of 50%. The staff of the New York commission recommended electric hikes totaling $77.4 million and gas decreases totaling $38.4 million, based on a return of 8.2% on a common-equity ratio of 48%. New tariffs are expected to take effect in April.

Central Maine Power's rate case has run into difficulties. The utility is seeking a minimal increase (thanks to lower federal taxes), based on a return of 10% on a common-equity ratio of 55%. However, it has been criticized for metering and billing problems. The commission's staff proposed a return of 8.75% on a common-equity ratio of 50%. An order is expected in the first quarter of 2020. CMP has also seen opposition to a proposed $950 million transmission line. It hopes to begin construction in 2020 and complete the project in 2022.

Is a merger in AVANGRID's future? The financial press has reported rumors of a combination between the company and PPL Corporation. We don't know if a deal will be reached, but an announcement might well be good news in what has been a disappointing year. The board has not raised the dividend, and the stock has traded in a narrow range while most utility issues have performed strongly. The dividend yield is slightly above average, but the equity does not stand out for the 18-month or 3- to 5-year period.

Paul E. Debbas, CFA November 15, 2019

(A) Diluted EPS. Excl. nonrecurring gain (loss): '16, 6¢; '17, (44¢). '18 EPS don't sum due to rounding. Next earnings report due late Feb. (B) Div'ds paid in early Jan., April, July, and Oct. ■ Dividend reinvestment plan available. (C) Incl. intangibles. In '18: $6.1 bill., $19.73/sh. (D) In millions. (E) Rate base: net original cost. Rate allowed on com. eq. in NY in '16: 9.0%; in CT in '17: 9.1% elec.; in CT in '19: 9.3% gas; in ME in '14: 9.45%; earned on avg. common eq., '18: 3.9%. Regulatory Climate: Below Average.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	NMF

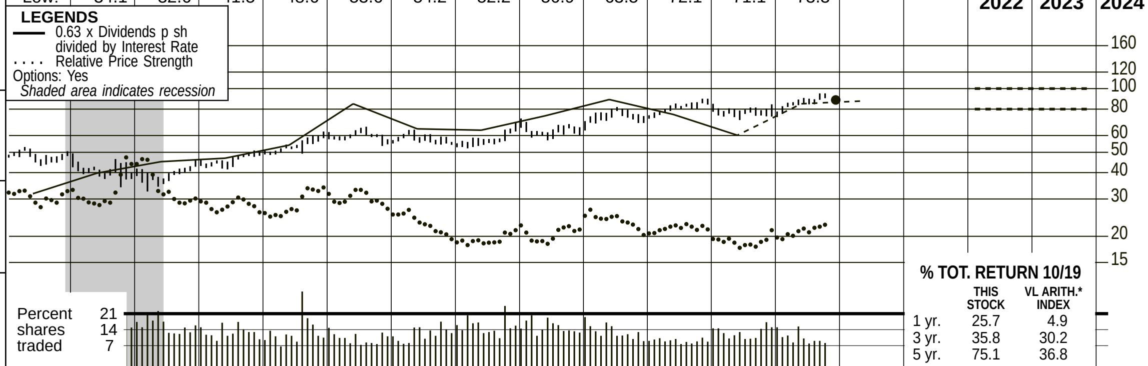
CON. EDISON NYSE-ED

RECENT PRICE 88.32 | P/E RATIO 21.1 (Trailing: 20.8 Median: 15.0) | RELATIVE P/E RATIO 1.21 | DIV'D YLD 3.5% | VALUE LINE

TIMELINESS 3 Lowered 3/8/19
SAFETY 1 New 7/27/90
TECHNICAL 1 Raised 11/15/19
BETA .45 (1.00 = Market)

High:	49.3	46.3	51.0	62.7	66.0	64.0	68.9	72.3	81.9	89.7	84.9	95.0
Low:	34.1	32.6	41.5	48.6	53.6	54.2	52.2	56.9	63.5	72.1	71.1	73.3

LEGENDS
—— 0.63 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range 2022 | 2023 | 2024

18-Month Target Price Range
Low-High: $71-$96 | Midpoint (% to Mid): $84 (-5%)

2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	100	(+15%)	7%
Low	80	(-10%)	2%

Institutional Decisions

	4Q2018	1Q2019	2Q2019
to Buy	423	424	401
to Sell	313	356	347
Hld's(000)	192114	193152	199915

Percent shares traded: 21, 14, 7

% TOT. RETURN 10/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	25.7	4.9
3 yr.	35.8	30.2
5 yr.	75.1	36.8

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
43.51	40.24	47.66	47.14	48.23	49.62	46.36	45.69	44.17	41.62	42.27	44.11	42.85	39.59	38.82	38.43	*37.70*	*38.70*	Revenues per sh	*41.75*
5.12	4.54	5.27	5.28	5.77	5.99	5.86	6.24	6.61	7.15	7.45	7.30	7.93	7.89	8.41	8.92	*8.60*	*9.45*	"Cash Flow" per sh	*11.00*
2.83	2.32	2.99	2.95	3.48	3.36	3.14	3.47	3.57	3.86	3.93	3.62	4.05	3.94	4.10	4.55	*3.95*	*4.40*	Earnings per sh A	*5.00*
2.24	2.26	2.28	2.30	2.32	2.34	2.36	2.38	2.40	2.42	2.46	2.52	2.60	2.68	2.76	2.86	*2.96*	*3.06*	Div'd Decl'd per sh B ■	*3.40*
5.72	5.60	6.59	7.17	7.09	8.50	7.80	6.96	6.72	7.06	8.67	8.26	10.42	12.07	11.11	10.89	*10.85*	*11.55*	Cap'l Spending per sh	*12.00*
28.44	29.09	29.80	31.09	32.58	35.43	36.46	37.93	39.05	40.53	41.81	42.94	44.55	46.88	49.74	52.11	*53.65*	*55.60*	Book Value per sh C	*60.50*
225.84	242.51	245.29	257.46	272.02	273.72	281.12	291.62	292.89	292.87	292.87	292.88	293.00	305.00	310.00	321.00	*334.00*	*341.00*	Common Shs Outst'g D	*344.00*
14.3	18.2	15.1	15.5	13.8	12.3	12.5	13.3	15.1	15.4	14.7	15.9	15.6	18.8	19.8	17.1	*Bold figures are*		Avg Ann'l P/E Ratio	*18.0*
.82	.96	.80	.84	.73	.74	.83	.85	.95	.98	.83	.84	.79	.99	1.00	.92	*Value Line*		Relative P/E Ratio	*1.00*
5.5%	5.3%	5.0%	5.0%	4.8%	5.7%	6.0%	5.2%	4.5%	4.1%	4.3%	4.4%	4.1%	3.6%	3.4%	3.7%	*estimates*		Avg Ann'l Div'd Yield	*3.8%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $20751 mill. **Due in 5 Yrs** $5056 mill.
LT Debt $17537 mill. **LT Interest** $798 mill.
(LT interest earned: 3.0x)

Leases, Uncapitalized Annual rentals $72 mill.

Pension Assets-12/18 $13450 mill. **Oblig** $14449 mill.

Pfd Stock None

Common Stock 332,430,408 shs.
as of 10/31/19
MARKET CAP: $29 billion (Large Cap)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
13032	13325	12938	12188	12381	12919	12554	12075	12033	12337	*12600*	*13200*	Revenues ($mill)	*14400*
868.0	992.0	1062.0	1141.0	1157.0	1066.0	1193.0	1189.0	1266.0	1424.0	*1295*	*1500*	Net Profit ($mill)	*1740*
34.2%	36.0%	36.1%	34.5%	31.8%	34.0%	33.6%	35.3%	36.6%	20.1%	*22.0%*	*19.5%*	Income Tax Rate	*17.0%*
2.6%	2.4%	1.6%	.5%	.5%	.3%	.7%	1.3%	1.5%	1.5%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*2.0%*
48.5%	48.6%	46.5%	45.9%	46.1%	48.0%	47.9%	50.8%	48.9%	51.1%	*51.5%*	*51.0%*	Long-Term Debt Ratio	*50.5%*
50.4%	50.4%	52.5%	54.1%	53.9%	52.0%	52.1%	49.2%	51.1%	48.9%	*48.5%*	*49.0%*	Common Equity Ratio	*49.5%*
20330	21952	21794	21933	22735	24207	25058	29033	30149	34221	*37050*	*38525*	Total Capital ($mill)	*42200*
22464	23863	25093	26939	28436	29827	32209	35216	37600	41749	*43800*	*46025*	Net Plant ($mill)	*52200*
5.7%	5.9%	6.2%	6.5%	6.4%	5.6%	6.0%	5.3%	5.4%	5.3%	*4.5%*	*5.0%*	Return on Total Cap'l	*5.5%*
8.3%	8.8%	9.1%	9.6%	9.4%	8.5%	9.1%	8.3%	8.2%	8.5%	*7.0%*	*8.0%*	Return on Shr. Equity	*8.5%*
8.4%	8.9%	9.2%	9.6%	9.4%	8.5%	9.1%	8.3%	8.2%	8.5%	*7.0%*	*8.0%*	Return on Com Equity E	*8.5%*
2.5%	3.2%	3.1%	3.6%	3.6%	2.6%	3.5%	3.0%	3.0%	3.5%	*2.0%*	*2.5%*	Retained to Com Eq	*2.5%*
71%	65%	66%	62%	62%	69%	61%	64%	63%	59%	*75%*	*69%*	All Div'ds to Net Prof	*67%*

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	-.4	-2.8	+2.8
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	13731	14156
Annual Load Factor (%)	NMF	NMF	NMF
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	352	354	306

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	-2.0%	-2.0%	*1.0%*
"Cash Flow"	4.0%	3.5%	*4.5%*
Earnings	2.5%	2.0%	*3.0%*
Dividends	2.0%	2.5%	*3.5%*
Book Value	4.0%	4.0%	*3.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	3157	2794	3417	2707	12075
2017	3228	2633	3211	2961	12033
2018	3364	2696	3328	2949	12337
2019	3514	2744	3365	*2977*	*12600*
2020	*3600*	*2850*	*3550*	*3200*	*13200*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	1.05	.77	1.47	.64	3.94
2017	1.27	.57	1.48	.78	4.10
2018	1.37	.60	1.52	1.06	4.55
2019	1.31	.46	1.42	*.76*	*3.95*
2020	*1.40*	*.60*	*1.60*	*.80*	*4.40*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2015	.65	.65	.65	.65	2.60
2016	.67	.67	.67	.67	2.68
2017	.69	.69	.69	.69	2.76
2018	.715	.715	.715	.715	2.86
2019	.74	.74	.74		

BUSINESS: Consolidated Edison, Inc. is a holding company for Consolidated Edison Company of New York, Inc. (CECONY), which sells electricity, gas, and steam in most of New York City and Westchester County. Also owns Orange and Rockland Utilities (O&R), which operates in New York and New Jersey. Has 3.7 million electric, 1.2 million gas customers. Pursues competitive energy opportunities through three wholly owned subsidiaries. Entered into midstream gas joint venture 6/16. Purchases most of its power. Fuel costs: 24% of revenues. '18 reported depreciation rates: 2.9%-3.1%. Has 15,300 employees. Chairman, President & CEO: John McAvoy. Inc.: New York. Address: 4 Irving Place, New York, New York 10003. Tel.: 212-460-4600. Internet: www.conedison.com.

Consolidated Edison's largest utility subsidiary reached a settlement of its general rate case. Consolidated Edison Company of New York struck the agreement, which covers 2020 through 2022, with the staff of the New York commission and intervenor groups. This would raise electric rates by $113 million, $370 million, and $326 million in 2020, 2021, and 2022, respectively. Gas tariffs would be increased by $84 million, $122 million, and $167 million in years one, two, and three, respectively. The utility will also benefit from amortizations to income of net regulatory liabilities: $312 million in 2020, $312 million in 2021, and $282 million in 2022. There are also performance-based measures that could add—or subtract—revenues. The return on equity would be 8.8% and the common-equity ratio would be 48%. A ruling is expected in early 2020.

Earnings should be much improved in 2020. This is partly due to an easy comparison. In 2019, ConEd is booking $0.20 a share of charges for the effects of hypothetical liquidation at book value for tax-equity investments in certain renewable-energy projects. Mark-to-market accounting adjustments reduced share net by $0.13 in the first nine months of 2019. We assume the New York regulators approve the settlement.

The cost of the Mountain Valley Pipeline has increased again. ConEd has a 12.5% stake in the project, which has been delayed by litigation. The total cost is now estimated at $5.3 billion-$5.5 billion, up from $5.0 billion. Completion is expected in late 2020. ConEd plans to limit its contribution to $530 million, which would drop its stake to 10%, at most.

There is another cause for concern. The renewable-energy subsidiary faces risks related to the bankruptcy filing of Pacific Gas and Electric, which buys power from some ConEd projects.

We expect a dividend hike in the first quarter of 2020. We estimate an increase of $0.10 a share in the annual payout, the same as in each of the past two years. The yield is slightly above the utility mean, but we suggest investors look elsewhere due to the aforementioned uncertainties and unimpressive total return potential for the 18-month and 3- to 5-year periods.

Paul E. Debbas, CFA *November 15, 2019*

(A) Diluted EPS. Excl. nonrec. gains (losses): '03, (45¢); '13, (32¢); '14, 9¢; '16, 15¢; '17, 84¢; '18, (13¢); gain on discontinued operations: '08, $1.01. '16 EPS don't sum due to rounding. Next earnings report due mid-Feb. (B) Div'ds historically paid in mid-Mar., June, Sept., and Dec. ■ Div'd reinvestment plan avail. (C) Incl. intang. In '18: $20.38/sh. (D) In mill. (E) Rate base: net orig. cost. Rate allowed on com. eq. for CECONY in '17: 9.0%; O&R in '19: 9.0%; earned on avg. com. eq., '18: 8.8%. Regulatory Climate: Below Average.

Company's Financial Strength	A+
Stock's Price Stability	100
Price Growth Persistence	40
Earnings Predictability	100

DUKE ENERGY NYSE-DUK

RECENT PRICE 93.15 | P/E RATIO 18.3 (Trailing: 19.4 Median: 18.0) | RELATIVE P/E RATIO 1.05 | DIV'D YLD 4.1% | VALUE LINE

TIMELINESS 2 Raised 10/25/19
SAFETY 2 New 6/1/07
TECHNICAL 1 Raised 11/8/19
BETA .50 (1.00 = Market)

18-Month Target Price Range
Low-High: $85-$113 | Midpoint (% to Mid): $99 (5%)

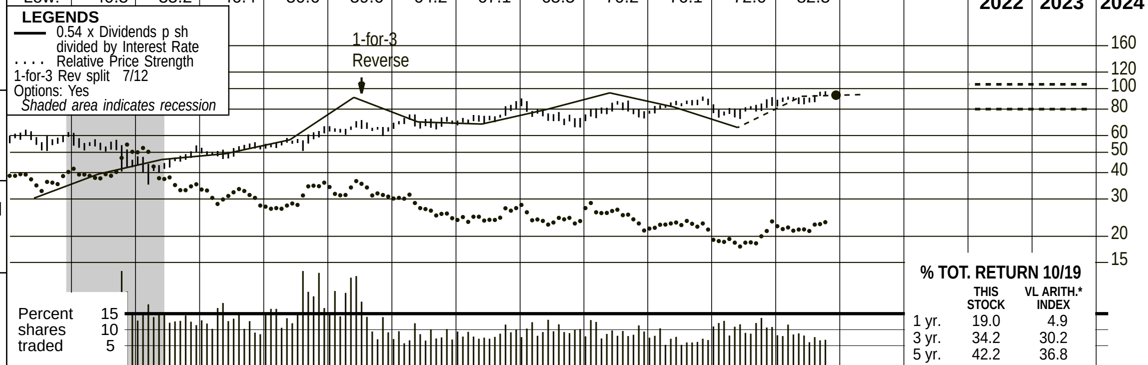
2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	105	(+15%)	7%
Low	80	(-15%)	1%

Institutional Decisions

	4Q2018	1Q2019	2Q2019
to Buy	636	694	682
to Sell	598	572	586
Hld's(000)	442549	438644	7059915

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	61.8	53.8	55.8	66.4	71.1	75.5	87.3	90.0	87.8	91.8	91.4	97.4
Low:	40.5	35.2	46.4	50.6	59.6	64.2	67.1	65.5	70.2	76.1	72.0	82.5



% TOT. RETURN 10/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	19.0	4.9
3 yr.	34.2	30.2
5 yr.	42.2	36.8

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
- -	- -	- -	25.32	30.24	31.15	29.18	32.22	32.63	27.88	34.84	33.84	34.10	32.49	33.66	33.73	*34.40*	*34.35*	Revenues per sh	*36.50*
- -	- -	- -	7.86	8.11	7.34	7.58	8.49	8.68	6.80	8.56	9.11	9.40	9.20	10.01	10.49	*11.80*	*12.05*	"Cash Flow" per sh	*13.50*
- -	- -	- -	2.76	3.60	3.03	3.39	4.02	4.14	3.71	3.98	4.13	4.10	3.71	4.22	4.13	*5.05*	*5.20*	Earnings per sh A	*5.75*
- -	- -	- -	- -	2.58	2.70	2.82	2.91	2.97	3.03	3.09	3.15	3.24	3.36	3.49	3.64	*3.75*	*3.82*	Div'd Decl'd per sh B ■	*4.05*
- -	- -	- -	8.07	7.43	10.35	9.85	10.84	9.80	7.81	7.83	7.62	9.83	11.29	11.50	12.91	*15.15*	*14.00*	Cap'l Spending per sh	*12.50*
- -	- -	- -	62.30	50.40	49.51	49.85	50.84	51.14	58.04	58.54	57.81	57.74	58.62	59.63	60.27	*61.75*	*64.10*	Book Value per sh C	*69.50*
- -	- -	- -	418.96	420.62	423.96	436.29	442.96	445.29	704.00	706.00	707.00	688.00	700.00	700.00	727.00	*733.00*	*754.00*	Common Shs Outst'g D	*770.00*
- -	- -	- -	- -	16.1	17.3	13.3	12.7	13.8	17.5	17.4	17.9	18.2	21.3	19.9	19.4	*Bold figures are*		Avg Ann'l P/E Ratio	*16.0*
- -	- -	- -	- -	.85	1.04	.89	.81	.87	1.11	.98	.94	.92	1.12	1.00	1.05	*Value Line*		Relative P/E Ratio	*.90*
- -	- -	- -	- -	4.4%	5.2%	6.2%	5.7%	5.2%	4.7%	4.4%	4.3%	4.3%	4.3%	4.2%	4.5%	*estimates*		Avg Ann'l Div'd Yield	*4.4%*

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
12731	14272	14529	19624	24598	23925	23459	22743	23565	24521	*25200*	*25900*	Revenues ($mill)	*28200*
1461.0	1765.0	1839.0	2136.0	2813.0	2934.0	2854.0	2560.0	2963.0	2928.0	*3735*	*3945*	Net Profit ($mill)	*4510*
34.4%	32.6%	31.3%	30.2%	32.6%	30.6%	32.2%	31.0%	30.4%	14.2%	*12.5%*	*12.0%*	Income Tax Rate	*12.0%*
17.5%	22.7%	23.2%	22.3%	8.8%	7.2%	9.2%	11.7%	12.3%	13.0%	*9.0%*	*8.0%*	AFUDC % to Net Profit	*8.0%*
42.6%	44.3%	45.1%	47.0%	48.0%	47.7%	48.6%	52.6%	54.0%	53.8%	*54.5%*	*54.5%*	Long-Term Debt Ratio	*55.0%*
57.4%	55.7%	54.9%	52.9%	52.0%	52.3%	51.4%	47.4%	46.0%	46.2%	*44.5%*	*45.0%*	Common Equity Ratio	*44.5%*
37863	40457	41451	77307	79482	78088	77222	86609	90774	94940	*101375*	*107825*	Total Capital ($mill)	*120500*
37950	40344	42661	68558	69490	70046	75709	82520	86391	91694	*97825*	*103150*	Net Plant ($mill)	*114300*
4.9%	5.5%	5.6%	3.6%	4.6%	4.8%	4.8%	4.0%	4.3%	4.2%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.0%*
6.7%	7.8%	8.1%	5.2%	6.8%	7.2%	7.2%	6.2%	7.1%	6.7%	*8.0%*	*8.0%*	Return on Shr. Equity	*8.5%*
6.7%	7.8%	8.1%	5.2%	6.8%	7.2%	7.2%	6.2%	7.1%	6.7%	*8.0%*	*8.0%*	Return on Com Equity E	*8.5%*
1.1%	2.1%	2.2%	.9%	1.5%	1.7%	1.5%	.6%	1.2%	1.0%	*2.0%*	*2.0%*	Retained to Com Eq	*2.5%*
84%	73%	72%	82%	78%	76%	79%	91%	83%	84%	*74%*	*73%*	All Div'ds to Net Prof	*70%*

CAPITAL STRUCTURE as of 6/30/19
Total Debt $60833 mill. **Due in 5 Yrs** $22487 mill.
LT Debt $54342 mill. **LT Interest** $1984 mill.
Incl. $941 mill. capitalized leases.
(LT interest earned: 2.6x)
Leases, Uncapitalized Annual rentals $239 mill.
Pension Assets-12/18 $8233 mill. **Oblig** $7869 mill.
Pfd Stock $973 mill. **Pfd Div'd** $58 mill.
40 mill. shs. 5.75%, cum., $25 liq. value, redeemable at $25.50 prior to 6/15/24.
Common Stock 728,601,060 shs.
as of 7/31/19
MARKET CAP: $68 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	-.3	-2.0	+3.9
Avg. Indust. Use (MWH)	2908	2914	2953
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (avg.)	+1.4	+1.3	+1.4
Fixed Charge Cov. (%)	264	272	218

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	1.5%	1.0%	*1.5%*
"Cash Flow"	2.5%	4.5%	*5.5%*
Earnings	2.5%	.5%	*6.0%*
Dividends	7.0%	3.0%	*2.5%*
Book Value	1.0%	1.5%	*2.5%*

QUARTERLY REVENUES ($ mill.)

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	5377	5213	6576	5577	22743
2017	5729	5555	6482	5799	23565
2018	6135	5643	6628	6115	24521
2019	6163	5873	6940	*6224*	*25200*
2020	*6350*	*6000*	*7200*	*6350*	*25900*

EARNINGS PER SHARE A

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.83	.90	1.44	.54	3.71
2017	1.02	.98	1.36	.86	4.22
2018	1.17	.71	1.63	.61	4.13
2019	1.24	1.12	1.82	*.87*	*5.05*
2020	*1.30*	*1.10*	*1.85*	*.95*	*5.20*

QUARTERLY DIVIDENDS PAID B ■

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2015	.795	.795	.825	.825	3.24
2016	.825	.825	.855	.855	3.36
2017	.855	.855	.89	.89	3.49
2018	.89	.89	.9275	.9275	3.64
2019	.9275	.9275	.945		

BUSINESS: Duke Energy Corporation is a holding company for utilities with 7.6 mill. elec. customers in NC, FL, IN, SC, OH, & KY, and 1.6 mill. gas customers in OH, KY, NC, SC, and TN. Owns independent power plants & has 25% stake in National Methanol in Saudi Arabia. Acq'd Progress Energy 7/12; Piedmont Natural Gas 10/16; discontinued most int'l ops. in '16. Elec. rev. breakdown: residential, 44%; commercial, 28%; industrial, 14%; other, 14%. Generating sources: gas, 26%; nuclear, 26%; coal, 24%; other, 2%; purchased, 22%. Fuel costs: 31% of revs. '18 reported deprec. rate: 3.0%. Has 30,100 employees. Chairman, President & CEO: Lynn J. Good. Inc.: DE. Address: 550 South Tryon St., Charlotte, NC 28202-1803. Tel.: 704-382-3853. Internet: www.duke-energy.com.

Duke Energy's electric utility subsidiaries in North Carolina have filed general rate cases. Duke Energy Carolinas requested an increase of $291 million (6.0%), and Duke Energy Progress filed for a hike of $464 million (12.3%). Each case is based on a 10.3% return on a 53% common-equity ratio. New rates are likely to take effect in the third quarter of 2020.

Electric rate cases are pending in Indiana and Kentucky, too. In Indiana, the utility filed for $395 million (15%), based on a 10.4% return on a 53% common-equity ratio. Duke sought $345 million in mid-2020 and $50 million in 2021. In Kentucky, the company requested $83 million (9.0%), based on a 10.6% return on a 52% common-equity ratio.

The North Carolina commission approved Piedmont Gas' settlement of its rate case. The utility had filed for an increase of $83 million (9.0%), based on a 10.6% return on a 52% common-equity ratio. The settlement boosted rates by $28 million (3.1%), based on a 9.7% return on a 52% common-equity ratio. New tariffs took effect on November 1st.

Rate relief is a key reason for the profit growth we expect in 2019 and 2020. In addition, in 2019 the comparisons are easy in the June and December quarters. Our 2019 EPS estimate is within the company's guidance of $4.95-$5.15 a share.

Duke completed the sale of a minority interest in its commercial renewable-energy portfolio. The sale proceeds were $415 million (before taxes). This will be used to retire debt.

Not everything is going well. Duke's utilities in South Carolina received disappointing rate orders, so the company appealed the decision to the state Supreme Court. Construction of a 47%-owned, $7.3 billion-$7.8 billion gas pipeline is on hold due to legal challenges. Even if a verdict from the U.S. Supreme Court is favorable, the in-service date won't occur until 2022. And due to the delays and cost overruns, Duke plans to add $2.5 billion of equity by year-end 2020. Finally, coal-ash pond closure costs remain controversial.

The dividend yield of this timely stock is above the utility average. But total return potential isn't appealing, either for the 18-month or the 2022-2024 period.

Paul E. Debbas, CFA *November 15, 2019*

(A) Diluted EPS. Excl. nonrec. losses: '12, 70¢; '13, 24¢; '14, 67¢; '17, 15¢; '18, 41¢; losses on disc. ops.: '14, 80¢; '16, 60¢; '18 EPS don't sum due to rounding. Next earnings report due mid-Feb. (B) Div'ds paid mid-Mar., June, Sept., & Dec. ■ Div'd reinv. plan avail. (C) Incl. intang. In '18: $60.27/sh. (D) In mill., adj. for rev. split. (E) Rate base: Net orig. cost. Rates all'd on com. eq. in '18 in NC: 9.9%; in '17 in SC: 10.1%; in '09 in OH: 10.63%; in '04 in IN: 10.3%; earned on avg. com. eq., '18: 6.8%. Reg. Clim.: NC Avg.; SC, OH, IN Above Avg.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	40
Earnings Predictability	90

P.S. ENTERPRISE GP. NYSE-PEG

RECENT PRICE **61.92** | P/E RATIO **19.4** (Trailing: 18.2 Median: 13.0) | RELATIVE P/E RATIO **1.11** | DIV'D YLD **3.1%** | VALUE LINE

TIMELINESS 2 Lowered 11/8/19
SAFETY 1 Raised 11/23/12
TECHNICAL 2 Raised 11/15/19
BETA .65 (1.00 = Market)

18-Month Target Price Range
Low-High $56-$75 | Midpoint (% to Mid) $66 (5%)

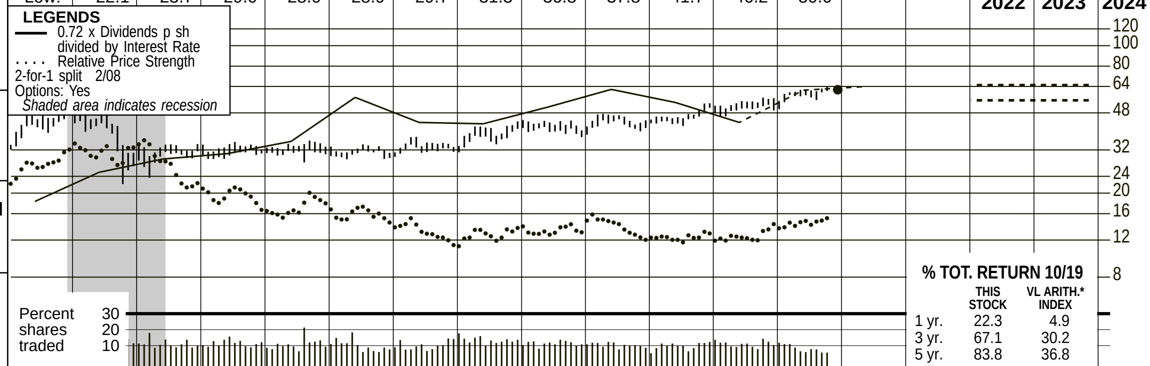
2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	65	(+5%)	5%
Low	55	(-10%)	1%

Institutional Decisions

	4Q2018	1Q2019	2Q2019
to Buy	344	354	364
to Sell	360	366	352
Hld's(000)	346789	348291	353688

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
High:	52.3	34.1	34.9	35.5	34.1	37.0	43.8	44.4	47.4	53.3	56.7	63.9
Low:	22.1	23.7	29.0	28.0	28.9	29.7	31.3	36.8	37.8	41.7	46.2	50.0



% TOT. RETURN 10/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	22.3	4.9
3 yr.	67.1	30.2
5 yr.	83.8	36.8

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
23.54	23.09	24.74	24.07	25.28	27.94	24.57	23.31	22.42	19.33	19.71	21.52	20.61	18.22	18.14	19.24	*19.80*	*20.60*	Revenues per sh	*23.25*
2.92	3.02	3.42	3.91	4.36	4.68	4.98	5.27	5.36	4.87	5.17	5.82	6.15	5.07	5.30	5.44	*6.65*	*6.55*	"Cash Flow" per sh	*7.75*
1.88	1.52	1.79	1.85	2.59	2.90	3.08	3.07	3.11	2.44	2.45	2.99	3.30	2.83	2.82	2.76	*3.70*	*3.40*	Earnings per sh A	*4.00*
1.08	1.10	1.12	1.14	1.17	1.29	1.33	1.37	1.37	1.42	1.44	1.48	1.56	1.64	1.72	1.80	*1.88*	*1.96*	Div'd Decl'd per sh B ■†	*2.30*
2.86	2.64	2.04	2.01	2.65	3.50	3.55	4.27	4.12	5.09	5.56	5.58	7.65	8.32	8.30	7.76	*6.15*	*5.95*	Cap'l Spending per sh	*6.00*
11.71	12.05	11.99	13.35	14.35	15.36	17.37	19.04	20.30	21.31	22.95	24.09	25.86	26.01	27.42	28.53	*29.70*	*31.15*	Book Value per sh C	*36.25*
472.27	476.20	502.33	505.29	508.52	506.02	505.99	505.97	505.95	505.89	505.86	505.84	505.28	504.87	505.00	504.00	*505.00*	*505.00*	Common Shs Outst'g D	*505.00*
10.6	14.3	16.5	17.8	16.5	13.6	10.0	10.4	10.4	12.8	13.5	12.6	12.4	15.3	16.3	18.7	*Bold figures are*		Avg Ann'l P/E Ratio	*15.0*
.60	.76	.88	.96	.88	.82	.67	.66	.65	.81	.76	.66	.62	.80	.82	1.01	*Value Line*		Relative P/E Ratio	*.85*
5.4%	5.1%	3.8%	3.5%	2.7%	3.3%	4.3%	4.3%	4.2%	4.6%	4.4%	3.9%	3.8%	3.8%	3.7%	3.5%	*estimates*		Avg Ann'l Div'd Yield	*3.8%*

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
12431	11793	11343	9781.0	9968.0	10886	10415	9198.0	9161.0	9696.0	*10000*	*10400*	Revenues ($mill)	*11700*
1567.0	1557.0	1577.0	1239.0	1243.0	1518.0	1679.0	1436.0	1431.0	1399.0	*1880*	*1725*	Net Profit ($mill)	*2045*
42.3%	40.5%	40.4%	36.2%	39.5%	38.2%	37.4%	31.7%	37.3%	22.3%	*18.5%*	*18.5%*	Income Tax Rate	*18.5%*
3.8%	5.5%	2.7%	4.8%	4.6%	4.5%	5.5%	8.4%	10.6%	9.8%	*7.0%*	*8.0%*	AFUDC % to Net Profit	*7.0%*
46.3%	44.8%	42.1%	38.3%	40.4%	40.4%	40.3%	45.3%	46.6%	47.8%	*48.5%*	*49.0%*	Long-Term Debt Ratio	*50.5%*
53.2%	55.2%	57.9%	61.7%	59.6%	59.6%	59.7%	54.7%	53.4%	52.2%	*51.5%*	*51.0%*	Common Equity Ratio	*49.5%*
16513	17452	17731	17467	19470	20446	21900	24025	25915	27545	*29050*	*30800*	Total Capital ($mill)	*36900*
15440	16390	17849	19736	21645	23589	26539	29286	31797	34363	*36050*	*37525*	Net Plant ($mill)	*41300*
11.0%	10.4%	10.2%	8.1%	7.5%	8.4%	8.6%	6.8%	6.4%	6.0%	*7.5%*	*6.5%*	Return on Total Cap'l	*6.5%*
17.7%	16.2%	15.4%	11.5%	10.7%	12.5%	12.9%	10.9%	10.3%	9.7%	*12.5%*	*11.0%*	Return on Shr. Equity	*11.0%*
17.8%	16.2%	15.4%	11.5%	10.7%	12.5%	12.9%	10.9%	10.3%	9.7%	*12.5%*	*11.0%*	Return on Com Equity E	*11.0%*
10.1%	9.0%	8.6%	4.8%	4.4%	6.3%	6.8%	4.6%	4.1%	3.4%	*6.0%*	*4.5%*	Retained to Com Eq	*5.0%*
43%	45%	44%	58%	59%	49%	47%	58%	61%	65%	*50%*	*57%*	All Div'ds to Net Prof	*57%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $15850 mill. **Due in 5 Yrs** $6770 mill.
LT Debt $14448 mill. **LT Interest** $549 mill.
(LT interest earned: 4.0x)

Leases, Uncapitalized Annual rentals $41 mill.

Pension Assets-12/18 $5120 mill. **Oblig** $5921 mill.

Pfd Stock None

Common Stock 505,726,465 shs.
as of 10/15/19
MARKET CAP: $31 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	-.3	-2.0	+2.8
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH(¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	9567	9978
Annual Load Factor (%)	NA	NA	NA
% Change Customers (avg.)	NA	NA	NA
Fixed Charge Cov. (%)	522	503	413

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	-3.0%	-2.0%	4.0%
"Cash Flow"	2.0%	.5%	6.5%
Earnings	1.5%	1.0%	6.0%
Dividends	3.5%	4.0%	5.0%
Book Value	6.5%	5.0%	5.0%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	2616	1905	2587	2090	9198
2017	2647	2155	2263	2096	9161
2018	2818	2016	2394	2468	9696
2019	2980	2374	2302	*2344*	*10000*
2020	*3150*	*2300*	*2500*	*2450*	*10400*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.93	.37	.94	.59	2.83
2017	.94	.69	.78	.42	2.82
2018	1.10	.53	.81	.32	2.76
2019	1.38	.92	.79	*.61*	*3.70*
2020	*1.10*	*.70*	*.95*	*.65*	*3.40*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2015	.39	.39	.39	.39	1.56
2016	.41	.41	.41	.41	1.64
2017	.43	.43	.43	.43	1.72
2018	.45	.45	.45	.45	1.80
2019	.47	.47	.47		

BUSINESS: Public Service Enterprise Group Incorporated is a holding company for Public Service Electric and Gas Company (PSE&G), which serves 2.3 million electric and 1.8 million gas customers in New Jersey, and PSEG Power LLC, a nonregulated power generator with nuclear, gas, and coal-fired plants in the Northeast. PSEG Energy Holdings is involved in renewable energy. The company no longer breaks out data on electric and gas operating statistics. Fuel costs: 33% of revenues. '18 reported depreciation rates (utility): 1.6%-2.5%. Has 13,100 employees. Chairman, President & Chief Executive Officer: Dr. Ralph Izzo. Inc.: New Jersey. Address: 80 Park Plaza, P.O. Box 1171, Newark, New Jersey 07101-1171. Telephone: 973-430-7000. Internet: www.pseg.com.

Public Service Enterprise Group's breakdown of earnings has changed significantly since the early part of this decade. Several years ago, the nonregulated operations (primarily PSEG Power) generated some 75% of corporate income. The utility subsidiary, Public Service Electric and Gas, produced the other 25%. Now, the proportions are reversed. Unfavorable conditions in the power markets have reduced PSEG Power's profitability, even with the Zero Emission Credits this business is receiving in New Jersey. PSE&G's contribution has risen materially thanks to growth in the rate base.

Understandably, most of the company's capital will be invested in the regulated utility operations. Included in this is the Energy Strong II program, for which the New Jersey Board of Public Utilities (BPU) in September approved a settlement that will see PSE&G spend $842 million on storm hardening and system resiliency through 2023. The utility is also spending $1.9 billion through 2023 on its Gas System Modernization II program. Proposed programs for energy efficiency and renewable energy (totaling $3.5 billion over six years) will be reviewed by the BPU in 2020. Electric transmission is another area of focus; PSE&G is seeking a $300 million increase for 2020 with the federal regulators. All told, PSE&G expects annual rate-base growth of 7.5%-8.5% through 2023.

Investors should not be alarmed by the earnings decline we estimate for 2020. Our earnings presentation *includes* mark-to-market accounting items and gains or losses on the nuclear decommissioning trust. These added $359 million to pretax profits in the first nine months of 2019, but the company excludes this from its earnings guidance of $3.20-$3.30 a share. Because we assume no such income in 2020, we look for share net to decline. However, our $3.40-a-share estimate is above the upper end of PSEG's targeted range for 2019.

This timely and high-quality stock has a dividend yield that is about average for a utility. However, expected total returns are unimpressive for either the 18-month or 3- to 5-year period.

Paul E. Debbas, CFA *November 15, 2019*

(A) Diluted EPS. Excl. nonrecur. gains (losses): '06, (35¢); '08, (96¢); '09, 6¢; '11, (34¢); '12, 7¢; '16, (30¢); '17, 28¢ (net); '18, 8¢; '19, (62¢); gains (loss) from disc. ops.: '05, (33¢); '06, 12¢; '07, 3¢; '08, 40¢; '11, 13¢. '17 EPS don't sum due to rounding. Next earnings report due late Feb. (B) Div'ds histor. paid in late Mar., June, Sept., & Dec. ■ Div'd reinv. plan avail. (C) Incl. intang. In '18: $7.06/sh. (D) In mill., adj. for split. (E) Rate base: Net orig. cost. Rate all'd on com. eq. in '18: 9.6%; earned on avg. com. eq., '18: 9.9%. Regul. Climate: Avg.

Company's Financial Strength	A++
Stock's Price Stability	95
Price Growth Persistence	45
Earnings Predictability	70

SOUTHERN COMPANY NYSE-SO

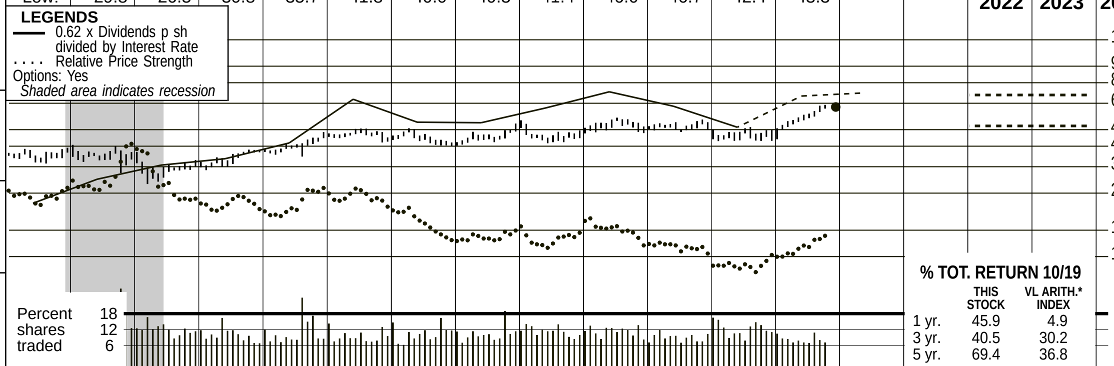
RECENT PRICE 61.36 | P/E RATIO 19.4 (Trailing: 20.1 Median: 16.0) | RELATIVE P/E RATIO 1.11 | DIV'D YLD 4.1% | VALUE LINE

TIMELINESS 3 Raised 3/2/18
SAFETY 2 Lowered 2/21/14
TECHNICAL 2 Raised 11/8/19
BETA .50 (1.00 = Market)

High:	40.6	37.6	38.6	46.7	48.6	48.7	51.3	53.2	54.6	53.5	49.4	63.1
Low:	29.8	26.5	30.8	35.7	41.8	40.0	40.3	41.4	46.0	46.7	42.4	43.3

Target Price Range 2022 | 2023 | 2024

LEGENDS
— 0.62 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$42-$67	$55 (-10%)

2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(+15%)	7%
Low	50	(-20%)	Nil

Institutional Decisions

	4Q2018	1Q2019	2Q2019
to Buy	530	618	592
to Sell	559	494	507
Hld's(000)	582043	590052	612834

% TOT. RETURN 10/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	45.9	4.9
3 yr.	40.5	30.2
5 yr.	69.4	36.8

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
15.31	16.05	18.28	19.24	20.12	22.04	19.21	20.70	20.41	19.06	19.26	20.34	19.18	20.09	22.86	22.73	*20.55*	*21.20*	Revenues per sh	*23.50*
3.53	3.65	4.03	4.01	4.22	4.43	4.43	4.51	4.91	5.18	5.27	5.28	5.47	5.69	6.64	6.41	*6.30*	*6.55*	"Cash Flow" per sh	*7.50*
1.97	2.06	2.13	2.10	2.28	2.25	2.32	2.36	2.55	2.67	2.70	2.77	2.84	2.83	3.21	3.00	*3.10*	*3.20*	Earnings per sh A	*3.75*
1.39	1.42	1.48	1.54	1.60	1.66	1.73	1.80	1.87	1.94	2.01	2.08	2.15	2.22	2.30	2.38	*2.46*	*2.54*	Div'd Decl'd per sh B ■	*2.78*
2.72	2.85	3.20	4.01	4.65	5.10	5.70	4.85	5.23	5.54	6.16	6.58	6.22	7.38	7.37	7.74	*7.15*	*6.50*	Cap'l Spending per sh	*5.25*
13.13	13.86	14.42	15.24	16.23	17.08	18.15	19.21	20.32	21.09	21.43	21.98	22.59	25.00	23.98	23.92	*26.20*	*26.85*	Book Value per sh C	*30.25*
734.83	741.50	741.45	746.27	763.10	777.19	819.65	843.34	865.13	867.77	887.09	907.78	911.72	990.39	1007.6	1033.8	*1050.0*	*1050.0*	Common Shs Outst'g D	*1080.0*
14.8	14.7	15.9	16.2	16.0	16.1	13.5	14.9	15.8	17.0	16.2	16.0	15.8	17.8	15.5	15.1	*Bold figures are*		Avg Ann'l P/E Ratio	*16.0*
.84	.78	.85	.87	.85	.97	.90	.95	.99	1.08	.91	.84	.80	.93	.78	.81	*Value Line*		Relative P/E Ratio	*.90*
4.7%	4.7%	4.4%	4.5%	4.4%	4.6%	5.5%	5.1%	4.6%	4.3%	4.6%	4.7%	4.8%	4.4%	4.6%	5.3%	*estimates*		Avg Ann'l Div'd Yield	*4.7%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $45953 mill. **Due in 5 Yrs** $13362 mill.
LT Debt $42098 mill. **LT Interest** $1389 mill.
(LT interest earned: 3.6x)
Leases, Uncapitalized Annual rentals $156 mill.
Pension Assets-12/18 $11611 mill.
Oblig $12763 mill.
Pfd Stock $291 mill. **Pfd Div'd** $15 mill.
Incl. 10 mill. shs. 5.83% cum. pfd. ($25 stated value); 475,115 shs. 4.2%-5.44% cum. pfd. ($100 par).

Common Stock 1,048,733,989 shs.
MARKET CAP: $64 billion (Large Cap)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
15743	17456	17657	16537	17087	18467	17489	19896	23031	23495	*21600*	*22250*	Revenues ($mill)	*25500*
1910.0	2040.0	2268.0	2415.0	2439.0	2567.0	2647.0	2757.0	3269.0	3096.0	*3280*	*3410*	Net Profit ($mill)	*4115*
31.9%	33.5%	35.0%	35.6%	34.8%	33.8%	33.4%	28.5%	25.2%	21.3%	*20.0%*	*20.0%*	Income Tax Rate	*20.0%*
14.9%	13.7%	10.2%	9.4%	11.6%	13.9%	13.2%	11.9%	7.6%	6.8%	*6.0%*	*6.0%*	AFUDC % to Net Profit	*4.0%*
53.2%	51.2%	50.0%	49.9%	51.5%	49.5%	52.8%	61.5%	64.5%	62.0%	*60.5%*	*60.5%*	Long-Term Debt Ratio	*59.0%*
43.6%	45.7%	47.1%	47.3%	45.8%	47.3%	44.0%	35.7%	35.0%	37.6%	*39.0%*	*39.0%*	Common Equity Ratio	*41.0%*
34091	35438	37307	38653	41483	42142	46788	69359	68953	65750	*70300*	*72300*	Total Capital ($mill)	*80000*
39230	42002	45010	48390	51208	54868	61114	78446	79872	80797	*84950*	*88250*	Net Plant ($mill)	*94700*
6.9%	7.0%	7.2%	7.3%	6.8%	7.1%	6.6%	4.9%	5.9%	5.9%	*6.0%*	*6.0%*	Return on Total Cap'l	*6.5%*
12.0%	11.8%	12.2%	12.5%	12.1%	12.1%	12.0%	10.3%	13.3%	12.4%	*12.0%*	*12.0%*	Return on Shr. Equity	*12.5%*
12.4%	12.2%	12.5%	12.8%	12.5%	12.5%	12.6%	11.0%	13.4%	12.5%	*12.0%*	*12.0%*	Return on Com Equity E	*12.5%*
3.2%	3.0%	3.4%	3.6%	3.2%	3.2%	3.1%	2.5%	3.9%	2.6%	*2.5%*	*2.5%*	Retained to Com Eq	*3.5%*
75%	77%	73%	73%	75%	75%	76%	78%	72%	79%	*79%*	*79%*	All Div'ds to Net Prof	*73%*

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	+.2	-2.6	+3.6
Avg. Indust. Use (MWH)	3105	3016	3048
Avg. Indust. Revs. per KWH (¢)	6.01	6.18	6.04
Capacity at Yearend (Mw)	46291	46936	45824
Peak Load, Summer (Mw) F	35781	34874	36429
Annual Load Factor (%)	61.5	61.4	61.2
% Change Customers (yr-end)	+1.0	+1.0	+1.0
Fixed Charge Cov. (%)	330	318	280

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	.5%	2.5%	*1.0%*
"Cash Flow"	4.0%	4.0%	*3.0%*
Earnings	3.0%	2.5%	*3.5%*
Dividends	3.5%	3.5%	*3.0%*
Book Value	4.0%	3.0%	*3.5%*

QUARTERLY REVENUES (mill.)

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	3992	4459	6264	5181	19896
2017	5771	5430	6201	5629	23031
2018	6372	5627	6159	5337	23495
2019	5412	5098	5995	*5095*	*21600*
2020	*5700*	*5300*	*6050*	*5200*	*22250*

EARNINGS PER SHARE A

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.57	.71	1.22	.33	2.83
2017	.73	.73	1.08	.67	3.21
2018	.99	.71	1.13	.17	3.00
2019	.74	.80	1.25	*.31*	*3.10*
2020	*.85*	*.75*	*1.20*	*.40*	*3.20*

QUARTERLY DIVIDENDS PAID B ■

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2015	.525	.543	.543	.543	2.15
2016	.543	.56	.56	.56	2.22
2017	.56	.58	.58	.58	2.30
2018	.58	.60	.60	.60	2.38
2019	.60	.62	.62		

BUSINESS: The Southern Company, through its subs., supplies electricity to 4.6 mill. customers in GA, AL, and MS. Also has a competitive generation business. Acq'd AGL Resources (renamed Southern Company Gas, 4.2 mill. customers in GA, NJ, IL, VA, & TN) 7/16. Sold Gulf Power 1/19. Electric rev. breakdown: residential, 37%; commercial, 31%; industrial, 18%; other, 14%. Retail revs. by state: GA, 56%; AL, 38%; MS, 6%. Generating sources: gas, 42%; coal, 27%; nuclear, 14%; other, 8%; purchased, 9%. Fuel costs: 34% of revs. '18 reported depr. rates (util.): 2.6%-4.1%. Has 29,200 empls. Chairman, Pres. and CEO: Thomas A. Fanning. Inc.: DE. Address: 30 Ivan Allen Jr. Blvd., N.W., Atlanta, GA 30308. Tel.: 404-506-0747. Internet: www.southerncompany.com.

Southern Company has been one of the top-performing stocks in the electric utility industry in 2019. The company's Georgia Power subsidiary is building two units at the site of the Vogtle nuclear station. The project has had delays and cost overruns that have caused the company to take write-offs, but in 2019 there have been no such charges. Thus, Wall Street has become more comfortable with the project. The progress Georgia Power has made and the generous dividend yield of the stock have attracted investors. An estimated $2.9 billion of costs remain to complete construction. Units 3 and 4 are scheduled to come on line in November of 2021 and 2022, respectively.

The company's financing needs have changed. Following the sale of $1.7 billion of equity units in the third quarter, management expects to need no additional common equity through 2023 beyond the mandatory conversion of the units in 2022. In fact, Southern Company will switch to open-market purchases for its dividend-reinvestment program.

Nicor Gas received a rate order in Illinois. The utility received a $168 million rate hike, based on a 9.73% return on a 54.2% common-equity ratio. New tariffs took effect on October 8th.

Electric and gas rate applications are pending in Georgia. Georgia Power filed for increases of $563 million at the start of 2020, $145 million in 2021, and $234 million in 2022, based on a return of 10.9% on a common-equity ratio of 56%. The commission's staff put forth a harsh recommendation, but that doesn't necessarily mean that the order will be bad. Atlanta Gas Light requested a hike of $96 million, based on a return of 10.75% on a common-equity ratio of 55%.

We raised our 2019 share-earnings estimate by a nickel, to $3.10. Third-quarter profits benefited from hotter-than-normal weather. We are sticking with our 2020 estimate of $3.20. The company will benefit from rate relief.

Even after the stock's 41% advance in 2019, the dividend yield is about a percentage point above the utility mean. But total return potential is negative for the 18-month span and unexciting for the 3- to 5-year period.

Paul E. Debbas, CFA *November 15, 2019*

(A) Diluted EPS. Excl. nonrec. gain (losses): '09, (25¢); '13, (83¢); '14, (59¢); '15, (25¢); '16, (28¢); '17, ($2.37); '18, (78¢); '19, $1.30. Next earnings report due late Feb. (B) Div'ds paid in early Mar., June, Sept., and Dec. ■ Div'd reinvest. plan avail. (C) Incl. def'd chgs. In '18: $15.95/sh. (D) In mill. (E) Rate base: AL, MS, fair value; FL, GA, orig. cost. All'd return on com. eq. (blended): 12.5%; earn. on avg. com. eq., '18: 12.4%. Regul. Climate: GA, AL Above Avg.; MS, FL Avg. (F) Winter peak in '18.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	25
Earnings Predictability	85

ALLETE NYSE-ALE

RECENT PRICE **80.04** | P/E RATIO **23.7** (Trailing: 22.1 / Median: 17.0) | RELATIVE P/E RATIO **1.37** | DIV'D YLD **3.1%** | VALUE LINE

TIMELINESS 3 Lowered 4/5/19
SAFETY 2 New 10/1/04
TECHNICAL 1 Raised 11/22/19
BETA .65 (1.00 = Market)

18-Month Target Price Range
Low-High $71-$102 — **Midpoint (% to Mid)** $87 (10%)

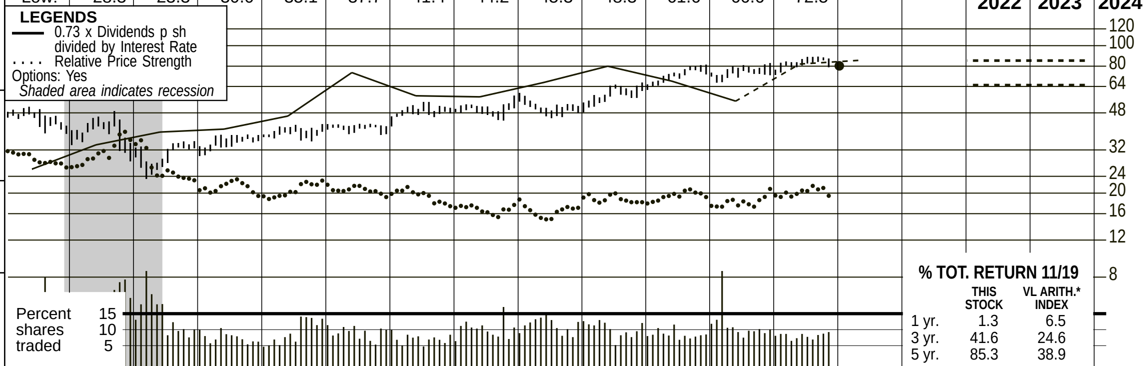
2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	85	(+5%)	5%
Low	65	(-20%)	-1%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	143	145	125
to Sell	119	126	142
Hld's(000)	37042	37472	38347

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
High:	49.0	35.3	37.9	42.5	42.7	54.1	58.0	59.7	66.9	81.2	82.8	88.6
Low:	28.3	23.3	30.0	35.1	37.7	41.4	44.2	45.3	48.3	61.6	66.6	72.5



% TOT. RETURN 11/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	1.3	6.5
3 yr.	41.6	24.6
5 yr.	85.3	38.9

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
- -	25.30	24.50	25.23	27.33	24.57	21.57	25.34	24.75	24.40	24.60	24.77	30.27	27.01	27.78	29.10	23.85	23.95	Revenues per sh	26.50
- -	2.97	3.85	4.14	4.42	4.23	3.57	4.35	4.91	5.01	5.35	5.68	6.79	7.08	6.59	7.37	7.35	7.60	"Cash Flow" per sh	8.75
- -	1.35	2.48	2.77	3.08	2.82	1.89	2.19	2.65	2.58	2.63	2.90	3.38	3.14	3.13	3.38	3.30	3.45	Earnings per sh A	4.25
- -	.30	1.25	1.45	1.64	1.72	1.76	1.76	1.78	1.84	1.90	1.96	2.02	2.08	2.14	2.24	2.35	2.46	Div'd Decl'd per sh B ■ †	2.85
- -	2.12	1.95	3.37	6.82	9.24	9.05	6.95	6.38	10.30	7.93	12.48	5.84	5.35	4.08	6.07	12.25	13.10	Cap'l Spending per sh	6.00
- -	21.23	20.03	21.90	24.11	25.37	26.41	27.26	28.78	30.48	32.44	35.06	37.07	38.17	40.47	41.86	42.90	44.05	Book Value per sh C	48.25
- -	29.70	30.10	30.40	30.80	32.60	35.20	35.80	37.50	39.40	41.40	45.90	49.10	49.60	51.10	51.50	51.75	52.00	Common Shs Outst'g D	52.75
- -	25.2	17.9	16.5	14.8	13.9	16.1	16.0	14.7	15.9	18.6	17.2	15.1	18.6	23.0	22.2	Bold figures are		Avg Ann'l P/E Ratio	17.5
- -	1.33	.95	.89	.79	.84	1.07	1.02	.92	1.01	1.05	.91	.76	.98	1.16	1.19	Value Line		Relative P/E Ratio	.95
- -	.9%	2.8%	3.2%	3.6%	4.4%	5.8%	5.0%	4.6%	4.5%	3.9%	3.9%	4.0%	3.6%	3.0%	3.0%	estimates		Avg Ann'l Div'd Yield	3.8%

CAPITAL STRUCTURE as of 9/30/19
Total Debt $1617.6 mill. **Due in 5 Yrs** $404.3 mill.
LT Debt $1404.9 mill. **LT Interest** $59.0 mill.
(LT interest earned: 3.6x)

Leases, Uncapitalized Annual rentals $9.9 mill.

Pension Assets-12/18 $598.0 mill. **Oblig** $747.0 mill.

Pfd Stock None

Common Stock 51,668,047 shs.

MARKET CAP: $4.1 billion (Mid Cap)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
759.1	907.0	928.2	961.2	1018.4	1136.8	1486.4	1339.7	1419.3	1498.6	1235	1245	Revenues ($mill)	1400
61.0	75.3	93.8	97.1	104.7	124.8	163.4	155.3	159.2	174.1	170	180	Net Profit ($mill)	225
33.7%	37.2%	27.6%	28.1%	21.5%	22.6%	19.4%	11.3%	14.8%	NMF	NMF	Nil	Income Tax Rate	Nil
12.8%	8.9%	2.7%	5.3%	4.4%	6.3%	2.0%	1.4%	.8%	.7%	2.0%	2.0%	AFUDC % to Net Profit	1.0%
42.8%	44.2%	44.3%	43.7%	44.6%	44.2%	46.3%	42.0%	41.0%	39.9%	41.0%	44.5%	Long-Term Debt Ratio	42.0%
57.2%	55.8%	55.7%	56.3%	55.4%	55.8%	53.7%	58.0%	59.0%	60.1%	59.0%	55.5%	Common Equity Ratio	58.0%
1625.3	1747.6	1937.2	2134.6	2425.9	2882.2	3388.9	3263.4	3507.4	3584.3	3775	4145	Total Capital ($mill)	4400
1622.7	1805.6	1982.7	2347.6	2576.5	3286.4	3669.1	3741.2	3822.4	3904.4	4330	4795	Net Plant ($mill)	5050
4.8%	5.4%	6.0%	5.6%	5.3%	5.2%	5.8%	5.8%	5.5%	5.8%	5.5%	5.0%	Return on Total Cap'l	6.0%
6.6%	7.7%	8.7%	8.1%	7.8%	7.8%	9.0%	8.2%	7.7%	8.1%	7.5%	8.0%	Return on Shr. Equity	9.0%
6.6%	7.7%	8.7%	8.1%	7.8%	7.8%	9.0%	8.2%	7.7%	8.1%	7.5%	8.0%	Return on Com Equity E	9.0%
.5%	1.5%	2.9%	2.3%	2.2%	2.5%	3.6%	2.8%	2.4%	2.7%	2.5%	2.5%	Retained to Com Eq	3.0%
93%	81%	66%	71%	72%	67%	60%	66%	68%	66%	71%	71%	All Div'ds to Net Prof	66%

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	-2.3	+8.4	-.2
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Winter (Mw)	1520	1599	1589
Annual Load Factor (%)	NA	NA	NA
% Change Customers (avg.)	NA	NA	NA
Fixed Charge Cov. (%)	318	339	296

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	1.0%	2.5%	-1.0%
"Cash Flow"	5.0%	6.5%	4.0%
Earnings	1.0%	4.0%	5.0%
Dividends	3.0%	3.0%	5.0%
Book Value	5.5%	5.5%	3.0%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2016	333.8	314.8	349.6	341.5	1339.7
2017	365.6	353.3	362.5	337.9	1419.3
2018	358.2	344.1	348.0	448.3	1498.6
2019	357.2	290.4	288.3	299.1	1235
2020	335	300	300	300	1245

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2016	.93	.50	.81	.90	3.14
2017	.97	.72	.88	.56	3.13
2018	.99	.61	.59	1.19	3.38
2019	1.18	.64	.60	.88	3.30
2020	1.25	.65	.65	.90	3.45

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2015	.505	.505	.505	.505	2.02
2016	.52	.52	.52	.52	2.08
2017	.535	.535	.535	.535	2.14
2018	.56	.56	.56	.56	2.24
2019	.5875	.5875	.5875	.5875	

BUSINESS: ALLETE, Inc. is the parent of Minnesota Power, which supplies electricity to 146,000 customers in northeastern MN, & Superior Water, Light & Power in northwestern WI. Electric rev. breakdown: taconite mining/processing, 26%; paper/wood products, 9%; other industrial, 8%; residential, 12%; commercial, 13%; wholesale, 16% other, 16%. ALLETE Clean Energy (ACE) owns renewable energy projects. Acq'd U.S. Water Services 2/15; sold it 3/19. Generating sources: coal & lignite, 43%; wind, 10%; other, 4%; purchased, 43%. Fuel costs: 27% of revs. '18 deprec. rate: 3.6%. Has 1,900 employees. Chairman & CEO: Alan R. Hodnik. President: Bethany M. Owen. Inc.: MN. Address: 30 West Superior St., Duluth, MN 55802-2093. Tel.: 218-279-5000. Internet: www.allete.com.

ALLETE's primary utility subsidiary has filed a general rate case. Minnesota Power filed for an increase of $65.9 million, based on a return of 10.05% on a common-equity ratio of 53.81%. The utility is seeking an interim hike of $48 million (subject to refund) at the start of 2020. Currently, Minnesota Power is earning an ROE of 9%. Final rates will be implemented in late 2021.

We now think earnings will decline in 2019. The fourth-quarter comparison is tough because ALLETE Clean Energy (ACE) recorded a gain of $0.20 a share a year ago on the sale of a wind facility. We *included* this in our earnings presentation because ACE has done this before. On the other hand, we *excluded* as a nonrecurring item of $0.22-a-share that ALLETE booked in the first six months of 2019 on the sale of its former subsidiary, U.S. Water Services. This is why our share-profit estimate of $3.30 is below management's targeted range of $3.50-$3.80.

ACE plans to add two or three wind projects annually. Two projects, totaling 186 megawatts, are on track for completion by year-end 2019. This will contribute to ALLETE's earnings growth in 2020. A 303-mw facility should be completed in late 2020. This is expected to bring ALLETE's total investment to over $700 million by then. ACE is also repowering some existing projects, which also boosts its earning power. At some point, ACE might well become large enough for ALLETE to spin it off as an independent company.

The utility is building a transmission project. Minnesota Power earns a current return on this spending. Its investment is estimated at $325 million.

We expect a dividend increase in early 2020. This is the usual timing of dividend hikes by the company's board of directors. We estimate a raise of $0.11 a share (4.7%) in the annual payout, the same increase as in 2019.

The dividend yield is approximately equal to the utility average. For the 18-month period, total return potential is modest. However, like most utility issues, the recent quotation is well within our 2022-2024 Target Price Range. Accordingly, total return prospects over the 3- to 5-year period are negligible.

Paul E. Debbas, CFA *December 13, 2019*

(A) Diluted EPS. Excl. nonrec. gains (losses): '04, (25¢); '05, ($1.84); '15, (46¢); '17, 25¢; '19, 22¢; gain (losses) on disc. ops.: '04, $2.57, '05, (16¢); '06, (2¢). '16 & '18 EPS don't sum due to rounding. Next earnings report due early Feb. **(B)** Div'ds historically paid in early Mar., June, Sept. and Dec. ■ Div'd reinvest. plan avail. † Shareholder invest. plan avail. **(C)** Incl. deferred charges. In '18: $11.90/sh. **(D)** In mill. **(E)** Rate base: Orig. cost depr. Rate allowed in MN on com. eq. in '18: 9.25%; earned on avg. com. eq., '18: 8.2%. Regulatory Climate: Avg.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	60
Earnings Predictability	85

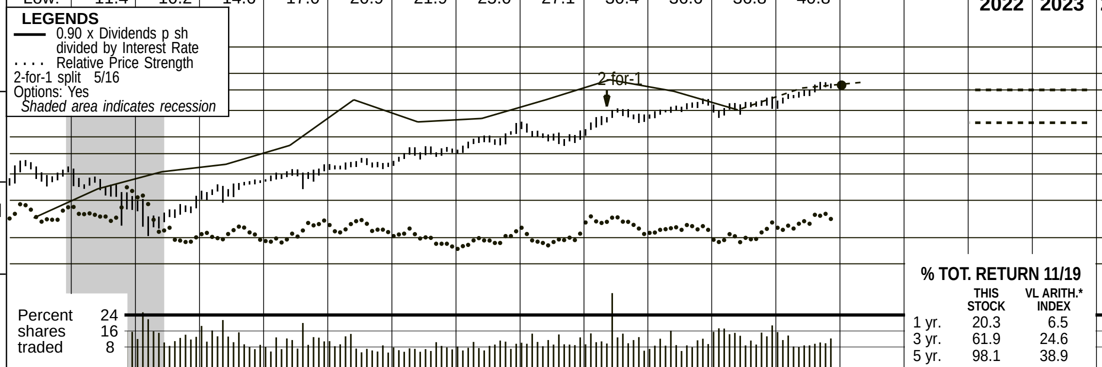
ALLIANT ENERGY NDQ-LNT

RECENT PRICE	52.70	P/E RATIO	22.0 (Trailing: 23.5 / Median: 16.0)	RELATIVE P/E RATIO	1.27	DIV'D YLD	2.7%	VALUE LINE

TIMELINESS 2 Raised 11/29/19
SAFETY 2 Raised 9/28/07
TECHNICAL 2 Lowered 11/29/19
BETA .60 (1.00 = Market)

High:	21.2	15.8	18.8	22.2	23.8	27.1	34.9	35.4	41.0	45.6	46.6	54.6
Low:	11.4	10.2	14.6	17.0	20.9	21.9	25.0	27.1	30.4	36.6	36.8	40.8

Target Price Range 2022 | 2023 | 2024



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$46-$63	$55 (5%)

2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	50	(-5%)	2%
Low	35	(-35%)	-6%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	225	242	248
to Sell	240	220	233
Hld's(000)	182908	185336	185069

% TOT. RETURN 11/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	20.3	6.5
3 yr.	61.9	24.6
5 yr.	98.1	38.9

Alliant Energy, formerly called Interstate Energy Corporation, was formed on April 21, 1998 through the merger of WPL Holdings, IES Industries, and Interstate Power. WPL stockholders received one share of Interstate Energy stock for each WPL share, IES stockholders received 1.14 Interstate Energy shares for each IES share, and Interstate Power stockholders received 1.11 Interstate Energy shares for each Interstate Power share.

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
15.51	15.40	16.51	13.94	14.77	15.10	14.34	14.58	14.62	14.97	*15.40*	*15.90*	Revenues per sh	*16.45*
2.10	2.60	2.75	2.95	3.34	3.44	3.45	3.45	3.97	4.32	*4.60*	*4.75*	"Cash Flow" per sh	*5.25*
.95	1.38	1.38	1.53	1.65	1.74	1.69	1.65	1.99	2.19	*2.30*	*2.40*	Earnings per sh A	*2.80*
.75	.79	.85	.90	.94	1.02	1.10	1.18	1.26	1.34	*1.42*	*1.52*	Div'd Decl'd per sh B ■ †	*1.74*
5.43	3.91	3.03	5.22	3.32	3.78	4.25	5.26	6.34	6.64	*6.35*	*5.90*	Cap'l Spending per sh	*6.15*
12.54	13.05	13.57	14.12	14.79	15.54	16.41	16.96	18.08	19.43	*21.80*	*23.05*	Book Value per sh C	*27.55*
221.31	221.79	222.04	221.97	221.89	221.87	226.92	227.67	231.35	236.06	*240.00*	*242.00*	Common Shs Outst'g D	*250.00*
13.9	12.5	14.5	14.5	15.3	16.6	18.1	22.3	20.6	19.1	*Bold figures are*		Avg Ann'l P/E Ratio	*15.0*
.93	.80	.91	.92	.86	.87	.91	1.17	1.04	1.03	*Value Line*		Relative P/E Ratio	*.85*
5.7%	4.6%	4.3%	4.1%	3.7%	3.5%	3.6%	3.2%	3.1%	3.2%	*estimates*		Avg Ann'l Div'd Yield	*4.1%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $6541.5 mill. **Due in 5 Yrs** $1000.0 mill.
LT Debt $5535.1 mill. **LT Interest** $230.0 mill.
(LT interest earned: 3.2x)

Pension Assets-12/18 $808.6 mill. **Oblig.** $1175.0 mill.
Pfd Stock $400.0 mill. **Pfd Div'd** $10.2 mill.
16,000,000 shs.

Common Stock 240,342,949 shs.

MARKET CAP: $12.7 billion (Large Cap)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
3432.8	3416.1	3665.3	3094.5	3276.8	3350.3	3253.6	3320.0	3382.2	3534.5	*3700*	*3850*	Revenues ($mill)	*4115*
208.6	303.9	304.4	337.8	382.1	385.5	380.7	373.8	455.9	512.1	*545*	*575*	Net Profit ($mill)	*695*
- -	30.1%	19.0%	21.5%	12.4%	10.1%	15.3%	13.4%	12.5%	8.4%	*11.0%*	*11.0%*	Income Tax Rate	*11.0%*
- -	- -	- -	- -	- -	- -	6.5%	7.0%	7.6%	7.8%	*7.5%*	*7.5%*	AFUDC % to Net Profit	*7.5%*
44.3%	46.3%	45.7%	48.4%	46.1%	49.7%	48.6%	52.8%	49.0%	53.3%	*52.0%*	*52.0%*	Long-Term Debt Ratio	*52.0%*
51.2%	49.5%	50.9%	48.4%	50.8%	47.5%	51.4%	47.2%	48.6%	46.7%	*48.0%*	*48.0%*	Common Equity Ratio	*48.0%*
5423.0	5840.8	5921.2	6476.6	6461.0	7257.2	7246.3	8177.6	8192.8	9832.0	*10000*	*10500*	Total Capital ($mill)	*12000*
6203.0	6730.6	7037.1	7838.0	7147.3	6442.0	8970.2	9809.9	10798	12462	*13000*	*14000*	Net Plant ($mill)	*17000*
5.1%	6.6%	6.4%	6.3%	7.0%	6.3%	6.3%	5.6%	6.8%	5.2%	*4.0%*	*5.5%*	Return on Total Cap'l	*6.0%*
6.9%	9.7%	9.5%	10.1%	11.0%	10.6%	10.2%	9.7%	10.9%	11.2%	*10.5%*	*10.5%*	Return on Shr. Equity	*10.0%*
6.8%	9.9%	9.5%	10.3%	11.3%	10.9%	10.2%	9.7%	10.9%	11.2%	*10.5%*	*10.5%*	Return on Com Equity E	*10.0%*
.9%	3.8%	3.3%	3.9%	4.9%	4.3%	3.6%	2.8%	4.0%	4.3%	*3.5%*	*4.0%*	Retained to Com Eq	*4.0%*
88%	64%	67%	64%	57%	59%	65%	72%	63%	61%	*62%*	*63%*	All Div'ds to Net Prof	*62%*

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	+2.0	-1.0	+2.0
Avg. Indust. Use (MWH)	11987	12102	12340
Avg. Indust. Revs. per KWH (¢)	7.04	7.16	7.25
Capacity at Peak (Mw)	5615	5375	5459
Peak Load, Summer (Mw)	5615	5375	5459
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.0	+.4	+.4
Fixed Charge Cov. (%)	295	319	322

BUSINESS: Alliant Energy Corp., formerly named Interstate Energy, is a holding company formed through the merger of WPL Holdings, IES Industries, and Interstate Power. Supplies electricity, gas, and other services in Wisconsin, Iowa, and Minnesota. Elect. revs. by state: WI, 41%; IA, 58%; MN, 1%. Elect. rev.: residential, 37%; commercial, 25%; industrial, 26%; wholesale, 5%; other, 7%. Fuel sources, 2018: coal, 37%; gas, 30%; other, 33%. Fuel costs: 45% of revs. 2018 depreciation rate: 5.9%. Estimated plant age: 16 years. Has approximately 3,885 employees. Chairman & Chief Executive Officer: John O. Larsen. Incorporated: Wisconsin. Address: 4902 N. Biltmore Lane, Madison, Wisconsin 53718. Telephone: 608-458-3311. Internet: www.alliantenergy.com.

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	-.5%	-1.0%	*2.0%*
"Cash Flow"	3.0%	4.0%	*6.0%*
Earnings	4.5%	4.5%	*6.5%*
Dividends	7.5%	7.0%	*5.5%*
Book Value	4.0%	4.5%	*7.5%*

QUARTERLY REVENUES ($ mill.)

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	843.8	754.2	925.0	797.0	3320.0
2017	853.9	765.3	906.9	856.1	3382.2
2018	916.3	816.1	928.6	873.5	3534.5
2019	987.2	790.2	990.2	*932.4*	*3700*
2020	*975*	*880*	*1050*	*945*	*3850*

EARNINGS PER SHARE A

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.43	.37	.57	.28	1.65
2017	.44	.41	.73	.41	1.99
2018	.52	.43	.87	.37	2.19
2019	.53	.40	.94	*.43*	*2.30*
2020	*.57*	*.46*	*.94*	*.43*	*2.40*

QUARTERLY DIVIDENDS PAID B ■†

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2015	.275	.275	.275	.275	1.10
2016	.295	.295	.295	.295	1.18
2017	.315	.315	.315	.315	1.26
2018	.335	.335	.335	.335	1.34
2019	.355	.355	.355	.355	

Alliant Energy raised its 2019 earnings outlook. The utility boosted the midpoint of its guidance by $0.06 a share, to a range of $2.27-$2.33, primarily due to higher earnings from temperature impacts on retail electric and gas sales during the third quarter. In response, we have boosted our 12-month estimate by a nickel (now at $2.30), representing year-over-year growth of about 5% over 2018's tally.

The company provided 2020 earnings guidance for the first time. Alliant expects share net to be between $2.34 and $2.48 next year. Growth will be driven by investments in the core utility business, including Wisconsin Power and Light's West Riverside Energy Center (the project is about 95% complete) and Interstate Power and Light's wind expansion program. These investments were reflected in WPL's approved electric rates for 2020 and IPL's electric rate review settlement (discussed below), which remains subject to a final decision by the Iowa Utilities Board.

The board of directors raised the dividend in November. This has been the pattern in recent years. The increase was $0.025 a share (7%) quarterly, slightly more than what we had been expecting. Alliant is targeting a payout ratio in a range of 60%-70%.

Leadership unveiled a new five-year investment forecast. Capital expenditures over the 2019-2023 period are expected to be $6.7 billion, with the majority of that earmarked for upgrades to electric and gas distribution systems. Alliant is also accelerating spending on renewables, with a goal to have at least 1,000 mw of solar energy generation by 2023.

The company reached a settlement with the Iowa Utilities Board. Under the proposed terms, annual retail electric rates would increase by $127 million in 2020 for the company's Interstate Power and Light subsidiary. The return on equity would be 9.5%, and the common-equity ratio would be 51%.

This stock is now ranked 2 (Above Average) for year-ahead price performance, having slipped a notch on our Timeliness scale since September. The dividend yield is below average for a utility, and the stock is trading above our 3- to 5-year Target Price Range.

Daniel Henigson, CFA December 13, 2019

(A) Diluted EPS. Excl. nonrecur. gains (losses): '09, (44¢); '10, (8¢); '11, (1¢); '12, (8¢). Next earnings rpt. due mid-Feb. (B) Dividends historically paid in mid-Feb., May, Aug., and Nov. ■ Div'd reinvest. plan avail. † Shareholder invest. plan avail. (C) Incl. deferred chgs. In '18: $89.7 mill., $0.38/sh. (D) In millions, adjusted for split. (E) Rate base: Orig. cost. Rates all'd on com. eq. in IA in '18: 10.0%; in WI in '18 Regul. Clim.: WI, Above Avg.; IA, Avg.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	90

AMEREN NYSE-AEE

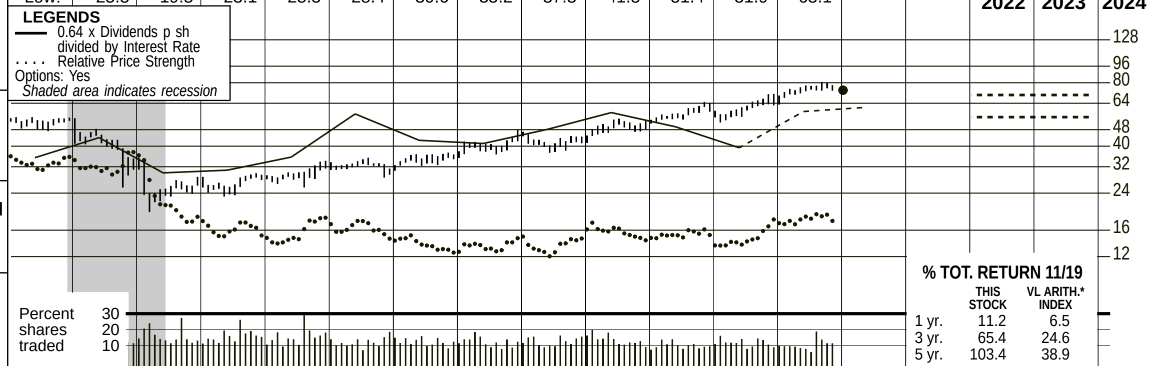
RECENT PRICE **73.81** | P/E RATIO **22.4** (Trailing: 22.7 / Median: 16.0) | RELATIVE P/E RATIO **1.29** | DIV'D YLD **2.7%** | **VALUE LINE**

TIMELINESS 3 Lowered 3/29/19
SAFETY 2 Raised 6/20/14
TECHNICAL 1 Raised 12/13/19
BETA .55 (1.00 = Market)

High:	54.3	35.3	29.9	34.1	35.3	37.3	48.1	46.8	54.1	64.9	70.9	80.9
Low:	25.5	19.5	23.1	25.5	28.4	30.6	35.2	37.3	41.5	51.4	51.9	63.1

Target Price Range 2022 | 2023 | 2024

LEGENDS
— 0.64 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$66-$92	$79 (5%)

2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(-5%)	2%
Low	55	(-25%)	-3%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	266	261	257
to Sell	245	255	257
Hld's(000)	176800	175894	186859

Percent shares traded 30 / 20 / 10

% TOT. RETURN 11/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	11.2	6.5
3 yr.	65.4	24.6
5 yr.	103.4	38.9

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
28.20	26.43	33.12	33.30	36.23	36.92	29.87	31.77	31.04	28.14	24.06	24.95	25.13	25.04	25.46	25.73	*24.20*	*24.95*	Revenues per sh	*28.00*
6.29	5.57	6.10	6.02	6.76	6.44	6.06	6.33	5.87	5.87	5.25	5.77	6.08	6.59	6.80	7.64	*7.65*	*8.05*	"Cash Flow" per sh	*10.00*
3.14	2.82	3.13	2.66	2.98	2.88	2.78	2.77	2.47	2.41	2.10	2.40	2.38	2.68	2.77	3.32	*3.25*	*3.45*	Earnings per sh A	*4.25*
2.54	2.54	2.54	2.54	2.54	2.54	1.54	1.54	1.56	1.60	1.60	1.61	1.66	1.72	1.78	1.85	*1.92*	*2.01*	Div'd Decl'd per sh B ■	*2.35*
4.19	4.13	4.63	4.99	6.96	9.75	7.51	4.66	4.50	5.49	5.87	7.66	8.12	8.78	9.05	9.56	*9.90*	*12.95*	Cap'l Spending per sh	*10.25*
26.73	29.71	31.09	31.86	32.41	32.80	33.08	32.15	32.64	27.27	26.97	27.67	28.63	29.27	29.61	31.21	*32.85*	*35.75*	Book Value per sh C	*41.50*
162.90	195.20	204.70	206.60	208.30	212.30	237.40	240.40	242.60	242.63	242.63	242.63	242.63	242.63	242.63	244.50	*246.00*	*254.50*	Common Shs Outst'g D	*259.00*
13.5	16.3	16.7	19.4	17.4	14.2	9.3	9.7	11.9	13.4	16.5	16.7	17.5	18.3	20.6	18.3	*Bold figures are*		Avg Ann'l P/E Ratio	*14.5*
.77	.86	.89	1.05	.92	.85	.62	.62	.75	.85	.93	.88	.88	.96	1.04	.98	*Value Line*		Relative P/E Ratio	*.80*
6.0%	5.5%	4.9%	4.9%	4.9%	6.2%	6.0%	5.8%	5.3%	5.0%	4.6%	4.0%	4.0%	3.5%	3.1%	3.0%	*estimates*		Avg Ann'l Div'd Yield	*3.8%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $9531 mill. **Due in 5 Yrs** $2525 mill.
LT Debt $8651 mill. **LT Interest** $401 mill.
(LT interest earned: 4.0x)
Leases, Uncapitalized Annual rentals $10 mill.
Pension Assets-12/18 $3899 mill. **Oblig** $4459 mill.
Pfd Stock $142 mill. **Pfd Div'd** $6 mill.
807,595 sh. $3.50 to $5.50 cum. (no par), $100 stated val., redeem. $102.176-$110/sh.; 616,323 sh. 4.00% to 6.625%, $100 par, redeem. $100-$104/sh.
Common Stock 246,029,792 shs. **as of 10/31/19**
MARKET CAP: $18 billion (Large Cap)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
7090.0	7638.0	7531.0	6828.0	5838.0	6053.0	6098.0	6076.0	6177.0	6291.0	*5950*	*6350*	Revenues ($mill)	*7250*
624.0	669.0	602.0	589.0	518.0	593.0	585.0	659.0	683.0	821.0	*805*	*880*	Net Profit ($mill)	*1100*
34.7%	36.8%	37.3%	36.9%	37.5%	38.9%	38.3%	36.7%	38.2%	22.4%	*17.5%*	*19.0%*	Income Tax Rate	*18.0%*
5.8%	7.8%	5.6%	6.1%	7.1%	5.7%	5.1%	4.1%	3.5%	4.4%	*4.0%*	*3.0%*	AFUDC % to Net Profit	*3.0%*
49.7%	48.2%	45.3%	49.5%	45.2%	47.2%	49.3%	47.7%	49.2%	50.3%	*52.0%*	*50.5%*	Long-Term Debt Ratio	*49.5%*
49.1%	50.9%	53.7%	49.4%	53.7%	51.7%	49.7%	51.3%	49.8%	48.8%	*47.0%*	*48.5%*	Common Equity Ratio	*49.5%*
15991	15185	14738	13384	12190	12975	13968	13840	14420	15632	*17175*	*18675*	Total Capital ($mill)	*21600*
17610	17853	18127	16096	16205	17424	18799	20113	21466	22810	*24150*	*26275*	Net Plant ($mill)	*29900*
5.3%	6.0%	5.6%	6.0%	5.6%	5.8%	5.3%	6.0%	5.9%	6.3%	*6.0%*	*6.0%*	Return on Total Cap'l	*6.5%*
7.8%	8.5%	7.5%	8.7%	7.7%	8.7%	8.3%	9.1%	9.3%	10.6%	*10.0%*	*9.5%*	Return on Shr. Equity	*10.0%*
7.8%	8.6%	7.5%	8.8%	7.8%	8.7%	8.3%	9.2%	9.4%	10.7%	*10.0%*	*9.5%*	Return on Com Equity E	*10.5%*
3.5%	3.8%	2.8%	3.0%	1.9%	2.9%	2.5%	3.3%	3.4%	4.8%	*4.0%*	*4.0%*	Retained to Com Eq	*4.5%*
56%	56%	63%	66%	76%	67%	70%	64%	64%	56%	*59%*	*58%*	All Div'ds to Net Prof	*56%*

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	-4.2	-3.4	+5.6
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	351	362	329

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	-3.5%	-1.5%	*1.5%*
"Cash Flow"	1.0%	4.5%	*6.0%*
Earnings	.5%	4.5%	*6.5%*
Dividends	-3.5%	2.5%	*4.5%*
Book Value	-.5%	.5%	*5.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	1434	1427	1859	1356	6076.0
2017	1514	1538	1723	1402	6177.0
2018	1585	1563	1724	1419	6291.0
2019	1556	1379	1659	*1356*	*5950*
2020	*1600*	*1500*	*1800*	*1450*	*6350*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.43	.61	1.52	.13	2.68
2017	.42	.79	1.18	.39	2.77
2018	.62	.97	1.45	.28	3.32
2019	.78	.72	1.47	*.28*	*3.25*
2020	*.75*	*.80*	*1.55*	*.35*	*3.45*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2015	.41	.41	.41	.425	1.66
2016	.425	.425	.425	.44	1.72
2017	.44	.44	.44	.4575	1.78
2018	.4575	.4575	.4575	.475	1.85
2019	.475	.475	.475	.495	

BUSINESS: Ameren Corporation is a holding company formed through the merger of Union Electric and CIPSCO. Acq'd CILCORP 1/03; Illinois Power 10/04. Has 1.2 mill. electric and 127,000 gas customers in Missouri; 1.2 mill. electric and 813,000 gas customers in Illinois. Discontinued nonregulated power-generation operation in '13. Electric rev. breakdown: residential, 43%; commercial, 32%; industrial, 8%; other, 17%. Generating sources: coal, 68%; nuclear, 24%; hydro & other, 3%; purchased, 5%. Fuel costs: 27% of revs. '18 reported deprec. rates: 3%-4%. Has 8,800 employees. Chairman, President & CEO: Warner L. Baxter. Inc.: MO. Address: One Ameren Plaza, 1901 Chouteau Ave., P.O. Box 66149, St. Louis, MO 63166-6149. Tel.: 314-621-3222. Internet: www.ameren.com.

Ameren has an electric rate case pending in Missouri. The utility's request of a $1 million decrease seems odd, but this figure includes the pass-through to customers of $100 million of reduced fuel and purchased-power costs. Ameren based its filing on a 9.95% return on a 51.9% common-equity ratio. Testimony from the commission's staff and intervenors was due shortly before this report went to press. An order is due by April, with new rates taking effect in late May. Note that Ameren Missouri received a $1 million gas tariff decrease at the start of September, which included the pass-through to customers of lower federal taxes. An allowed ROE wasn't specified, but a range of 9.4%-9.95% was considered reasonable. Ameren Illinois plans to file a gas rate case in early 2020.

We have trimmed our 2019 and 2020 share-earnings estimates by $0.05. Third-quarter profits were slightly below our estimate. Our revised expectation of $3.25 is within management's guidance of $3.23-$3.33. In 2020, the allowed ROE for Ameren Illinois' electric operations will be lower because the rate on the 30-year U.S. Treasury bond has fallen. This will affect the company's annual earning power by a few cents a share.

Financing needs are significant. Ameren has issued more than $1.5 billion of long-term debt this year, most of which was used to retire short-term borrowings. The company also sold 7.5 million shares through a forward agreement, which will raise an estimated $540 million-$550 million. This will probably be settled in late 2020, when a $1.2 billion, 700-megawatt wind project is expected to begin operating. Ameren is also issuing some $100 million of common stock annually for its dividend-reinvestment and other stock programs.

The board of directors raised the dividend in the fourth quarter. The increase was two cents a share (4.2%) quarterly. Ameren's target for the payout ratio is a range of 55%-70%.

Ameren stock is priced expensively. The dividend yield is about a half percentage point below the electric utility average. And the recent quotation is *above* our 2022-2024 Target Price Range.

Paul E. Debbas, CFA *December 13, 2019*

(A) Dil. EPS. Excl. nonrec. gain (losses): '05, (11¢); '10, ($2.19); '11, (32¢); '12, ($6.42); '17, (63¢); gain (loss) from disc. ops.: '13, (92¢); '15, 21¢. '16-'17 EPS don't sum due to rounding. Next egs. report due late Feb. **(B)** Div'ds pd. late Mar., June, Sept., & Dec. ■ Div'd reinv. plan avail. **(C)** Incl. intang. In '18: $6.29/sh. **(D)** In mill. **(E)** Rate base: Orig. cost depr. Rate all'd on com. eq. in MO in '17: elec., none; in '11: gas, none; in IL in '14: elec., 8.7%, in '18: gas, 9.87%; earned on avg. com. eq., '18: 8.3%. Reg. Climate: MO, Avg.; IL, Below Avg.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	85

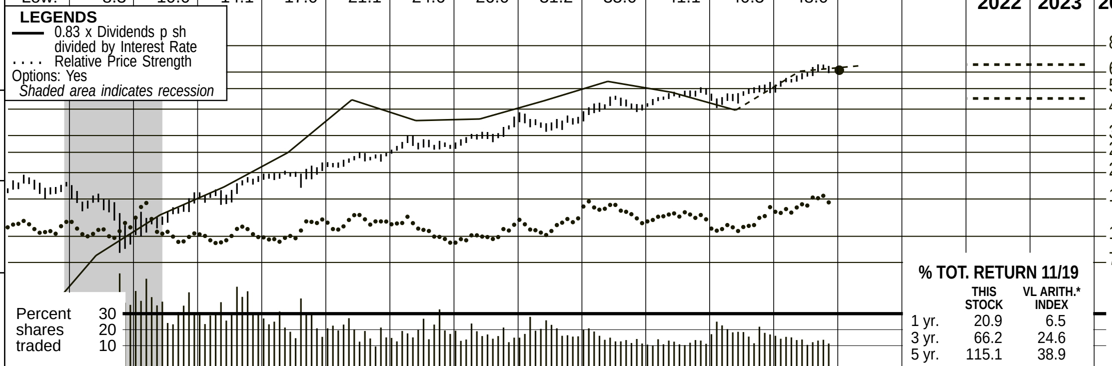
CMS ENERGY CORP. NYSE-CMS

RECENT PRICE 61.13 | P/E RATIO 22.1 (Trailing: 27.9 Median: 17.0) | RELATIVE P/E RATIO 1.28 | DIV'D YLD 2.7% | VALUE LINE

TIMELINESS 3 Lowered 1/11/19
SAFETY 2 Raised 3/21/14
TECHNICAL 2 Lowered 12/6/19
BETA .50 (1.00 = Market)

High:	17.5	16.1	19.3	22.4	25.0	30.0	36.9	38.7	46.3	50.8	53.8	65.3
Low:	8.3	10.0	14.1	17.0	21.1	24.6	26.0	31.2	35.0	41.1	40.5	48.0

LEGENDS
— 0.83 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range 2022 2023 2024

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$52-$71	$62 (0%)

2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	65	(+5%)	5%
Low	45	(-25%)	-4%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	298	251	253
to Sell	233	256	269
Hld's(000)	261163	264000	263460

Percent shares traded 30 20 10

% TOT. RETURN 11/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	20.9	6.5
3 yr.	66.2	24.6
5 yr.	115.1	38.9

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
34.21	28.06	28.52	30.57	28.95	30.13	27.23	25.77	25.59	23.90	24.68	26.09	23.29	22.92	23.37	24.25	***24.10***	***24.55***	Revenues per sh	26.25
2.39	2.87	3.43	3.22	3.08	3.88	3.47	3.70	3.65	3.82	4.06	4.22	4.59	4.88	5.29	5.61	***6.00***	***6.30***	"Cash Flow" per sh	7.50
d.29	.74	1.10	.64	.64	1.23	.93	1.33	1.45	1.53	1.66	1.74	1.89	1.98	2.17	2.32	***2.50***	***2.65***	Earnings per sh A	3.25
- -	- -	- -	- -	.20	.36	.50	.66	.84	.96	1.02	1.08	1.16	1.24	1.33	1.43	***1.53***	***1.63***	Div'd Decl'd per sh B ■	2.00
3.32	2.69	2.69	3.01	5.61	3.50	3.59	3.29	3.47	4.65	4.98	5.73	5.64	5.99	5.91	7.32	***7.75***	***9.05***	Cap'l Spending per sh	8.00
9.84	10.63	10.53	10.03	9.46	10.88	11.42	11.19	11.92	12.09	12.98	13.34	14.21	15.23	15.77	16.78	***17.80***	***19.20***	Book Value per sh C	24.00
161.13	195.00	220.50	222.78	225.15	226.41	227.89	249.60	254.10	264.10	266.10	275.20	277.16	279.21	281.65	283.37	***284.00***	***287.00***	Common Shs Outst'g D	296.00
- -	12.4	12.6	22.2	26.8	10.9	13.6	12.5	13.6	15.1	16.3	17.3	18.3	20.9	21.3	20.3	*Bold figures are*		Avg Ann'l P/E Ratio	17.0
- -	.66	.67	1.20	1.42	.66	.91	.80	.85	.96	.92	.91	.92	1.10	1.07	1.09	*Value Line*		Relative P/E Ratio	.95
- -	- -	- -	- -	1.2%	2.7%	4.0%	4.0%	4.3%	4.2%	3.8%	3.6%	3.4%	3.0%	2.9%	3.0%	*estimates*		Avg Ann'l Div'd Yield	3.6%

CAPITAL STRUCTURE as of 9/30/19
Total Debt $13195 mill. **Due in 5 Yrs** $4121 mill.
LT Debt $12121 mill. **LT Interest** $530 mill.
Incl. $81 mill. capitalized leases.
(LT interest earned: 2.7x)
Leases, Uncapitalized Annual rentals $16 mill.
Pension Assets-12/18 $2247 mill. **Oblig** $2512 mill.
Pfd Stock $37 mill. **Pfd Div'd** $2 mill.
Incl. 373,148 shs. $4.50 $100 par, cum., callable at $110.00.
Common Stock 283,842,478 shs.
as of 10/7/19
MARKET CAP: $17 billion (Large Cap)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
6205.0	6432.0	6503.0	6312.0	6566.0	7179.0	6456.0	6399.0	6583.0	6873.0	***6850***	***7050***	Revenues ($mill)	7750
231.0	356.0	384.0	413.0	454.0	479.0	525.0	553.0	610.0	659.0	***715***	***770***	Net Profit ($mill)	960
34.6%	38.1%	36.8%	39.4%	39.9%	34.3%	34.0%	33.1%	31.2%	14.9%	***17.0%***	***17.0%***	Income Tax Rate	17.0%
13.0%	2.2%	2.6%	2.9%	2.0%	2.3%	2.7%	3.1%	1.1%	1.4%	***2.0%***	***2.0%***	AFUDC % to Net Profit	2.0%
67.9%	70.1%	66.9%	67.9%	67.5%	68.7%	68.3%	67.1%	67.3%	69.0%	***69.0%***	***68.5%***	Long-Term Debt Ratio	66.5%
29.0%	29.5%	32.6%	31.6%	32.2%	31.0%	31.4%	32.6%	32.4%	30.7%	***31.0%***	***31.5%***	Common Equity Ratio	33.0%
8977.0	9473.0	9279.0	10101	10730	11846	12534	13040	13692	15476	***16375***	***17475***	Total Capital ($mill)	21300
9682.0	10069	10633	11551	12246	13412	14705	15715	16761	18126	***19350***	***20900***	Net Plant ($mill)	24400
4.7%	5.8%	6.3%	5.9%	6.0%	5.7%	5.7%	5.8%	5.9%	5.6%	***5.5%***	***6.0%***	Return on Total Cap'l	6.0%
8.0%	12.5%	12.5%	12.8%	13.0%	12.9%	13.2%	12.9%	13.6%	13.8%	***14.0%***	***14.0%***	Return on Shr. Equity	13.5%
8.5%	12.5%	12.6%	12.9%	13.1%	13.0%	13.3%	13.0%	13.7%	13.8%	***14.0%***	***14.0%***	Return on Com Equity E	13.5%
4.1%	6.9%	5.6%	5.0%	5.2%	5.0%	5.2%	4.8%	5.2%	5.3%	***5.5%***	***5.5%***	Retained to Com Eq	5.0%
54%	46%	55%	61%	60%	62%	61%	63%	62%	62%	***61%***	***61%***	All Div'ds to Net Prof	62%

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	+1.7	-1.4	+2.2
Avg. Indust. Use (MWH)	6031	NA	NA
Avg. Indust. Revs. per KWH (¢)	7.76	8.26	7.63
Capacity at Peak (Mw)	8331	NA	NA
Peak Load, Summer (Mw)	8227	7634	8084
Annual Load Factor (%)	54.6	NA	NA
% Change Customers (yr-end)	+.5	+1.2	+.3
Fixed Charge Cov. (%)	292	301	250

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	-2.5%	-1.0%	*2.0%*
"Cash Flow"	4.5%	6.5%	*6.0%*
Earnings	10.0%	7.0%	*7.0%*
Dividends	21.5%	7.0%	*7.0%*
Book Value	4.5%	5.5%	*7.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	1801	1371	1587	1640	6399
2017	1829	1449	1527	1778	6583
2018	1953	1492	1599	1829	6873
2019	2059	1445	1546	***1800***	***6850***
2020	***2100***	***1600***	***1600***	***1850***	***7050***

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.59	.45	.67	.28	1.98
2017	.71	.33	.61	.52	2.17
2018	.86	.49	.59	.38	2.32
2019	.75	.33	.73	***.69***	***2.50***
2020	***.85***	***.50***	***.75***	***.55***	***2.65***

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec. 31	Full Year
2015	.29	.29	.29	.29	1.16
2016	.31	.31	.31	.31	1.24
2017	.3325	.3325	.3325	.3325	1.33
2018	.3575	.3575	.3575	.3575	1.43
2019	.3825	.3825	.3825	.3825	

BUSINESS: CMS Energy Corporation is a holding company for Consumers Energy, which supplies electricity and gas to lower Michigan (excluding Detroit). Has 1.8 million electric, 1.8 million gas customers. Has 1,034 megawatts of nonregulated generating capacity. Sold Palisades nuclear plant in '07. Electric revenue breakdown: residential, 45%; commercial, 34%; industrial, 15%; other, 6%. Generating sources: coal, 26%; gas, 14%; other, 3%; purchased, 57%. Fuel costs: 44% of revenues. '18 reported deprec. rates: 3.9% electric, 2.9% gas, 10.1% other. Has 8,000 full-time employees. Chairman: John G. Russell. President & CEO: Patricia K. Poppe. Inc.: Michigan. Address: One Energy Plaza, Jackson, MI 49201. Tel.: 517-788-0550. Internet: www.cmsenergy.com.

CMS Energy's utility subsidiary received a gas rate increase. The Michigan Public Service Commission (MPSC) granted Consumers Energy a hike of $144 million, based on a return of 9.9% on a common-equity ratio of 52.05%. Thus, the utility received the majority of the $204 million it was seeking. New tariffs took effect at the start of October. Another positive factor of the MPSC's order is that Consumers Energy's gas operations will continue to operate under a regulatory mechanism that decouples revenues and volume.

Two more rate cases are coming up. Frequent rate applications are necessary because the utility has a large system and a lot of old equipment (older than most of its peers) that needs replacing. In the coming years, Consumers Energy will add some renewable-energy projects. The utility plans to file an additional gas case by yearend and an electric application (its first in more than a year) in the first quarter of 2020. Orders from the MPSC are due 10 months after the filing dates.

Steady earnings growth is likely in 2019 and 2020. The utility is benefiting from rate relief and effective expense control. (Declining interest rates are helping in this regard.) Our share-earnings estimates of $2.50 and $2.65 for 2019 and 2020, respectively, are within CMS Energy's targeted (and typically narrow) ranges of $2.47-$2.51 and $2.63-$2.68. Our previous 2020 estimate of $2.70 a share was apparently a bit optimistic, so we trimmed it by a nickel. The company's goal for annual profit growth is 6%-8%.

We expect a dividend increases in the first quarter of 2020. We estimate a boost of $0.10 a share (6.5%) in the annual payout (the same as in 2019), but wouldn't rule out a slightly larger raise. CMS Energy's goal for dividend growth is 6%-8% annually, the same as its target for earnings growth.

CMS Energy's strengths are adequately reflected in the stock price. The dividend yield is about a half percentage point below the utility mean. Total return potential is low for the 18-month span and the 3- to 5-year period. Like most utility equities, the recent quotation is well within our 2022-2024 Target Price Range.

Paul E. Debbas, CFA December 13, 2019

(A) Diluted EPS. Excl. nonrec. gains (losses): '05, ($1.61); '06, ($1.08); '07, ($1.26); '09, (7¢); '10, 3¢; '11, 12¢; '12, (14¢); '17, (53¢); gains (losses) on disc. ops.: '05, 7¢; '06, 3¢; '07, (40¢); '09, 8¢; '10, (8¢); '11, 1¢; '12, 3¢. '16 EPS don't sum due to rounding. Next earnings report due late Jan. (B) Div'ds historically paid late Feb., May, Aug., & Nov. ■ Div'd reinvest. plan avail. (C) Incl. intang. In '18: $6.15/sh. (D) In mill. (E) Rate base: Net orig. cost. Rate allowed on com. eq. in '18: 10%; earn. on avg. com. eq., '18: 14.3%. Reg. Clim.: Above Avg.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	75
Earnings Predictability	85

DTE ENERGY CO. NYSE-DTE

RECENT PRICE	124.01	P/E RATIO	19.6 (Trailing: 20.8; Median: 16.0)	RELATIVE P/E RATIO	1.13	DIV'D YLD	3.3%	VALUE LINE

TIMELINESS 3 Lowered 6/14/19
SAFETY 2 Raised 12/21/12
TECHNICAL 2 Lowered 12/6/19
BETA .55 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$109-$145	$127 (0%)

2022-24 PROJECTIONS

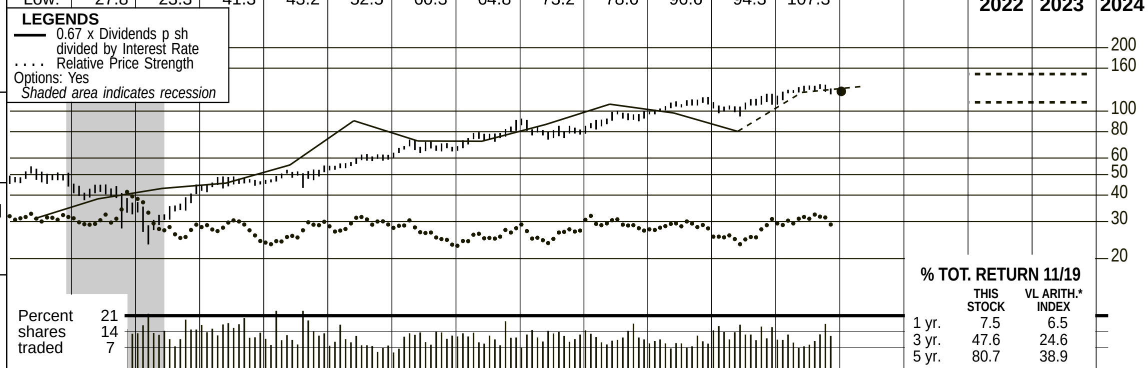
	Price	Gain	Ann'l Total Return
High	150	(+20%)	*8%*
Low	110	(-10%)	*1%*

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	334	282	303
to Sell	243	271	264
Hld's(000)	129236	130894	133730

High:	45.3	45.0	49.1	55.3	62.6	73.3	90.8	92.3	100.4	116.7	121.0	134.4
Low:	27.8	23.3	41.3	43.2	52.5	60.3	64.8	73.2	78.0	96.6	94.3	107.3

Target Price Range
2022 | 2023 | 2024



% TOT. RETURN 11/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	7.5	6.5
3 yr.	47.6	24.6
5 yr.	80.7	38.9

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
41.76	40.84	50.74	50.93	54.28	57.23	48.45	50.51	52.57	51.01	54.56	69.50	57.60	59.24	70.28	78.12	***68.55***	***70.20***	Revenues per sh	***74.00***
6.95	6.81	8.14	8.19	8.48	8.26	9.38	9.78	9.57	9.77	10.13	11.85	9.44	10.60	11.77	12.58	***12.50***	***13.20***	"Cash Flow" per sh	***15.25***
2.85	2.55	3.27	2.45	2.66	2.73	3.24	3.74	3.67	3.88	3.76	5.10	4.44	4.83	5.73	6.17	***6.25***	***6.35***	Earnings per sh A	***7.25***
2.06	2.06	2.06	2.08	2.12	2.12	2.12	2.18	2.32	2.42	2.59	2.69	2.84	3.06	3.36	3.59	***3.85***	***4.12***	Div'd Decl'd per sh B ■	***4.95***
4.45	5.19	5.99	7.92	7.96	8.42	6.26	6.49	8.77	10.56	10.59	11.58	11.26	11.40	12.54	14.91	***19.40***	***12.65***	Cap'l Spending per sh	***12.25***
31.36	31.85	32.44	33.02	35.86	36.77	37.96	39.67	41.41	42.78	44.73	47.05	48.88	50.22	53.03	56.27	***61.00***	***64.50***	Book Value per sh C	***75.75***
168.61	174.21	177.81	177.14	163.23	163.02	165.40	169.43	169.25	172.35	177.09	176.99	179.47	179.43	179.39	181.93	***194.00***	***198.00***	Common Shs Outst'g D	***212.00***
13.7	16.0	13.8	17.4	18.3	14.8	10.4	12.3	13.5	14.9	17.9	14.9	18.1	19.0	18.6	17.4	*Bold figures are*		Avg Ann'l P/E Ratio	***18.0***
.78	.85	.73	.94	.97	.89	.69	.78	.85	.95	1.01	.78	.91	1.00	.94	.94	*Value Line*		Relative P/E Ratio	***1.00***
5.3%	5.0%	4.6%	4.9%	4.4%	5.2%	6.3%	4.8%	4.7%	4.2%	3.8%	3.5%	3.5%	3.3%	3.2%	3.3%	*estimates*		Avg Ann'l Div'd Yield	***3.8%***

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
8014.0	8557.0	8897.0	8791.0	9661.0	12301	10337	10630	12607	14212	***13300***	***13900***	Revenues ($mill)	***15700***
532.0	630.0	624.0	666.0	661.0	905.0	796.0	868.0	1029.0	1120.0	***1145***	***1245***	Net Profit ($mill)	***1560***
31.6%	32.7%	35.9%	29.8%	27.5%	28.5%	25.6%	24.5%	21.8%	8.1%	***12.0%***	***12.0%***	Income Tax Rate	***12.0%***
2.6%	1.6%	1.6%	3.0%	3.5%	4.1%	4.3%	3.6%	3.5%	3.8%	***4.0%***	***3.0%***	AFUDC % to Net Profit	***2.0%***
54.0%	51.3%	50.6%	48.8%	47.7%	50.0%	50.2%	55.6%	56.2%	54.2%	***56.0%***	***55.5%***	Long-Term Debt Ratio	***54.0%***
46.0%	48.7%	49.4%	51.2%	52.3%	50.0%	49.8%	44.4%	43.8%	45.8%	***44.0%***	***44.5%***	Common Equity Ratio	***46.0%***
13648	13811	14196	14387	15135	16670	17607	20280	21697	22371	***26800***	***28650***	Total Capital ($mill)	***34900***
12431	12992	13746	14684	15800	16820	18034	19730	20721	21650	***24125***	***25250***	Net Plant ($mill)	***28400***
5.7%	6.3%	5.9%	6.1%	5.7%	6.6%	5.7%	5.3%	5.9%	6.1%	***5.5%***	***5.5%***	Return on Total Cap'l	***5.5%***
8.5%	9.4%	8.9%	9.0%	8.3%	10.9%	9.1%	9.6%	10.8%	10.9%	***9.5%***	***10.0%***	Return on Shr. Equity	***9.5%***
8.5%	9.4%	8.9%	9.0%	8.3%	10.9%	9.1%	9.6%	10.8%	10.9%	***9.5%***	***10.0%***	Return on Com Equity E	***9.5%***
2.9%	4.0%	3.4%	3.5%	2.7%	5.2%	3.4%	3.7%	4.6%	4.9%	***3.5%***	***3.5%***	Retained to Com Eq	***3.0%***
65%	57%	62%	61%	67%	52%	63%	61%	58%	55%	***63%***	***65%***	All Div'ds to Net Prof	***67%***

CAPITAL STRUCTURE as of 9/30/19
Total Debt $15788 mill. **Due in 5 Yrs** $5467 mill.
LT Debt $13858 mill. **LT Interest** $571 mill.
Incl. $756 mill. Trust Preferred Securities.
(LT interest earned: 3.0x)

Leases, Uncapitalized Annual rentals $42 mill.

Pension Assets-12/18 $4273 mill. **Oblig** $5124 mill.

Pfd Stock None

Common Stock 183,396,510 shs.

MARKET CAP: $23 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	+3.5	-3.1	+3.5
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NMF	NMF	NMF
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	300	300	278

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	2.5%	5.5%	*1.0%*
"Cash Flow"	3.5%	3.5%	*4.5%*
Earnings	8.0%	8.0%	*4.5%*
Dividends	4.5%	6.5%	*7.0%*
Book Value	4.0%	4.5%	*6.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	2566	2262	2928	2874	10630
2017	3236	2855	3245	3271	12607
2018	3753	3159	3550	3750	14212
2019	3514	2888	3119	***3779***	***13300***
2020	***3650***	***3050***	***3250***	***3950***	***13900***

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	1.37	.84	1.88	.74	4.83
2017	2.23	.99	1.51	1.00	5.73
2018	2.00	1.29	1.84	1.05	6.17
2019	2.19	.99	1.73	***1.34***	***6.25***
2020	***2.20***	***1.05***	***1.90***	***1.20***	***6.35***

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.73	.73	.73	.77	2.96
2017	.825	.825	.825	.825	3.30
2018	.8825	.8825	.8825	.8825	3.53
2019	.945	.945	.945	.945	
2020	1.0125				

BUSINESS: DTE Energy Company is a holding company for DTE Electric (formerly Detroit Edison), which supplies electricity in Detroit and a 7,600-square-mile area in southeastern Michigan, and DTE Gas (formerly Michigan Consolidated Gas). Customers: 2.2 mill. electric, 1.3 mill. gas. Has various nonutility operations. Electric revenue breakdown: residential, 47%; commercial, 34%; industrial, 13%; other, 6%. Generating sources: coal, 67%; nuclear, 17%; gas, 1%; purchased, 15%. Fuel costs: 61% of revenues. '18 reported deprec. rates: 3.7% electric, 2.7% gas. Has 10,600 employees. Chairman: Gerard M. Anderson. President & CEO: Jerry Norcia. Inc.: MI. Address: One Energy Plaza, Detroit, MI 48226-1279. Tel.: 313-235-4000. Internet: www.dteenergy.com.

DTE Energy expects to complete a major acquisition of midstream gas assets later this month. The company agreed to pay $2.25 million in cash for gas pipeline, gathering, and processing assets in the Haynesville Basin in Louisiana, plus $400 million when a pipeline is completed in the second half of 2020. Additional capital spending of $600 million is expected. This transaction is much larger than the two midstream gas purchases that were completed earlier in 2019. DTE Energy financed the deal in late October with a combination of long-term debt, common stock, and equity units that are mandatorily convertible to common in 2022. Management expects the purchase to boost the bottom line by $0.15 a share in 2020, rising to $0.45 a share over a five-year period. However, we will not reflect this in our estimates and projections until after the acquisition is completed. Accordingly, our 2020 earnings estimate is below the company's "early outlook" guidance of $6.47-$6.70 a share.

DTE Electric and DTE Gas have rate cases pending. DTE Electric filed for an increase of $351 million, based on a 10.5% return on a 50% common-equity ratio. The staff of the Michigan commission proposed a hike of $195 million, based on a 9.8% return on the same equity ratio. New tariffs are expected to take effect in May. DTE Gas is seeking an increase of $204 million, based on a 10.5% return on a 52% common-equity ratio. An order is expected in late September. Note that the requested ROEs of 10.5% are above the currently allowed 10.0%. DTE Energy's utilities (particularly DTE Electric) have filed frequent rate cases in recent years. Rate relief (along with growth from the company's nonutility operations, including the gas pipeline segment) has been a key reason for DTE Energy's profit growth in recent years.

The board of directors raised the annual dividend $0.27 a share (7.1%). The increase was effective with the January payment. DTE Energy expects 7% dividend growth to continue through 2021.

This stock has a dividend yield that is about average for a utility. Total return potential does not stand out, either for the 18-month or 3- to 5-year period.

Paul E. Debbas, CFA *December 13, 2019*

(A) Diluted EPS. Excl. nonrec. gains (losses): '03, (16¢); '05, (2¢); '07, $1.96; '08, 50¢; '11, 51¢; '15, (39¢); '17, 59¢; gains (losses) on disc. ops.: '03, 40¢; '04, (6¢); '05, (20¢); '06, (2¢); '07, $1.20; '08, 13¢; '12, (33¢). '17-'18 EPS don't sum due to rounding. Next egs. due mid-Feb. **(B)** Div'ds pd. mid-Jan., Apr., July & Oct. ■ Div'd reinvest. plan avail. **(C)** Incl. intang. In '18: $42.63/sh. **(D)** In mill. **(E)** Rate base: Net orig. cost. Rate all'd on com. eq. in '18: 10% elec.; in '16: 10.1% gas; earn. on avg. com. eq., '18: 11.3%. Regul. Clim.: Above Avg.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	75
Earnings Predictability	85

ENTERGY CORP. NYSE-ETR

RECENT PRICE 116.92 | P/E RATIO 24.8 (Trailing: 24.6 / Median: 12.0) | RELATIVE P/E RATIO 1.43 | DIV'D YLD 3.2% | VALUE LINE

TIMELINESS 3 Raised 10/26/18
SAFETY 2 Raised 12/13/19
TECHNICAL 2 Raised 11/15/19
BETA .60 (1.00 = Market)

High:	127.5	86.6	84.3	74.5	74.5	72.6	92.0	90.3	82.1	87.9	90.8	122.1
Low:	61.9	59.9	68.7	57.6	61.6	60.2	60.4	61.3	65.4	69.6	71.9	83.2

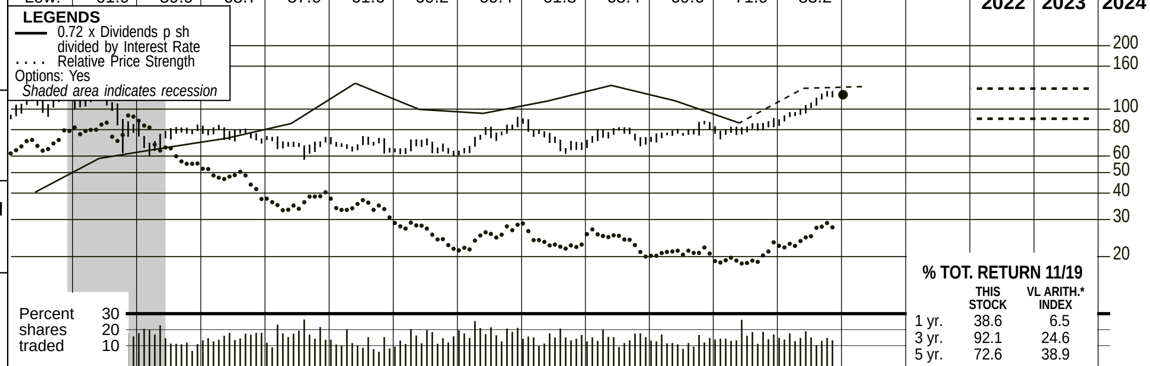
18-Month Target Price Range
Low-High: $83-$127
Midpoint (% to Mid): $105 (-10%)

2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	125	(+5%)	5%
Low	90	(-25%)	-2%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	307	260	298
to Sell	253	281	248
Hld's(000)	166792	175686	175725



% TOT. RETURN 11/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	38.6	6.5
3 yr.	92.1	24.6
5 yr.	72.6	38.9

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
40.17	46.69	46.61	53.94	59.47	69.15	56.82	64.27	63.67	57.94	63.86	69.71	64.54	60.55	61.35	58.23	*55.05*	*54.00*	Revenues per sh	*51.50*
7.43	8.33	8.18	10.69	11.73	12.89	13.29	16.54	17.53	15.98	16.25	17.68	17.71	18.72	16.70	16.50	*15.50*	*16.65*	"Cash Flow" per sh	*18.50*
3.69	3.93	4.40	5.36	5.60	6.20	6.30	6.66	7.55	6.02	4.96	5.77	5.81	6.88	5.19	5.88	*4.80*	*5.50*	Earnings per sh A	*6.75*
1.60	1.89	2.16	2.16	2.58	3.00	3.00	3.24	3.32	3.32	3.32	3.32	3.34	3.42	3.50	3.58	*3.66*	*3.74*	Div'd Decl'd per sh B ■ †	*4.30*
6.85	6.51	6.72	9.44	10.29	13.92	12.99	13.33	15.21	18.18	15.73	14.82	16.79	17.28	22.07	22.45	*23.00*	*19.55*	Cap'l Spending per sh	*20.25*
38.02	38.26	35.71	40.45	40.71	42.07	45.54	47.53	50.81	51.73	54.00	55.83	51.89	45.12	44.28	46.78	*48.65*	*50.55*	Book Value per sh C	*58.25*
228.90	216.83	216.83	202.67	193.12	189.36	189.12	178.75	176.36	177.81	178.37	179.24	178.39	179.13	180.52	189.06	*199.00*	*200.00*	Common Shs Outst'g D	*210.00*
13.8	15.1	16.3	14.3	19.3	16.6	12.0	11.6	9.1	11.2	13.2	12.9	12.5	10.9	15.0	13.8	*Bold figures are*		Avg Ann'l P/E Ratio	*16.0*
.79	.80	.87	.77	1.02	1.00	.80	.74	.57	.71	.74	.68	.63	.57	.75	.74	*Value Line*		Relative P/E Ratio	*.90*
3.1%	3.2%	3.0%	2.8%	2.4%	2.9%	4.0%	4.2%	4.9%	4.9%	5.1%	4.5%	4.6%	4.6%	4.5%	4.4%	*estimates*		Avg Ann'l Div'd Yield	*4.0%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $19376 mill. **Due in 5 Yrs** $6984.3 mill.
LT Debt $16938 mill. **LT Interest** $762.2 mill.
Incl. $338.4 mill. of securitization bonds and $20.4 mill. of capitalized leases.
(LT interest earned: 1.7x)
Leases, Uncapitalized Annual rentals $94.0 mill.
Pension Assets-12/18 $5497.4 mill. **Oblig** $7404.9 mill.
Pfd Stock $219.4 mill. **Pfd Div'd** $13.8 mill.
642,307 shs. 4.32%-7.5%, $100 par; 250,000 shs. 8.75%, all without sinking fund.
Common Stock 199,102,083 shs. **as of 10/31/19**
MARKET CAP: $23 billion (Large Cap)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
10746	11488	11229	10302	11391	12495	11513	10846	11074	11009	*10950*	*10800*	Revenues ($mill)	*10800*
1251.1	1270.3	1367.4	1091.9	904.5	1060.0	1061.2	1249.8	950.7	1092.1	*955*	*1115*	Net Profit ($mill)	*1425*
33.6%	32.7%	17.3%	13.0%	26.7%	37.8%	2.2%	11.3%	1.8%	NMF	*8.0%*	*23.0%*	Income Tax Rate	*23.0%*
7.4%	7.4%	8.9%	11.9%	10.1%	9.3%	7.4%	8.1%	14.7%	17.5%	*23.0%*	*15.0%*	AFUDC % to Net Profit	*14.0%*
55.3%	56.3%	52.2%	55.8%	55.1%	54.9%	57.8%	63.6%	63.6%	63.2%	*63.5%*	*63.0%*	Long-Term Debt Ratio	*60.5%*
43.1%	42.1%	46.4%	42.9%	43.6%	43.8%	40.8%	35.5%	35.5%	35.9%	*36.0%*	*36.0%*	Common Equity Ratio	*39.0%*
19985	20166	19324	21432	22109	22842	22714	22777	22528	24602	*27075*	*28050*	Total Capital ($mill)	*31500*
23389	23848	25609	27299	27882	28723	27824	27921	29664	31974	*34450*	*36175*	Net Plant ($mill)	*41400*
7.6%	7.7%	8.5%	6.4%	5.4%	6.0%	6.0%	6.9%	5.7%	5.8%	*5.0%*	*5.5%*	Return on Total Cap'l	*6.0%*
14.0%	14.4%	14.8%	11.5%	9.1%	10.3%	11.1%	15.1%	11.6%	12.0%	*9.5%*	*11.0%*	Return on Shr. Equity	*11.5%*
14.3%	14.7%	15.0%	11.6%	9.2%	10.4%	11.2%	15.2%	11.7%	12.2%	*9.5%*	*11.0%*	Return on Com Equity E	*11.5%*
7.6%	7.6%	8.4%	5.2%	3.0%	4.4%	4.8%	7.7%	3.9%	4.9%	*2.5%*	*3.5%*	Retained to Com Eq	*4.0%*
48%	49%	45%	56%	68%	58%	58%	50%	68%	61%	*76%*	*68%*	All Div'ds to Net Prof	*64%*

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	+.3	+.2	+4.1
Avg. Indust. Use (MWH)	989	1034	946
Avg. Indust. Revs. per KWH(¢)	5.09	5.41	5.16
Capacity at Peak (Mw)	24656	24279	23121
Peak Load, Summer (Mw)	21387	21671	21587
Annual Load Factor (%)	63	62	65
% Change Customers (yr-end)	+.8	+.6	+.6
Fixed Charge Cov. (%)	258	169	95

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	- -	-.5%	-2.5%
"Cash Flow"	4.0%	1.0%	1.0%
Earnings	.5%	-.5%	2.0%
Dividends	3.0%	1.0%	3.5%
Book Value	1.0%	-2.5%	4.5%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	2609	2462	3124	2648	10846
2017	2588	2618	3243	2623	11074
2018	2724	2669	3104	2512	11009
2019	2610	2666	3141	*2533*	*10950*
2020	*2650*	*2650*	*3050*	*2450*	*10800*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	1.28	3.16	2.16	.28	6.88
2017	.46	2.27	2.21	.25	5.19
2018	.73	1.34	3.42	.39	5.88
2019	1.32	1.22	1.82	*.44*	*4.80*
2020	*1.00*	*1.45*	*2.50*	*.55*	*5.50*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2015	.83	.83	.83	.85	3.34
2016	.85	.85	.85	.87	3.42
2017	.87	.87	.87	.89	3.50
2018	.89	.89	.89	.91	3.58
2019	.91	.91	.91	.93	

BUSINESS: Entergy Corporation supplies electricity to 2.9 million customers through subsidiaries in Arkansas, Louisiana, Mississippi, Texas, and New Orleans (regulated separately from Louisiana). Distributes gas to 200,000 customers in Louisiana. Has a nonutility subsidiary that owns six nuclear units (two no longer operating). Electric revenue breakdown: residential, 38%; commercial, 26%; industrial, 27%; other, 9%. Generating sources: gas, 39%; nuclear, 27%; coal, 9%; purchased, 25%. Fuel costs: 35% of revenues. '18 reported depreciation rate: 2.8%. Has 13,700 employees. Chairman & CEO: Leo P. Denault. Incorporated: Delaware. Address: 639 Loyola Avenue, P.O. Box 61000, New Orleans, Louisiana 70161. Telephone: 504-576-4000. Internet: www.entergy.com.

Entergy has been one of the top-performing stocks in the electric utility industry in 2019. The share price has risen 35% this year. We think the market is reacting favorably to Entergy's ongoing transition from a partly nonregulated company to a regulated utility. The company has sold (or agreed to sell) its nonregulated nuclear units, which have faced unfavorable market conditions in recent years. This has reduced Entergy's business risk significantly; in fact, we raised the stock's Safety rank a notch, to 2 (Above Average). What's more, the company's utilities are performing well. The service area's economy is solid, and is producing respectable load growth. The rate base is expanding, in part through the construction and acquisition of gas-fired generating plants. The utilities are also benefiting from rate relief (in most cases) and regulatory mechanisms that provide for the recovery of certain capital expenditures without having to file a general rate case.

Investors should not be alarmed by the steep earnings decline we expect in 2019. In 2018, Entergy recorded tax credits that boosted the bottom line materially in the third quarter. There were no such credits in the same period this year. Note that the company is still incurring costs associated with its remaining nonregulated nuclear assets. We *include* these in our earnings presentation, even though management excludes them from its guidance of $5.25-$5.45 a share. A reduction in these expenses and growth from the utilities should produce higher profits in 2020.

The regulated business is not without risk. Entergy's utility in New Orleans received an unfavorable rate order that reduced its electric and gas tariffs by $16 million and $2 million, respectively, based on a 9.35% return on a 50% common-equity ratio.

The board of directors raised the dividend in the fourth quarter. The increase was two cents a share (2.2%) quarterly. It is likely that investors will have to wait until 2021 to see more-substantial dividend growth.

The stock has an average yield for a utility. Total return potential is negative for the 18-month span and unappealing for the 3- to 5-year period.

Paul E. Debbas, CFA *December 13, 2019*

(A) Diluted EPS. Excl. nonrec. gain (losses): '03, 33¢; '05, (21¢); '12, ($1.26); '13, ($1.14); '14, (56¢); '15, ($6.99); '16, ($10.14); '17, ($2.91); '18, ($1.25). Next earnings report due early Feb. (B) Div'ds historically paid in early Mar., June, Sept., & Dec. ■ Div'd reinvest. plan avail. † Shareholder invest. plan avail. (C) Incl. def'd charges. In '18: $28.37/sh. (D) In millions. (E) Rate base: Net original cost. Allowed ROE (blended): 9.95%; earned on avg. com. eq., '18: 12.6%. Regulatory Climate: Average.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	25
Earnings Predictability	60

WEC ENERGY GROUP NYSE-WEC

RECENT PRICE	88.27	P/E RATIO	24.8 (Trailing: 25.5; Median: 17.0)	RELATIVE P/E RATIO	1.43	DIV'D YLD	2.8%	VALUE LINE

TIMELINESS 3 Lowered 8/16/19
SAFETY 1 Raised 3/23/12
TECHNICAL 1 Raised 11/15/19
BETA .50 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$68-$98	$83 (-5%)

2022-24 PROJECTIONS

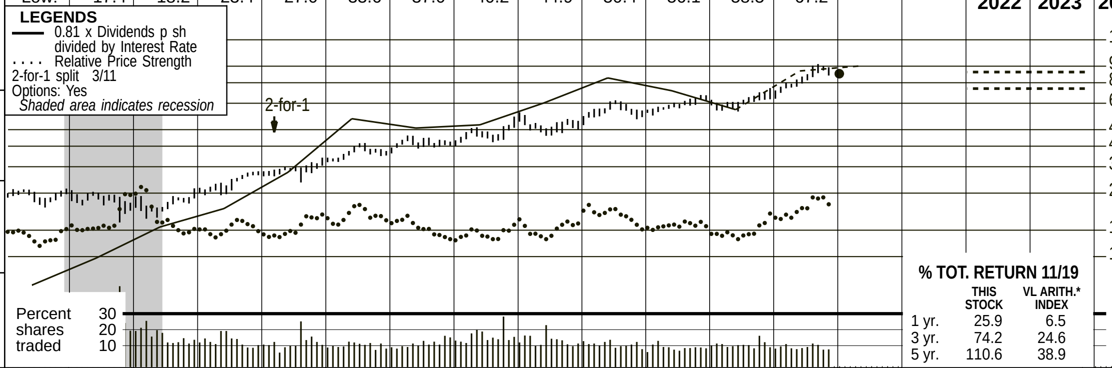
	Price	Gain	Ann'l Total Return
High	90	(Nil)	4%
Low	75	(-15%)	Nil

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	352	352	392
to Sell	367	332	359
Hld's(000)	236446	243164	246256

High:	24.8	25.3	30.5	35.4	41.5	45.0	55.4	58.0	66.1	70.1	75.5	98.2
Low:	17.4	18.2	23.4	27.0	33.6	37.0	40.2	44.9	50.4	56.1	58.5	67.2

Target Price Range 2022 | 2023 | 2024



% TOT. RETURN 11/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	25.9	6.5
3 yr.	74.2	24.6
5 yr.	110.6	38.9

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
17.12	14.66	16.31	17.08	18.12	18.95	17.65	17.98	19.46	18.54	20.00	22.16	18.77	23.68	24.24	24.34	*24.40*	*25.65*	Revenues per sh	*29.25*
2.86	2.58	2.89	2.90	2.98	2.95	3.11	3.30	3.68	4.01	4.33	4.47	3.87	5.39	5.69	6.04	*6.50*	*6.90*	"Cash Flow" per sh	*8.50*
1.13	.93	1.28	1.32	1.42	1.52	1.60	1.92	2.18	2.35	2.51	2.59	2.34	2.96	3.14	3.34	*3.53*	*3.70*	Earnings per sh A	*4.50*
.40	.42	.44	.46	.50	.54	.68	.80	1.04	1.20	1.45	1.56	1.74	1.98	2.08	2.21	*2.36*	*2.50*	Div'd Decl'd per sh B ■	*3.00*
2.95	2.85	3.40	4.17	5.28	4.86	3.50	3.41	3.60	3.09	3.04	3.26	4.01	4.51	6.21	6.71	*8.55*	*8.85*	Cap'l Spending per sh	*8.25*
9.96	10.65	11.46	12.35	13.25	14.27	15.26	16.26	17.20	18.05	18.73	19.60	27.42	28.29	29.98	31.02	*32.05*	*33.15*	Book Value per sh C	*36.75*
236.85	233.97	233.96	233.94	233.89	233.84	233.82	233.77	230.49	229.04	225.96	225.52	315.68	315.62	315.57	315.52	*315.50*	*315.50*	Common Shs Outst'g D	*315.50*
12.4	17.5	14.5	16.0	16.5	14.8	13.3	14.0	14.2	15.8	16.5	17.7	21.3	19.9	20.0	19.6	*Bold figures are*		Avg Ann'l P/E Ratio	*18.0*
.71	.92	.77	.86	.88	.89	.89	.89	.89	1.01	.93	.93	1.07	1.04	1.01	1.05	*Value Line*		Relative P/E Ratio	*1.00*
2.8%	2.6%	2.4%	2.2%	2.1%	2.4%	3.2%	3.0%	3.3%	3.2%	3.5%	3.4%	3.5%	3.4%	3.3%	3.4%	*estimates*		Avg Ann'l Div'd Yield	*3.7%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $12276 mill. **Due in 5 Yrs** $3529.1 mill.
LT Debt $10897 mill. **LT Interest** $513.5 mill.
Incl. $18.4 mill. capitalized leases.
(LT interest earned: 3.3x)
Leases, Uncapitalized Annual rentals $8.7 mill.
Pension Assets-12/18 $2690.8 mill.
Oblig $2927.2 mill.
Pfd Stock $30.4 mill. **Pfd Div'd** $1.2 mill.
260,000 shs. 3.60%, $100 par, callable. $101;
44,498 shs. 6%, $100 par.
Common Stock 315,435,595 shs.

MARKET CAP: $28 billion (Large Cap)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
4127.9	4202.5	4486.4	4246.4	4519.0	4997.1	5926.1	7472.3	7648.5	7679.5	*7700*	*8100*	Revenues ($mill)	*9200*
378.4	455.6	514.0	547.5	578.6	589.5	640.3	940.2	998.2	1060.5	*1120*	*1180*	Net Profit ($mill)	*1425*
36.5%	35.4%	33.9%	35.9%	36.9%	38.0%	40.4%	37.6%	37.2%	13.8%	*11.0%*	*11.0%*	Income Tax Rate	*11.0%*
25.0%	18.6%	16.8%	9.4%	4.5%	1.3%	4.5%	3.8%	1.6%	2.1%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*1.0%*
51.9%	50.6%	53.6%	51.7%	50.6%	48.5%	51.2%	50.5%	48.0%	50.4%	*52.0%*	*49.5%*	Long-Term Debt Ratio	*51.5%*
47.7%	49.0%	46.0%	48.0%	49.1%	51.2%	48.6%	49.3%	51.9%	49.4%	*48.0%*	*50.5%*	Common Equity Ratio	*48.5%*
7473.1	7764.5	8608.0	8619.3	8626.6	8636.5	17809	18118	18238	19813	*21050*	*20800*	Total Capital ($mill)	*24075*
9070.5	9601.5	10160	10572	10907	11258	19190	19916	21347	22001	*24050*	*25825*	Net Plant ($mill)	*30700*
6.4%	7.5%	7.5%	7.9%	8.1%	8.1%	4.5%	6.3%	6.6%	6.5%	*6.5%*	*7.0%*	Return on Total Cap'l	*7.0%*
10.5%	11.9%	12.9%	13.1%	13.6%	13.2%	7.4%	10.5%	10.5%	10.8%	*11.0%*	*11.0%*	Return on Shr. Equity	*12.0%*
10.6%	12.0%	12.9%	13.2%	13.6%	13.3%	7.4%	10.5%	10.5%	10.8%	*11.0%*	*11.5%*	Return on Com Equity E	*12.0%*
6.2%	7.0%	6.8%	6.5%	5.9%	5.3%	2.1%	3.5%	3.6%	3.7%	*3.5%*	*3.5%*	Retained to Com Eq	*4.0%*
42%	41%	47%	51%	57%	60%	71%	67%	66%	66%	*67%*	*67%*	All Div'ds to Net Prof	*67%*

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	+18.5	-3.0	+2.5
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Lg. C&I Revs. per KWH (¢)	7.08	7.13	7.05
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.5	+.7	+.7
Fixed Charge Cov. (%)	404	422	323

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	3.0%	4.5%	*3.5%*
"Cash Flow"	7.0%	7.5%	*7.0%*
Earnings	8.5%	6.0%	*6.0%*
Dividends	15.5%	11.0%	*6.0%*
Book Value	8.5%	10.5%	*3.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	2194	1602	1712	1963	7472.3
2017	2304	1632	1657	2055	7648.5
2018	2287	1672	1644	2077	7679.5
2019	2377	1590	1608	*2125*	*7700*
2020	*2450*	*1750*	*1650*	*2250*	*8100*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	1.09	.57	.68	.61	2.96
2017	1.12	.63	.68	.71	3.14
2018	1.23	.73	.74	.65	3.34
2019	1.33	.74	.74	*.72*	*3.53*
2020	*1.30*	*.80*	*.85*	*.75*	*3.70*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2015	.4225	.4225	.44	.4575	1.74
2016	.495	.495	.495	.495	1.98
2017	.52	.52	.52	.52	2.08
2018	.5525	.5525	.5525	.5525	2.21
2019	.59	.59	.59	.59	

BUSINESS: WEC Energy Group, Inc. (formerly Wisconsin Energy) is a holding company for utilities that provide electric, gas & steam service in WI & gas service in IL, MN, & MI. Customers: 1.6 mill. elec., 2.9 mill. gas. Acq'd Integrys Energy 6/15. Sold Point Beach nuclear plant in '07. Electric revenue breakdown: residential, 35%; small commercial & industrial, 31%; large commercial & industrial, 21%; other, 13%. Generating sources: coal, 45%; gas, 22%; renewables, 4%; purchased, 29%. Fuel costs: 38% of revenues. '18 reported deprec. rates (utility): 2.0%-3.2%. Has 7,900 employees. Chairman: Gale E. Klappa. President & CEO: Kevin Fletcher. Inc.: WI. Address: 231 W. Michigan St., P.O. Box 1331, Milwaukee, WI 53201. Tel.: 414-221-2345. Internet: www.wecenergygroup.com.

The Public Service Commission of Wisconsin approved regulatory settlements for WEC Energy's utilities in the state. Wisconsin Electric was granted electric, gas, and steam increases of $37 million (1.3%), $10 million (2.8%), and $2 million (10.0%), respectively. Wisconsin Gas had a $1 million (0.2%) cut. Wisconsin Public Service received electric and gas hikes of $35 million (3.5%) and $4 million (1.4%), respectively. New tariffs will take effect at the start of 2020. Wisconsin Gas will have an allowed return on equity of 10.2%, and Wisconsin Electric and Wisconsin Public Service will have an allowed ROE of 10.0%. The common-equity ratio will be 52.5%.

We expect solid earnings growth in 2019 and 2020. WEC Energy's Peoples Gas utility in Chicago is spending $280 million-$300 million annually to replace old pipes, and recovers these expenditures contemporaneously through a rider (surcharge) on customers' bills. The company is also getting income from two wind projects that are majority-owned by a nonutility subsidiary. These provide a higher ROE than the regulated utilities earn. Two more projects are coming on line in late 2019 and late 2020. The service area's economy is in good shape. Finally, rate relief in Wisconsin will help the bottom line in 2020. Our 2019 earnings estimate is at the top end of management's guidance of $3.51-$3.53 a share. Our 2020 estimate would produce a 5% profit increase, within WEC Energy's goal of 5%-7% yearly growth.

A dividend increase is probable in the first quarter. We estimate the board of directors will raise the quarterly disbursement $0.035 a share (5.9%). WEC Energy is targeting a payout ratio in a range of 65%-70%. The company usually makes an announcement of its expected dividend hike in early December. This was expected shortly after our report went to press.

High-quality WEC Energy stock has a relatively low dividend yield, by utility standards. Like many utility equities, the recent quotation is near the upper end of our 2022-2024 Target Price Range, so total return potential over that time frame is negligible. Total return potential over the 18-month period is also unappealing.

Paul E. Debbas, CFA December 13, 2019

(A) Diluted EPS. Excl. gains on discont. ops.: '04, 77¢; '11, 6¢; nonrecurring gain: '17, 65¢. '16 & '18 EPS don't sum due to rounding. Next earnings report due early February. **(B)** Div'ds paid in early Mar., June, Sept. & Dec. ■ Div'd reinvest. plan avail. **(C)** Incl. intang. In '18: $21.74/sh. **(D)** In mill., adj. for split. **(E)** Rate base: Net orig. cost. Rates all'd on com. eq. in WI in '15: 10.0%-10.3%; in IL in '15: 9.05%; in MN in '16: 9.11%; in MI in '16: 9.9%; earned on avg. com. eq., '18: 11.0%. Regulatory Climate: WI, Above Avg.; IL, Below Avg.; MN & MI, Avg.

Company's Financial Strength	A+
Stock's Price Stability	95
Price Growth Persistence	75
Earnings Predictability	90

AVISTA CORP. NYSE-AVA

RECENT PRICE	P/E RATIO	(Trailing/Median)	RELATIVE P/E RATIO	DIV'D YLD
47.56	23.7	(Trailing: 16.3, Median: 17.0)	1.27	3.4%

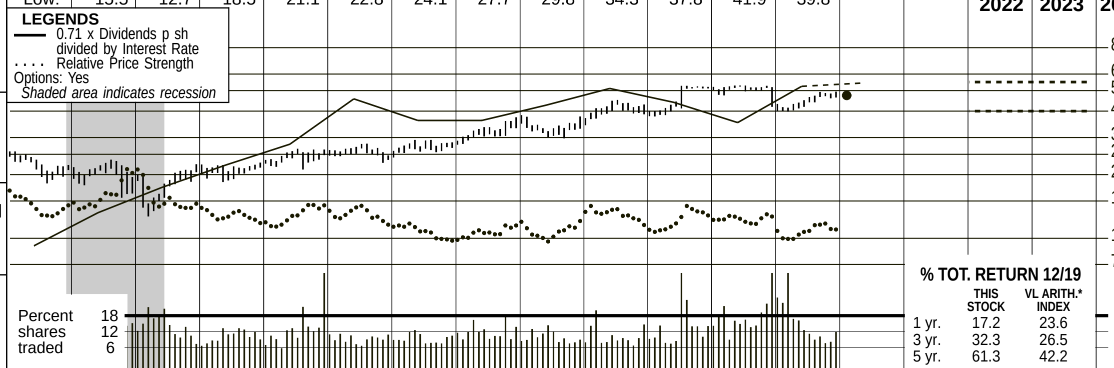
VALUE LINE

TIMELINESS 3 New 12/14/18
SAFETY 2 Raised 5/7/10
TECHNICAL 2 Raised 1/3/20
BETA .60 (1.00 = Market)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	23.6	22.4	22.8	26.5	28.0	29.3	37.4	38.3	45.2	52.8	52.9	49.5
Low:	15.5	12.7	18.5	21.1	22.8	24.1	27.7	29.8	34.3	37.8	41.9	39.8

Target Price Range 2022 | 2023 | 2024

LEGENDS
— 0.71 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$37-$51	$44 (-5%)

2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+15%)	*7%*
Low	40	(-15%)	*Nil*

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	151	131	121
to Sell	100	108	103
Hld's(000)	51692	53198	53961

% TOT. RETURN 12/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	17.2	23.6
3 yr.	32.3	26.5
5 yr.	61.3	42.2

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
23.24	23.76	27.98	28.68	26.80	30.77	27.58	27.29	27.73	25.86	26.94	23.66	23.83	22.47	22.08	21.27	*20.15*	*20.60*	Revenues per sh	*21.75*
2.63	2.35	2.72	4.27	2.93	3.98	4.45	3.62	3.78	3.70	4.36	4.36	4.92	5.30	4.87	5.01	*5.95*	*5.15*	"Cash Flow" per sh	*6.00*
1.02	.73	.92	1.47	.72	1.36	1.58	1.65	1.72	1.32	1.85	1.84	1.89	2.15	1.95	2.07	*2.90*	*2.05*	Earnings per sh [A]	*2.50*
.49	.52	.55	.57	.60	.69	.81	1.00	1.10	1.16	1.22	1.27	1.32	1.37	1.43	1.49	1.55	*1.61*	Div'd Decl'd per sh [B] ■	*1.75*
2.21	2.47	3.23	3.14	4.04	4.09	3.86	3.64	4.20	4.61	5.05	5.47	6.46	6.34	6.30	6.46	*6.65*	*6.05*	Cap'l Spending per sh	*6.00*
15.54	15.54	15.87	17.46	17.27	18.30	19.17	19.71	20.30	21.06	21.61	23.84	24.53	25.69	26.41	26.99	*28.80*	*29.40*	Book Value per sh [C]	*32.00*
48.34	48.47	48.59	52.51	52.91	54.49	54.84	57.12	58.42	59.81	60.08	62.24	62.31	64.19	65.49	65.69	*67.00*	*68.00*	Common Shs Outst'g [D]	*71.00*
13.8	24.4	19.4	15.4	30.9	15.0	11.4	12.7	14.1	19.3	14.6	17.3	17.6	18.8	23.4	24.5	*15.3*		Avg Ann'l P/E Ratio	*18.5*
.79	1.29	1.03	.83	1.64	.90	.76	.81	.88	1.23	.82	.91	.89	.99	1.18	1.32	*.85*		Relative P/E Ratio	*1.05*
3.5%	2.9%	3.0%	2.5%	2.7%	3.4%	4.5%	4.8%	4.5%	4.6%	4.5%	4.0%	4.0%	3.4%	3.1%	2.9%	3.5%		Avg Ann'l Div'd Yield	*3.8%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $2065.2 mill. **Due in 5 Yrs** $554.5 mill.
LT Debt $1930.9 mill. **LT Interest** $82.3 mill.
Incl. $51.5 mill. debt to affiliated trusts; $57.2 mill. capitalized leases.
(LT interest earned: 2.7x)
Pension Assets-12/18 $544.0 mill. **Oblig** $671.6 mill.
Pfd Stock None

Common Stock 66,709,945 shs. **as of 11/1/19**

MARKET CAP: $3.2 billion (Mid Cap)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
1512.6	1558.7	1619.8	1547.0	1618.5	1472.6	1484.8	1442.5	1445.9	1396.9	*1350*	*1400*	Revenues ($mill)	*1550*
87.1	92.4	100.2	78.2	111.1	114.2	118.1	137.2	126.1	136.4	*195*	*140*	Net Profit ($mill)	*180*
34.3%	35.0%	35.4%	34.4%	36.0%	37.6%	36.3%	36.3%	36.5%	16.0%	*16.0%*	*16.5%*	Income Tax Rate	*16.5%*
4.2%	4.0%	5.2%	8.3%	8.8%	11.1%	10.1%	8.1%	7.9%	7.7%	*6.0%*	*9.0%*	AFUDC % to Net Profit	*7.0%*
50.9%	51.6%	51.4%	50.8%	51.4%	51.0%	50.0%	51.2%	47.2%	50.5%	*50.0%*	*50.5%*	Long-Term Debt Ratio	*50.5%*
49.1%	48.4%	48.6%	49.2%	48.6%	49.0%	50.0%	48.8%	52.8%	49.5%	*50.0%*	*49.5%*	Common Equity Ratio	*49.5%*
2139.0	2325.3	2439.9	2561.2	2669.7	3027.3	3060.3	3379.0	3273.2	3580.3	*3865*	*4035*	Total Capital ($mill)	*4575*
2607.0	2714.2	2860.8	3023.7	3202.4	3620.0	3898.6	4147.5	4398.8	4648.9	*4890*	*5090*	Net Plant ($mill)	*5650*
5.5%	5.4%	5.5%	4.3%	5.4%	4.9%	5.1%	5.3%	5.0%	4.8%	*6.0%*	*4.5%*	Return on Total Cap'l	*5.0%*
8.3%	8.2%	8.5%	6.2%	8.6%	7.7%	7.7%	8.3%	7.3%	7.7%	*10.0%*	*7.0%*	Return on Shr. Equity	*8.0%*
8.3%	8.2%	8.5%	6.2%	8.6%	7.7%	7.7%	8.3%	7.3%	7.7%	*10.0%*	*7.0%*	Return on Com Equity [E]	*8.0%*
4.1%	3.3%	3.1%	.8%	2.9%	2.4%	2.3%	3.0%	1.9%	2.2%	*4.5%*	*1.5%*	Retained to Com Eq	*2.5%*
51%	60%	64%	88%	66%	69%	70%	64%	73%	72%	*53%*	*78%*	All Div'ds to Net Prof	*68%*

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	-1.2	+4.7	-3.7
Avg. Indust. Use (MWH)	1314	1367	1344
Avg. Indust. Revs. per KWH (¢)	6.09	6.11	6.20
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Winter (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.6	+1.2	+1.4
Fixed Charge Cov. (%)	333	296	259

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	-2.5%	-4.0%	*Nil*
"Cash Flow"	3.0%	5.0%	*3.0%*
Earnings	5.5%	5.0%	*3.5%*
Dividends	8.5%	4.5%	*3.5%*
Book Value	4.0%	4.5%	*3.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	418.2	318.8	303.4	402.1	1442.5
2017	436.5	314.5	297.1	397.8	1445.9
2018	409.4	319.3	296.0	372.2	1396.9
2019	396.5	300.8	283.8	*368.9*	*1350*
2020	*410*	*315*	*295*	*380*	*1400*

Cal-endar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.92	.43	.19	.62	2.15
2017	.96	.34	.07	.58	1.95
2018	.83	.39	.15	.70	2.07
2019	1.76	.38	.08	*.68*	*2.90*
2020	*.85*	*.40*	*.10*	*.70*	*2.05*

Cal-endar	QUARTERLY DIVIDENDS PAID [B] ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.3425	.3425	.3425	.3425	1.37
2017	.3575	.3575	.3575	.3575	1.43
2018	.3725	.3725	.3725	.3725	1.49
2019	.3875	.3875	.3875	.3875	1.55
2020					

BUSINESS: Avista Corporation (formerly The Washington Water Power Company) supplies electricity & gas in eastern Washington & northern Idaho. Supplies electricity to part of Alaska & gas to part of Oregon. Customers: 402,000 electric, 350,000 gas. Acq'd Alaska Electric Light and Power 7/14. Sold Ecova energy-management sub. 6/14. Electric rev. breakdown: residential, 38%; commercial, 32%; industrial, 11%; wholesale, 9%; other, 10%. Generating sources: hydro, 31%; gas & coal, 27%; purch., 42%. Fuel costs: 35% of revs. '18 reported depr. rate (Avista Utilities): 3.2%. Has 2,000 employees. Chairman: Scott L. Morris. Pres. & CEO: Dennis Vermillion. Inc.: WA. Address: 1411 E. Mission Ave., Spokane, WA 99202-2600. Tel.: 509-489-0500. Internet: www.avistacorp.com.

There have been significant developments in Avista's rate cases. The utility reached a settlement in Washington that (if approved by the state commission) will raise electric and gas rates by $28.5 million (5.4%) and $8.0 million (5.2%), respectively. The agreement is based on a return on equity of 9.4% and a common-equity ratio of 48.5%. New tariffs will take effect on April 1st. In Idaho, the regulators approved a settlement that will benefit Avista's earning power modestly. The allowed ROE is 9.5% and the common-equity ratio is 50%. New rates took effect on December 1st. Note, too, that a $3.6 million (4.2%) gas rate hike took effect in Oregon on January 15th.

A ruling on Avista's 2015 rate order in Washington is expected in the current quarter. The commission is reviewing its decision after the state's attorney general's office complained that customers ought to receive a refund of previously collected revenues. Some intervenors contend that the refund should amount to $40 million (pretax). Avista took a $3 million pretax reserve against earnings in the third quarter of 2019, which hurt the bottom line modestly.

Earnings will probably return to a more-typical level this year. In the first quarter of 2019, Avista booked a credit of $1.01 a share for the breakup fee after a proposed takeover of the company failed to win regulatory approval. (We *included* this merger-related benefit because we also include any merger-related costs.) The utility will benefit from rate relief. However, if Avista must take a revenue refund beyond the aforementioned $3 million reserve, our estimate will likely prove too high.

A dividend increase is likely this quarter. This is the board's usual practice. We estimate the directors will boost the annual disbursement $0.06 a share (3.9%). Avista's target is a payout ratio of 60%-70% by 2022.

Avista stock does not stand out among utilities. The dividend yield isn't significantly different from the industry average. Total return potential is negligible for the 18-month period and unspectacular for the 3- to 5-year period. The stock does have some speculative appeal, given that Avista has shown it is willing to be acquired.

Paul E. Debbas, CFA *January 24, 2020*

(A) Diluted EPS. Excl. nonrec. gain (losses): '03, (3¢); '14, 9¢; '17, (16¢); gains (loss) on discontinued ops.: '03, (10¢); '14, $1.17; '15, 8¢. '16 EPS don't sum due to rounding. Next earnings report due early Feb. **(B)** Div'ds paid in mid-Mar., June, Sept. & Dec. ■ Div'd reinvest. plan avail. **(C)** Incl. def'd chgs. In '18: $10.23/sh. **(D)** In mill. **(E)** Rate base: Net orig. cost. Rate all'd on com. eq. in WA in '18: 9.5%; in ID in '17: 9.5%; in OR in '17: 9.4%; earned on avg. com. eq., '18: 7.8%. Regulatory Climate: WA, Below Avg.; ID, Above Avg.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	60
Earnings Predictability	65

BLACK HILLS CORP. NYSE-BKH

RECENT PRICE	P/E RATIO		RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
78.69	22.2	(Trailing: 22.4, Median: 18.0)	1.19	2.8%	

TIMELINESS 3 Lowered 9/20/19
SAFETY 2 Raised 5/1/15
TECHNICAL 3 Lowered 1/24/20
BETA .70 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$58-$85	$72 (-10%)

2022-24 PROJECTIONS

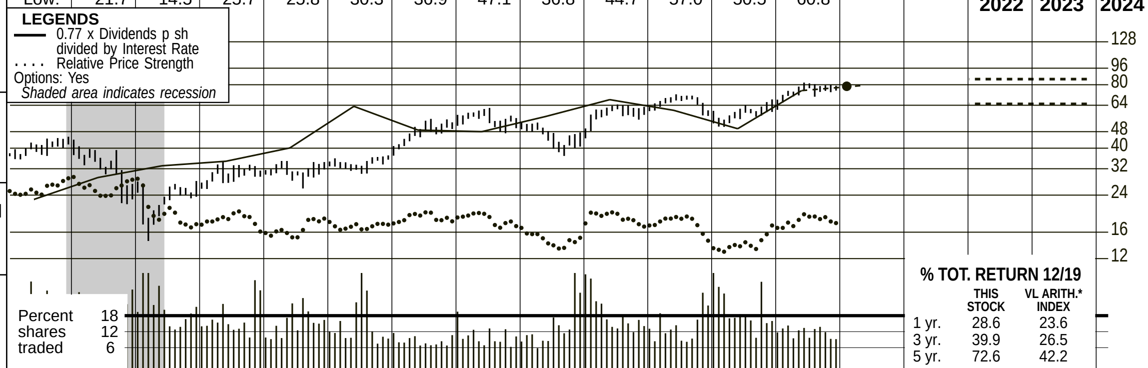
	Price	Gain	Ann'l Total Return
High	85	(+10%)	5%
Low	65	(-15%)	-1%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	144	148	145
to Sell	128	128	133
Hld's(000)	52579	54551	53817

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	44.0	28.0	34.5	34.8	37.0	55.1	62.1	53.4	64.6	72.0	68.2	82.0
Low:	21.7	14.5	25.7	25.8	30.3	36.9	47.1	36.8	44.7	57.0	50.5	60.8

Target Price Range 2022 | 2023 | 2024



% TOT. RETURN 12/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	28.6	23.6
3 yr.	39.9	26.5
5 yr.	72.6	42.2

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
35.17	34.54	41.97	19.69	18.41	26.03	32.58	33.29	28.96	26.55	28.67	31.20	25.48	29.47	31.38	29.24	*28.50*	*28.80*	Revenues per sh	*31.25*
4.26	4.46	4.81	5.04	5.29	2.95	5.41	4.88	4.01	5.59	5.93	6.25	5.67	6.28	7.15	6.61	*6.85*	*7.15*	"Cash Flow" per sh	*8.25*
1.84	1.74	2.11	2.21	2.68	.18	2.32	1.66	1.01	1.97	2.61	2.89	2.83	2.63	3.38	3.47	*3.45*	*3.65*	Earnings per sh A	*4.25*
1.20	1.24	1.28	1.32	1.37	1.40	1.42	1.44	1.46	1.48	1.52	1.56	1.62	1.68	1.81	1.93	2.05	*2.17*	Div'd Decl'd per sh B ■	*2.60*
2.80	2.80	4.18	9.24	6.92	8.51	8.90	12.04	10.03	7.90	7.97	8.92	8.90	8.89	6.09	7.62	*13.35*	*9.95*	Cap'l Spending per sh	*7.50*
21.72	22.43	22.29	23.68	25.66	27.19	27.84	28.02	27.53	27.88	29.39	30.80	28.63	30.25	31.92	36.36	*38.25*	*40.30*	Book Value per sh C	*45.25*
32.30	32.48	33.16	33.37	37.80	38.64	38.97	39.27	43.92	44.21	44.50	44.67	51.19	53.38	53.54	60.00	*61.45*	*62.50*	Common Shs Outst'g D	*62.50*
15.9	17.1	17.3	15.8	15.0	NMF	9.9	18.1	31.1	17.1	18.2	19.0	16.1	22.3	19.5	16.8	*21.7*		Avg Ann'l P/E Ratio	*17.5*
.91	.90	.92	.85	.80	NMF	.66	1.15	1.95	1.09	1.02	1.00	.81	1.17	.98	.91	*1.20*		Relative P/E Ratio	*.95*
4.1%	4.2%	3.5%	3.8%	3.4%	4.2%	6.2%	4.8%	4.6%	4.4%	3.2%	2.8%	3.5%	2.9%	2.7%	3.3%	2.7%		Avg Ann'l Div'd Yield	*3.5%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $3149.9 mill. **Due in 5 Yrs** $1339.8 mill.
LT Debt $3049.2 mill. **LT Interest** $114.4 mill.
(LT interest earned: 3.1x)
Leases, Uncapitalized Annual rentals $1.1 mill.

Pension Assets-12/18 $390.8 mill. **Oblig** $445.4 mill.

Pfd Stock None

Common Stock 61,454,071 shs. **as of 10/31/19**

MARKET CAP: $4.8 billion (Mid Cap)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
1269.6	1307.3	1272.2	1173.9	1275.9	1393.6	1304.6	1573.0	1680.3	1754.3	*1750*	*1800*	Revenues ($mill)	*1950*
89.7	64.6	40.4	86.9	115.8	128.8	128.3	140.3	186.5	192.5	*210*	*225*	Net Profit ($mill)	*270*
30.7%	26.4%	31.1%	35.5%	34.7%	33.7%	35.8%	25.1%	28.7%	19.2%	*13.5%*	*13.5%*	Income Tax Rate	*13.5%*
20.1%	28.0%	65.0%	5.4%	2.4%	2.4%	2.7%	5.3%	2.7%	1.4%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*2.0%*
48.4%	51.9%	51.4%	43.2%	51.6%	47.9%	56.0%	66.5%	64.5%	57.5%	*62.0%*	*58.0%*	Long-Term Debt Ratio	*55.5%*
51.6%	48.1%	48.6%	56.8%	48.4%	52.1%	44.0%	33.5%	35.5%	42.5%	*38.0%*	*42.0%*	Common Equity Ratio	*44.5%*
2100.7	2286.3	2489.7	2171.4	2704.7	2643.6	3332.7	4825.8	4818.4	5132.4	*6200*	*5965*	Total Capital ($mill)	*6350*
2160.7	2495.4	2789.6	2742.7	2990.3	3239.4	3259.1	4469.0	4541.4	4854.9	*5465*	*5870*	Net Plant ($mill)	*6650*
5.9%	4.4%	3.3%	5.5%	5.5%	6.1%	4.9%	4.0%	5.2%	5.0%	*4.5%*	*5.0%*	Return on Total Cap'l	*5.0%*
8.3%	5.9%	3.3%	7.1%	8.9%	9.4%	8.8%	8.7%	10.9%	8.8%	*9.0%*	*9.0%*	Return on Shr. Equity	*9.5%*
8.3%	5.9%	3.3%	7.1%	8.9%	9.4%	8.8%	8.7%	10.9%	8.8%	*9.0%*	*9.0%*	Return on Com Equity E	*9.5%*
3.2%	.7%	NMF	1.8%	3.7%	4.3%	3.8%	3.3%	5.3%	3.9%	*3.5%*	*3.5%*	Retained to Com Eq	*4.0%*
62%	87%	NMF	75%	58%	54%	57%	62%	52%	55%	*59%*	*59%*	All Div'ds to Net Prof	*60%*

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	+3.0	+.9	+2.7
Avg. Indust. Use (MWH)	17321	18376	19789
Avg. Indust. Revs. per KWH (¢)	7.80	7.69	7.41
Capacity at Yearend (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	1086	1094	1104
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.6	+.8	+.8
Fixed Charge Cov. (%)	236	296	276

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	3.5%	1.5%	*.5%*
"Cash Flow"	4.0%	5.0%	*3.5%*
Earnings	6.5%	11.0%	*5.0%*
Dividends	3.0%	4.0%	*6.5%*
Book Value	2.5%	3.0%	*5.5%*

QUARTERLY REVENUES ($ mill.)

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	450.0	325.4	333.8	463.8	1573.0
2017	547.5	341.9	335.6	455.3	1680.3
2018	575.4	355.7	322.0	501.2	1754.3
2019	597.8	333.9	325.5	*492.8*	*1750*
2020	*610*	*350*	*335*	*505*	*1800*

EARNINGS PER SHARE A

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.94	.31	.41	.97	2.63
2017	1.42	.41	.52	1.03	3.38
2018	1.59	.45	.32	1.11	3.47
2019	1.73	.24	.44	*1.04*	*3.45*
2020	*1.65*	*.42*	*.48*	*1.10*	*3.65*

QUARTERLY DIVIDENDS PAID B ■

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.42	.42	.42	.42	1.68
2017	.445	.445	.445	.475	1.81
2018	.475	.475	.475	.505	1.93
2019	.505	.505	.505	.535	2.05
2020					

BUSINESS: Black Hills Corporation is a holding company for Black Hills Energy, which serves 212,000 electric customers in CO, SD, WY and MT, and 1.1 million gas customers in NE, IA, KS, CO, WY, and AR. Has coal mining sub. Acq'd Cheyenne Light 1/05; utility ops. from Aquila 7/08; SourceGas 2/16. Discont. telecom in '05; oil marketing in '06; gas marketing in '11; gas & oil E&P in '17. Electric rev. breakdown: res'l, 33%; comm'l, 37%; ind'l, 19%; other, 11%. Generating sources: coal, 32%; other, 10%; purch., 58%. Fuel costs: 36% of revs. '18 deprec. rate: 3.4%. Has 2,900 employees. Chairman: David R. Emery. Pres. & CEO: Linn Evans. Inc.: SD. Address: 7001 Mount Rushmore Rd., P.O. Box 1400, Rapid City, SD 57709-1400. Tel.: 605-721-1700. Internet: www.blackhillscorp.com.

Black Hills received a rate order in Wyoming. The commission granted the utility a gas rate hike of $13.3 million, based on a 9.4% return on a 50.2% common-equity ratio. Black Hills had filed for $16.1 million, so the utility received most of what it requested. New tariffs will take effect on March 1st, a month earlier than initially expected.

Another rate case is pending, and others are upcoming. Black Hills is seeking a gas increase in Colorado of $2.5 million, based on a 10.3% return on a 50.1% common-equity ratio. A ruling is expected in time for new rates to take effect at the start of March. The company's gas utilities in Nebraska have been combined into one legal entity, and Black Hills plans to file a rate application in the state in mid-2020. The company also intends to file a gas case in Arkansas, but the timing of this is unknown.

After a probably flattish result in 2019, share profits should advance this year. A sharp increase in average shares outstanding hurt year-to-year comparisons in 2019. In 2020, rate relief should help. In addition to the rate cases mentioned above, Black Hills obtains revenues annually from formula rate plans. Our 2019 and 2020 share-earnings estimates are within management's targeted ranges of $3.45-$3.55 and $3.55-$3.75, respectively.

Black Hills raised its capital spending plans. This is not due to any one project, although a planned windfarm was increased from 40 megawatts to 52.5 mw, lifting the expected cost from $57 million to $79 million. The company issued $99 million of common stock last year, and expects to raise $80 million-$100 million (up from the previous expectation of $40 million-$80 million) in 2020.

The board of directors raised the dividend in the fourth quarter. The increase was $0.03 a share (5.9%) quarterly, the same as in each of the two previous years. Black Hills' goal for the payout ratio is a range of 50%-60%.

Even after the dividend hike, Black Hills stock has a yield that is below the utility average. Total return potential is negative for the 18-month span and low for the 3- to 5-year period.

Paul E. Debbas, CFA *January 24, 2020*

(A) Dil. EPS. Excl. nonrec. gains (losses): '08, ($1.55); '09, (28¢); '10, 10¢; '15, ($3.54); '16, ($1.26); '17, 14¢; '18, $1.31; '19, (25¢); gains (losses) on disc. ops.: '06, 21¢; '07, (4¢); '08, $4.12; '09, 7¢; '11, 23¢; '12, (16¢); '17, (31¢); '18, (12¢). Next egs. rept. due early Feb. (B) Div'ds paid early Mar., Jun., Sept., & Dec. ■ Div'd reinv. plan avail. (C) Incl. def'd chgs. In '18: $25.82/sh. (D) In mill. (E) Rate base: Net orig. cost. Rate all'd on com. eq. in SD in '15: none spec.; in CO in '17: 9.37%; earned on avg. com. eq., '18: 10.1%. Reg. Clim.: Avg.

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	65
Earnings Predictability	60

NORTHWESTERN NYSE-NWE

RECENT PRICE **72.51** | P/E RATIO **21.5** (Trailing: 21.3 Median: 16.0) | RELATIVE P/E RATIO **1.16** | DIV'D YLD **3.3%** | **VALUE LINE**

TIMELINESS **3** Lowered 9/6/19
SAFETY **2** Raised 7/27/18
TECHNICAL **3** Lowered 1/24/20
BETA .60 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$56-$81	$69 (-5%)

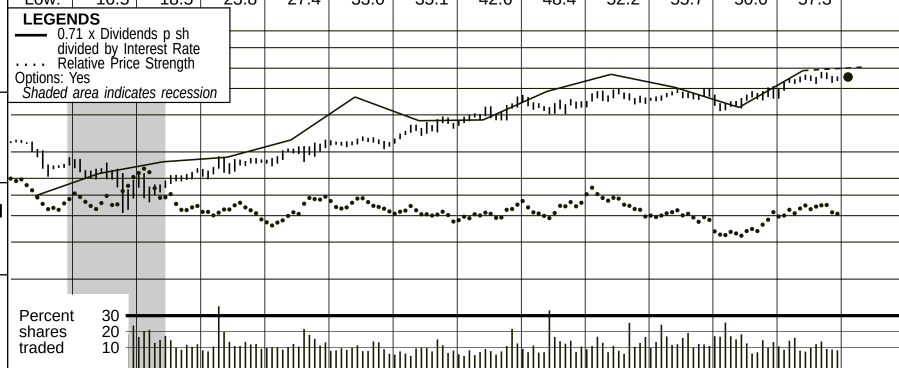
2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	80	(+10%)	6%
Low	60	(-15%)	-1%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	140	131	113
to Sell	126	145	150
Hld's(000)	48402	48906	49607

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
High:	29.7	26.8	30.6	36.6	38.0	47.2	58.7	59.7	63.8	64.5	65.7	76.7
Low:	16.5	18.5	23.8	27.4	33.0	35.1	42.6	48.4	52.2	55.7	50.0	57.3



Target Price Range
2022 | 2023 | 2024
120 100 80 64 48 32 24 20 16 12 8

% TOT. RETURN 12/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	24.5	23.6
3 yr.	40.1	26.5
5 yr.	51.2	42.2

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
- -	29.18	32.57	31.49	30.79	35.09	31.72	30.66	30.80	28.76	29.80	25.68	25.21	26.01	26.45	23.81	*24.75*	*25.55*	Revenues per sh	*28.00*
- -	3.20	4.00	3.62	3.70	4.40	4.62	4.76	5.42	5.18	5.45	5.39	5.92	6.74	6.76	6.96	*7.10*	*7.15*	"Cash Flow" per sh	*8.00*
- -	d14.32	1.71	1.31	1.44	1.77	2.02	2.14	2.53	2.26	2.46	2.99	2.90	3.39	3.34	3.40	*3.55*	*3.50*	Earnings per sh A	*3.75*
- -	- -	1.00	1.24	1.28	1.32	1.34	1.36	1.44	1.48	1.52	1.60	1.92	2.00	2.10	2.20	2.30	*2.40*	Div'd Decl'd per sh B ■ †	*2.70*
- -	2.25	2.26	2.81	3.00	3.47	5.26	6.30	5.20	5.89	5.95	5.76	5.89	5.96	5.60	5.64	*6.65*	*7.30*	Cap'l Spending per sh	*5.75*
- -	19.92	20.60	20.65	21.12	21.25	21.86	22.64	23.68	25.09	26.60	31.50	33.22	34.68	36.44	38.60	*40.20*	*41.35*	Book Value per sh C	*44.50*
- -	35.60	35.79	35.97	38.97	35.93	36.00	36.23	36.28	37.22	38.75	46.91	48.17	48.33	49.37	50.32	*50.50*	*50.90*	Common Shs Outst'g D	*51.60*
- -	- -	17.1	26.0	21.7	13.9	11.5	12.9	12.6	15.7	16.9	16.2	18.4	17.2	17.8	16.8	*19.8*		Avg Ann'l P/E Ratio	*19.0*
- -	- -	.91	1.40	1.15	.84	.77	.82	.79	1.00	.95	.85	.93	.90	.90	.91	*1.10*		Relative P/E Ratio	*1.05*
- -	- -	3.4%	3.6%	4.1%	5.4%	5.7%	4.9%	4.5%	4.2%	3.7%	3.3%	3.6%	3.4%	3.5%	3.9%	3.3%		Avg Ann'l Div'd Yield	*3.8%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $2196.6 mill. **Due in 5 Yrs** $321.5 mill.
LT Debt $2194.1 mill. **LT Interest** $86.7 mill.
Incl. $18.1 mill. capitalized leases.
(LT interest earned: 2.7x)

Pension Assets-12/18 $525.3 mill.
Oblig $649.6 mill.

Pfd Stock None

Common Stock 50,446,835 shs.
as of 10/25/19

MARKET CAP: $3.7 billion (Mid Cap)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
1141.9	1110.7	1117.3	1070.3	1154.5	1204.9	1214.3	1257.2	1305.7	1198.1	*1250*	*1300*	Revenues ($mill)	*1450*
73.4	77.4	92.6	83.7	94.0	120.7	138.4	164.2	162.7	171.1	*180*	*180*	Net Profit ($mill)	*200*
17.2%	25.0%	9.8%	9.6%	13.2%	- -	13.7%	- -	7.6%	NMF	*NMF*	*5.0%*	Income Tax Rate	*10.0%*
4.4%	14.2%	3.3%	9.4%	8.7%	8.9%	9.8%	4.3%	5.2%	3.4%	*4.0%*	*5.0%*	AFUDC % to Net Profit	*3.0%*
56.4%	57.2%	52.2%	53.8%	53.5%	53.4%	53.1%	52.0%	50.2%	52.2%	*51.0%*	*50.0%*	Long-Term Debt Ratio	*48.0%*
43.6%	42.8%	47.8%	46.2%	46.5%	46.6%	46.9%	48.0%	49.8%	47.8%	*49.0%*	*50.0%*	Common Equity Ratio	*52.0%*
1803.9	1916.4	1797.1	2020.7	2215.7	3168.0	3408.6	3493.9	3614.5	4064.6	*4150*	*4225*	Total Capital ($mill)	*4425*
1964.1	2118.0	2213.3	2435.6	2690.1	3758.0	4059.5	4214.9	4358.3	4521.3	*4680*	*4865*	Net Plant ($mill)	*5225*
6.0%	5.9%	7.0%	5.5%	5.5%	4.8%	5.2%	5.9%	5.6%	5.2%	*5.5%*	*5.0%*	Return on Total Cap'l	*5.5%*
9.3%	9.4%	10.8%	9.0%	9.1%	8.2%	8.6%	9.8%	9.0%	8.8%	*9.0%*	*8.5%*	Return on Shr. Equity	*9.0%*
9.3%	9.4%	10.8%	9.0%	9.1%	8.2%	8.6%	9.8%	9.0%	8.8%	*9.0%*	*8.5%*	Return on Com Equity E	*9.0%*
3.2%	3.5%	4.7%	3.2%	3.5%	3.8%	3.0%	4.1%	3.4%	3.2%	*3.0%*	*2.5%*	Retained to Com Eq	*2.5%*
66%	63%	56%	65%	61%	54%	65%	58%	62%	64%	*64%*	*68%*	All Div'ds to Net Prof	*69%*

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	-.7	+3.8	+2.9
Avg. Indust. Use (MWH)	29784	30987	34573
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Winter (Mw)	2138	2133	2173
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.2	+1.3	+1.2
Fixed Charge Cov. (%)	253	275	275

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	-2.5%	-3.0%	*1.5%*
"Cash Flow"	5.5%	5.0%	*2.5%*
Earnings	8.5%	7.0%	*2.0%*
Dividends	5.0%	7.0%	*4.5%*
Book Value	5.5%	8.0%	*3.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	332.5	293.1	301.0	330.6	1257.2
2017	367.3	283.9	309.9	344.6	1305.7
2018	341.5	261.8	279.9	314.9	1198.1
2019	384.2	270.7	274.8	*320.3*	*1250*
2020	*365*	*285*	*310*	*340*	*1300*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.82	.73	.92	.92	3.39
2017	1.17	.44	.75	.98	3.34
2018	1.18	.61	.56	1.06	3.40
2019	1.44	.49	.42	*1.20*	*3.55*
2020	*1.20*	*.55*	*.65*	*1.10*	*3.50*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.50	.50	.50	.50	2.00
2017	.525	.525	.525	.525	2.10
2018	.55	.55	.55	.55	2.20
2019	.575	.575	.575	.575	2.30
2020					

BUSINESS: NorthWestern Corporation (doing business as North-Western Energy) supplies electricity & gas in the Upper Midwest and Northwest, serving 438,000 electric customers in Montana and South Dakota and 289,000 gas customers in Montana (85% of gross margin), South Dakota (14%), and Nebraska (1%). Electric revenue breakdown: residential, 39%; commercial, 46%; industrial, 5%; other, 10%. Generating sources: hydro, 35%; coal, 29%; wind, 6%; other, 4%; purchased, 26%. Fuel costs: 24% of revenues. '18 reported deprec. rate: 3.0%. Has 1,500 employees. Chairman: Stephen P. Adik. President & CEO: Robert C. Rowe. Inc.: Delaware. Address: 3010 West 69th Street, Sioux Falls, South Dakota 57108. Tel.: 605-978-2900. Internet: www.northwesternenergy.com.

NorthWestern received a rate order in Montana. In late December, the Montana Public Service Commission (MPSC) approved a settlement that raised electric rates $6.5 million (1.3%), based on a 10.65% return on equity and a 49.4% common-equity ratio. The utility has been collecting interim rates since April 1, 2019. The order also lowered annual depreciation expense by $9.3 million.

The company is adding generating capacity. In South Dakota, NorthWestern is building roughly 60 megawatts of gas-fired capacity at an expected cost of $80 million. The utility will use both debt and equity to finance the project, probably in or close to a 50/50 split. Completion is expected by the end of 2021. In Montana, the company has agreed to pay $1.00 for Puget Sound Energy's 25% stake in Unit 4 of the Colstrip coal-fired station. Of the 185 mw acquired, the company would sell 90 mw back to Puget Sound Energy under a purchased-power agreement, and would use the other 95 mw to serve its customers. The MPSC must approve the purchase for the deal to go through. A ruling is expected by yearend. Finally, NorthWestern is about to issue a request for proposals to add 280 mw of capacity in Montana. The winning bidder(s) will probably be selected in the third quarter.

We have cut our 2019 and 2020 share-earnings estimates by $0.10 each year. Third-quarter profits were well below normal, due in part to mild summer weather conditions. We look for a slight earnings decline in 2020, owing to higher property taxes and financing costs. Our estimate is within management's preliminary guidance of $3.45-$3.60.

We expect a dividend hike in the current quarter. This is the typical timing for NorthWestern. We estimate an increase of $0.10 a share (4.4%) annually. The company's target for the payout ratio is 60%-70%.

This stock has an average valuation for a utility. The dividend yield is near the industry mean. Like most utility equities, the recent quotation is well within our 2022-2024 Target Price Range. Total return potential for the 18-month span and the 3- to 5-year period is unimpressive.

Paul E. Debbas, CFA *January 24, 2020*

(A) Diluted EPS. Excl. gain (loss) on disc. ops.: '05, (6¢); '06, 1¢; nonrec. gains: '12, 39¢ net; '15, 27¢; '18, 52¢; '19, 45¢. '18 EPS don't sum due to rounding. Next earnings report due mid-Feb. (B) Div'ds historically paid in late Mar., June, Sept. & Dec. ■ Div'd reinvestment plan avail. (C) Incl. def'd charges. In '18: $15.80/sh. (D) In mill. (E) Rate base: Net orig. cost. Rate allowed on com. eq. in MT in '14 (elec.): 9.8%; in '17 (gas): 9.55%; in SD in '15: none specified; in NE in '07: 10.4%; earned on avg. com. eq., '18: 9.2%. Regul. Climate: Below Average.

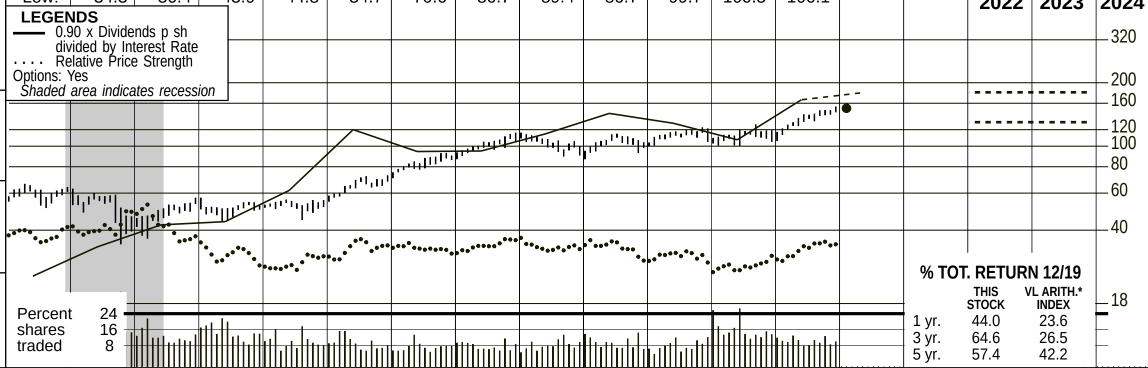
Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	75
Earnings Predictability	85

SEMPRA ENERGY NYSE-SRE

RECENT PRICE 151.22 | P/E RATIO 23.4 (Trailing: 25.5 / Median: 19.0) | RELATIVE P/E RATIO 1.26 | DIV'D YLD 2.8% | VALUE LINE

TIMELINESS 3 Lowered 6/21/19
SAFETY 2 Raised 7/29/16
TECHNICAL 3 Lowered 12/13/19
BETA .70 (1.00 = Market)

High:	63.0	57.2	57.2	56.0	72.9	93.0	116.3	116.2	114.7	123.0	127.2	154.5
Low:	34.3	36.4	43.9	44.8	54.7	70.6	86.7	89.4	86.7	99.7	100.5	106.1



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$107-$164	$136 (-10%)

2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	180	(+20%)	7%
Low	130	(-15%)	Nil

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	344	338	368
to Sell	294	316	293
Hld's(000)	266999	257637	253080

% TOT. RETURN 12/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	44.0	23.6
3 yr.	64.6	26.5
5 yr.	57.4	42.2

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
34.81	40.18	45.64	44.89	43.79	44.21	32.88	37.44	41.83	39.80	43.18	44.80	41.20	40.71	44.59	42.69	*37.95*	*40.00*	Revenues per sh	*43.75*
5.56	6.58	5.96	6.74	6.93	7.40	7.94	7.76	8.58	8.92	8.87	9.41	10.32	9.50	10.57	11.07	*11.15*	*12.35*	"Cash Flow" per sh	*15.00*
3.01	3.93	3.52	4.23	4.26	4.43	4.78	4.02	4.47	4.35	4.22	4.63	5.23	4.24	4.63	5.48	*5.85*	*6.85*	Earnings per sh A	*9.00*
1.00	1.00	1.16	1.20	1.24	1.37	1.56	1.56	1.92	2.40	2.52	2.64	2.80	3.02	3.29	3.58	3.87	*4.20*	Div'd Decl'd per sh B ■	*5.25*
4.63	4.62	5.46	7.28	7.70	8.47	7.76	8.58	11.85	12.20	10.52	12.68	12.71	16.85	15.71	13.82	*16.90*	*13.40*	Cap'l Spending per sh	*10.25*
17.17	20.78	23.95	28.66	31.87	32.75	36.54	37.54	41.00	42.42	45.03	45.98	47.56	51.77	50.41	54.35	*61.25*	*65.85*	Book Value per sh C	*77.50*
226.60	234.18	257.19	262.01	261.21	243.32	246.51	240.45	239.93	242.37	244.46	246.33	248.30	250.15	251.36	273.77	*290.00*	*300.00*	Common Shs Outst'g D	*320.00*
9.0	8.6	11.8	11.5	14.0	11.8	10.1	12.6	11.8	14.9	19.7	21.9	19.7	24.4	24.3	20.4	*23.0*		Avg Ann'l P/E Ratio	*17.0*
.51	.45	.63	.62	.74	.71	.67	.80	.74	.95	1.11	1.15	.99	1.28	1.22	1.10	*1.25*		Relative P/E Ratio	*.95*
3.7%	2.9%	2.8%	2.5%	2.1%	2.6%	3.2%	3.1%	3.6%	3.7%	3.0%	2.6%	2.7%	2.9%	2.9%	3.2%	2.9%		Avg Ann'l Div'd Yield	*3.4%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $26203 mill. **Due in 5 Yrs** $11654 mill.
LT Debt $20995 mill. **LT Interest** $840 mill.
Incl. $1275 mill. capitalized leases.
(LT interest earned: 3.3x)
Leases, Uncapitalized Annual rentals $91 mill.
Pension Assets-12/18 $2160 mill.
Oblig $3356 mill.
Pfd Stock $2278 mill. **Pfd Div'd** $105 mill.
17.25 mill. shs. 6% mandatorily convertible pfd.;
5.75 mill. shs. 6.75% mandatorily convertible pfd.;
811,073 shs. 6% cum., $25 par.
Common Stock 281,895,936 shs. **as of 10/28/19**
MARKET CAP: $43 billion (Large Cap)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
8106.0	9003.0	10036	9647.0	10557	11035	10231	10183	11207	11687	*11000*	*12000*	Revenues ($mill)	*14000*
1193.0	1008.0	1088.0	1079.0	1060.0	1162.0	1314.0	1065.0	1169.0	1607.0	*1910*	*2280*	Net Profit ($mill)	*3000*
30.5%	26.5%	25.3%	18.2%	26.5%	19.7%	19.2%	14.4%	24.5%	20.1%	*21.0%*	*21.0%*	Income Tax Rate	*23.5%*
10.6%	11.3%	15.2%	17.2%	11.2%	14.4%	15.3%	22.2%	21.9%	12.6%	*11.0%*	*9.0%*	AFUDC % to Net Profit	*7.0%*
44.8%	49.4%	50.4%	52.8%	50.5%	51.7%	52.6%	52.7%	56.4%	55.7%	*53.5%*	*52.5%*	Long-Term Debt Ratio	*53.5%*
54.1%	49.6%	49.2%	46.7%	49.4%	48.2%	47.3%	47.3%	43.5%	38.4%	*41.0%*	*42.5%*	Common Equity Ratio	*46.0%*
16646	18186	20015	22002	22281	23513	24963	27400	29135	38769	*43100*	*46475*	Total Capital ($mill)	*53700*
18281	19876	23572	25191	25460	25902	28039	32931	36503	36796	*37750*	*40100*	Net Plant ($mill)	*44100*
8.3%	6.8%	6.7%	6.1%	6.0%	6.1%	6.4%	5.0%	5.1%	5.1%	*5.5%*	*6.0%*	Return on Total Cap'l	*6.5%*
13.0%	10.9%	10.9%	10.4%	9.6%	10.2%	11.1%	8.2%	9.2%	9.4%	*9.0%*	*10.0%*	Return on Shr. Equity	*11.5%*
13.1%	11.1%	11.0%	10.4%	9.6%	10.3%	11.1%	8.2%	9.2%	10.0%	*9.5%*	*10.0%*	Return on Com Equity E	*11.5%*
9.3%	7.0%	6.5%	5.1%	4.1%	5.0%	5.8%	2.9%	3.3%	4.1%	*3.0%*	*4.0%*	Retained to Com Eq	*5.0%*
29%	37%	41%	52%	58%	52%	48%	65%	65%	62%	*69%*	*64%*	All Div'ds to Net Prof	*58%*

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	-3.8	-.2	-3.2
Avg. Indust. Use (MWH)	4785	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NMF	NMF	NMF
Peak Load, Summer (Mw)	NMF	NMF	NMF
Annual Load Factor (%)	NMF	NMF	NMF
% Change Customers (yr-end)	+.6	+.8	+.9
Fixed Charge Cov. (%)	237	264	186

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	-.5%	.5%	*.5%*
"Cash Flow"	4.0%	3.5%	*6.5%*
Earnings	1.0%	2.0%	*11.0%*
Dividends	10.0%	7.5%	*8.0%*
Book Value	5.5%	4.0%	*7.0%*

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
	QUARTERLY REVENUES ($ mill.)				
2016	2622	2156	2535	2870	10183
2017	3031	2533	2679	2964	11207
2018	2962	2564	2940	3221	11687
2019	2898	2230	2758	*3114*	*11000*
2020	*3100*	*2400*	*3100*	*3400*	*12000*

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
	EARNINGS PER SHARE A				
2016	1.61	.06	1.02	1.52	4.24
2017	1.75	1.20	.22	1.46	4.63
2018	1.43	1.27	1.23	1.55	5.48
2019	1.78	1.10	2.00	*.97*	*5.85*
2020	*2.00*	*1.50*	*1.60*	*1.75*	*6.85*

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
	QUARTERLY DIVIDENDS PAID B ■				
2016	.70	.755	.755	.755	2.97
2017	.755	.8225	.8225	.8225	3.22
2018	.8225	.895	.895	.895	3.51
2019	.895	.9675	.9675	.9675	3.80
2020	.9675				

BUSINESS: Sempra Energy is a holding co. for San Diego Gas & Electric Company, which sells electricity & gas mainly in San Diego County, & Southern California Gas Company, which distributes gas to most of Southern California. Owns 80% of Oncor (acq'd 3/18), which distributes electricity in Texas. Customers: 4.9 mill. electric, 6.6 mill. gas. Electric rev. breakdown: residential, 41%; commercial, 42%; industrial, 10%; other, 7%. Purchases most of its power; the rest is gas. Has nonutility subsidiaries. Sold commodities business in '10. Power costs: 34% of revs. '18 reported deprec. rates: 2.4%-6.4%. Has 20,000 employees. Chairman: Debra L. Reed. CEO: Jeffrey W. Martin. Inc.: CA. Address: 488 8th Ave., San Diego, CA 92101. Tel.: 619-696-2000. Internet: www.sempra.com.

Sempra Energy expects to complete the sales of its utility assets in South America in the current quarter. Over the past two years, the company has sold assets in order to make its strategic and geographic focus narrower, and these are the last sales in this process. After taxes, Sempra expects to wind up with cash in a range of $4.55 billion-$4.85 billion. The company plans to use it to fund capital spending (utility and nonutility) and retire debt. Sempra will record a gain on the sale (estimated at $6.08-$6.76 a share), which we will *exclude* as income from discontinued operations.

The company's utilities received orders on their cost-of-capital cases. San Diego Gas & Electric and Southern California Gas had sought increases in their allowed returns on equity and common-equity ratio, but the California commission maintained the allowed ROEs at 10.2% for SDG&E and 10.05% for SoCalGas and the common-equity ratio at 52%. The order is effective for 2020 through 2022.

Earnings will likely improve substantially in 2020. SDG&E and SoCalGas are benefiting from rate hikes of $134 million (6.7%) and $220 million (7.9%), which took effect at the start of the year. A liquefied natural gas facility is being completed this year, and Sempra's investments in Mexico should increase their contribution. Our earnings estimate is at the midpoint of the company's targeted range of $6.70-$7.00 a share.

The LNG facility's full contribution won't come until 2021. This will be the first full year of operation for each of the three trains. Sempra expects annual income of $400 million-$450 million.

We expect a dividend increase at the board meeting in February. This is the usual timing of the directors' action. We estimate that annual payout will be raised (8.5%), effective with the April payment.

Sempra was one of the top-performing utility stocks in 2019. The share price rose 40%, as Wall Street applauded the company's ongoing asset sales and the solid performance of its operations. However, the dividend yield is a cut below the utility mean. Total return potential is negative for the 18-month period and just modest for the 3- to 5-year span.

Paul E. Debbas, CFA *January 24, 2020*

(A) Dil. EPS. Excl. nonrec. gains (losses): '09, (26¢); '10, ($1.05); '11, $1.15; '12, (98¢); '13, (30¢); '15, 14¢; '16, $1.23; '17, (17¢); '18, ($2.06); '19, 16¢; gain (losses) from disc. ops.: '06, $1.21; '07, (10¢); '19, 95¢. '16 EPS don't sum due to chg. in shs. Next egs. report due late Feb. **(B)** Div'ds paid mid-Jan., Apr., July, Oct. ■ Div'd reinv. plan avail. **(C)** Incl. intang. In '18: $15.47/sh. **(D)** In mill. **(E)** Rate base: Net orig. cost. Rate all'd on com. eq.: SDG&E in '13: 10.3%; SoCalGas in '13: 10.1%; earn. on avg. com. eq., '18: 10.5%. Regul. Climate: Avg.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	70

XCEL ENERGY NDQ-XEL

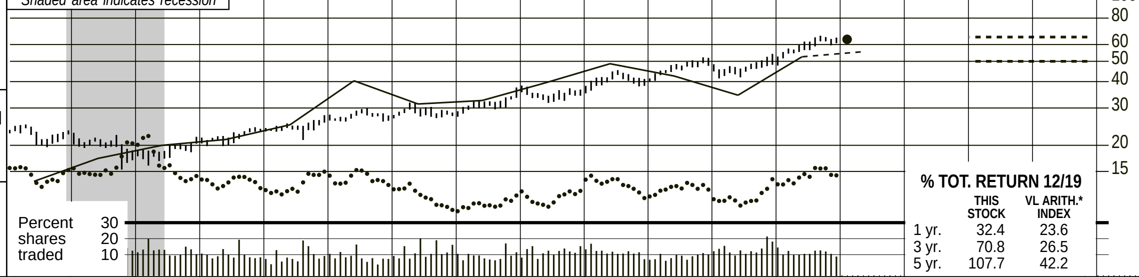
RECENT PRICE	P/E RATIO		RELATIVE P/E RATIO	DIV'D YLD
63.47	23.7	(Trailing: 25.4, Median: 15.0)	1.27	2.7%

VALUE LINE

TIMELINESS **3** Lowered 9/20/19
SAFETY **1** Raised 5/1/15
TECHNICAL **3** Lowered 12/27/19
BETA .50 (1.00 = Market)

High:	22.9	21.9	24.4	27.8	29.9	31.8	37.6	38.3	45.4	52.2	54.1	66.1
Low:	15.3	16.0	19.8	21.2	25.8	26.8	27.3	31.8	35.2	40.0	41.5	47.7

LEGENDS
— 0.68 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range 2022 | 2023 | 2024

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$50-$68	$59 (-5%)

2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	65	(Nil)	4%
Low	50	(-20%)	-2%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	353	352	347
to Sell	308	308	333
Hld's(000)	396450	404643	407757

Percent shares traded 30 / 20 / 10

% TOT. RETURN 12/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	32.4	23.6
3 yr.	70.8	26.5
5 yr.	107.7	42.2

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
19.90	20.84	23.86	24.16	23.40	24.69	21.08	21.38	21.90	20.76	21.92	23.11	21.72	21.90	22.46	22.44	*22.30*	*23.50*	Revenues per sh	*25.00*
3.35	3.27	3.28	3.61	3.45	3.50	3.48	3.51	3.79	4.00	4.10	4.28	4.56	5.04	5.47	5.92	*6.20*	*6.60*	"Cash Flow" per sh	*7.75*
1.23	1.27	1.20	1.35	1.35	1.46	1.49	1.56	1.72	1.85	1.91	2.03	2.10	2.21	2.30	2.47	*2.60*	*2.75*	Earnings per sh A	*3.25*
.75	.81	.85	.88	.91	.94	.97	1.00	1.03	1.07	1.11	1.20	1.28	1.36	1.44	1.52	1.62	*1.72*	Div'd Decl'd per sh B ■	*2.05*
2.49	3.19	3.25	4.00	4.89	4.66	3.91	4.60	4.53	5.27	6.82	6.33	7.26	6.42	6.54	7.70	*9.00*	*6.70*	Cap'l Spending per sh	*8.25*
12.95	12.99	13.37	14.28	14.70	15.35	15.92	16.76	17.44	18.19	19.21	20.20	20.89	21.73	22.56	23.78	*25.15*	*27.20*	Book Value per sh C	*31.00*
398.96	400.46	403.39	407.30	428.78	453.79	457.51	482.33	486.49	487.96	497.97	505.73	507.54	507.22	507.76	514.04	*525.00*	*539.00*	Common Shs Outst'g D	*546.00*
11.6	13.6	15.4	14.8	16.7	13.7	12.7	14.1	14.2	14.8	15.0	15.4	16.5	18.5	20.2	18.9	*22.7*		Avg Ann'l P/E Ratio	*17.5*
.66	.72	.82	.80	.89	.82	.85	.90	.89	.94	.84	.81	.83	.97	1.02	1.02	*1.25*		Relative P/E Ratio	*.95*
5.2%	4.7%	4.6%	4.4%	4.0%	4.7%	5.1%	4.5%	4.2%	3.9%	3.9%	3.8%	3.7%	3.3%	3.1%	3.3%	2.7%		Avg Ann'l Div'd Yield	*3.6%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $18605 mill. **Due in 5 Yrs** $4172 mill.
LT Debt $16819 mill. **LT Interest** $706 mill.
Incl. $145 mill. capitalized leases.
(LT interest earned: 2.6x)

Leases, Uncapitalized Annual rentals $239 mill.
Pension Assets-12/18 $2742 mill. **Oblig** $3477 mill.
Pfd Stock None

Common Stock 524,388,096 shs.
as of 10/17/19
MARKET CAP: $33 billion (Large Cap)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
9644.3	10311	10655	10128	10915	11686	11024	11107	11404	11537	*11700*	*12200*	Revenues ($mill)	*13650*
685.5	727.0	841.4	905.2	948.2	1021.3	1063.6	1123.4	1171.0	1261.0	*1360*	*1465*	Net Profit ($mill)	*1755*
35.1%	37.5%	35.8%	33.2%	33.8%	33.9%	35.8%	34.1%	30.7%	12.6%	*8.0%*	*Nil*	Income Tax Rate	*Nil*
16.8%	11.7%	9.4%	10.8%	13.4%	12.5%	7.7%	7.8%	9.4%	12.4%	*9.0%*	*10.0%*	AFUDC % to Net Profit	*9.0%*
51.6%	53.1%	51.1%	53.3%	53.3%	53.0%	54.1%	56.3%	55.9%	56.4%	*57.0%*	*57.0%*	Long-Term Debt Ratio	*57.5%*
47.7%	46.3%	48.9%	46.7%	46.7%	47.0%	45.9%	43.7%	44.1%	43.6%	*43.0%*	*43.0%*	Common Equity Ratio	*42.5%*
15277	17452	17331	19018	20477	21714	23092	25216	25975	28025	*30750*	*34200*	Total Capital ($mill)	*39900*
18508	20663	22353	23809	26122	28757	31206	32842	34329	36944	*39775*	*41300*	Net Plant ($mill)	*47000*
6.2%	5.7%	6.5%	6.1%	6.0%	6.0%	5.8%	5.7%	5.8%	5.7%	*5.5%*	*5.5%*	Return on Total Cap'l	*5.5%*
9.3%	8.9%	9.9%	10.2%	9.9%	10.0%	10.0%	10.2%	10.2%	10.3%	*10.5%*	*10.0%*	Return on Shr. Equity	*10.5%*
9.4%	8.9%	9.9%	10.2%	9.9%	10.0%	10.0%	10.2%	10.2%	10.3%	*10.5%*	*10.0%*	Return on Com Equity E	*10.5%*
3.7%	3.6%	4.3%	4.7%	4.5%	4.5%	4.3%	4.0%	3.9%	4.3%	*4.0%*	*4.0%*	Retained to Com Eq	*4.0%*
61%	59%	56%	54%	54%	55%	57%	61%	62%	58%	*62%*	*62%*	All Div'ds to Net Prof	*64%*

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	+.3	-.7	+3.2
Large C & I Use (MWH)	22519	22642	23004
Large C & I Revs. per KWH (¢)	6.17	6.36	5.91
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	20423	19591	20293
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.9	+.9	+1.1
Fixed Charge Cov. (%)	342	330	281

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	-1.0%	.5%	*2.0%*
"Cash Flow"	4.5%	6.5%	*6.0%*
Earnings	5.5%	5.0%	*5.5%*
Dividends	4.5%	6.0%	*6.0%*
Book Value	4.5%	4.5%	*5.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	2772	2500	3040	2795	11107
2017	2946	2645	3017	2796	11404
2018	2951	2658	3048	2880	11537
2019	3141	2577	3013	*2969*	*11700*
2020	*3250*	*2750*	*3150*	*3050*	*12200*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.47	.39	.90	.45	2.21
2017	.47	.45	.97	.42	2.30
2018	.57	.52	.96	.42	2.47
2019	.61	.46	1.01	*.52*	*2.60*
2020	*.63*	*.52*	*1.10*	*.50*	*2.75*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.32	.34	.34	.34	1.34
2017	.34	.36	.36	.36	1.42
2018	.36	.38	.38	.38	1.50
2019	.38	.405	.405	.405	1.60
2020	.405				

BUSINESS: Xcel Energy Inc. is the parent of Northern States Power, which supplies electricity to Minnesota, Wisconsin, North Dakota, South Dakota & Michigan & gas to Minnesota, Wisconsin, North Dakota & Michigan; Public Service of Colorado, which supplies electricity & gas to Colorado; & Southwestern Public Service, which supplies electricity to Texas & New Mexico. Customers: 3.6 mill. electric, 2.0 mill. gas. Elec. rev. breakdown: residential, 31%; sm. comm'l & ind'l, 36%; lg. comm'l & ind'l, 18%; other, 15%. Generating sources not available. Fuel costs: 41% of revs. '18 reported depr. rate: 3.1%. Has 11,100 employees. Chairman, Pres. & CEO: Ben Fowke. Inc.: MN. Address: 414 Nicollet Mall, Minneapolis, MN 55401. Tel.: 612-330-5500. Internet: www.xcelenergy.com.

Xcel Energy's utility in Colorado should soon receive a rate order. Public Service of Colorado sought an electric rate hike of $108 million, based on a return on equity of 10.2% and a common-equity ratio of 55.6%. The state commission has stated (verbally, not in writing) that it plans to grant an ROE of 9.3% and an equity ratio of 55.6%. An order is expected soon.

Northern States Power deferred its rate case until November. Instead, the utility will benefit from the extension of regulatory mechanisms for true-ups of sales, capital, and property taxes, along with a deferral of an increase in decommissioning accruals.

Southwestern Public Service has electric rate cases pending in Texas and New Mexico. These filings will enable the utility to place wind projects in the rate base. In Texas, SPS is seeking a hike of $136.5 million, based on an ROE of 10.35% and a common-equity ratio of 54.65%. The company expects new tariffs to take effect in the second quarter. In New Mexico, the utility reached a settlement that would increase rates by $31 million, based on an ROE of 9.45% and a common-equity ratio of 54.8%. New rates are expected to go into effect in the second or third quarter.

Rate relief should enable Xcel to continue to produce steady earnings growth. Our 2019 and 2020 share-earnings estimates are within the company's targeted range of $2.60-$2.65 and $2.73-$2.83, respectively. Xcel's goal for annual profit growth is 5%-7%. The company has the same target for dividend growth, and we expect a raise of $0.10 a share (6.2%) in the annual payout, effective with the April payment.

Financing needs are significant. The company executed a forward sale of 11,845,000 common shares of $743 million. Settlement will occur by yearend. Also, Xcel and its utility subsidiaries plan to issue $2.4 billion of long-term debt in 2020.

The dividend yield of this high-quality stock is close to the utility average. The recent quotation is near the upper end of our 2022-2024 Target Price Range. Total return potential is unappealing, either for the 18-month or the 3- to 5-year time frame.

Paul E. Debbas, CFA *January 24, 2020*

(A) Diluted EPS. Excl. nonrecurring gain (losses): '10, 5¢; '15, (16¢); '17, (5¢); gains (losses) on discontinued ops.: '03, 27¢; '04, (30¢); '05, 3¢; '06, 1¢; '09, (1¢); '10, 1¢. '17 EPS don't sum due to rounding. Next earnings report due late Jan. (B) Div'ds historically paid mid-Jan., Apr., July, and Oct. ■ Div'd reinvestment plan available. (C) Incl. intangibles. In '18: $5.92/sh. (D) In mill. (E) Rate base: Varies. Rate allowed on com. eq. (blended): 9.6%; earned on avg. com. eq., '18: 10.4%. Regulatory Climate: Average.

Company's Financial Strength	A+
Stock's Price Stability	100
Price Growth Persistence	60
Earnings Predictability	100

PPL CORPORATION NYSE-PPL

RECENT PRICE 33.57 | P/E RATIO 13.6 (Trailing: 13.6 Median: 13.0) | RELATIVE P/E RATIO 0.78 | DIV'D YLD 4.9% | VALUE LINE

TIMELINESS 3 Lowered 5/17/19
SAFETY 2 Raised 8/21/15
TECHNICAL 3 Raised 11/8/19
BETA .70 (1.00 = Market)

High:	55.2	34.4	33.1	30.3	30.2	33.6	38.1	36.7	39.9	40.2	32.5	33.8
Low:	26.8	24.3	23.8	24.1	26.7	28.4	29.4	29.2	32.1	30.7	25.3	27.8

Target Price Range 2022 | 2023 | 2024

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$25-$35	$30 (-10%)

2022-24 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	45	(+35%)	11%
Low	35	(+5%)	6%

Institutional Decisions

	4Q2018	1Q2019	2Q2019
to Buy	379	431	374
to Sell	363	309	358
Hld's(000)	534281	526798	522107

% TOT. RETURN 10/19

	THIS STOCK	VL ARITH.* INDEX
1 yr.	16.2	4.9
3 yr.	13.4	30.2
5 yr.	21.7	36.8

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
15.75	15.37	16.36	17.92	17.41	21.47	20.03	17.63	22.02	21.11	18.82	17.27	11.38	11.06	10.74	10.81	*10.00*	*10.30*	Revenues per sh	*11.00*
3.60	3.59	3.84	4.26	5.10	4.71	3.47	3.66	4.59	4.84	4.64	4.58	3.78	4.28	3.68	4.16	*3.95*	*4.30*	"Cash Flow" per sh	*5.00*
1.84	1.87	1.92	2.29	2.63	2.45	1.19	2.29	2.61	2.61	2.38	2.38	2.37	2.79	2.11	2.58	*2.40*	*2.55*	Earnings per sh A	*2.75*
.77	.82	.96	1.10	1.22	1.34	1.38	1.40	1.40	1.44	1.47	1.49	1.50	1.52	1.58	1.64	*1.65*	*1.66*	Div'd Decl'd per sh B ■	*1.80*
2.17	1.94	2.13	3.62	4.51	3.79	3.25	3.30	4.30	5.34	6.68	6.14	5.24	4.30	4.52	4.50	*4.30*	*4.05*	Cap'l Spending per sh	*3.25*
9.19	11.21	11.62	13.30	14.88	13.55	14.57	16.98	18.72	18.01	19.78	20.47	14.72	14.56	15.52	16.18	*17.40*	*18.35*	Book Value per sh C	*21.50*
354.72	378.14	380.15	385.04	373.27	374.58	377.18	483.39	578.41	581.94	630.32	665.85	673.86	679.73	693.40	720.32	*770.00*	*773.00*	Common Shs Outst'g D	*780.00*
10.6	12.5	15.1	14.1	17.3	17.6	25.7	11.9	10.5	10.9	12.8	14.1	13.9	12.8	17.6	11.3	*Bold figures are*		Avg Ann'l P/E Ratio	*14.5*
.60	.66	.80	.76	.92	1.06	1.71	.76	.66	.69	.72	.74	.70	.67	.89	.61	*Value Line*		Relative P/E Ratio	*.80*
4.0%	3.5%	3.3%	3.4%	2.7%	3.1%	4.5%	5.1%	5.1%	5.1%	4.8%	4.4%	4.5%	4.2%	4.2%	5.6%	*estimates*		Avg Ann'l Div'd Yield	*4.5%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $22934 mill. **Due in 5 Yrs** $7474 mill.
LT Debt $21547 mill. **LT Interest** $872 mill.
Incl. 23 mill. units 7.75%, $25 liq. value; 82,000 units 8.23%, $1000 face value.
(LT interest earned: 3.3x)

Leases, Uncapitalized Annual rentals 262 mill.
Pension Assets-12/18 $10910 mill.
Oblig $11158 mill.
Pfd Stock None
Common Stock 723,033,043 shs.
as of 10/31/19
MARKET CAP: $24 billion (Large Cap)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		22-24
7556.0	8521.0	12737	12286	11860	11499	7669.0	7517.0	7447.0	7785.0	*7700*	*7950*	Revenues ($mill)	*8600*
465.0	1009.0	1456.0	1536.0	1541.0	1583.0	1603.0	1902.0	1449.0	1827.0	*1810*	*1980*	Net Profit ($mill)	*2200*
21.8%	22.0%	31.0%	26.2%	23.1%	33.0%	22.5%	25.4%	24.2%	20.0%	*19.0%*	*19.0%*	Income Tax Rate	*19.0%*
9.5%	3.5%	4.0%	4.1%	3.7%	2.8%	1.6%	1.6%	1.9%	2.0%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*1.0%*
55.2%	59.0%	61.9%	64.1%	62.3%	58.0%	65.2%	64.3%	64.8%	63.3%	*59.0%*	*57.5%*	Long-Term Debt Ratio	*55.0%*
42.5%	39.8%	37.2%	35.9%	37.7%	42.0%	34.8%	35.7%	35.2%	36.7%	*41.0%*	*42.5%*	Common Equity Ratio	*45.0%*
12940	20621	29071	29205	33058	32484	28482	27707	30608	31726	*32750*	*33475*	Total Capital ($mill)	*37500*
13174	20858	27266	30032	33087	34597	30382	30074	33092	34458	*36525*	*38325*	Net Plant ($mill)	*41800*
5.2%	6.1%	6.5%	7.0%	6.2%	6.5%	7.1%	8.4%	6.2%	7.2%	*7.0%*	*7.5%*	Return on Total Cap'l	*7.0%*
8.0%	11.9%	13.1%	14.7%	12.4%	11.6%	16.2%	19.2%	13.5%	15.7%	*13.5%*	*14.0%*	Return on Shr. Equity	*13.0%*
8.1%	12.0%	13.3%	14.6%	12.4%	11.6%	16.2%	19.2%	13.5%	15.7%	*13.5%*	*14.0%*	Return on Com Equity E	*13.0%*
NMF	5.2%	6.4%	6.7%	5.3%	4.5%	6.0%	8.8%	3.5%	6.0%	*4.5%*	*5.0%*	Retained to Com Eq	*4.5%*
115%	58%	52%	54%	57%	61%	63%	54%	74%	62%	*68%*	*65%*	All Div'ds to Net Prof	*64%*

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	-.5	-1.5	+2.0
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Winter (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	339	336	292

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24
Revenues	-5.5%	-12.0%	*Nil*
"Cash Flow"	-1.5%	-3.0%	*3.5%*
Earnings	- -	-.5%	*1.5%*
Dividends	2.5%	2.0%	*2.0%*
Book Value	1.0%	-4.0%	*5.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	2011	1785	1889	1832	7517
2017	1951	1725	1845	1926	7447
2018	2126	1848	1872	1939	7785
2019	2079	1803	1933	*1885*	*7700*
2020	*2200*	*1850*	*2000*	*1900*	*7950*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.71	.71	.69	.68	2.79
2017	.59	.43	.51	.58	2.11
2018	.65	.73	.62	.57	2.58
2019	.64	.60	.65	*.51*	*2.40*
2020	*.70*	*.60*	*.65*	*.60*	*2.55*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2015	.3725	.3725	.3725	.3775	1.50
2016	.3775	.38	.38	.38	1.52
2017	.38	.395	.395	.395	1.57
2018	.395	.41	.41	.41	1.63
2019	.41	.4125	.4125	.4125	

BUSINESS: PPL Corporation (formerly PP&L Resources, Inc.) is a holding company for PPL Electric Utilities (formerly Pennsylvania Power & Light Company), which distributes electricity to 1.4 million customers in eastern & central PA. Acq'd Kentucky Utilities and Louisville Gas and Electric (1.2 mill. customers) 11/10. Has electric distribution sub. in U.K. (7.8 mill. customers). Sold gas distribution subsidiary in '08. Spun off power generating subsidiary in '15. The company no longer breaks out data on electric operating statistics. Fuel costs: 20% of revs. '18 reported depr. rate: 2.8%. Has 12,400 empls. Chairman & CEO: William H. Spence. President & COO: Vincent Sorgi. Inc.: PA. Address: Two North Ninth St., Allentown, PA 18101-1179. Tel.: 800-345-3085. Internet: www.pplweb.com.

PPL Corporation's stock has the highest dividend yield of any electric utility equity under our coverage. The yield is nearly two percentage points above the utility average. The stock trades at a discount to most electric issues because of the regulatory uncertainty arising from PPL's ownership of electric distribution companies in the United Kingdom. In April of 2023, a new regulatory scheme will replace the current one under which PPL's U.K. utilities operate. Investors are worried that the replacement will be unfavorable for the company. Selling or spinning off these operations would produce significant tax leakage. At least the prospect of an unfavorable change in political leadership appears to have diminished, and the stock price is up 14% since our August report. In addition, all of PPL's exposure to the British pound in 2019 and 70% of its exposure in 2020 is hedged at rates that are more favorable than current exchange rates.

We continue to estimate an earnings decline in 2019. In 2018, foreign currency hedges boosted share profits by $0.21, but this benefit amounted to just $0.03 in the first nine months of 2019. (We *include* these items in our earnings presentation because they are an ongoing part of PPL's results.) Average shares outstanding is much higher this year. Our 2019 share-net estimate is at the midpoint of PPL's targeted range of $2.35-$2.45.

We estimate a 6% earnings increase in 2020. PPL will benefit from a full year's effect of rate relief. The U.K. operations got a price hike in April, and the company's utilities in Kentucky were granted tariff increases at the start of May. PPL has already provided a 2021 profit target of $2.50-$2.80 a share, and we think the company will attain this goal.

This stock is of interest for income-oriented investors. However, our model for the 18-month period indicates negative total returns for this time frame. For the 3- to 5-year period, total return potential is superior to that of most utility issues.

Is a merger in PPL's future? The financial press has reported rumors of a combination between PPL and AVANGRID. Even if the rumor is accurate, there is no assurance that a deal will be reached.

Paul E. Debbas, CFA *November 15, 2019*

(A) Diluted EPS. Excl. nonrec. gain (losses): '07, (12¢); '10, (8¢); '11, 8¢; '13, (62¢); gains (losses) on disc. ops.: '07, 19¢; '08, 3¢; '09, (10¢); '10, (4¢); '12, (1¢); '14, 23¢; '15, ($1.36). '18 EPS don't sum due to rounding. Next earnings report due early Feb. (B) Div'ds paid in early Jan., Apr., July, & Oct. ■ Div'd reinvest. plan avail. (C) Incl. intang. In '18: $7.71/sh. (D) In mill., adj. for split. (E) Rate base: Fair value. Rate all'd on com. eq. in PA in '16: none spec.; in KY in '19: 9.725%; earned on avg. com. eq., '18: 16.1%. Regulatory Climate: Avg.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	15
Earnings Predictability	70

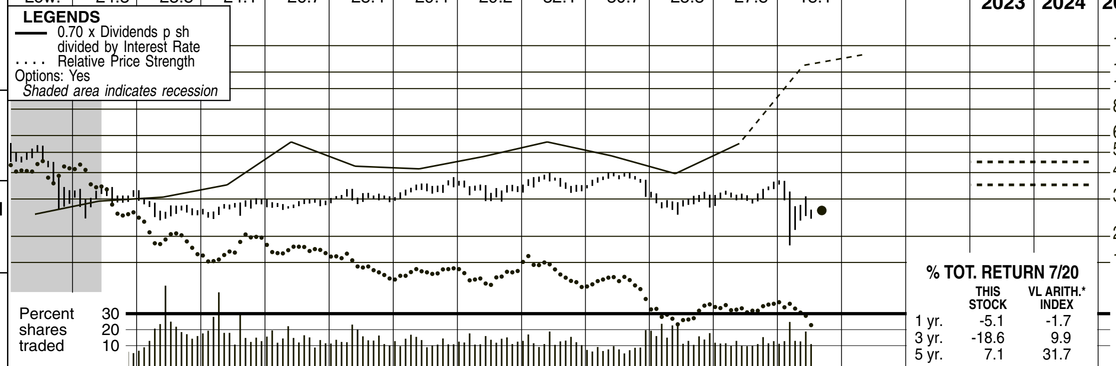
PPL CORPORATION NYSE-PPL

RECENT PRICE	P/E RATIO	(Trailing: 10.8, Median: 13.0)	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
26.52	11.4	Trailing: 10.8 Median: 13.0	0.53	6.3%	

TIMELINESS 3 Lowered 4/3/20
SAFETY 2 Raised 8/21/15
TECHNICAL 3 Raised 8/14/20
BETA 1.10 (1.00 = Market)

High:	34.4	33.1	30.3	30.2	33.6	38.1	36.7	39.9	40.2	32.5	36.3	36.8
Low:	24.3	23.8	24.1	26.7	28.4	29.4	29.2	32.1	30.7	25.3	27.8	18.1

Target Price Range
2023 | 2024 | 2025



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$19-$53	$36 (35%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	45	(+70%)	18%
Low	35	(+30%)	12%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	390	425	356
to Sell	335	349	435
Hld's(000)	514363	526640	514761

% TOT. RETURN 7/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-5.1	-1.7
3 yr.	-18.6	9.9
5 yr.	7.1	31.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
15.37	16.36	17.92	17.41	21.47	20.03	17.63	22.02	21.11	18.82	17.27	11.38	11.06	10.74	10.81	10.13	*9.80*	*10.05*	Revenues per sh	*11.00*
3.59	3.84	4.26	5.10	4.71	3.47	3.66	4.59	4.84	4.64	4.58	3.78	4.28	3.68	4.16	3.94	*4.20*	*4.30*	"Cash Flow" per sh	*5.00*
1.87	1.92	2.29	2.63	2.45	1.19	2.29	2.61	2.61	2.38	2.38	2.37	2.79	2.11	2.58	2.37	*2.40*	*2.45*	Earnings per sh A	*2.75*
.82	.96	1.10	1.22	1.34	1.38	1.40	1.40	1.44	1.47	1.49	1.50	1.52	1.58	1.64	1.65	*1.66*	*1.67*	Div'd Decl'd per sh B ■	*1.80*
1.94	2.13	3.62	4.51	3.79	3.25	3.30	4.30	5.34	6.68	6.14	5.24	4.30	4.52	4.50	4.02	*4.35*	*4.05*	Cap'l Spending per sh	*3.25*
11.21	11.62	13.30	14.88	13.55	14.57	16.98	18.72	18.01	19.78	20.47	14.72	14.56	15.52	16.18	16.93	*17.75*	*18.55*	Book Value per sh C	*21.25*
378.14	380.15	385.04	373.27	374.58	377.18	483.39	578.41	581.94	630.32	665.85	673.86	679.73	693.40	720.32	767.23	*771.00*	*775.00*	Common Shs Outst'g D	*780.00*
12.5	15.1	14.1	17.3	17.6	25.7	11.9	10.5	10.9	12.8	14.1	13.9	12.8	17.6	11.3	13.3	*Bold figures are*		Avg Ann'l P/E Ratio	*14.5*
.66	.80	.76	.92	1.06	1.71	.76	.66	.69	.72	.74	.70	.67	.89	.61	.72	*Value Line*		Relative P/E Ratio	*.80*
3.5%	3.3%	3.4%	2.7%	3.1%	4.5%	5.1%	5.1%	5.1%	4.8%	4.4%	4.5%	4.2%	4.2%	5.6%	5.2%	*estimates*		Avg Ann'l Div'd Yield	*4.5%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $23536 mill. **Due in 5 Yrs** $8902 mill.
LT Debt $20670 mill. **LT Interest** $864 mill.
Incl. 23 mill. units 7.75%, $25 liq. value; 82,000 units 8.23%, $1000 face value.
(LT interest earned: 3.3x)

Leases, Uncapitalized Annual rentals $29 mill.
Pension Assets-12/19 $12530 mill. **Oblig** $12661 mill.
Pfd Stock None
Common Stock 768,763,491 shs. as of 4/30/20
MARKET CAP: $20 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
8521.0	12737	12286	11860	11499	7669.0	7517.0	7447.0	7785.0	7769.0	*7550*	*7800*	Revenues ($mill)	*8500*
1009.0	1456.0	1536.0	1541.0	1583.0	1603.0	1902.0	1449.0	1827.0	1746.0	*1855*	*1885*	Net Profit ($mill)	*2090*
22.0%	31.0%	26.2%	23.1%	33.0%	22.5%	25.4%	24.2%	20.0%	19.0%	*19.0%*	*19.0%*	Income Tax Rate	*19.0%*
3.5%	4.0%	4.1%	3.7%	2.8%	1.6%	1.6%	1.9%	2.0%	1.9%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*2.0%*
59.0%	61.9%	64.1%	62.3%	58.0%	65.2%	64.3%	64.8%	63.3%	61.5%	*60.0%*	*59.5%*	Long-Term Debt Ratio	*57.5%*
39.8%	37.2%	35.9%	37.7%	42.0%	34.8%	35.7%	35.2%	36.7%	38.5%	*40.0%*	*40.5%*	Common Equity Ratio	*42.5%*
20621	29071	29205	33058	32484	28482	27707	30608	31726	33712	*34325*	*35425*	Total Capital ($mill)	*39100*
20858	27266	30032	33087	34597	30382	30074	33092	34458	36482	*38475*	*40150*	Net Plant ($mill)	*42900*
6.1%	6.5%	7.0%	6.2%	6.5%	7.1%	8.4%	6.2%	7.2%	6.6%	*7.0%*	*7.0%*	Return on Total Cap'l	*7.0%*
11.9%	13.1%	14.7%	12.4%	11.6%	16.2%	19.2%	13.5%	15.7%	13.4%	*13.5%*	*13.0%*	Return on Shr. Equity	*12.5%*
12.0%	13.3%	14.6%	12.4%	11.6%	16.2%	19.2%	13.5%	15.7%	13.4%	*13.5%*	*13.0%*	Return on Com Equity E	*12.5%*
5.2%	6.4%	6.7%	5.3%	4.5%	6.0%	8.8%	3.5%	6.0%	4.3%	*4.0%*	*4.0%*	Retained to Com Eq	*4.0%*
58%	52%	54%	57%	61%	63%	54%	74%	62%	68%	*69%*	*69%*	All Div'ds to Net Prof	*67%*

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-1.5	+2.0	-3.4
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Winter (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	336	292	283

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-6.0%	-11.0%	.5%
"Cash Flow"	-1.0%	-3.5%	4.0%
Earnings	1.0%	-1.0%	2.5%
Dividends	2.0%	2.0%	2.0%
Book Value	1.0%	-3.5%	4.5%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1951	1725	1845	1926	7447.0
2018	2126	1848	1872	1939	7785.0
2019	2079	1803	1933	1954	7769.0
2020	2054	*1700*	*1896*	*1900*	*7550*
2021	*2100*	*1800*	*1950*	*1950*	*7800*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.59	.43	.51	.58	2.11
2018	.65	.73	.62	.57	2.58
2019	.64	.60	.65	.48	2.37
2020	.72	*.53*	*.60*	*.55*	*2.40*
2021	*.65*	*.60*	*.65*	*.55*	*2.45*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.3775	.38	.38	.38	1.52
2017	.38	.395	.395	.395	1.57
2018	.395	.41	.41	.41	1.63
2019	.41	.4125	.4125	.4125	1.65
2020	.4125	.415	.415		

BUSINESS: PPL Corporation (formerly PP&L Resources, Inc.) is a holding company for PPL Electric Utilities (formerly Pennsylvania Power & Light Company), which distributes electricity to 1.4 million customers in eastern & central PA. Acq'd Kentucky Utilities and Louisville Gas and Electric (1.3 mill. customers) 11/10. Has electric distribution sub. in U.K. (7.9 mill. customers). Sold gas distribution subsidiary in '08. Spun off power-generating subsidiary in '15. The company no longer breaks out data on electric operating statistics. Fuel costs: 18% of revs. '19 reported depr. rate: 2.8%. Has 12,300 empls. Chairman: William H. Spence. President & CEO: Vincent Sorgi. Inc.: PA. Address: Two North Ninth St., Allentown, PA 18101-1179. Tel.: 800-345-3085. Internet: www.pplweb.com.

The dividend yield of PPL Corporation stock is more than two percentage points above the average for electric utility issues. Unlike other electric equities in the United States, PPL has electric companies in the United Kingdom, and this concerns investors. Thus, the company's results have exposure to exchange rates. As of March 31st, 86% of PPL's exposure for the remainder of 2020 was hedged, but the company was just 8% hedged for 2021. Investors are also worried about the possibility of unfavorable (for the company) change to the regulatory scheme in the U.K. when this occurs in April of 2023. A sale or spinoff of the U.K. utilities appears unlikely because this would cause significant tax leakage. The price of PPL stock has declined 26% this year, more than most utility issues have fallen.

Our 2020 earnings estimate is at the low end of PPL's targeted range of $2.40-$2.60 a share. We are being conservative given the possible costs of the coronavirus and effects of the weak economy on kilowatt-hour sales. A large increase in average shares outstanding is another factor hurting the share-net comparison this year. Our estimate is just slightly above the 2019 tally. We look for another small earnings increase, to $2.45 a share, in 2021. PPL's guidance for next year is the same $2.40-$2.60 a share as for 2020. Note that second-quarter results were scheduled to be released shortly after our report went to press.

The timing of the next rate cases in the United States is uncertain. PPL's distribution utility in Pennsylvania has no plans to file. In Kentucky, the usual timing is to apply every other year. The last rate increase for the company's two utilities there occurred in 2019.

This stock has appeal for income-oriented investors. The dividend yield is high, but we think the disbursement is not at risk of being cut. The payout ratio is not so elevated, and PPL's finances are sound. Total return potential is attractive for the next 18 months and respectable for the 3- to 5-year period. The one drawback is that dividend growth prospects through 2023-2025 are well below the norm for electric companies.

Paul E. Debbas, CFA *August 14, 2020*

(A) Diluted EPS. Excl. nonrec. gain (losses): '07, (12¢); '10, (8¢); '11, 8¢; '13, (62¢); gains (losses) on disc. ops.: '07, 19¢; '08, 3¢; '09, (10¢); '10, (4¢); '12, (1¢); '14, 23¢; '15, ($1.36). '18 EPS don't sum due to rounding. Next earnings report due early Nov. (B) Div'ds paid in early Jan., Apr., July, & Oct. ■ Div'd reinvest. plan avail. (C) Incl. intang. In '19: $7.08/sh. (D) In mill., adj. for split. (E) Rate base: Fair value. Rate all'd on com. eq. in '16: none spec.; in KY in '19: 9.725%; earned on avg. com. eq., '19: 14.3%. Regulatory Climate: Avg.

Company's Financial Strength	B++
Stock's Price Stability	75
Price Growth Persistence	15
Earnings Predictability	75