ADRIEN M. MCKENZIE WORKPAPERS

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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* (Jan. 13, 2017) at p. 1780.
WP-4	Moody's Investors Service, *Kentucky Power Company*, Credit Opinion (Apr. 14, 2020).
WP-5	Moody's Investors Service, "US utility sector upgrades driven by stable and transparent regulatory frameworks," *Sector Comment* (Feb. 3, 2014).
WP-6	S&P Global Market Intelligence, *Adjustment Clauses, A State-by-State Overview*, RRA Regulatory Focus (Nov. 12, 2019).
WP-7	S&P Global Ratings, *Kentucky Power Co.*, RatingsDirect (Apr. 8, 2020).
WP-8	S&P Global Ratings, *COVID-10: The Outlook For North American Regulated Utilities Turns Negative*, RatingsDirect (Apr. 2, 2020).
WP-9	S&P Global Ratings, *North American Regulated Utilities Face Tough Financial Policy Tradeoffs To Avoid Ratings Pressure Amid The COVID-19 Pandemic*, RatingsDirect (May 11, 2020).
WP-10	Moody's Investors Service, *FAQ on credit implications of the coronavirus outbreak*, Sector Comment (Mar. 26, 2020).
WP-11	S&P Global Ratings, *Credit Conditions North America: Unprecedented Uncertainty Slams Credit* (Mar. 31, 2020).
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WP-13	S&P Global Market Intelligence, *State Regulatory Evaluations*, RRA Regulatory Focus (Mar. 25, 2020).
WP-14	Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports* at 71 (2006).
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WP-19	Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports, Inc.* (2006) at 307.
WP-20	*Morningstar*, "Ibbotson SBBI 2015 Classic Yearbook," at pp. 99, 108.
WP-21	Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports* at 189-190 (2006).
WP-22	E. F. Brigham, D. A. Aberwald, and L. C. Gapenski, "Common Equity Flotation Costs and Rate Making," *Public Utilities Fortnightly* (May 2, 1985).

ADRIEN M. MCKENZIE WORK PAPERS

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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.

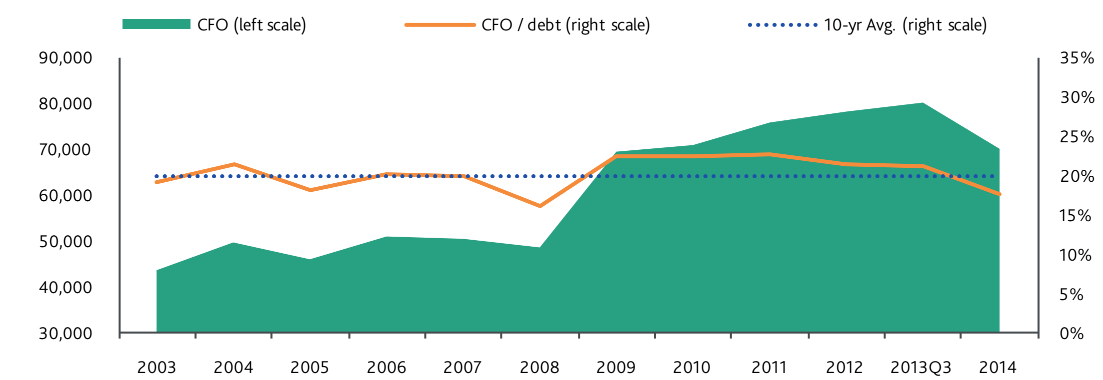
Fundamentally, the regulatory environment is the most important driver of our outlook because it sets the pace for cost-recovery. Favorable rate orders, even in states where utilities have had contentious regulatory relationships in the past, are part of what we view as a broader shift toward stronger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

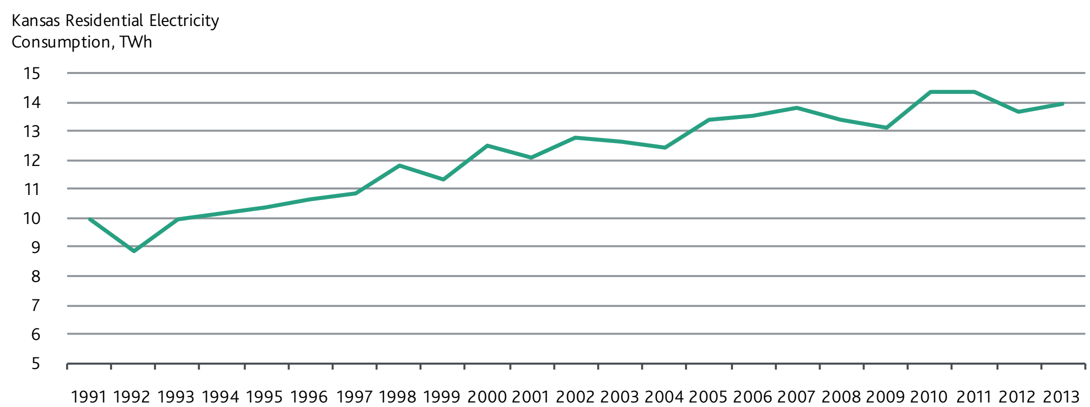
Puget Sound Energy Inc.'s (PSE; Baa1 stable) June 2013 rate order is a good example. Its regulator, the Washington Utilities and Transportation Commission, approved the decoupling of electric and gas revenue from sales volume, and a property-tax tracker that provides more-efficient recovery of property-tax 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



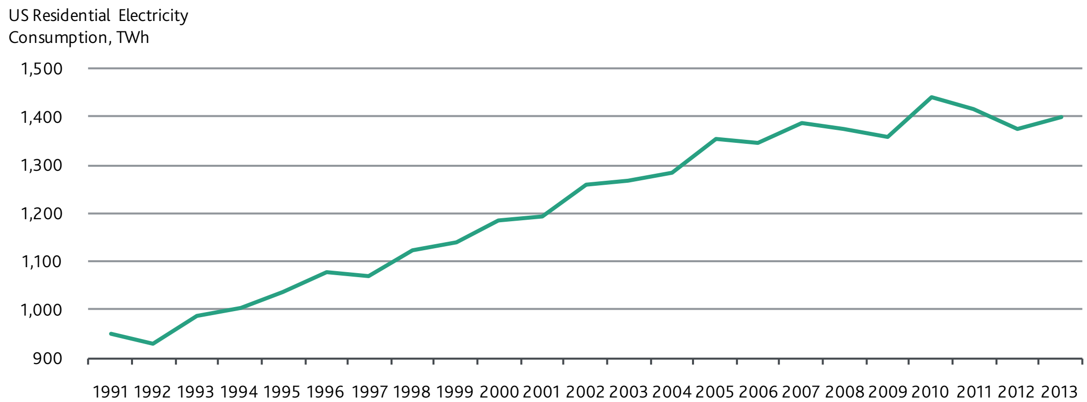
Notes: TWh stands for terawatt hour. 2013 US Energy Information Administration (EIA) data are through October 2013. Our estimates for November and December 2013 are based on historical trends.
Source: US Energy Information Administration

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)

» US Unregulated Power: Headwinds continue for the merchant power players, July 2013 (156302)

» US Coal Industry Outlook Stabilizes as Business Conditions Hit Bottom, August 2013 (157309)

» Global Oil & Gas: Persistent High Oil Prices Keep Industry Robust, but Global Supply Increasing (Summary), December 2013 (160980)

Special Comment:

» US utility sector upgrades driven by stable and transparent regulatory frameworks, January 2014 (163726)

» YieldCos: Fantastic for Shareholders; Less So for Bondholders, November 2013 (160121)

» Planned Capital Expenditures Set to Fall in 2015, And Modestly Decline Thereafter, October 2013 (158945)

» US Telecommunications and Regulated Utilities: End of Bonus Depreciation Could Prompt Cuts in Capital Spending, Dividends, September 2013 (157572)

» US Local Gas Distribution Companies: Lower risks and unique growth opportunities versus electric utility peers, May 2013 (153018)

» The Prospect of US LNG Exports Influences Pricing and Gas Markets Worldwide, May 2013 (151819)

» US Extends Tax Credit for Wind Power, a Credit Positive for Developers and Utilities, January 2013 (148915)

Rating Methodology:

» Regulated Electric and Gas Utilities, December 2013 (157160)

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Analyst Contacts:

NEW YORK	+1.212.553.1653
Jeffrey F. Cassella *Analyst* jeffrey.cassella@moodys.com	+1.212.553.1665
Lesley Ritter *Analyst* lesley.ritter@moodys.com	+1.212.553.1607
Toby Shea *Vice President - Senior Analyst* toby.shea@moodys.com	+1.212.553.1779
Swami Venkataraman *Vice President - Senior Credit Officer* swami.venkataraman@moodys.com	+1.212.553.7950
Susana Vivares *Vice President - Senior Analyst* susana.vivares@moodys.com	+1.212.553.4694
Larry Hess *Managing Director - Utilities* larry.hess@moodys.com	+1.212.553.3837

TORONTO	+1.416.214.1635
Gavin MacFarlane *Vice President – Senior Analyst* gavin.macfarlane@moodys.com	+1.416.214.3864

Report Number: 164268

Author
Ryan Wobbrock

Production Specialist
Cassina Brooks

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.

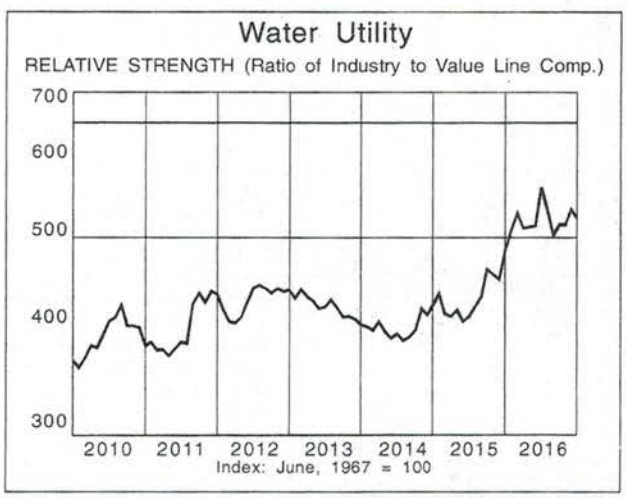
Consolidation

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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CREDIT OPINION
14 April 2020

Update

Rate this Research

RATINGS

Kentucky Power Company

Domicile	Ashland, Kentucky, United States
Long Term Rating	Baa3
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.

Analyst Contacts

Cliff Wang +1.212.553.6905
Associate Analyst
cliff.wang@moodys.com

Laura Schumacher +1.212.553.3853
VP-Sr Credit Officer
laura.schumacher@moodys.com

Michael G. Haggarty +1.212.553.7172
Associate Managing Director
michael.haggarty@moodys.com

Jim Hempstead +1.212.553.4318
MD-Utilities
james.hempstead@moodys.com

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

Kentucky Power Company

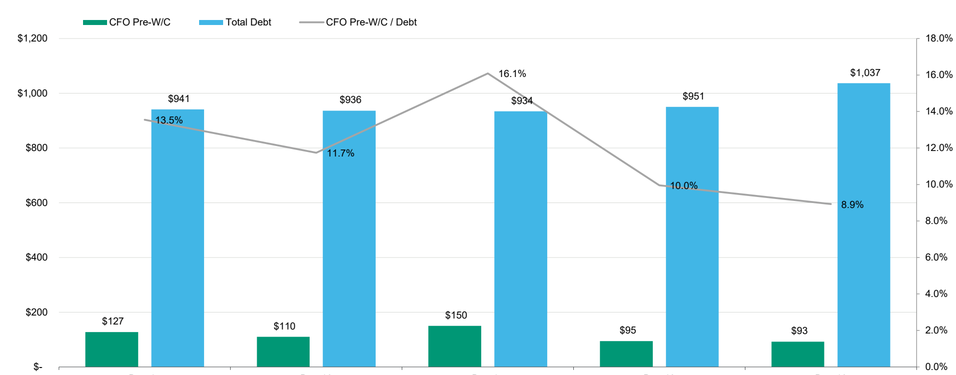
Update to credit analysis

Summary

Our view of Kentucky Power Company's (KPCo) credit reflects its risk profile as a vertically integrated electric utility operating in eastern Kentucky. Our opinion reflects the lower cash flow and cash flow-based credit metrics the company has demonstrated in recent years as a result of under earning and required refunds in an economically challenged service territory. Longer term, KPCo remains exposed to carbon transition risks because a sizeable portion of its rate base is represented by coal-fired generating assets.

The rapid and widening spread of the coronavirus outbreak, deteriorating global economic outlook, falling oil prices, 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 expect utilities like KPCo to be relatively resilient to recessionary pressures because of its predominantly rate regulated business. 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. Longer term, recessionary pressures may increase regulatory resistance to rate increases, which could also negatively impact credit metrics.

Exhibit 1
Historical CFO Pre-W/C, Total Debt and CFO Pre-W/C to Debt ($ in millions)



Source: Moody's Financial Metrics

Credit strengths

» Reasonable regulatory relationship

» Position as part of the American Electric Power Company (AEP) family

Credit challenges

» Increasing capital expenditures and cash deferrals will continue to pressure already low credit metrics

» Relatively weak service territory in eastern Kentucky

» Elevated carbon transition risk

Rating outlook

KPCo's stable rating outlook recognizes that its low cash flow-based credit metrics will continue to be impacted by a relatively weak service territory and a heightened capital expenditure program. In the near-term, cash flows are also being pressured by deferrals agreed to in the utility's last rate case, and a requirement to leave rates unchanged until 2021. Beyond 2020, we expect KPCo's annual ratio of cash flow from operations excluding changes in working capital (CFO pre-WC) to debt will be in the 10%-13% range.

Factors that could lead to an upgrade

» An improvement in economic conditions, or a reduction in operating or capital expenses, leading to improved financial performance

» A sustained ratio of CFO pre-WC to debt above 13% with a ratio of CFO pre-WC less dividends above 11%

Factors that could lead to a downgrade

» A deterioration in KPCo's relationship with its regulator

» An increase in capital or operating expenses that KPCo was unable to recover on a timely basis

» A ratio of CFO pre-WC to debt remaining below 10% for a sustained period of time

Key indicators

Exhibit 2

Kentucky Power Company Indicators [1]

	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19
CFO Pre-W/C + Interest / Interest	3.8x	3.3x	4.3x	3.4x	3.2x
CFO Pre-W/C / Debt	13.5%	11.7%	16.1%	10.0%	8.9%
CFO Pre-W/C – Dividends / Debt	8.9%	7.0%	12.3%	10.0%	8.4%
Debt / Capitalization	42.1%	41.3%	46.8%	45.6%	46.4%

[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

Kentucky Power Company (KPCo), a vertically integrated electric utility company headquartered in Ashland, Kentucky, is a wholly owned subsidiary of American Electric Power Company, Inc. (AEP, Baa1 negative), with about $1.8 billion in rate base (4% of AEP's total) and 2019 revenue of about $619 million (about 4% of AEP's total revenue). The utility is primarily regulated by the Kentucky Public Service Commission (KPSC).

Detailed credit considerations

Reasonable regulatory relationship

Moody's views the regulatory environment in Kentucky as reasonably supportive to long-term credit quality; however, the KPSC's decisions have been impacted by the weak economic conditions in KPCo's service territory. In its last (January 2018) rate decision, the KPSC cited the area's economic challenges as a rationale for its decision to award a lower return on equity than had been agreed to with intervenors, or initially requested by the utility. The company also agreed to a three year stay-out provision and a five-year deferral period (through 2022) of approximately $50 million of costs ($15 million in year one) associated with an affiliate power purchase agreement.

Kentucky does provide a suite of cost recovery mechanisms that help reduce regulatory lag, including a fuel adjustment clause and environmental recovery riders which allow a utility to earn a return on construction work in progress. Utilities in Kentucky can also start to collect interim rates approximately six months after filing a rate case if the KPSC has not acted on it.

In its last (January 2018) rate order, the KPSC authorized a $12.4 million (approximately 2%) base rate increase reflecting a 9.7% return on equity (ROE), a 42% equity layer and a rate base of $1.2 billion. The order followed KPCo's November 2017 non-unanimous (excluding the state Attorney General) settlement with intervenors that included a $31.8 million rate increase premised on a 9.75% ROE. The noticeable differential between the authorized increase and the amount agreed upon in the settlement was primarily driven by a $14 million reduction to reflect the impact of a lower corporate tax rate on KPCo's revenue requirement. In addition, in June 2018, the KPSC approved a settlement that required KPCo to return a total of $175 million of excess deferred taxes over 18 years. The refunds became effective July 1, 2018.

The KPSC's January 2018 order also approved rider recovery for 80% of any changes to KPCo's PJM transmission costs (beyond what is currently included in base rates), which is positive for credit in light of the agreed upon three year stay-out (new rates effective no earlier than January 2021). In addition, in an effort to reduce rates, and in light of lower load levels, the KPSC discontinued nearly all of KPCo' demand-side management/energy efficiency programs for both residential and commercial customers and ordered the implementation of customer credits to return prior over collections.

The January 2018 rate decision was initiated in June 2017, when KPCo requested a rate increase of approximately $65.4 million (later lowered to $60 million to reflect lower debt financing costs), incorporating a 10.31% ROE, 42% equity layer and $1.2 billion rate base valuation.

We expect KPCo to file its next rate increase request in by mid-2020; although timing may be impacted by the recent coronavirus outbreak.

Cash flow credit metrics are under pressure

Historically, KPCo's key cash flow based financial credit metrics were strong for its credit quality, including CFO pre-WC to debt in the mid-to-high teens. More recently, cash flow metrics have declined fairly dramatically as the utility's debt load increased in conjunction with its generation transforming capital program, while sales volumes have been negatively impacted by challenging economic conditions. KPCo has now shifted the focus of its capital spending to its transmission and distribution system, but the program remains robust. Investment during the 2020-2024 period is expected to average approximately $180 million per year versus approximately $110 million annually for the three-year period between 2016 and 2018. In 2019, capital expenditures totaled over $160 million.

KPCo's has historically struggled to earn its authorized ROE. Following the January 2018 rate increase, equity earnings improved to 9.0% for the twelve months ending December 2018, a significant improvement from 2017 when the company earned only 5.1%. However, in 2019, weak economic conditions and increased expenses contributed to KPCo's reported earned return falling to 7.4%. Going forward, the company will remain focused on expense control and will likely seek additional rate relief to be able to earn closer to its allowed 9.7% ROE and to improve its cash flow.

As of December 2019, KPCo's three-year average CFO pre-WC to debt was about 12%, for calendar year 2019, the metric was about 9%. These metrics fall near the high end of the "Ba" scoring range of 5%-13% for this key metric within in our rating methodology for regulated electric and gas utilities. As a subsidiary of AEP, the company has some flexibility with regards to dividend policy including the ability to retain cash in response to lower cash flow. In 2018, no dividends were paid to AEP; in 2019, a minimal $5 million was paid as a result, the company's ratios of CFO pre-WC less dividends to debt were at the low end of the "Baa" scoring range for this factor.

Over the next few years, we expect the combination of increased debt to fund capital expenditures, federal tax reform (which eliminated bonus depreciation and lowered the amount of cash utilities are able to defer for taxes), and deferred cost recovery, will maintain pressure on CFO pre-WC. However, we expect the near-term pressure from deferrals and amortization of excess deferred taxes will subside allowing KPCo to generate ratios of CFO pre-WC in a range of 10%-13%. In light of these relatively low ratios, we expect the company may continue to limit dividends, which would cause its ratios of CFO pre-WC less dividends to debt to remain at similar levels and be supportive of credit quality.

Service territory economy remains depressed

According to Moody's Economy, Kentucky's growth is expected to rank among the lowest in the south. Employment from mid-2018 to mid-2019 expanded by only 0.4% compared to 1.3% nationally. While private services are expanding, the large manufacturing sector is not adding staff and the public sector is shrinking. While, healthcare is expected to be a source of stability, making up 13% of the workforce, longer term Kentucky is expected to continue to underperform the south and the U.S.

KPCo has been actively working with state and federal officials to foster economic development in eastern Kentucky that will bring job opportunities, increase customer retention, and support load growth. However, these efforts have yet to begin to meaningfully contribute to utility load growth or cash flow. Approximately 41% of KPCo's 2019 energy sales were to industrial customers. In the same year, total weather normalized retail load was down 0.7%; this follows a similar decline of 0.7% in 2018, 1.7% in 2017, 6.6% in 2016 and 3.4% in 2015.

Position within the AEP family

As a subsidiary of AEP, KPCo has access to services and efficiencies of a larger organization through agreements that provide management and coordination of physical and financial activities surrounding power, transmission, capacity, natural gas and risk management activities. The company also benefits from ready access to capital from its parent, and ability to retain capital for investment. In the near-term, in light of the economic challenges facing the company, we anticipate KPCo will make limited, if any, distributions to the AEP parent.

AEP is one of the largest electric utility holding companies in the U.S. with approximately $76 billion in total assets, $46 billion in rate base and 40,000 miles of transmission lines, serving about 5.4 million customers in eleven states.

ESG considerations

Environmental considerations incorporated into our credit analysis for KPCo are primarily related to carbon regulations. KPCo has elevated carbon transition risk within the regulated utility sector as its significant coal generation ownership results in a higher risk profile than other vertically integrated electric utilities. KPCo's total owned generation capacity of 1,060 MW includes a 50% ownership in the coal-fired Mitchell plant (780 MW) and the gas-fired Big Sandy Unit 1 (280 MW). KPCo also purchases approximately 393 MW from its affiliate AEP Generating Company's share of the Rockport coal plant under a long-term unit power agreement, bringing its overall capacity mix to 19% natural gas and 81% coal. Social risks are primarily related to health and safety as well as demographic and societal trends. Corporate governance considerations include financial policy and we note that a strong financial position is an important characteristic for managing environmental and social risks.

Liquidity analysis

KPCo's liquidity is adequate. For the twelve months ending December 31, 2019, KPCo generated approximately $81 million of cash from operations, invested $163 million in capital expenditures and up streamed $5 million in dividends to parent AEP, resulting in a negative free cash flow (FCF) of approximately $86 million. In 2018, KPCo generated CFO of approximately $118 million, invested $136 million in capital expenditures and paid no dividends to parent AEP, resulting in a negative FCF of $18 million. Going forward, we expect KPCo will remain free cash flow negative as capital expenditures increase. Shortfalls are likely to be funded with a combination of long-term debt issuance and short-term funding from the utility money pool.

Although KPCo does not benefit from a dedicated external credit facility, the company does have access to its parent company AEP's liquidity through participation in its utility money pool. As of December 31 2019, KPCo's borrowing limit under the money pool was $180 million and the utility had borrowed approximately $113 million. KPCo also utilizes AEP's $750 million receivable securitization facility, which expires in July 2021; at the end of December 2019, KPCo had approximately $42 million of receivables sold under its arrangement with AEP Credit. KPCo's nearest maturity is $65 million of pollution control bonds with a June 2020 put date and $40 million in senior unsecured notes due in June 2021. We expect the utility will look to refinance these obligations well in advance of their maturities.

AEP currently has one syndicated credit facility totaling $4.0 billion expiring in June 2022. As of December 31, 2019, AEP had approximately $2.11 billion of outstanding commercial paper utilizing capacity under the facility. AEP is not required to make a representation with respect to either material adverse change or material litigation in order to borrow under the facilities. The facilities contain a covenant requiring that AEP's consolidated debt to capitalization (as defined) not exceed 67.5%. AEP states the contractually defined ratio was 57.4% at December 31, 2019.

Rating methodology and scorecard factors

Exhibit 3

Kentucky Power Company

Regulated Electric and Gas Utilities Industry Grid [1][2]	Current FY 12/31/2019		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	Baa	Baa	Baa	Baa
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	Baa	Baa	Baa	Baa
Factor 3 : Diversification (10%)				
a) Market Position	Ba	Ba	Ba	Ba
b) Generation and Fuel Diversity	B	B	B	B
Factor 4 : Financial Strength (40%) [4]				
a) CFO pre-WC + Interest / Interest (3 Year Avg)	3.7x	Baa	3.5x - 4x	Baa
b) CFO pre-WC / Debt (3 Year Avg)	11.6%	Ba	9% - 12%	Ba
c) CFO pre-WC – Dividends / Debt (3 Year Avg)	10.2%	Baa	9% - 12%	Baa
d) Debt / Capitalization (3 Year Avg)	46.3%	Baa	45% - 50%	Baa
Rating:				
Scorecard-indicated Outcome Before Notching Adjustment		Baa2		Baa3
HoldCo Structural Subordination Notching				
a) Scorecard-indicated Outcome		Baa2		Baa3
b) Actual Rating Assigned		Baa3		Baa3

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
[2] As of 12/31/2019(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.
[4] Standard Risk Grid for Financial Strength
Source: Moody's Financial Metrics

Appendix

Exhibit 4

Peer Comparison [1]

	Kentucky Power Company			Duke Energy Kentucky, Inc.			Louisville Gas & Electric Company			Kentucky Utilities Co.		
	Baa3 Stable			Baa1 Stable			A3 Stable			A3 Stable		
(in US millions)	FYE Dec-17	FYE Dec-18	FYE Dec-19	FYE Dec-17	FYE Dec-18	LTM Sept-19	FYE Dec-17	FYE Dec-18	FYE Dec-19	FYE Dec-17	FYE Dec-18	FYE Dec-19
Revenue	$643	$642	$619	$431	$483	$487	$1,453	$1,496	$1,500	$1,744	$1,760	$1,740
CFO Pre-W/C	$150	$95	$93	$103	$141	$140	$566	$519	$558	$699	$648	$653
Total Debt	$934	$951	$1,037	$511	$653	$817	$1,984	$2,171	$2,283	$2,440	$2,625	$2,827
CFO Pre-W/C / Debt	16.1%	10.0%	8.9%	20.1%	21.6%	17.2%	28.5%	23.9%	24.4%	28.6%	24.7%	23.1%
CFO Pre-W/C – Dividends / Debt	12.3%	10.0%	8.4%	20.1%	21.6%	17.2%	18.9%	16.7%	16.5%	19.4%	15.3%	15.0%
Debt / Capitalization	46.8%	45.6%	46.4%	42.4%	44.7%	48.7%	39.1%	39.7%	39.9%	37.7%	38.7%	39.4%

[1] All figures & ratios calculated using Moody's estimates & standard adjustments. FYE = Financial Year-End. LTM = Last Twelve Months.
Source: Moody's Financial Metrics

Exhibit 5

Cash flow and credit measures [1]

CF Metrics	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19
As Adjusted					
FFO	154	132	152	119	115
+/- Other	(26)	(22)	(2)	(25)	(22)
CFO Pre-WC	127	110	150	95	93
+/- ΔWC	16	38	(21)	27	(10)
CFO	144	148	129	122	82
- Div	44	44	35	-	5
- Capex	115	101	97	138	163
FCF	(15)	3	(3)	(16)	(86)
(CFO Pre-W/C) / Debt	13.5%	11.7%	16.1%	10.0%	8.9%
(CFO Pre-W/C - Dividends) / Debt	8.9%	7.0%	12.3%	10.0%	8.4%
FFO / Debt	16.3%	14.1%	16.3%	12.6%	11.1%
RCF / Debt	11.7%	9.4%	12.6%	12.6%	10.6%
Revenue	654	655	643	642	619
Cost of Good Sold	304	260	250	253	230
Interest Expense	46	47	46	40	42
Net Income	21	50	35	54	50
Total Assets	2,484	2,518	2,360	2,465	2,612
Total Liabilities	1,824	1,852	1,693	1,735	1,834
Total Equity	660	666	667	730	778

[1] All figures & ratios calculated using Moody's estimates & standard adjustments. FYE = Financial Year-End. LTM = Last Twelve Months.
Source: Moody's Financial Metrics

Ratings

Exhibit 6

Category	Moody's Rating
KENTUCKY POWER COMPANY	
Outlook	Stable
Issuer Rating	Baa3
Senior Unsecured	Baa3
PARENT: AMERICAN ELECTRIC POWER COMPANY, INC.	
Outlook	Negative
Senior Unsecured	Baa1
Jr Subordinate	Baa2
Commercial Paper	P-2

Source: Moody's Investors Service

REPORT NUMBER 1223549

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US utility sector upgrades driven by stable and transparent regulatory frameworks

» 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.

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

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 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.

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

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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Analyst Contacts:

NEW YORK +1.212.553.1653

Mihoko Manabe +1.212.553.1942
Senior Vice President
mihoko.manabe@moodys.com

Toby Shea +1.212.553.1779
Vice President - Senior Analyst
toby.shea@moodys.com

Susana Vivaras +1.212.553.1722
Vice President-Senior Analyst
susana.vivaras@moodys.com

Jeffrey Cassella +1.212.553.1665
Analyst
jeffrey.cassella@moodys.com

Ryan Wobbrock +1.212.553.7104
Assistant Vice President - Analyst
ryan.wobbrock@moodys.com

Swami Venkataraman +1.212.553.7950
Vice President - Senior Credit Officer
swami.venkat@moodys.com

Sam Asher +1.212.553.1482
Associate Analyst
sam.asher@moodys.com

Franklin Sherman +1.212.553.4635
Associate Analyst
franklin.sherman@moodys.com

Susan Lam +1.212.553.4351
Associate Analyst
susan.lam@moodys.com

Sid Menon +1.212.553.0165
Associate Analyst
siddharth.menon@moodys.com

Caroline Guerrero +1.212.535.0511
Associate Analyst
caroline.guerrero@moodys.com

Jairo Chung +1.212.553.5123
Associate Analyst
jairo.chung@moodys.com

Jim Hempstead +1.212.553.4318
Associate Managing Director
james.hempstead@moodys.com

Michael Haggarty +1.212.553.7172
Senior Vice President
michael.haggarty@moodys.com

Walter Winrow +1.212.553.7943
Managing Director - Global Project and Infrastructure Finance
walter.winrow@moodys.com

Report Number: 163726

Author
Jim Hempstead

Production Associate
Vikas Baisla

S&P Global
Market Intelligence

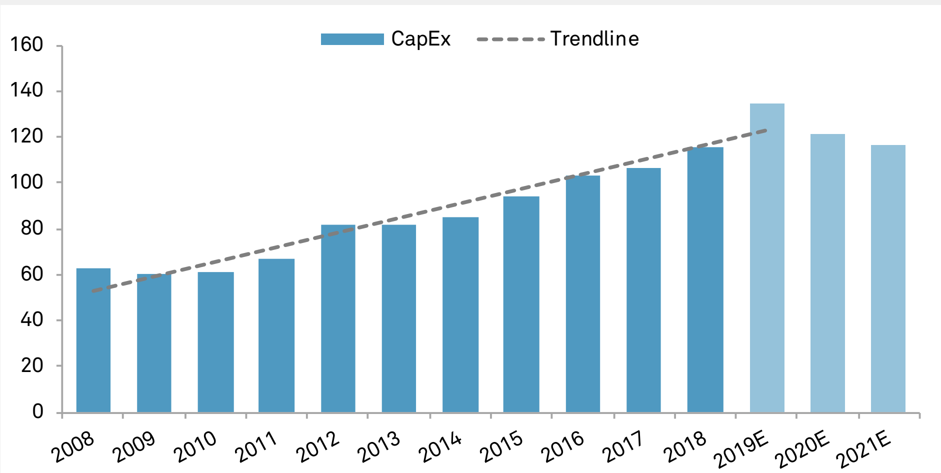
November 12, 2019
spglobal.com/marketintelligence

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.

Russell Ernst, CFA
Principal Analyst

Amy Poszywak
Research Analyst

Sales & subscriptions
Sales_NorthAm@spglobal.com

Enquiries
support.mi@spglobal.com

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.

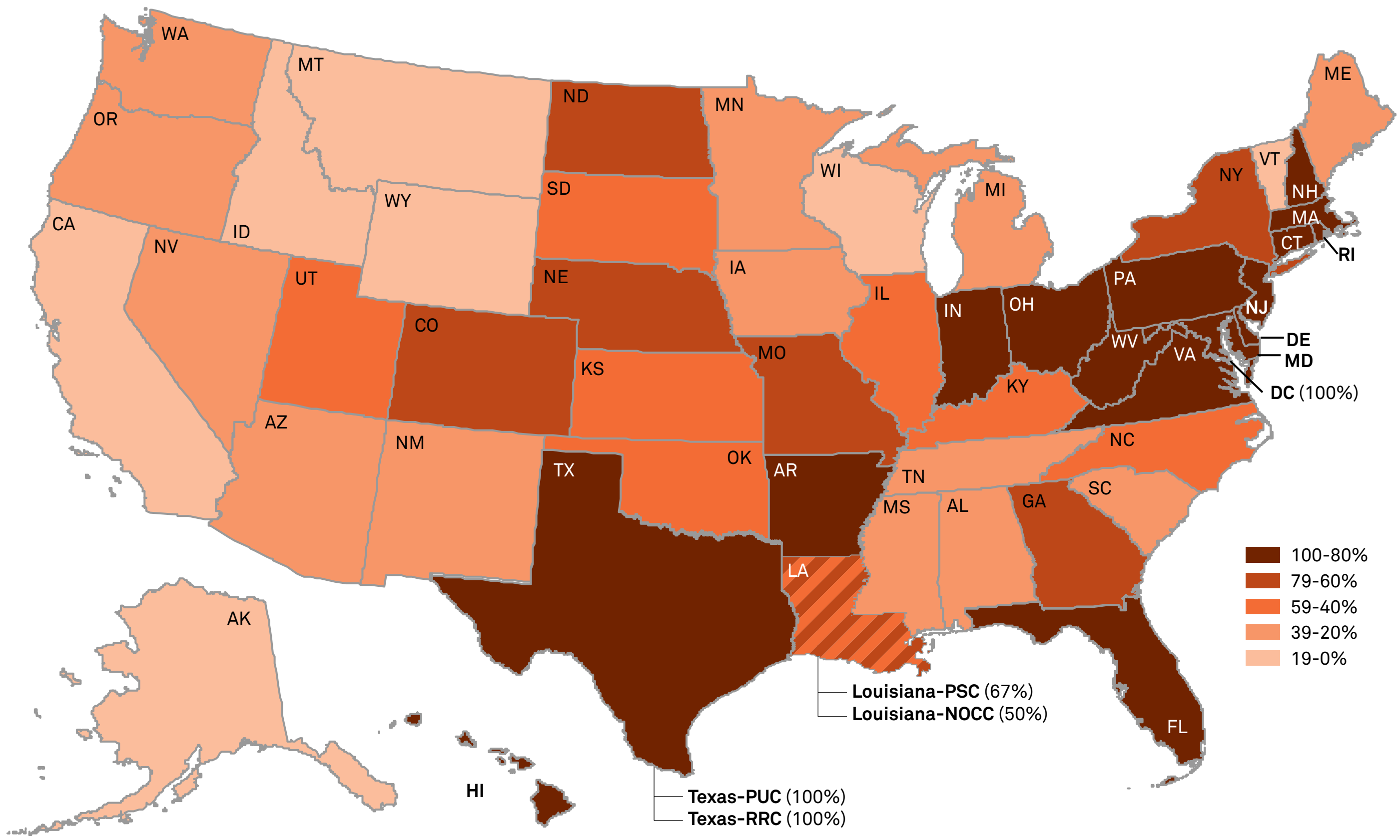
Another type of adjustment clause, a decoupling mechanism, enables utilities to offset the effect on revenues of fluctuations in sales caused by customer participation in energy efficiency programs, deviations from "normal" temperature patterns, or economic conditions. RRA considers a decoupling mechanism 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.

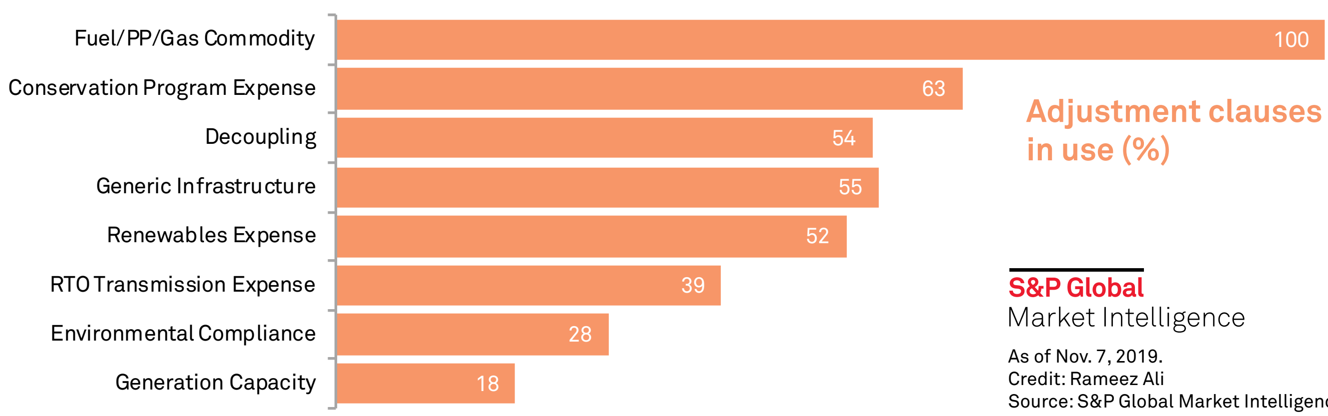
More recently and with greater frequency, commissions have approved mechanisms that permit the costs associated with the construction of new generation capacity or delivery infrastructure to be reflected in rates, effectively including these items in rate base without a full rate case. In some instances, 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 (%)





S&P Global
Market Intelligence

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

Contributors: Charlotte Cox, Jim Davis, Monica Hlinka, Lillian Federico, Lisa Fontanella, Jason Lehmann, Dan Lowrey and Amy Poszywak

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	✓	--	--	--	✓ *	--	--	✓ *	--	✓ *

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	
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	✓		✓	--		--		--	--		--		--		--	✓	*

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	✓	✓ *	✓	--	--	✓ *	--	✓ *	--	✓ *

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
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.	-- *	--	--	✓ *	--	--	--	✓ *	--	--

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	
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	--	*	✓		--	*	--		--		--		--		✓	*	--	✓	*

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
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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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.	✓	✓	--	--	--	--	--	✓ *	--	✓ *

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.*

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Kentucky Power Co.

Primary Credit Analyst:
Gerrit W Jepsen, CFA, New York (1) 212-438-2529; gerrit.jepsen@spglobal.com

Secondary Contacts:
William Hernandez, Farmers Branch + 1 (214) 765-5877; william.hernandez@spglobal.com
Dimitri Henry, New York + 1 (212) 438 1032; dimitri.henry@spglobal.com

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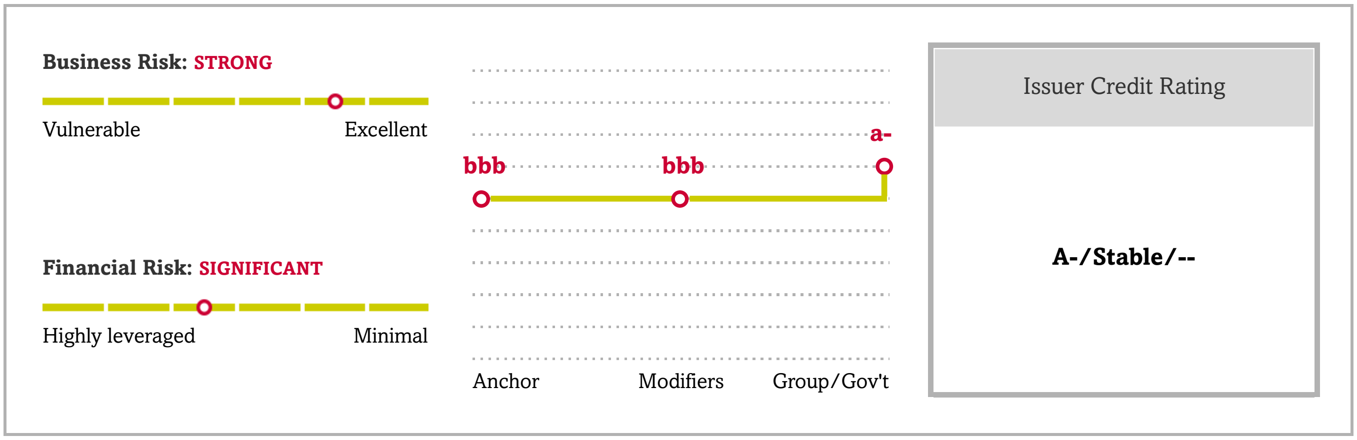
Kentucky Power Co.



Credit Highlights

Overview

Key strengths	Key risks
Lower-risk vertically integrated regulated electric utility.	Limited geographic diversity and small customer base.
Credit-supportive and constructive regulatory framework in Kentucky.	Coal-fired generation increases environmental compliance exposure.
Balanced capital structure supports overall credit quality.	Customer concentration, with industrial customers contributing about one-half of the energy sales.

Kentucky Power Co. (KPCo) operates under a credit-supportive framework. Kentucky's commission offers a constructive regulatory framework that provides for the timely recovery of approved capital expenditures. The commission has also approved pass-through fuel cost mechanisms reducing cash flow volatility.

Debt leverage will increase in the forecast period. Debt to EBITDA is expected to remain higher in the mid- to high-5x area over the next few years from greater use of debt to fund capital spending.

There is a rate freeze until December 2020. KPCo is under a three-year base rate stay-out and the company cannot request a rate increase before Jan. 1, 2021.

Outlook: Stable

The stable rating outlook on KPCo reflects that of its parent American Electric Power Co. Inc. (AEP). The stable outlook on AEP and its subsidiaries reflects its improving business risk profile consisting almost entirely of solid regulated utility operations. We expect AEP to generate funds from operations (FFO) to debt of 15%-16% through 2021 after factoring in the impact of U.S. tax reform.

Downside scenario

We could lower the ratings on AEP and its subsidiaries if its financial performance weakens such that FFO to debt is consistently below 14%, or if its business risk increases as a result of ineffective regulatory risk management or the pursuit of risky unregulated investments.

Upside scenario

While not likely, we could raise the ratings on AEP and its subsidiaries if its financial performance improves, with FFO to debt consistently above 20% while business risk is unchanged.

Our Base-Case Scenario

Assumptions

- EBITDA margin averaging about 16% through 2022.
- Effective management of regulatory risk and continued recovery of prudent costs.
- Elevated capital spending of $170 million-$200 million per year driven by infrastructure investments.
- All debt maturities refinanced.

Key Metrics

	2020e	2021e	2022e
Adjusted FFO to debt (%)	14-16	15-17	15-17
Adjusted debt to EBITDA (x)	5-5.5	4.5-5	4.5-5
Adjusted FFO cash interest coverage (x)	4-4.5	4.5-4.9	4.5-4.9

e--Expected. FFO--Funds from operations.

Company Description

KPCo is a vertically integrated electric utility serving about 170,000 customers in eastern Kentucky. It also sells electricity at wholesale to municipalities.

Business Risk: Strong

Our assessment of KPCo's business risk profile reflects the company's lower-risk vertically integrated electric utility business that operates under a generally constructive regulatory framework. KPCo has a small customer base of around 170,000 and limited geographical diversity since it operates almost entirely in Kentucky. The service territory demonstrates modest growth. Industrial customers contribute about one-half of the energy sales, leading to less stable operating cash flow.

Under Kentucky Public Service Commission regulation, the company benefits from a fuel-cost adjustment mechanism that provides for incremental cost recovery when fuel costs rise. Moreover, the company's low-cost, coal-fired generation and efficient operations contribute to overall competitive rates for customers. KPCo has been able to receive timely recovery of approved capital expenditures.

KPCo's higher exposure to coal generation, at about 75%, could lead to greater environmental compliance costs.

Table 1

Peer Comparison

Industry sector: electric			
	Kentucky Power Co.	**Kentucky Utilities Co.**	**Louisville Gas & Electric Co.**
Ratings as of April 2, 2020	A-/Stable/--	A-/Stable/A-2	A-/Stable/A-2
	--Fiscal year ended Dec. 31, 2018--		
(Mil. $)			
Revenue	642.1	1,760.0	1,496.0
EBITDA	203.0	774.8	618.9
FFO	165.8	650.2	533.7
Interest expense	41.9	118.6	93.8
Cash interest paid	40.4	99.5	78.2
Cash flow from operations	118.2	589.2	454.7
Capital expenditure	134.8	562.5	555.2
FOCF	(16.6)	26.7	(100.5)
DCF	(16.6)	(219.3)	(256.5)
Cash and short-term investments	1.2	14.0	10.0
Debt	938.0	2,817.7	2,297.0
Equity	732.9	3,442.0	2,687.0
Adjusted ratios			
EBITDA margin (%)	31.6	44.0	41.4
Return on capital (%)	6.5	7.8	8.0
EBITDA interest coverage (x)	4.8	6.5	6.6
FFO cash interest coverage (x)	5.1	7.5	7.8
Debt/EBITDA (x)	4.6	3.6	3.7
FFO/debt (%)	17.7	23.1	23.2
Cash flow from operations/debt (%)	12.6	20.9	19.8

Table 1

Peer Comparison (cont.)

Industry sector: electric

	Kentucky Power Co.	Kentucky Utilities Co.	Louisville Gas & Electric Co.
FOCF/debt (%)	(1.8)	0.9	(4.4)

DCF/debt (%)
FFO--Funds from operations. FOCF--Free operating cash flow. DCF--Discretionary cash flow.

Financial Risk: Significant

KPCo benefits from various rate mechanisms that allow for the timely recovery of costs and support more stable operating cash flows. We expect the company will continue to fund its investments in a manner that preserves existing credit quality.

Under our base-case scenario, we anticipate KPCo's stand-alone adjusted FFO to debt in the 14%-16% range in 2020. Afterwards, we expect FFO to debt to improve thereafter to the 15%-17% range as the company benefits from recovery mechanisms like the environmental cost rider, as well as formula transmission rates and forward test years for rate cases. For 2020, we also forecast the company to have greater leverage with slightly higher debt to EBITDA in the low- to mid-5x range, only to fall to the higher 4x range thereafter. In addition, ongoing discretionary cash flow deficits after dividends and elevated capital spending are expected to be at least partly debt-funded.

We assess KPCo's financial risk under our medial volatility financial benchmarks, reflecting the company's lower-risk regulated utility operations and effective management of regulatory risk. These benchmarks are more relaxed compared with those used for a typical corporate issuer.

Table 2

Financial Summary

Industry sector: electric

	--Fiscal year ended Dec. 31--				
	2018	**2017**	**2016**	**2015**	**2014**
(Mil. $)					
Revenue	642.1	642.8	655.0	654.2	782.0
EBITDA	203.0	185.2	206.3	170.8	192.5
FFO	165.8	143.5	203.5	153.3	135.4
Interest expense	41.9	48.8	50.5	49.5	43.2
Cash interest paid	40.4	44.6	45.8	44.8	38.6
Cash flow from operations	118.2	124.5	158.6	135.2	212.3
Capital expenditure	134.8	94.5	98.8	113.4	99.9
FOCF	(16.6)	29.9	59.8	21.8	112.5
DCF	(16.6)	(5.1)	15.8	(22.2)	(2.5)
Cash and short-term investments	1.2	0.9	0.9	0.9	0.8
Gross available cash	1.2	0.9	0.9	0.9	0.8
Debt	938.0	926.9	920.0	940.1	919.4

Table 2

Financial Summary (cont.)					
Industry sector: electric					
	--Fiscal year ended Dec. 31--				
	2018	**2017**	**2016**	**2015**	**2014**
Equity	732.9	670.3	668.4	663.1	663.6
Adjusted ratios					
EBITDA margin (%)	31.6	28.8	31.5	26.1	24.6
Return on capital (%)	6.5	6.1	7.6	5.4	6.3
EBITDA interest coverage (x)	4.8	3.8	4.1	3.5	4.5
FFO cash interest coverage (x)	5.1	4.2	5.4	4.4	4.5
Debt/EBITDA (x)	4.6	5.0	4.5	5.5	4.8
FFO/debt (%)	17.7	15.5	22.1	16.3	14.7
Cash flow from operations/debt (%)	12.6	13.4	17.2	14.4	23.1
FOCF/debt (%)	(1.8)	3.2	6.5	2.3	12.2
DCF/debt (%)	(1.8)	(0.5)	1.7	(2.4)	(0.3)

FFO--Funds from operations. FOCF--Free operating cash flow. DCF--Discretionary cash flow.

Liquidity: Adequate

We assess KPCo.'s stand-alone liquidity as adequate because we believe its liquidity sources are likely to cover uses by more than 1.1x over the next 12 months and meet cash outflows even if EBITDA declines 10%. We believe KPCo has sound banking relationships, the ability to absorb high-impact, low probability events without the need for refinancing, and a satisfactory standing in the credit markets.

Principal Liquidity Sources	Principal Liquidity Uses
• Estimated cash FFO of about $145 million. • Average available borrowing capacity from the AEP money pool of about $180 million.	• Debt maturities, including affiliate advances of about $65 million. • Capital spending of about $225 million.

Environmental, Social, And Governance

KPCo's carbon footprint is a significant environmental risk factor in the long run due to its high level of coal-based power generation. Of KPCo's 1,060 megawatts (MW) of owned generation capacity and 393 MW of purchased power capacity, coal contributes around 81%, and natural gas about 19%. The company's reliance on coal-fired generation exposes it to heightened risks, including the ongoing cost of operating older units in the face of disruptive technology advances, and the potential for significant capital investments to meet increasing environmental regulation. KPCo and parent AEP have begun to reduce reliance by retiring coal plants and investing in hydro, wind, solar, and energy efficiency. AEP's management is taking active steps to reduce the company's environmental footprint, committing to cutting carbon dioxide emissions to 80% of 2000 levels by 2050. Social and governance factors are consistent with what we see across the industry for other regulated utilities.

Group Influence

We consider KPCo to be a core subsidiary of AEP because it is highly unlikely to be sold, has a strong long-term commitment from senior management, is successful at what it does, and contributes meaningfully to the group. There are no meaningful insulation measures that protect KPCo from AEP. Therefore, our issuer credit rating on KPCo is in line with AEP's group credit profile of 'a-'.

Issue Ratings - Subordination Risk Analysis

Capital structure

KPCo's capital structure consists of about $900 million of debt.

Analytical conclusions

We rate KPCo's senior unsecured debt the same as the issuer credit rating because it is the debt of a qualified investment-grade utility.

Reconciliation

Table 3

Reconciliation Of Kentucky Power Co. Reported Amounts With S&P Global Ratings' Adjusted Amounts (Mil. $)

	--12 months ended Sept. 30, 2018--									
Kentucky Power Co. reported amounts.										
	Debt	**Shareholders' equity**	**Revenues**	**EBITDA**	**Operating income**	**Interest expense**	**EBITDA**	**Cash flow from operations**	**Dividends paid**	**Capital expenditures**
	879.6	719.8	653.8	202.5	106.6	37.9	202.5	143.6	8.8	135.1

Table 3

Reconciliation Of Kentucky Power Co. Reported Amounts With S&P Global Ratings' Adjusted Amounts (Mil. $) (cont.)

S&P Global Ratings' adjustments										
Interest expense (reported)	--	--	--	--	--	--	(37.9)	--	--	--
Interest income (reported)	--	--	--	--	--	--	(0.2)	--	--	--
Current tax expense (reported)	--	--	--	--	--	--	6.1	--	--	--
Operating leases	7.7	--	--	2.0	0.5	0.5	1.4	1.4	--	--
Postretirement benefit obligations/deferred compensation	--	--	--	(3.0)	(3.0)	--	(2.8)	(0.8)	--	--
Surplus cash	(0.7)	--	--	--	--	--	--	--	--	--
Capitalized interest	--	--	--	--	--	0.6	(0.6)	(0.6)	--	(0.6)
Asset retirement obligations	28.3	--	--	2.4	2.4	2.4	(5.4)	20.3	--	--
Non-operating income (expense)	--	--	--	--	2.5	--	--	--	--	--
Debt - accrued interest not included in reported debt	9.3	--	--	--	--	--	--	--	--	--
EBITDA - other	--	--	--	2.3	2.3	--	2.3	--	--	--
Total adjustments	44.5	0.0	0.0	3.6	4.7	3.6	(37.2)	20.3	0.0	(0.6)

S&P Global Ratings' adjusted amounts

	Debt	Equity	Revenues	EBITDA	EBIT	Interest expense	Funds from Operations	Cash flow from operations	Dividends paid	Capital expenditures
	924.1	719.8	653.8	206.0	111.4	41.5	165.3	163.9	8.8	134.5

Ratings Score Snapshot

Issuer Credit Rating

A-/Stable/--

Business risk: Strong

- **Country risk:** Very low
- **Industry risk:** Very low
- **Competitive position:** Satisfactory

Financial risk: Significant

- **Cash flow/leverage:** Significant

Anchor: bbb

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 : bbb

- **Group credit profile:** a-
- **Entity status within group:** Core (+2 notches from SACP)

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 - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 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

	Financial Risk Profile					
Business 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 April 8, 2020)*

Kentucky Power Co.	
Issuer Credit Rating	A-/Stable/--
Senior Unsecured	A-
Issuer Credit Ratings History	
02-Feb-2017	A-/Stable/--
16-Sep-2016	BBB+/Watch Pos/--
29-Sep-2014	BBB/Positive/--

*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.

COVID-19: The Outlook For North American Regulated Utilities Turns Negative

April 2, 2020

PRIMARY CREDIT ANALYST

Gabe Grosberg
New York
(1) 212-438-6043
gabe.grosberg@spglobal.com

SECONDARY CONTACT

Kevin M Sheridan
New York
+ 1 (212) 438 3022
kevin.sheridan@spglobal.com

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

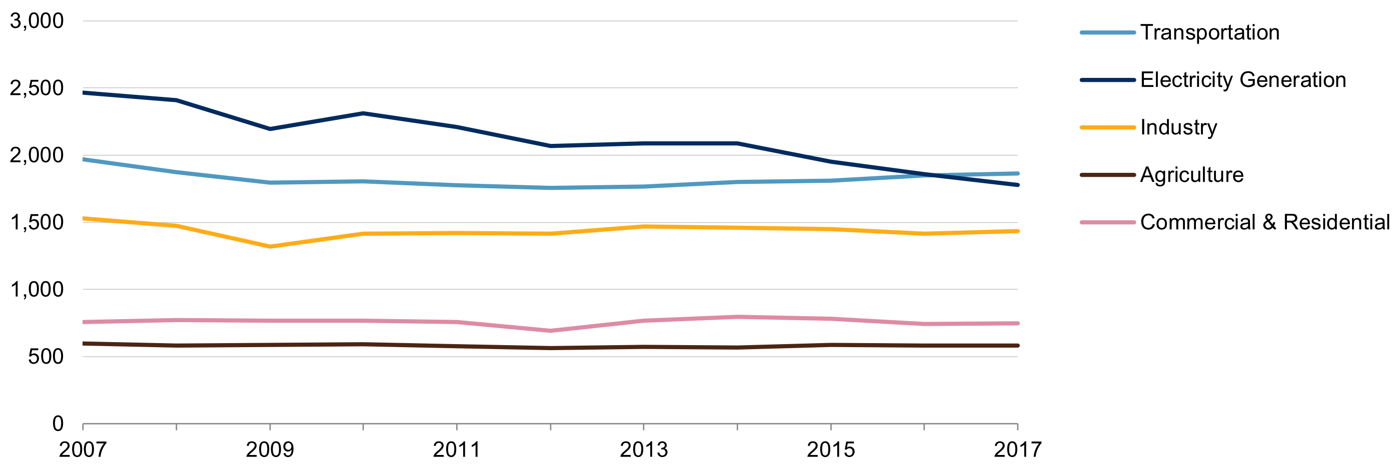
The North America regulated utility industry's credit quality was already weakening prior to COVID-19. This reflected companies' more consistent ability to manage credit measures closer to the downgrade threshold, leaving very minimal financial cushion at the current rating level. We generally view the 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

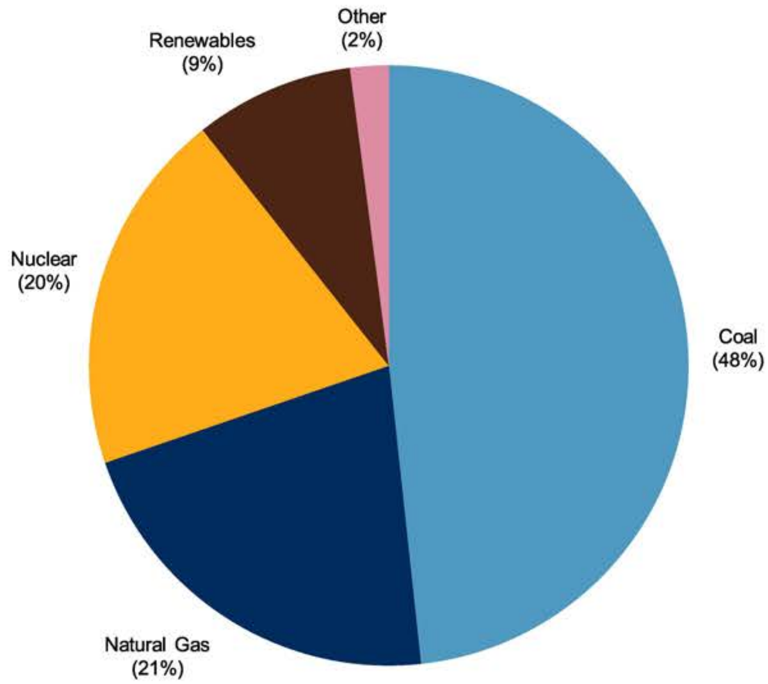
Total U.S. Greenhouse Gas Emissions By Economic Sector From 2007 -2017
Million metric tons of CO2 equivalents



Source: U.S. Energy Information Administration.

Chart 2

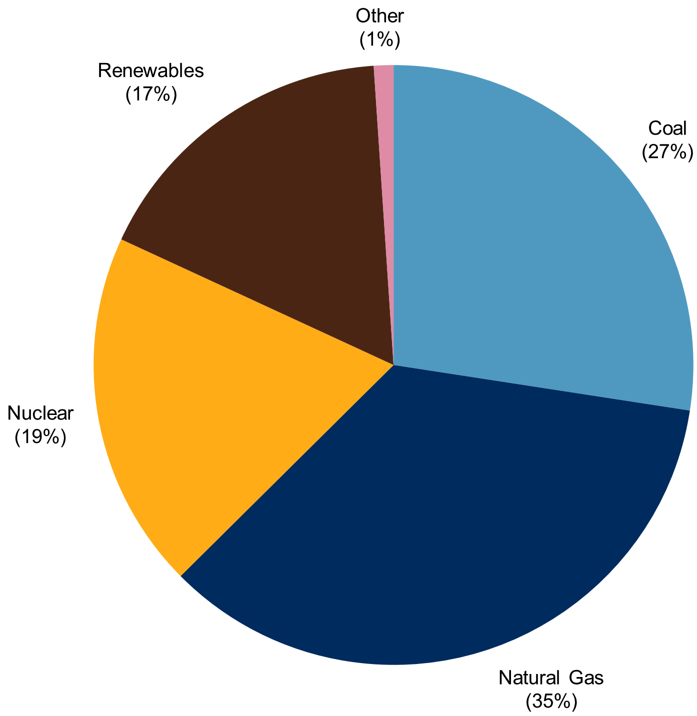
U.S. 2008 Generation Mix



Source: U.S. Energy Information Administration.

Chart 3

U.S. 2018 Generation Mix



Source: U.S. Energy Information Administration.

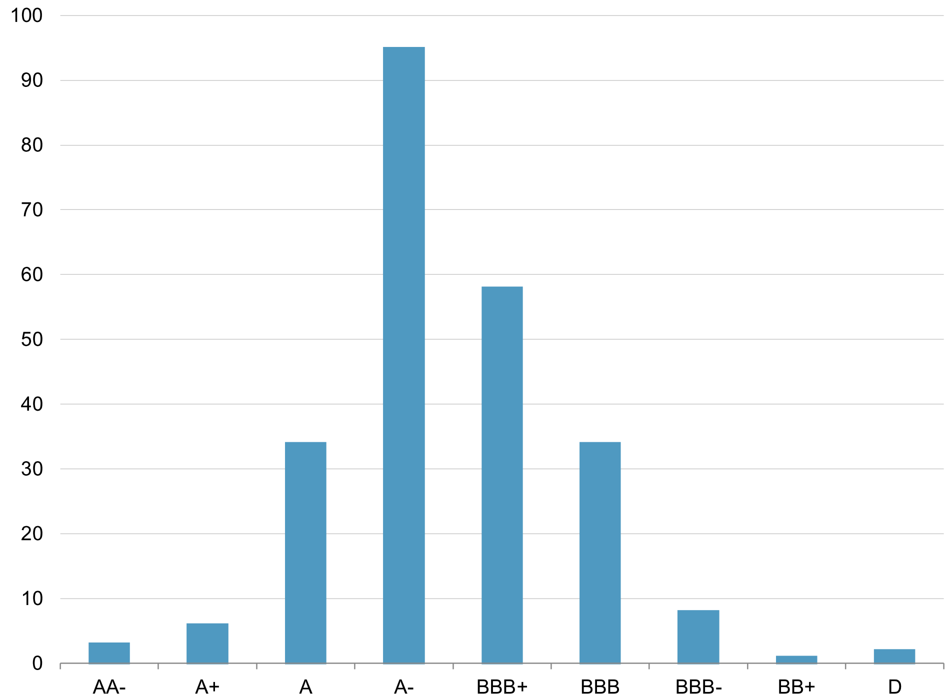
However, there are individual companies such as American Electric Power Co. Inc., Ameren Corp., and Evergy Inc. that despite having long-term plans to reduce their reliance on coal-fired generation, will continue to rely heavily on that fuel source for the next decade, possibly pressuring credit quality.

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

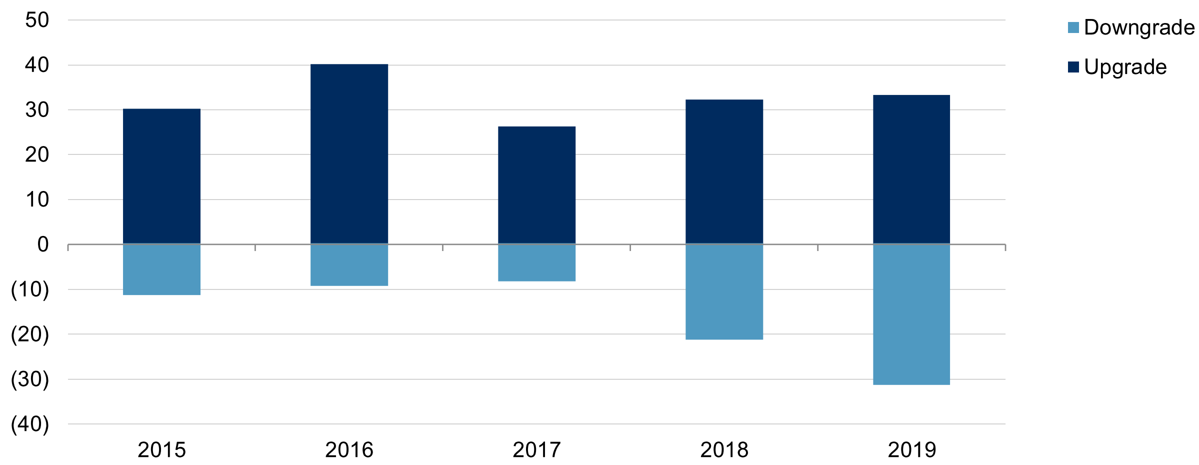


Source: S&P Global Ratings.

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

North American Regulated Utilities Upgrades And Downgrades



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).

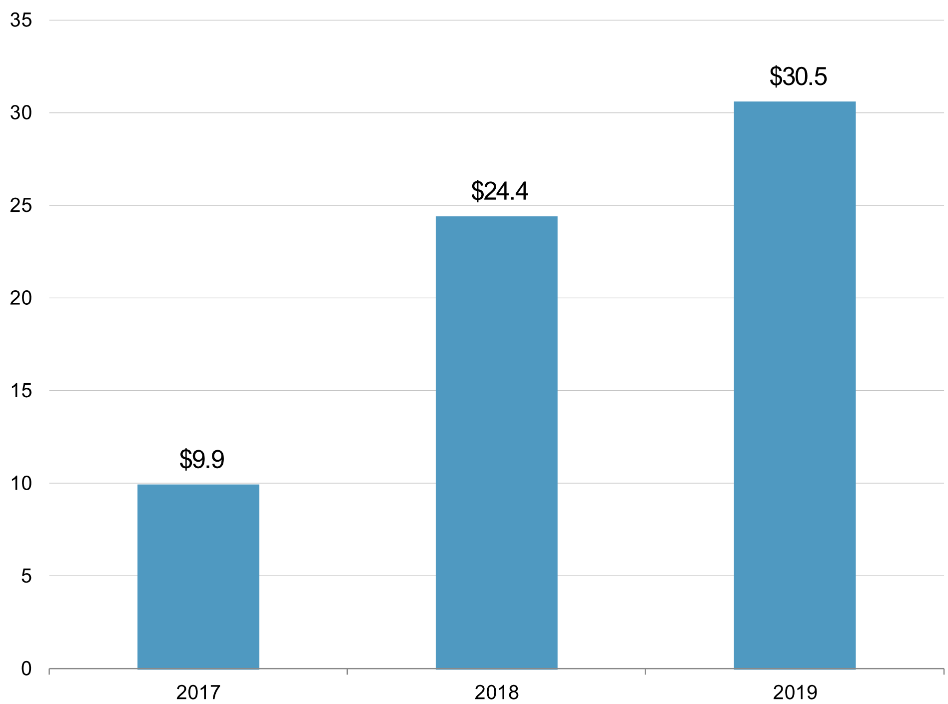
For the North America utility industry, we expect that COVID-19 will reduce the commercial and industrial (C&I) usage (North American Regulated Utilities Face Additional Risks Amid Coronavirus Outbreak, March 19, 2020). While some utilities will be able to offset some of the lower C&I usage through various 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.

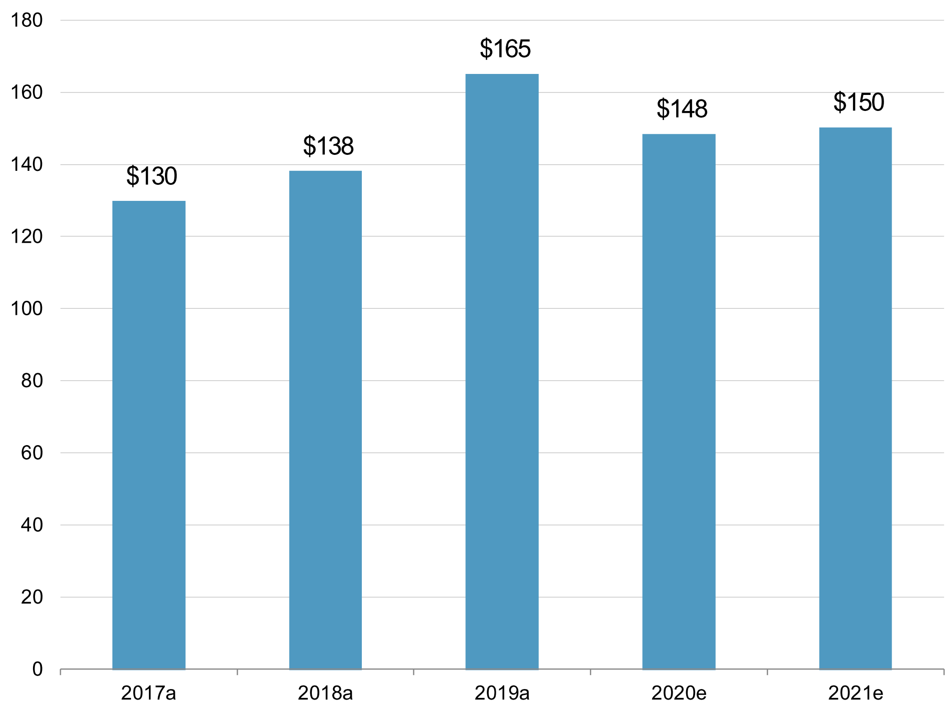
Another area of concern are utilities that rely to various degrees on nonutility businesses that have commodity exposure (S&P Global Ratings Cuts WTI And Brent Crude Oil Price Assumptions Amid Continued Near-Term Pressure, March 19, 2020). These include OGE Energy Corp., CenterPoint Energy Inc., DTE 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

RatingsDirect®

North American Regulated Utilities Face Tough Financial Policy Tradeoffs To Avoid Ratings Pressure Amid The COVID-19 Pandemic

May 11, 2020

PRIMARY CREDIT ANALYST

Kyle M Loughlin
New York
(1) 212-438-7804
kyle.loughlin
@spglobal.com

RESEARCH CONTRIBUTOR

Debadrita Mukherjee
CRISIL Global Analytical Center, an S&P affiliate, Mumbai

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

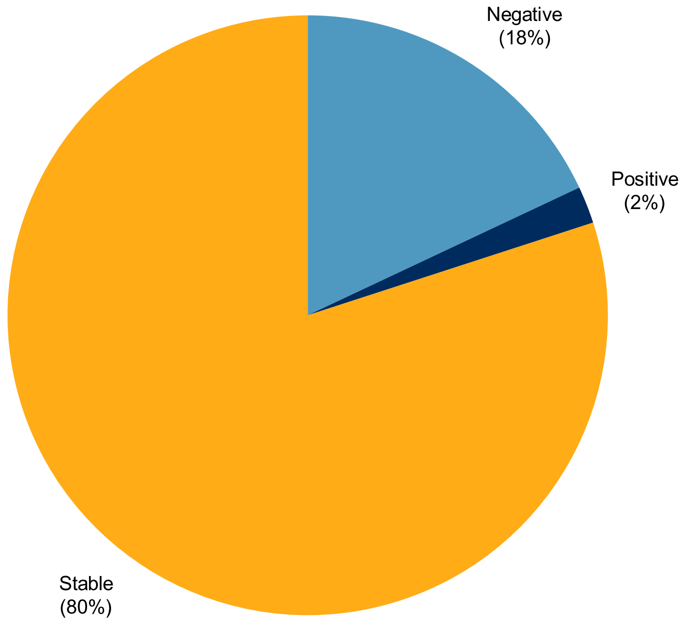
COVID-19 Cost Recovery Provisions

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.

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Contacts

Jeffrey F. Cassella +1.212.553.1665
VP-Sr Credit Officer
jeffrey.cassella@moodys.com

Jairo Chung +1.212.553.5123
VP-Senior Analyst
jairo.chung@moodys.com

Nana Hamilton +1.212.553.9440
AVP-Analyst
nana.hamilton@moodys.com

Gavin MacFarlane +1.416.214.3864
VP-Sr Credit Officer
gavin.macfarlane@moodys.com

Natividad Martel, CFA +1.212.553.4561
VP-Senior Analyst
natividad.martel@moodys.com

Edna R Marinelarena +1.212.553.1383
Analyst
edna.marinelarena@moodys.com

Robert Petrosino CFA +1.212.553.1946
VP-Senior Analyst
robert.petrosino@moodys.com

Laura Schumacher +1.212.553.3853
VP-Sr Credit Officer
laura.schumacher@moodys.com

Michael G. Haggarty +1.212.553.7172
Associate Managing Director
michael.haggarty@moodys.com

Jim Hempstead +1.212.553.4318
MD-Utilities
james.hempstead@moodys.com

» Contacts continued on last page

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?

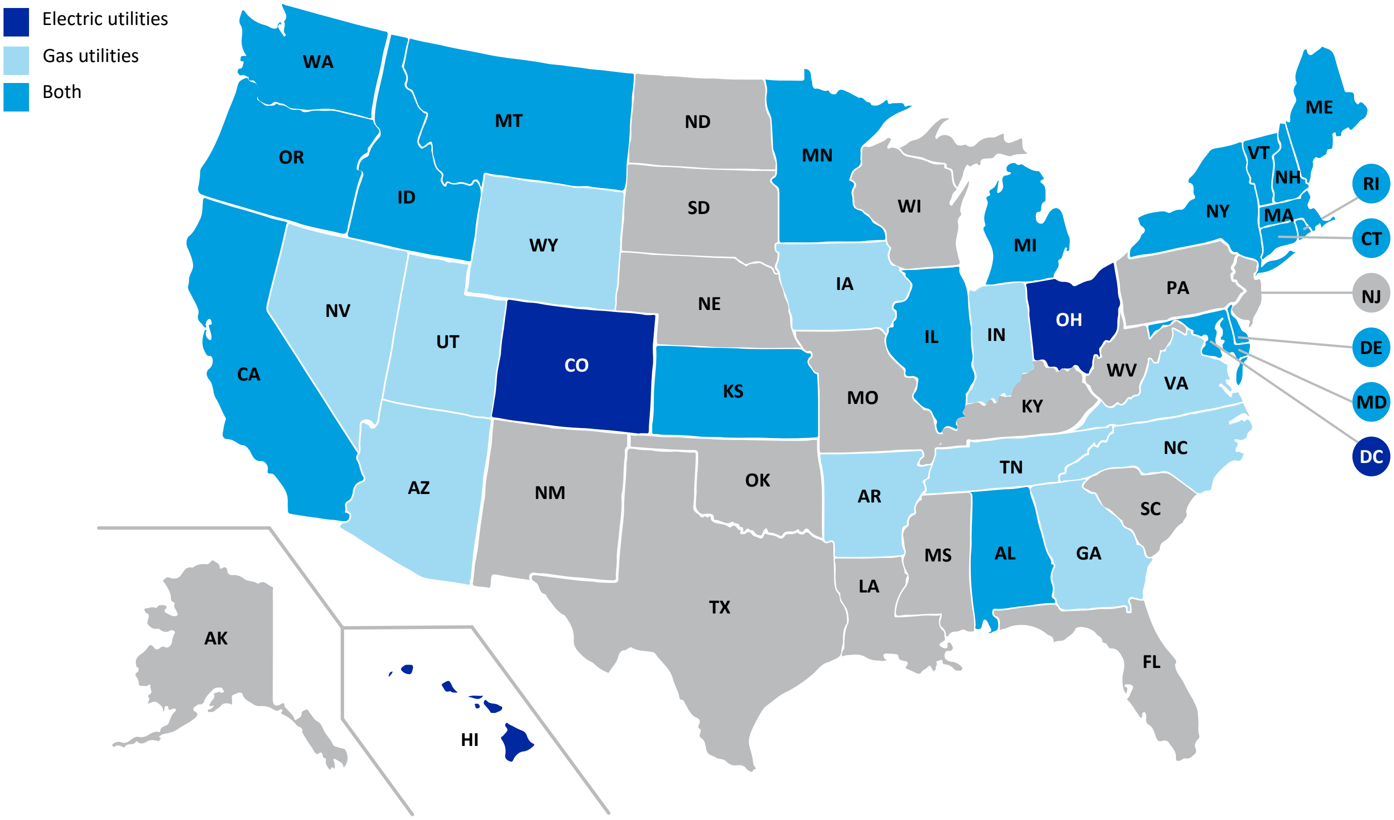
Regulatory support is important to recover costs associated with lost volumes, revenue or customers. Some utilities are already somewhat insulated from volume declines thanks to decoupling mechanisms. Revenue decoupling, which is widely used by local gas distribution companies (LDCs), is a ratemaking 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.

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

Moody's related publications

Outlooks

» 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

» Regulated electric and gas utilities – New York: Threat to revoke National Grid's operating license is credit negative for utilities, November 2019

Sector In-Depth

» Regulated electric and gas utilities – US: Grid hardening, regulatory support key to credit quality as climate hazards worsen, March 2020

» Regulated electric utilities – US: Intensifying climate hazards to heighten focus on infrastructure investments, January 2020

» Regulated electric and gas utilities – New York: Threat to revoke National Grid's operating license is credit negative for utilities, November 2019

» Electric utilities and power producers – US: Power companies on pace to reduce CO2 emissions, September 2019

» Utilities and power companies – North America: Corporate governance assessments show generally credit-friendly characteristics, September 2019

» Regulated electric and gas utilities – US: Recent regulatory, legislative developments have been largely credit positive, September 2019

» Regulated electric and gas utilities - North America: Free cash flow and capital allocation: external capital needs to decline in 2019, August 2019

» Regulated electric utilities – US: Proposed California wildfire risk legislation is credit positive but questions remain, July 2019

» Electric and gas – US: Pipeline cybersecurity standards help plug security loophole in utility supply chain, July 2019

» Regulated water utilities - US: M&A expands to cross-sector deals, with mixed credit implications for acquirers, March 2019

» 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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Analyst Contacts

Toby Shea +1.212.553.1779
VP-Sr Credit Officer
toby.shea@moodys.com

Ryan Wobbrock +1.212.553.7104
VP-Sr Credit Officer
ryan.wobbrock@moodys.com

MOODY'S
INVESTORS SERVICE

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.

Regional Credit Conditions Chair

David C Tesher
New York
david.tesher@spglobal.com
+1-212-438-2618

U.S. Chief Economist

Beth Ann Bovino
New York
bethann.bovino@spglobal.com
+1-212-438-1652

Senior Economist, U.S. and Canada

Satyam Panday
New York
satyam.panday@spglobal.com
+1-212-438-6009

Global Head of Research

Alexandra Dimitrijevic
London
alexandra.dimitrijevic@spglobal.com
+ 44-207-176-3128

Financing Conditions

Nick Kraemer
New York
nick.kraemer@spglobal.com
+1-212-438-1698

Research Contributors

Joe M Maguire
New York
joe.maguire@spglobal.com
+1-212-438-7507

Yucheng Zheng
New York
yucheng.zheng@spglobal.com
+1-212-438-4436

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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.

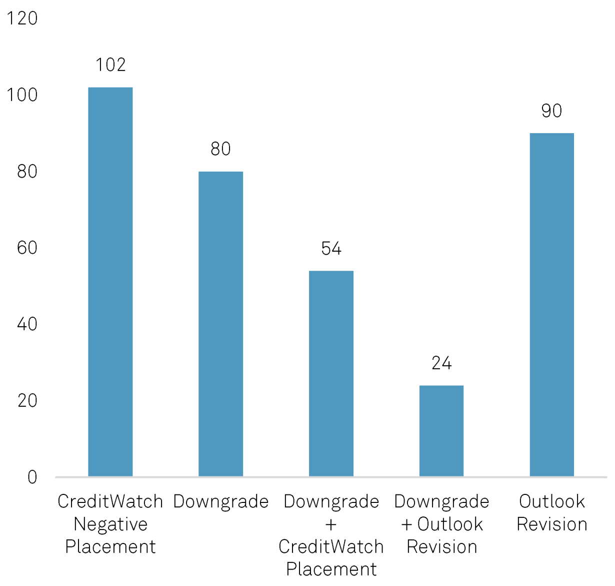
Protracted uncertainty regarding demand and supply/production disruptions are adding downside pressure to credit metrics across the rating spectrum. In terms of specific rating levels, we expect that companies rated 'B' and below will come under the most pressure, as these low ratings indicate higher 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

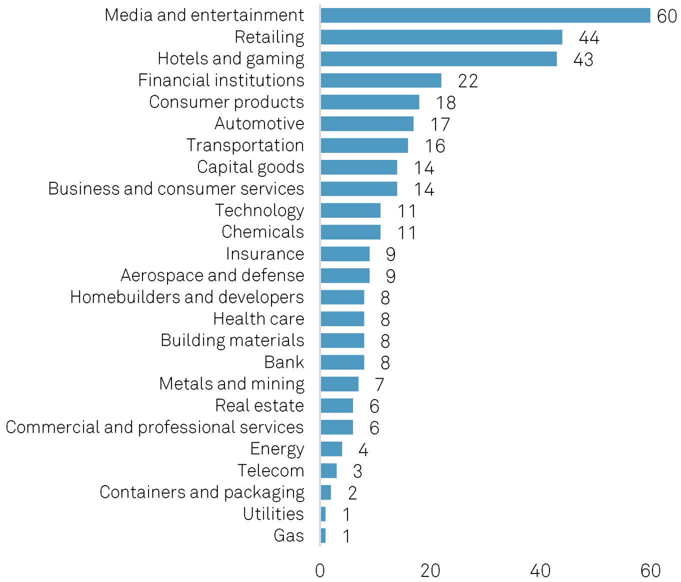


Note: These 350 rating actions pertain to ratings where we mention COVID-19 as one factor or in combination with others.

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.

Appendix 4: List Of Analytical Contacts

Sector	Analyst Name and Contact
Aerospace & Defense	**Philip Baggaley** +1 (212) 438-7683 philip.baggaley@spglobal.com
Autos	**Philip Baggaley** +1 (212) 438-7683 philip.baggaley@spglobal.com
Building Materials	**Donald Marleau** +1 (416) 507-2526 donald.marleau@spglobal.com
Capital Goods	**Ana Lai** +1 (212) 438-6895 ana.lai@spglobal.com
Chemicals	**Paul Kurias** +1 (212) 438-3486 paul.kurias@spglobal.com
Consumer Products	**Diane Shand** +1 (212) 438-7860 diane.shand@spglobal.com
Financial Institutions	**Stuart Plesser** +1 (212) 438-6870 stuart.plesser@spglobal.com
Forest Products	**Donald Marleau** +1 (416) 507-2526 donald.marleau@spglobal.com
Gaming, Leisure & Lodging	**Emile Courtney** +1 (212) 438-7824 emile.courtney@spglobal.com
Health Care & Pharmaceuticals	**Arthur Wong** +1 (416) 507-2561 arthur.wong@spglobal.com
Homebuilders	**Donald Marleau** +1 (416) 507-2526 donald.marleau@spglobal.com
Insurance	**Joseph Marinucci** +1 (212) 438-2012 joseph.marinucci@spglobal.com
Media & Entertainment	**Naveen Sarma** +1 (212) 438-7833 naveen.sarma@spglobal.com
Metals & Mining	**Donald Marleau** +1 (416) 507-2526 donald.marleau@spglobal.com
Midstream Energy	**Michael Grande** +1 (212) 438-2242 michael.grande@spglobal.com
Oil & Gas	**Thomas Watters** +1 (212) 438-7818 thomas.watters@spglobal.com
Oil Refineries	**Michael Grande** +1 (212) 438-2242 michael.grande@spglobal.com
Public Finance	**Jane Ridley**

	+1 (303) 721-4487 jane.ridley@spglobal.com
REITs	**Ana Lai** +1 (212) 438-6895 ana.lai@spglobal.com
Regulated Utilities	**Gabe Grosberg** +1 (212) 438-6043 gabe.grosberg@spglobal.com
Retail & Restaurants	**Sarah Wyeth** +1 (212) 438-5658 sarah.wyeth@spglobal.com
Sovereign	**Joydeep Mukherji** +1 (212) 438-7351 joydeep.mukherji@spglobal.com
Structured Finance	**Winston Chang** +1 (212) 438-8123 winston.chang@spglobal.com **James Manzi** +1 (202) 383-2028 james.manzi@spglobal.com
Technology	**David Tsui** +1 (415) 371-5063 david.tsui@spglobal.com
Telecom	**Allyn Arden** +1 (212) 438-7832 allyn.arden@spglobal.com
Transportation	**Philip Baggaley** +1 (212) 438-7683 philip.baggaley@spglobal.com
Unregulated (Merchant) Power	**Aneesh Prabhu** +1 (212) 438-1285 aneesh.prabhu@spglobal.com

spglobal.com/ratings

Seeking Alpha α
Energy

Marathon raises rates at Catlettsburg as demand claws back

May 11, 2020 4:53 PM ET | About: Marathon Petroleum Corporation (MPC) | By: Carl Surran, SA News Editor

- Marathon Petroleum (NYSE:MPC) has been raising rates at its Catlettsburg refinery in Kentucky, and is now running at ~82% of its maximum rate of 300K bbl/day after cutting crude runs as demand due to the coronavirus, Bloomberg reports.
- The refinery reportedly has been at reduced rates since at least the third week of March.
- Marathon said last week it had seen gasoline demand pick up 5%-15% since April and expects continued improvement over the next couple of months as more businesses reopen.
- Now read: **Impressive Performance For Valero And Marathon After The Lowest Levels Since 2012 »**

Comments (7)

PalmDesertRat

the selling price is only half the equation,cost being the other half. it's the crack spread that makes the money, not just the price

11 May 2020, 11:03 PM

ShankaSwingTrades

Might time to back up the truck soon!

11 May 2020, 08:51 PM

User 51153147

Shanka too late

12 May 2020, 07:00 AM

Pts117
PREMIUM

The time was in the low 20's where MPC sat for weeks

18 May 2020, 10:07 AM

OptionLover

It moved as expected!

11 May 2020, 06:09 PM

investor@2015

Go, go, go MPC!

11 May 2020, 05:34 PM

hayfarmer0305

That's great news I'm up 40 percent on this one and think I'm going to stay a while!

11 May 2020, 05:27 PM

S&P Global
Market Intelligence

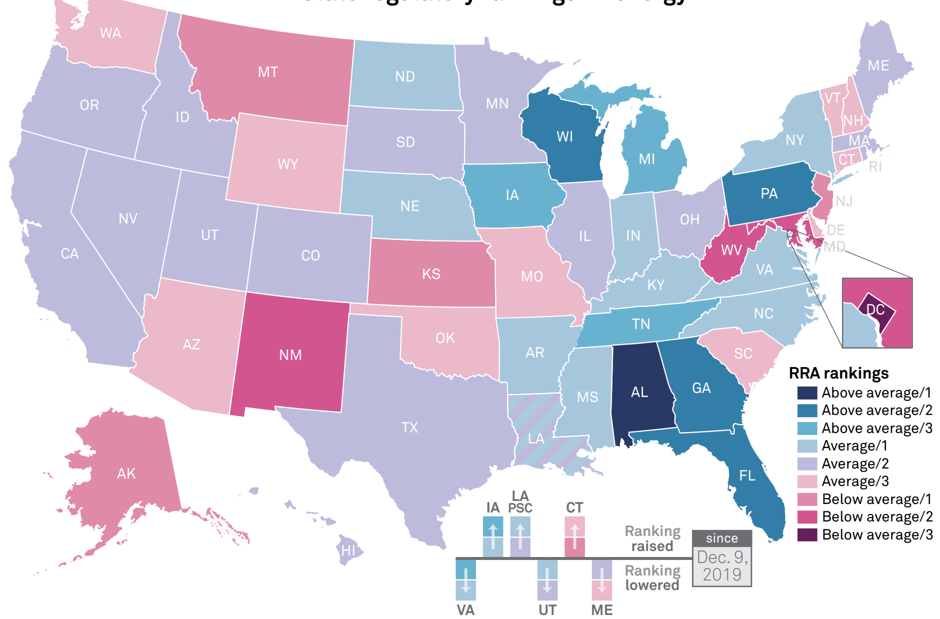
March 25, 2020
spglobal.com/marketintelligence

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.

Lillian Federico
Research Director

Sales & subscriptions
Sales_NorthAm@spglobal.com

Enquiries
support.mi@spglobal.com

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.

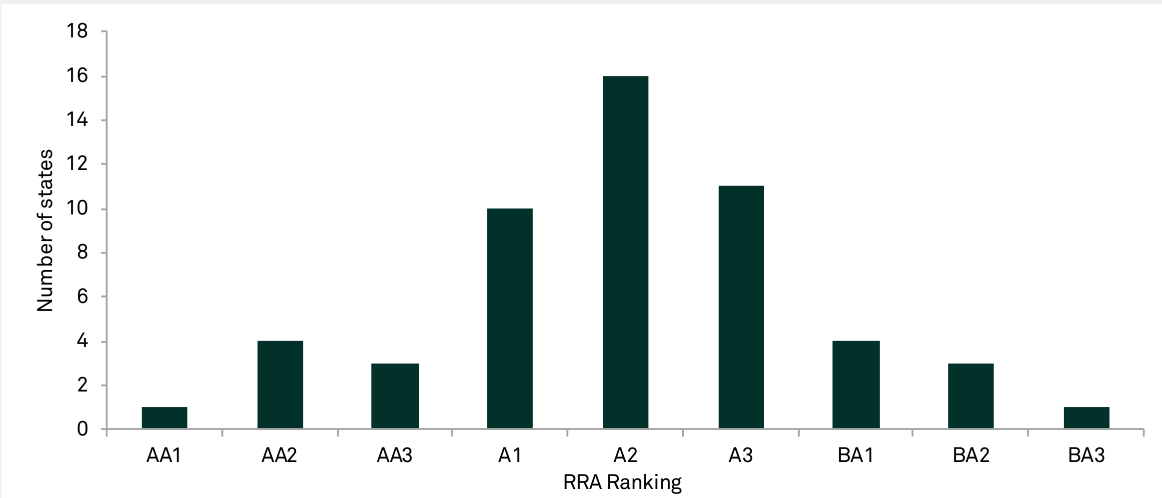
An Above Average designation indicates that, in RRA's view, the regulatory climate in the jurisdiction is relatively more constructive than average, representing lower risk for investors that hold or are considering acquiring the securities issued by the utilities operating in that jurisdiction.

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

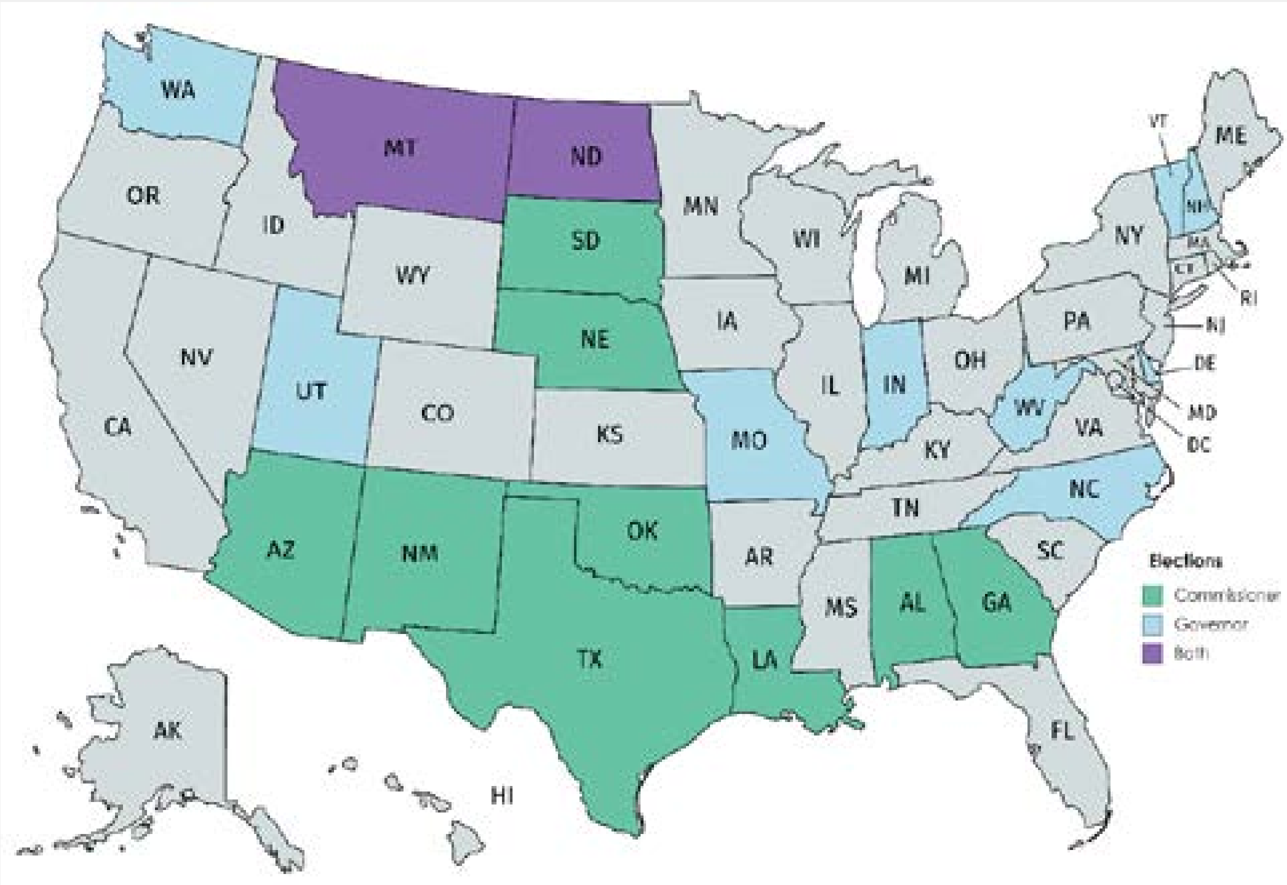
The coronavirus outbreak presents challenges for U.S. utilities on several fronts, including but not limited to, expected reductions in usage as businesses, schools and government buildings remain shuttered, lower revenues due to a higher anticipated occurrence of bad-debt/uncollectibles and increased 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.

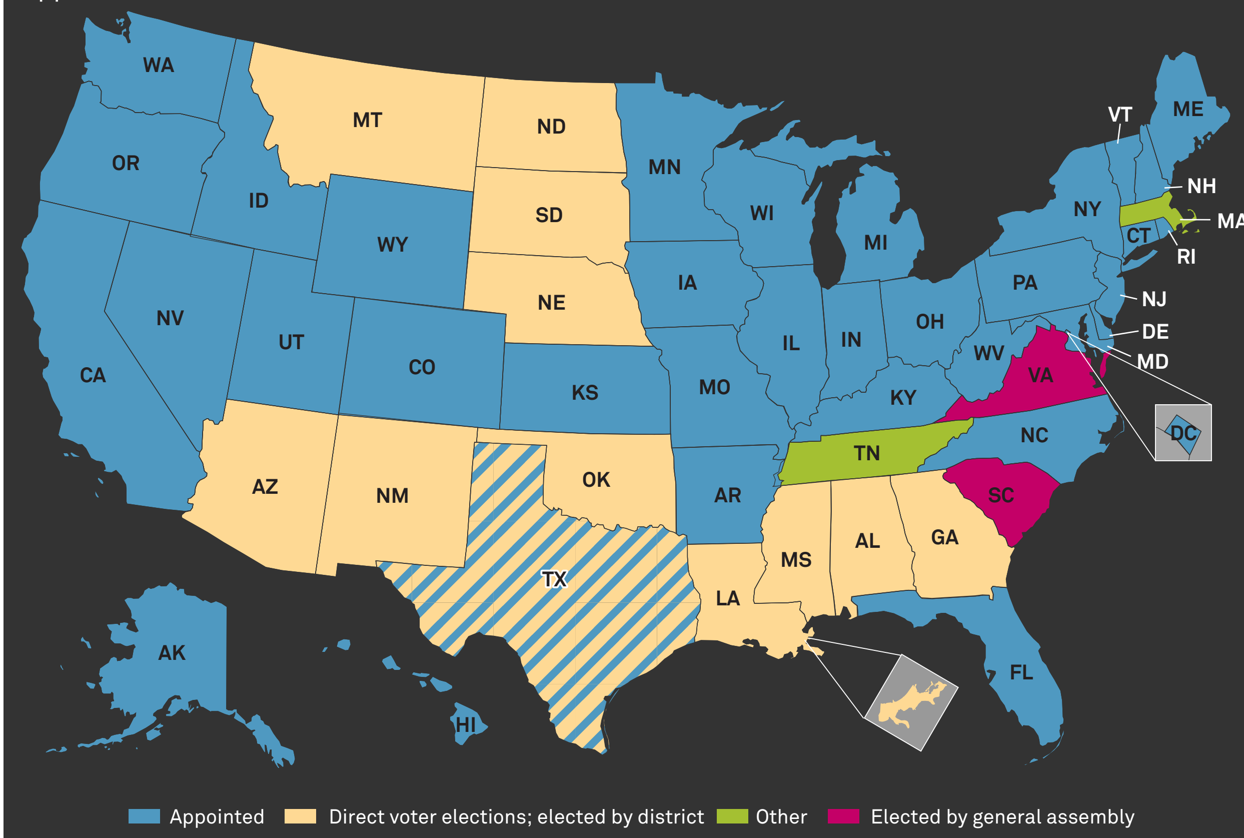
The summaries below provide an overview of the variables RRA looks at, including a brief discussion of how each can impact the ranking of a given regulatory environment.

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.

Commissioner selection method

Appointed vs. elected



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.

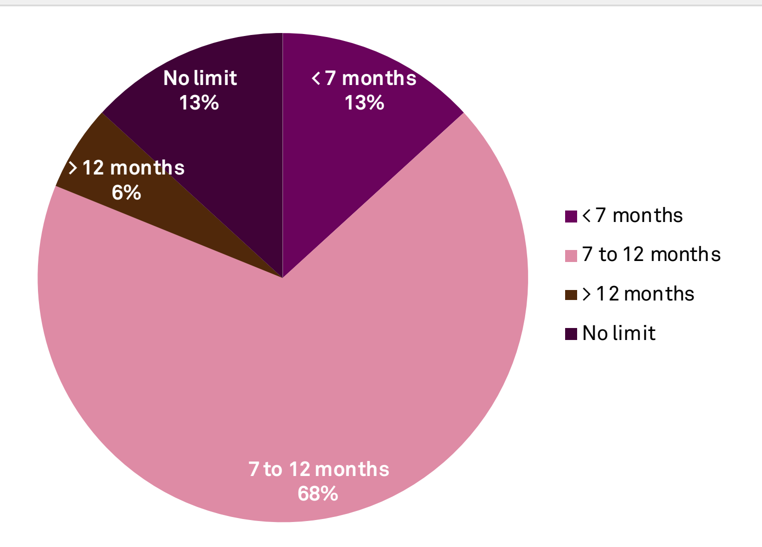
Settlements

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.

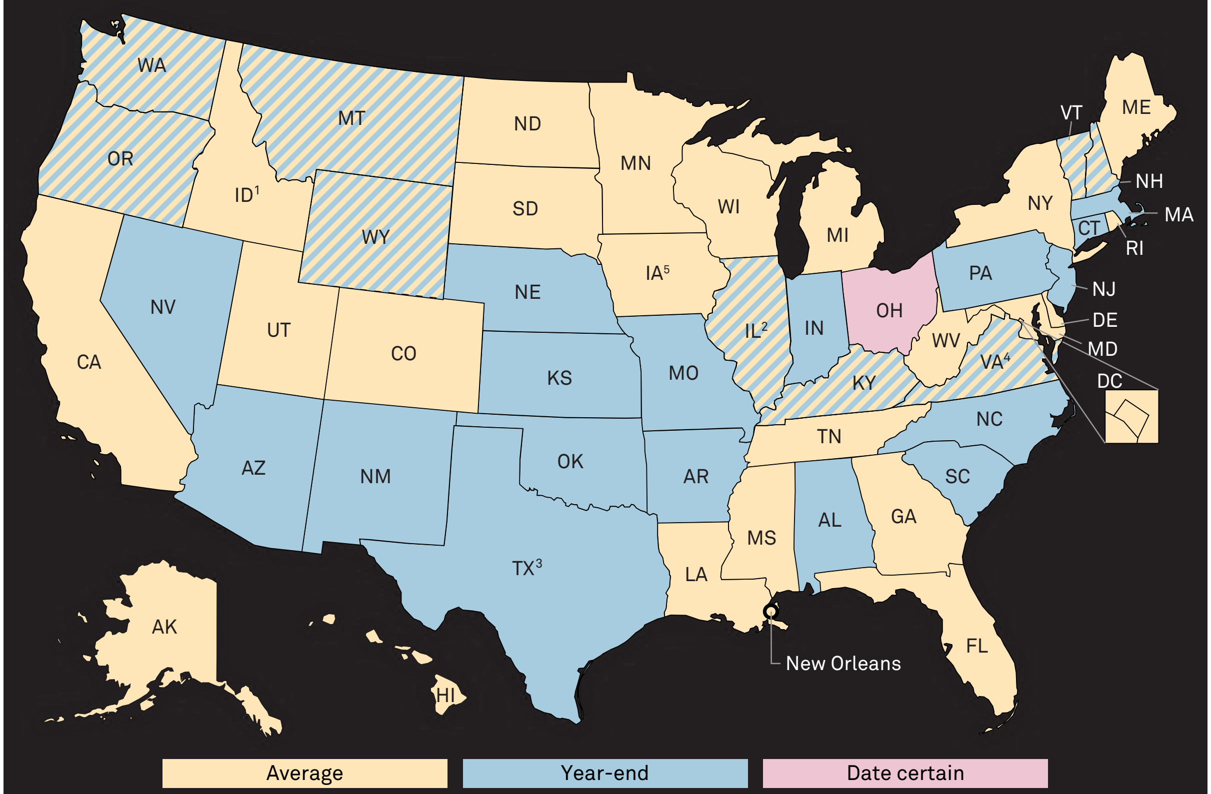
Again, this relates to how well the parameters used to set rates reflect actual conditions that will exist during the rate-effective period; hence, the more recent the valuation, the more likely it is to approximate the actual level of rate base being employed to serve customers once the new rates are 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.

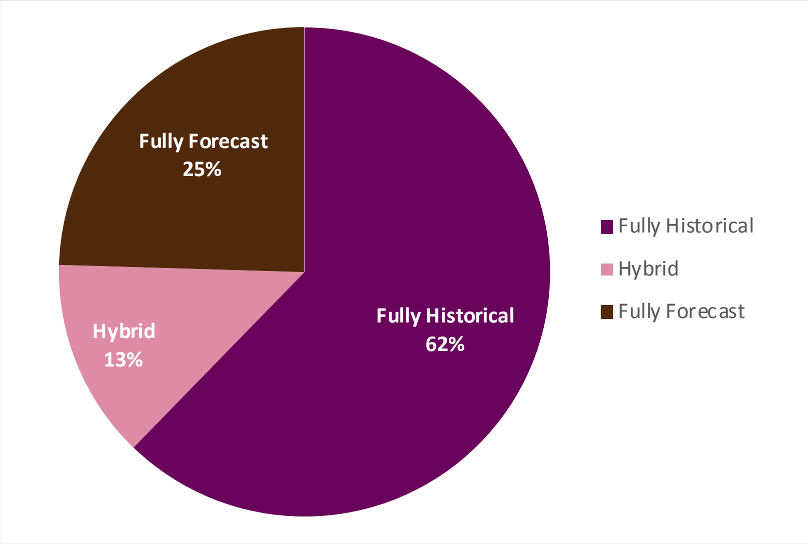
Some states utilize a combination of the two, in which a utility is permitted to file a rate case that is based on data that is fully or partially forecast at the time of filing and is later updated to reflect actual data that becomes known during the course of the proceeding.

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

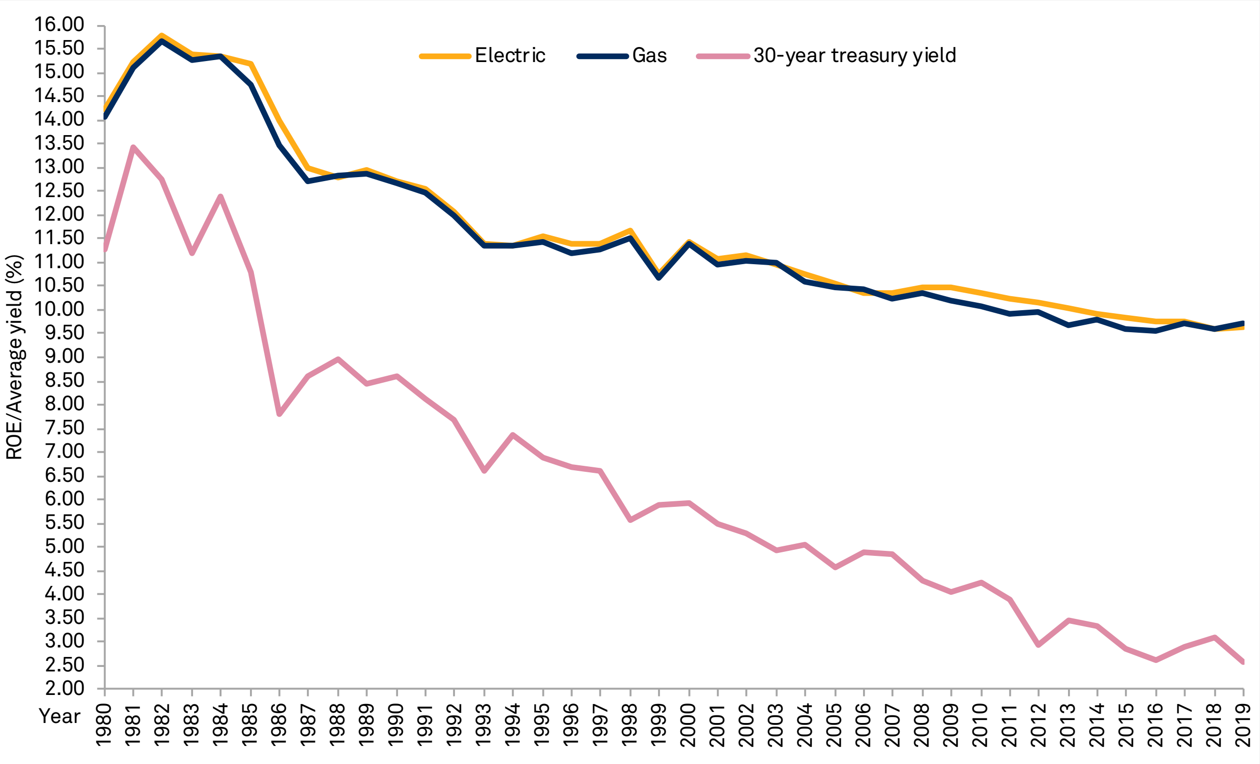


Data gathered as of March 25, 2020.
Source: Regulatory Research Associates, an offering of S&P Global Market Intelligence

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.

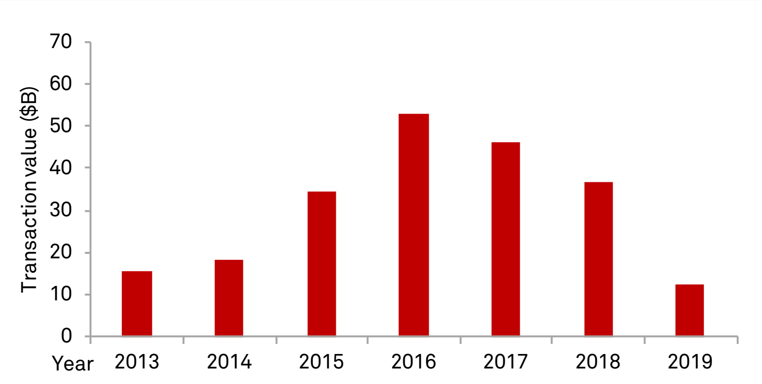
Merger and acquisition activity

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.

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.

Utility mergers announced 2013—2019



Data gathered as of Dec. 31, 2019.
Source: Regulatory Research Associates, an offering of S&P Global Market Intelligence

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.

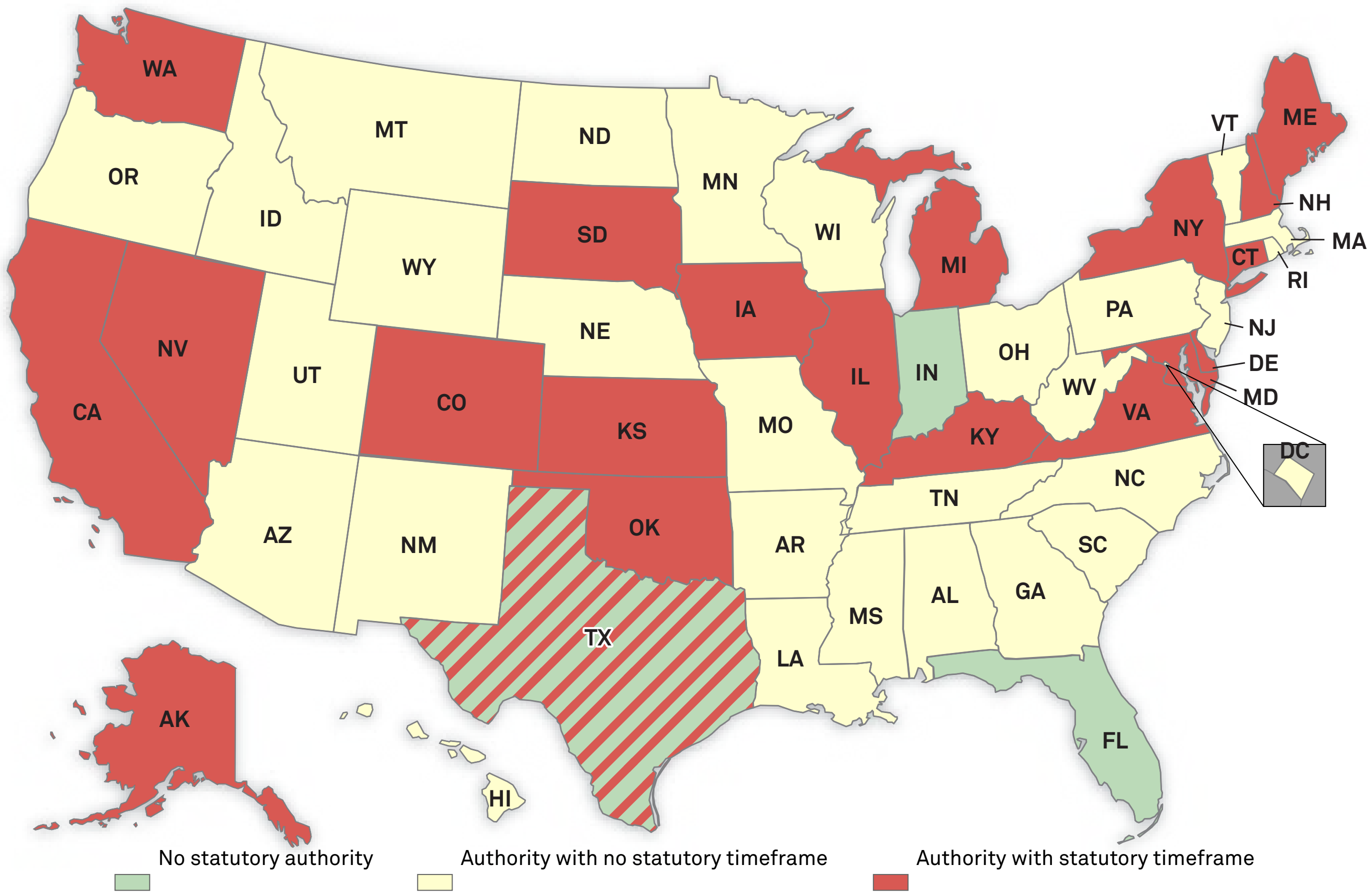
In addition, RRA considers whether a settlement was reached among the parties and, if so, whether the commission honored that settlement or required additional commitments. RRA also examines how politicized the process was: Did the governor, or in the District of Columbia the mayor, play a role? Did 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.

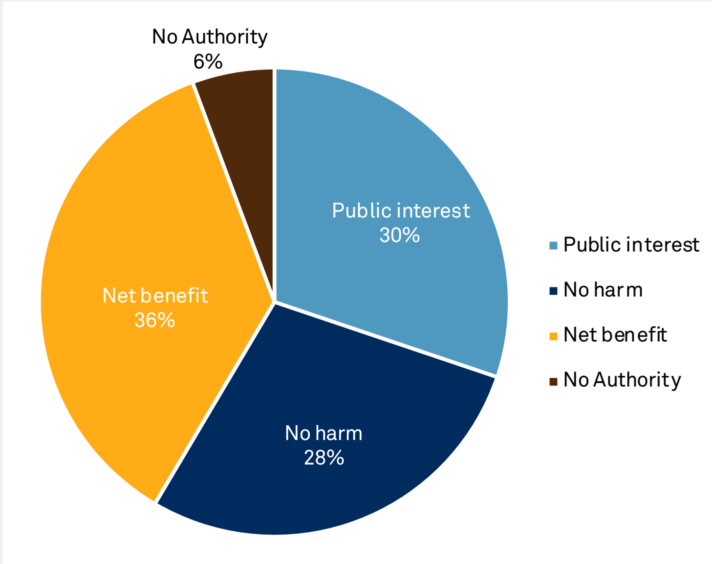
See the Merger Activity section of each Commission Profile for additional detail on statutory guidelines for merger reviews and detail concerning approved/rejected mergers and the associated conditions imposed.

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.

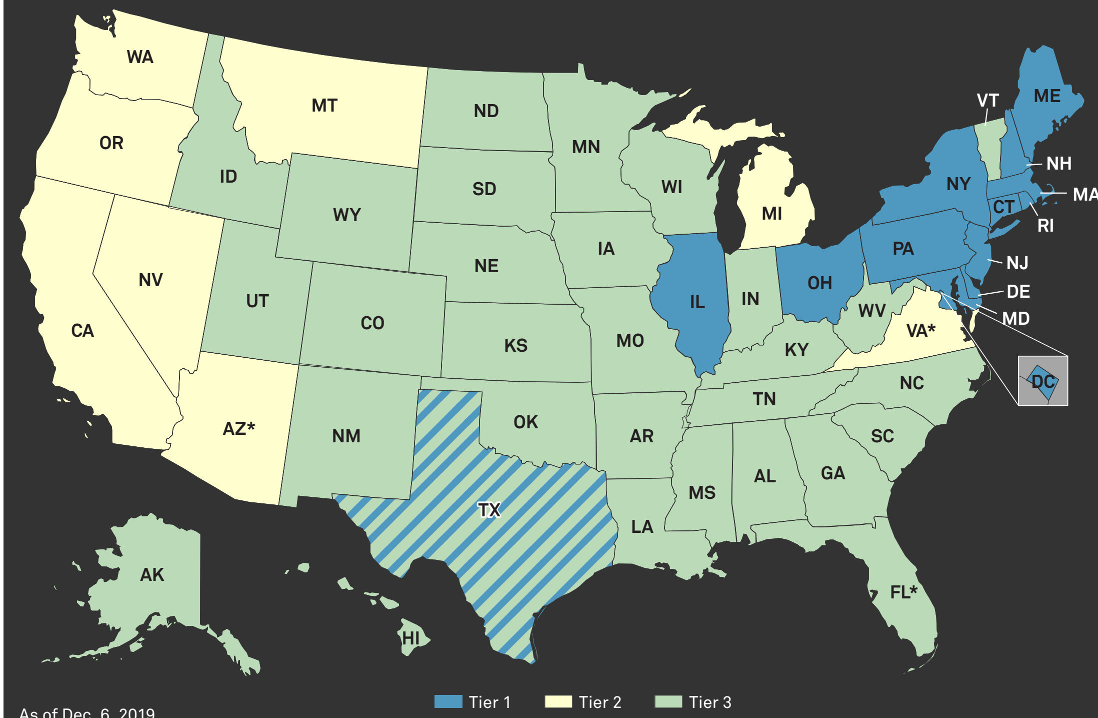
RRA classifies each of the regulatory jurisdictions into one of three tiers based on their relative electric industry restructuring status.

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.

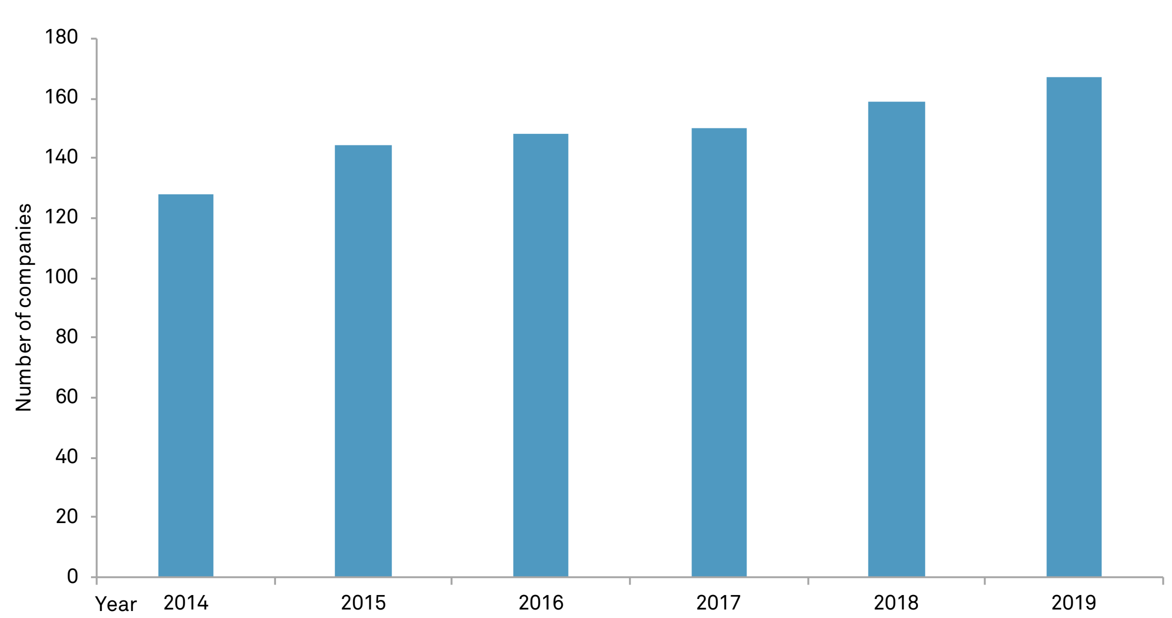
Adjustment clauses

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.

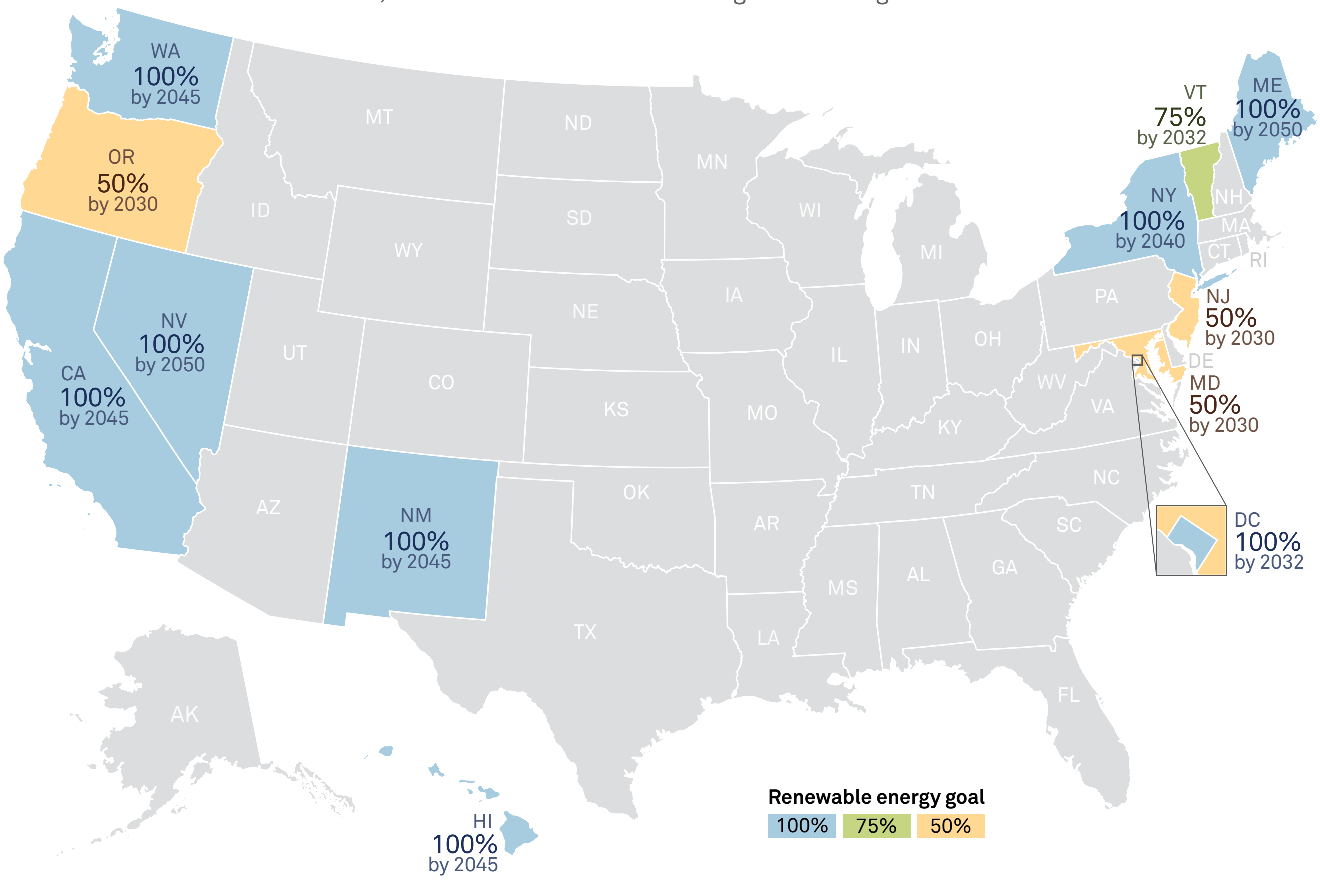
In recent years, the focus on renewables has surged across the United States, with all but 12 jurisdictions developing some type of RPS. The proliferation of renewables, particularly those that are customer-sited or distributed resources, and the related rise of battery storage and electric vehicles 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.

Contributors: *Charlotte Cox, Jim Davis, Russell Ernst, Lisa Fontanella, Monica Hlinka, Jason Lehman, Dan Lowrey and Amy Poszywak*

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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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THE COST OF CAPITAL –

A PRACTITIONER'S GUIDE

BY

DAVID C. PARCELL

PREPARED FOR THE SOCIETY OF UTILITY AND REGULATORY FINANCIAL ANALYSTS (SURFA)

2010 EDITION

Author's Note: This manual has been prepared as an educational reference on cost of capital concepts. Its purpose is to describe a broad array of cost of capital models and techniques. No cost of equity model or other concept is recommended or emphasized, nor is any procedure for employing any model recommended. Furthermore, no opinions or preferences are expressed by either the author or the Society of Utility and Regulatory Financial Analysts.

This part of the manual describes the major cost of equity methods. In doing so, no particular method is being endorsed. Rather, the description of each model is done from an informational perspective in order for the reader to review the theoretical basis of each model, the assumptions of each model, and various ways to estimate the inputs of each model. The following chapters describe, in alphabetical order, the most commonly-used cost of equity models – capital asset pricing model, comparable earnings, discounted cash flow, and risk premium.

Use of Models

All methods and models are necessarily based upon simplifying assumptions which are employed in order to make the particular method usable in rate proceedings or for other uses in finance. It is often argued that certain of these assumptions are not reflective of actual capital market behavior. While this is true, it is important for the analyst to recognize and focus not on the strict existence of the model's assumptions but rather whether the relaxation of these assumptions limits the usefulness of the model to explain or predict economic phenomena, including stock prices. In the final analysis, the value of any return on equity method depends on its ability to capture market expectations and provide a reasonable working approximation of stock valuation. "The 'end result' doctrine is reminiscent of the philosophy of economic positivism, which states that the value of a model or theory should not be assessed by the severity or realism of its assumptions, but rather by its ability to explain or accurately economic phenomena." (Morin, 2006, 14).

On the other hand, economic and financial models are simplified representations, constructed by theoreticians, which attempt to describe how investors should act or react in making investment decisions in the "real world." Thus, models attempt to describe how investors behave. However, it is unlikely that the typical investor consults models to learn how to behave in the financial markets. In particular, as noted above, each model employs simplifying assumptions which permit an application of economic and financial theory to assist in developing rigorous models to explain investor behavior. As noted, it is not necessary for these assumptions to be explicitly verifiable for the models to be useful tools. Yet, both analysts and regulators should recognize that no model can be refined to the extent that the cost of common equity for any firm can be reduced to a simple formulistic exercise and be exactly measured. Investor expectations differ and it is apparent that all investors do not rely upon the same information and models in making investment decisions. Consequently, so single model and model variant can be demonstrated to capture all investor expectations.

Furthermore, no single model is so inherently precise that it can be relied on solely to the exclusion of other theoretically sound models. Each model requires the exercise of judgment as to the reasonableness of the underlying assumptions of the methodology and on the reasonableness of the proxies used to validate the theory. Each model has its own way of examining investor behavior, its own premises, and its own set of simplifications of reality. Each method proceeds from different fundamental premises, most of which cannot be validated empirically. Investors clearly do not subscribe to any singular method, nor does the stock price reflect the application of any one single method by investors. Therefore, it is essential that estimates of investors' required rate of return produced by one method be compared with those produced by other methods, and that all cost of equity estimates be required to pass fundamental tests of reasonableness and economic logic. "The concept of a fair rate of return, therefore, represents a range or a zone of reasonableness" (Phillips, 1988, 357-358).

Two texts have evaluated the various cost of equity models (Kolbe, Read and Hall, 1986; Thompson, 1991). These texts, while informative to the process of evaluating alternative methods, do not establish a single model as superior to the others. In addition, the texts do not evaluate the alternative methodologies available for implementing each model. Nevertheless, they do provide informative insights to the interested reader.

Classification of Models

There are numerous ways that the various cost of equity models can be classified. One way is to classify models according to their underlying financial theory. The capital asset pricing model (CAPM) is based upon portfolio theory; the comparable earnings method is based upon the economic concept of opportunity cost; the discounted cash flow (DCF) model is based on the

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models, such as the Arbitrage Pricing Model (APM) and the Fama-French Three-Factor Model, assert that there are several broad factors that influence security returns and formally quantify the impact of these factors on security returns. What weights should be assigned to the competing approaches? Who is the winner? The quick answer is that all the relevant capital market data and financial theories available should be used in estimating the cost of capital.

15.2 Use of Multiple Methods

There are four broad generic methodologies available to measure the cost of equity: DCF, Risk Premium, and Capital Asset Pricing Model (CAPM), which are market-oriented, and Comparable Earnings, which is accounting-oriented. Each generic market-based methodology in turn contains several variants: For example, the Empirical CAPM and the Fama-French Three-Factor Model are sub-species of the CAPM methodology. The multiple-stage DCF model is a variation of the generic DCF approach.

Each methodology requires the exercise of considerable judgment on the reasonableness of the assumptions underlying the methodology and on the reasonableness of the proxies used to validate the theory. The inability of the DCF model to account for changes in relative market valuation, discussed below, is a vivid example of the potential shortcomings of the DCF model when applied to a given company. Similarly, the inability of the CAPM to account for variables that affect security returns other than beta tarnishes its use.

No one individual method provides the necessary level of precision for determining a fair return, but each method provides useful evidence to facilitate the exercise of an informed judgment. Reliance on any single method or preset formula is inappropriate when dealing with investor expectations because of possible measurement difficulties and vagaries in individual companies' market data.

Examples of such vagaries include dividend suspension, insufficient or unrepresentative historical data due to a recent merger, increased competition, impending merger or acquisition, and a new corporate identity due to restructuring activities. To illustrate, there were difficulties in applying cost of capital methodologies while the electric utility industry was experiencing structural change in the late 1990s and early 2000s. The traditional cost of equity estimation methodologies were difficult to implement during the fast-changing circumstances of the electric utility industry during that period. This is because utility company historical data had become less meaningful for an industry in a state of change. Past earnings and dividend trends were simply not indicative of the future. For example, historical growth rates of earnings and dividends had been depressed by eroding margins due to a variety of factors, including structural transformation and the transition to a more competitive environment. As a result, historical data were not representative of the future long-term earning power of these companies. Moreover, historical growth rates were not representative of future trends for several electric utilities involved in mergers and acquisitions, as these companies going forward were not the same companies for which historical data were available. A similar argument applied to historical risk measures. Historical risk measures, such as beta, were downward-biased in assessing the current industry risk circumstances.

As a general proposition, it is extremely dangerous to rely on only one generic methodology to estimate equity costs. The difficulty is compounded when only one variant of that methodology is employed. It is compounded even further when that one methodology is applied to a single company. Hence, several methodologies applied to several comparable-risk companies should be employed to estimate the cost of common equity. The advantage of using several different approaches is that the results of each one can be used to check the others. If the cost of equity estimation process is limited to one methodology, such as DCF or CAPM, it may severely bias the results. One major problem that results from using only one methodology is the lack of corroborating evidence. There is simply no objective cross check on the result. All the market data and financial theories available should be used in making an estimate.

There is no single model that conclusively determines or estimates the expected return for an individual firm. Each methodology possesses its own way of examining investor behavior, its own premises, and its own set of simplifications of reality. Each method proceeds from different fundamental premises that cannot be validated empirically. Investors do not necessarily subscribe to any one method, nor does the stock price reflect the application of any one single method by the price-setting investor. There is no monopoly as to which method is used by investors. In the absence of any hard evidence as to which method outdoes the other, all relevant evidence should be used and weighted equally, in order to minimize judgmental error, measurement error, and conceptual infirmities. A regulator should rely on the results of a variety of methods applied to a variety of comparable groups, and not on one particular method. There is no guarantee that a single DCF result is necessarily the ideal predictor of the stock price and of the cost of equity reflected in that price, just as there is no guarantee that a single CAPM or Risk Premium result constitutes the perfect explanation of that stock price. The DCF, CAPM, and Risk Premium models are three different ways of getting a handle on the same problem.

If a regulatory commission relies on a single cost of equity estimate or on a single methodology, that commission greatly limits its flexibility and increases the risk of authorizing unreasonable rates of return. The results from one methodology or from a one-company sample are likely to contain a high degree of measurement error and may be distorted by short-term aberrations. A commission's hands should not be bound to one single company-specific estimate of equity costs, nor should the commission ignore relevant evidence and back itself into a corner.

The financial literature supports the use of multiple methods. Professor Eugene Brigham, a widely respected scholar and finance academician, asserts:[1]

> Three methods typically are used: (1) the Capital Asset Pricing Model (CAPM), (2) the discounted cash flow (DCF) method, and (3) the bond-yield-plus-risk-premium approach. These methods are not mutually exclusive—no method dominates the others, and all are subject to error when used in practice. Therefore, when faced with the task of estimating a company's cost of equity, we generally use all three methods and then choose among them on the basis of our confidence in the data used for each in the specific case at hand.

Another prominent finance scholar, Professor Stewart Myers, in an early pioneering article on regulatory finance, stated:[2]

> Use more than one model when you can. Because estimating the opportunity cost of capital is difficult, only a fool throws away useful information. That means you should not use any one model or measure mechanically and exclusively. Beta is helpful as one tool in a kit, to be used in parallel with DCF models or other techniques for interpreting capital market data.

Reliance on multiple tests recognizes that no single methodology produces a precise definitive estimate of the cost of equity. As stated in Bonbright, Danielsen, and Kamerschen (1988), "*no single or group test or technique is conclusive*." Only a fool discards relevant evidence.

15.3 Musings on DCF

While the DCF model has been fashionable in regulatory proceedings, although not nearly as much in academic circles, uncritical acceptance of the standard DCF equation vests the model with a degree of accuracy that simply is not

[1] See Brigham and Ehrhardt (2005).

[2] See Myers (1972).

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Myron J. Gordon

1974
MSU Public Utilities Studies

Division of Research
Graduate School of Business Administration
Michigan State University
East Lansing, Michigan

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

$$\mathrm{AYPS}(T) = \mathrm{AFC}(T)/.5\,[\mathrm{ANS}(T) + \mathrm{ANS}(T-1)], \tag{5.4.1}$$

where 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

$$\mathrm{YGR}(T) = [\mathrm{AYPS}(T) - \mathrm{AYPS}(T-1)]/\mathrm{AYPS}(T-1). \tag{5.4.2}$$

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

$$Ln[1 + \mathrm{YGRS}(T)] = \lambda Ln[1 + \mathrm{YGR}(T)] + (1-\lambda)Ln[1 + \mathrm{YGRS}(T-1)], \tag{5.4.3}$$

with $\lambda = .15$ and 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 BVS($T-1$) = \$50.00. With RRC(T) = .10, AYP(T) = \$5.00, and with RETR(T) = .5, BVS(T) = \$52.50. If RRC($T+1$) = .10, AYP($T+1$) = \$5.25, and YGR($T+1$) = RTGR($T+1$) = .05. However, if RRC($T+1$) = .11, RTGR($T+1$) = (.11)(.5) = .055, while AYP($T+1$) = \$5.775, and YGR($T+1$) = (\$5.775 − \$5.00)/\$5.00 = .155.

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Roger A. Morin, PhD

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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 of 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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2006
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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 β 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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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

Eugene F. Brigham is graduate research professor of finance and director of the Public Utility Research Center at the University of Florida. He is the author of numerous journal articles and textbooks, and he testifies regularly concerning rate of return. **Dr. Brigham** received his PhD degree from the University of California at Berkeley.

Dana A. Aberwald is a research associate at the Public Utilities Research Center at the University of Florida. **Ms. Aberwald** received a BSBA degree in accounting and an MBA degree from the University of Florida and is a certified public accountant.

Louis C. Gapenski teaches at the University of Florida, where he is a research associate at the Public Utilities Research Center. **Mr. Gapenski** holds degrees from the Virginia Military Institute, the Naval Postgraduate School, and the University of Florida.

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, then to apply the alternative theories, asking the following question: What results do the several methods produce, and are these 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 formula, which Patterson [6] used, is as follows:[6]

$$r = \frac{\text{Expected dividend yield}}{1 - F} + g \quad (5)$$

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, in which the company raises an additional share of 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
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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.

Edison Electric Institute

Alternative Regulation for Emerging Utility Challenges: 2015 Update

Prepared by:
Pacific Economics Group Research LLC

Mark Newton Lowry, PhD

Matthew Makos

Gretchen Waschbusch, MBA

Prepared for:
Edison Electric Institute

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701 Pennsylvania Avenue, N.W.
Washington, D.C. 20004-2696
Phone: 202-508-5000
Web site: www.eei.org

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

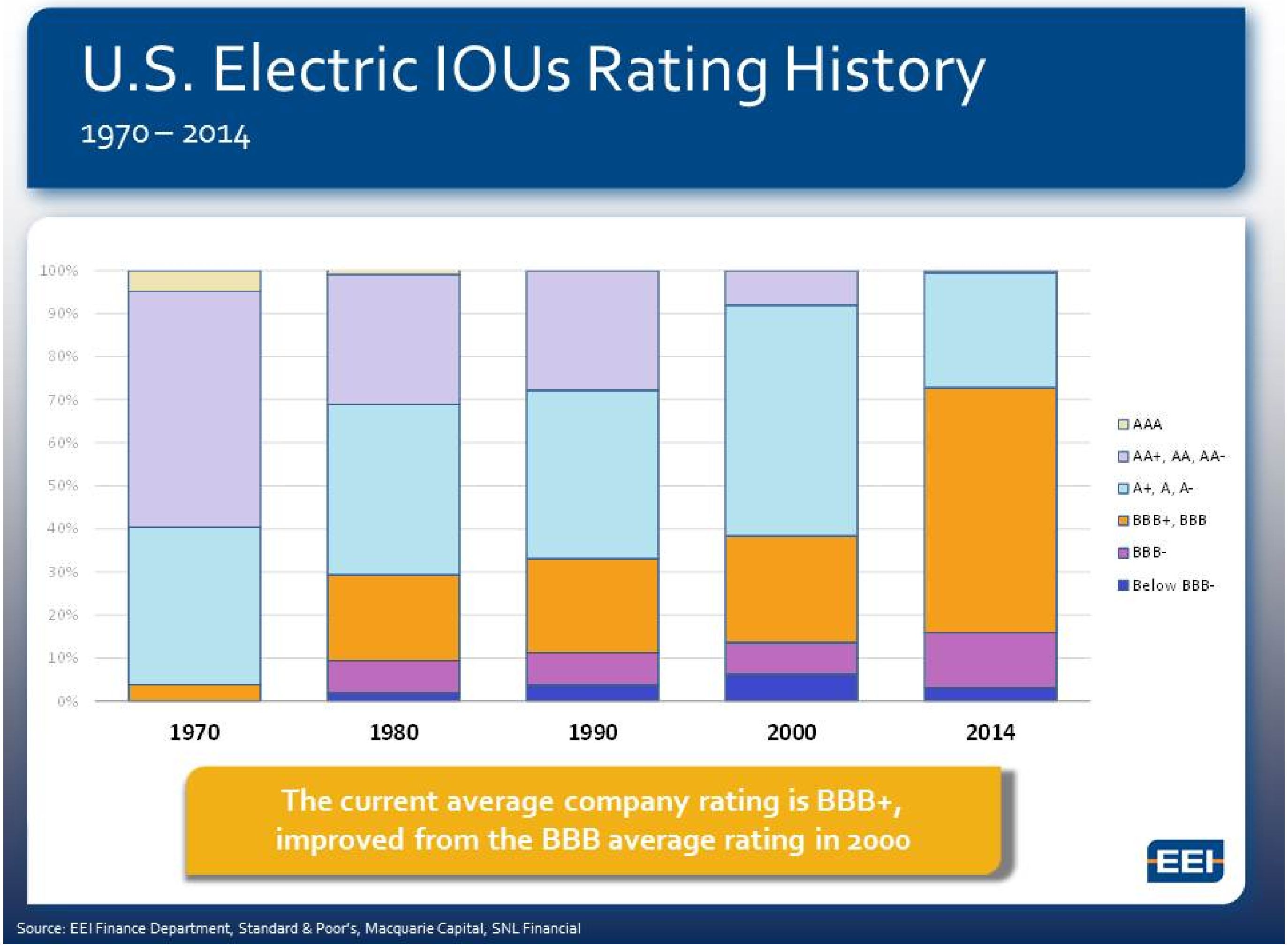

U.S. Electric IOUs Rating History
1970 – 2014
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1970
1980
1990
2000
2014
AAA
AA+, AA, AA-
A+, A, A-
BBB+, BBB
BBB-
Below BBB-
The current average company rating is BBB+, improved from the BBB average rating in 2000
EEI
Source: EEI Finance Department, Standard & 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

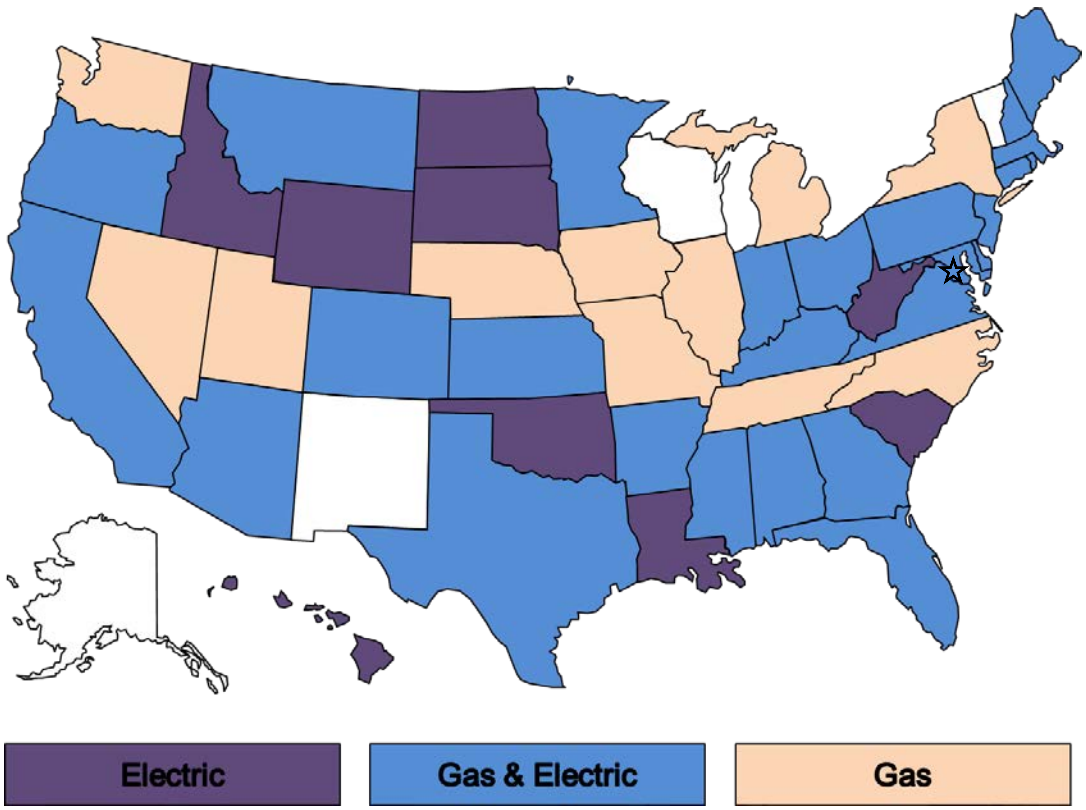


Figure 3: Recent Capital Cost Tracker Precedents by State: Water Utilities

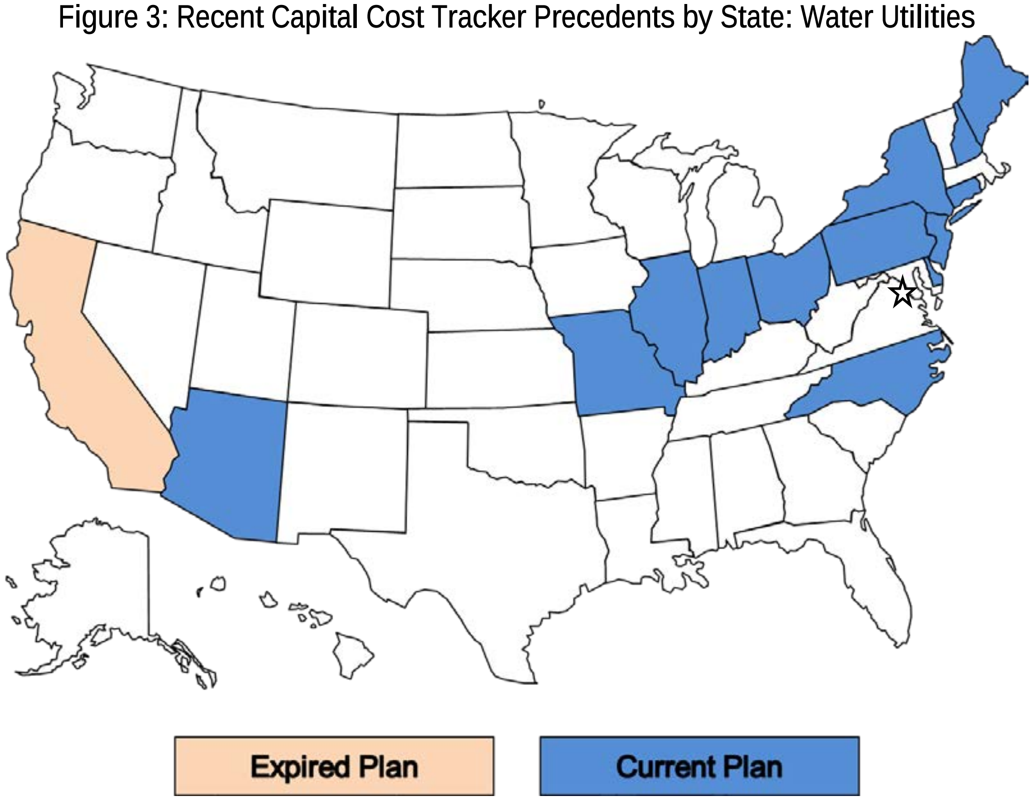


Table 2

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.

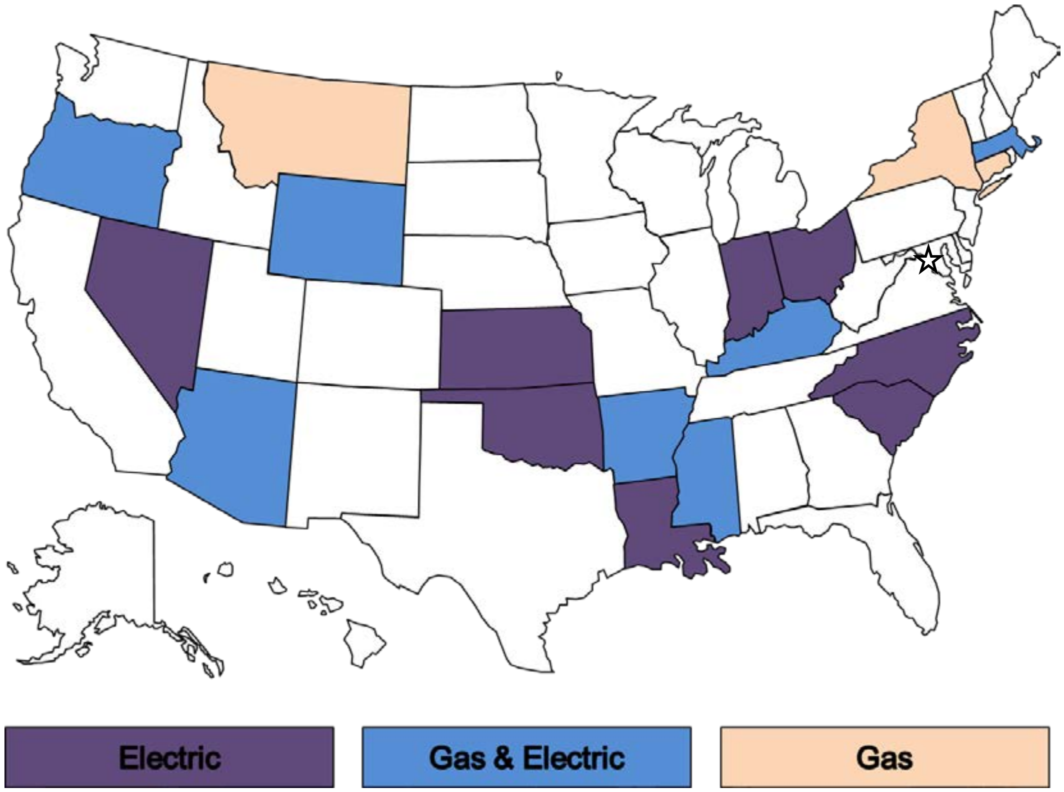
Precedents for LRAMs are detailed in Table 3 and Figure 4 below.[3] LRAMs are currently the most popular means of relaxing the link between revenue and system use in the US electric utility industry. Since our 2013 survey, LRAMs have been adopted for electric utilities in Arizona, Louisiana, and Mississippi. 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

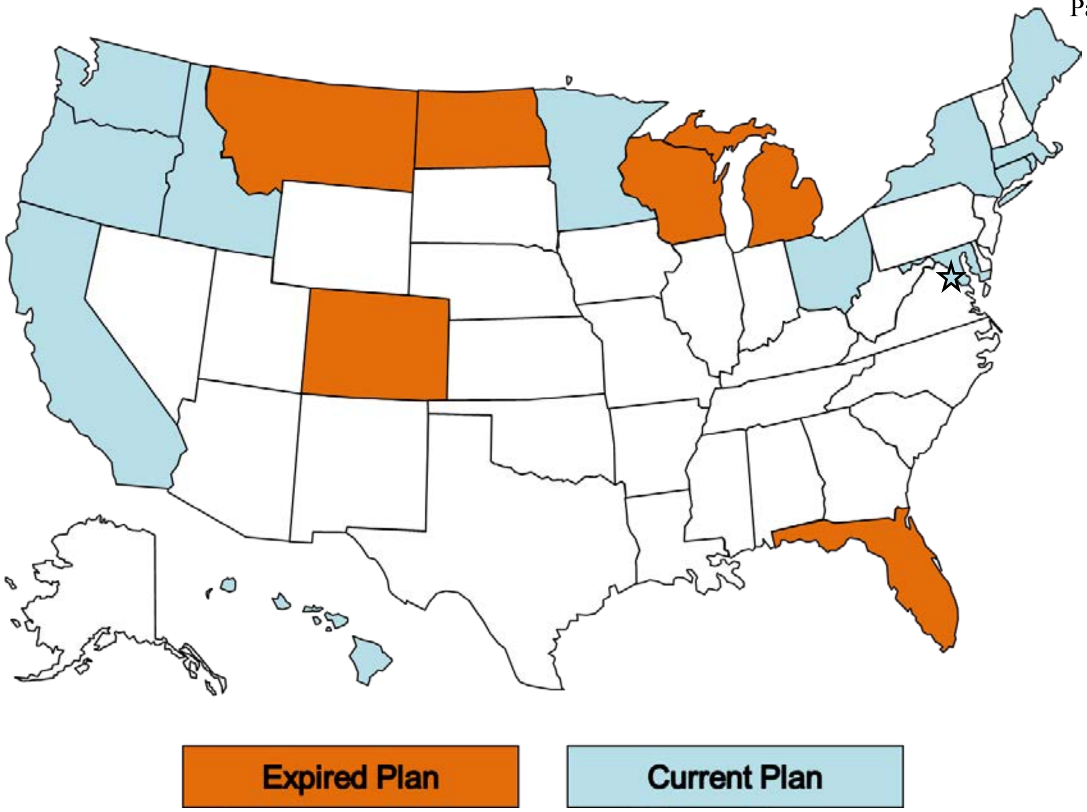


Figure 5b: Gas Revenue Decoupling by State

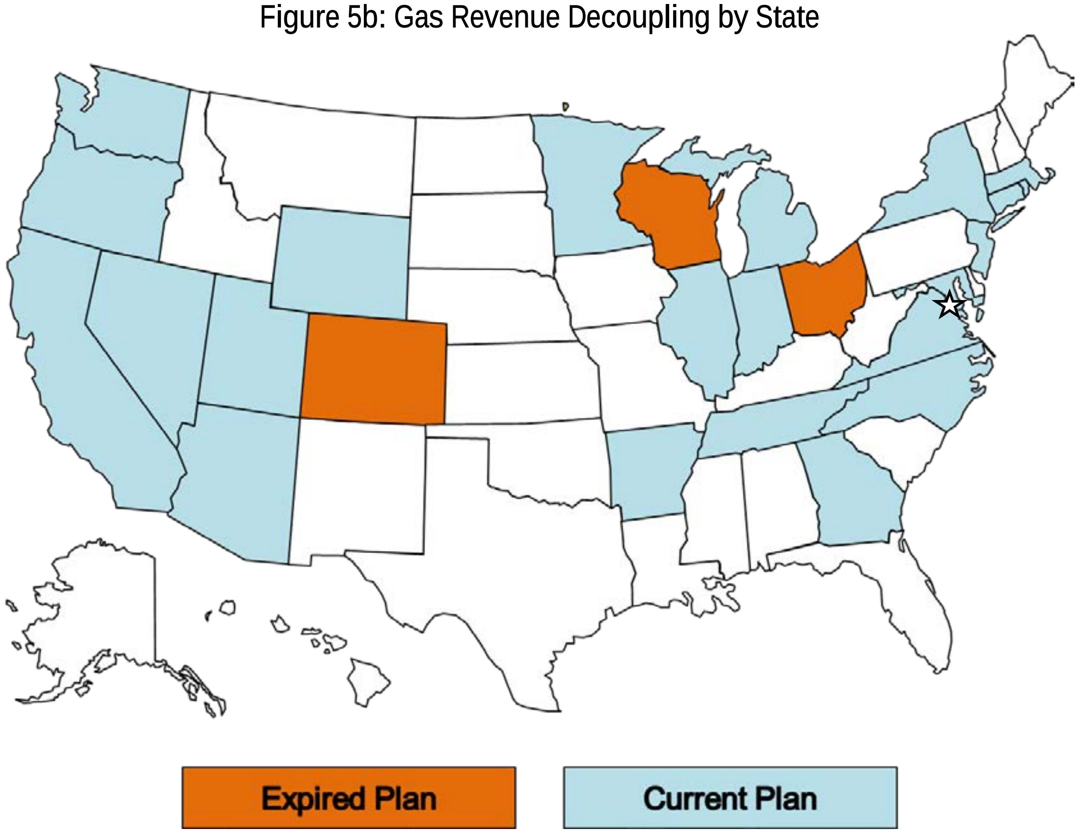


Table 4

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

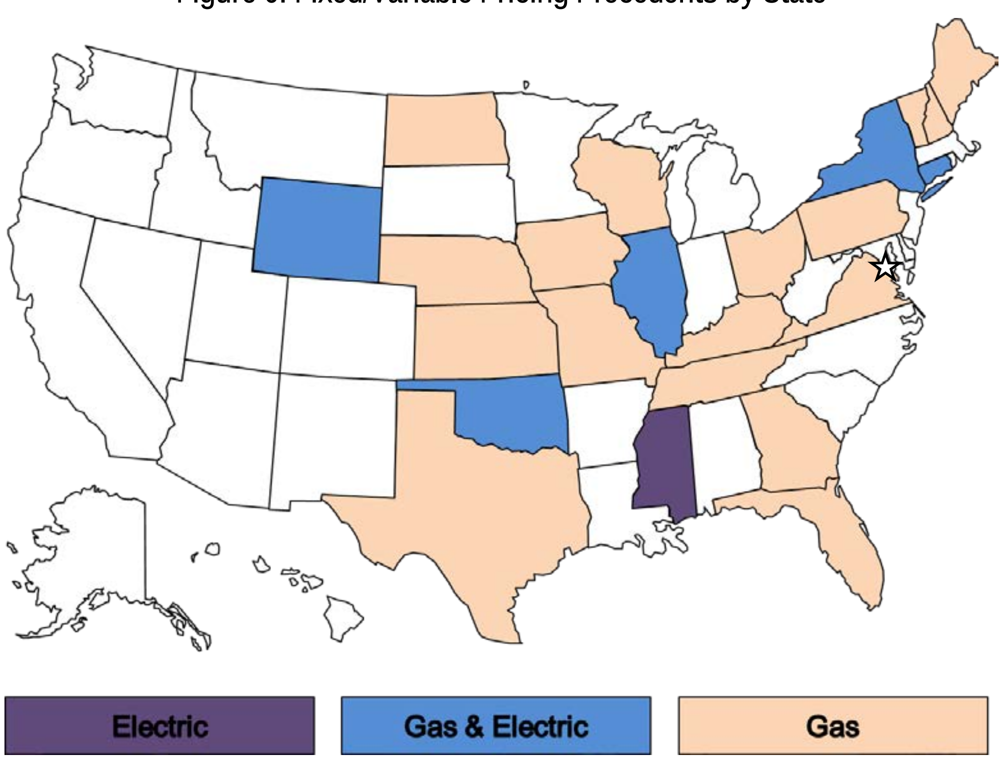


Table 5

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).

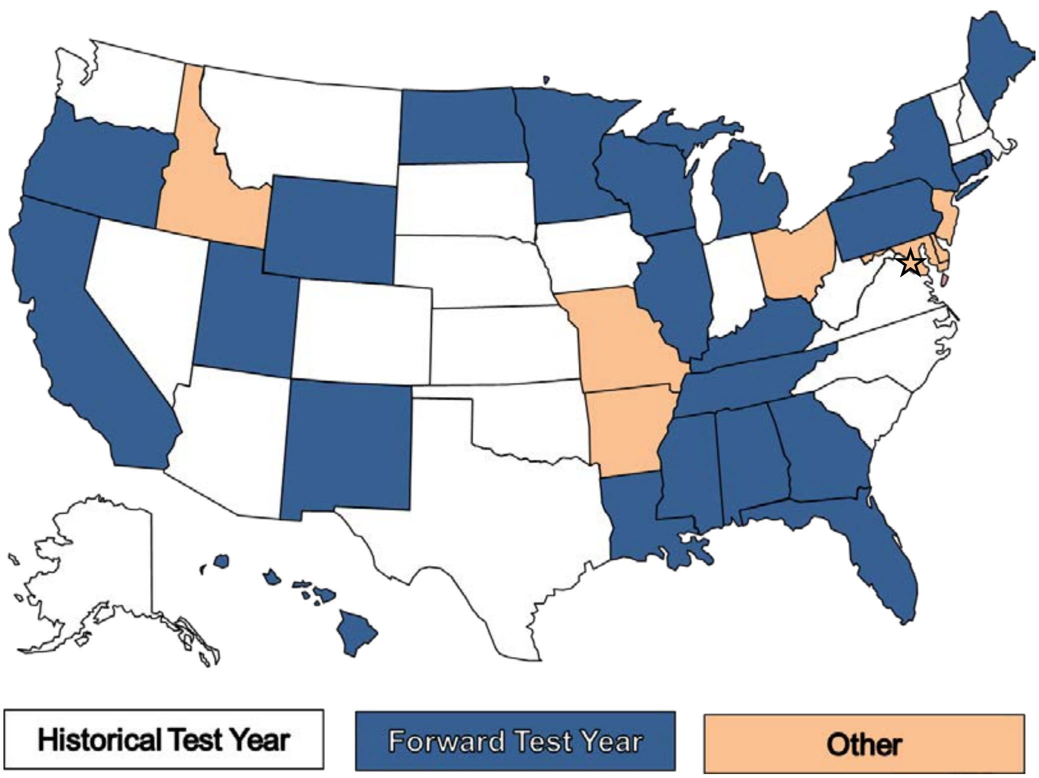
[4] A forward test year can in principle be the rate case year, and thereby not require two-year forecasts. Proposed rates can be established on an interim basis shortly after the filing.

[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

Jurisdiction	Notes
Fully-Forecasted Test Years Commonly Used (15)	
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)	
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)	
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)	
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.

[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

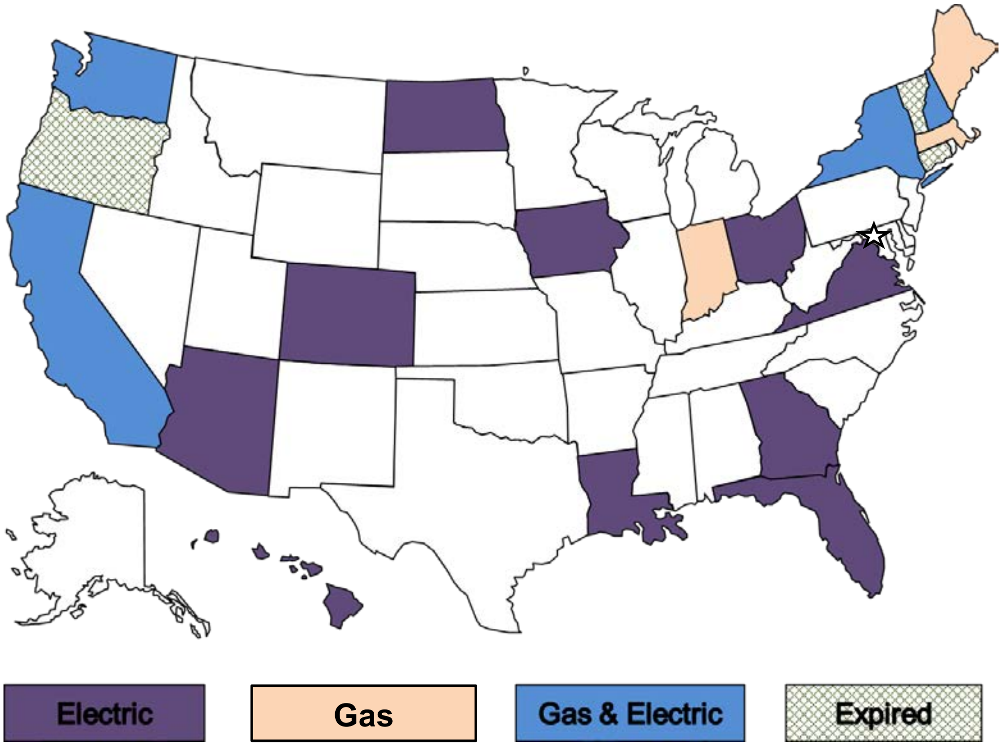


Figure 8b: Recent Canadian Multiyear Rate Plan Precedents by Province

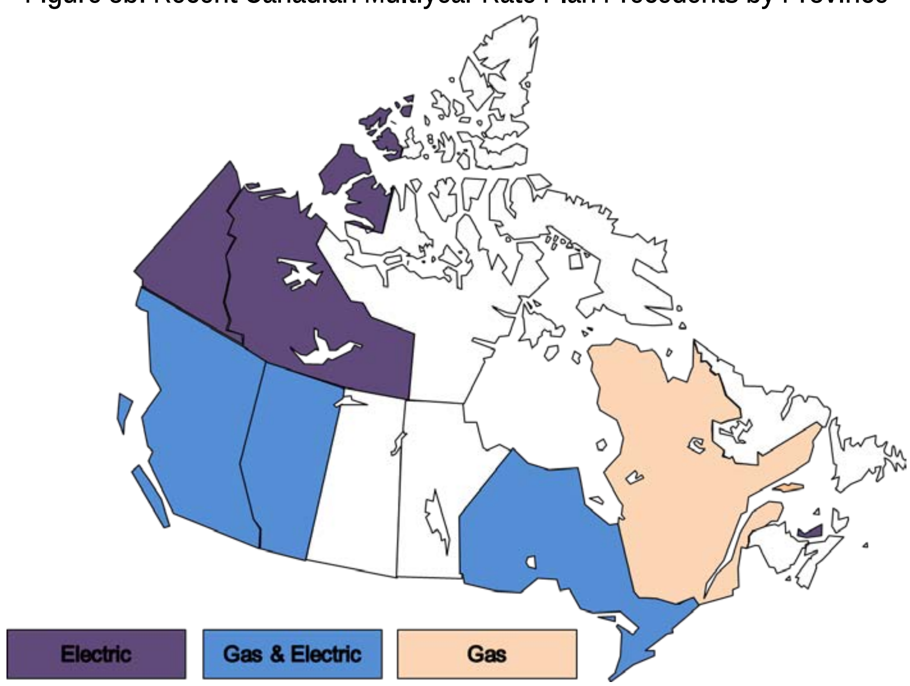


Table 7

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 20[illegible]
Yukon Territory	Yukon Electrical Company, Limited	2013-2015	Bundled power service	Revenue Cap Stairstep	None	Board Order 2014-06; April 201[illegible]

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.

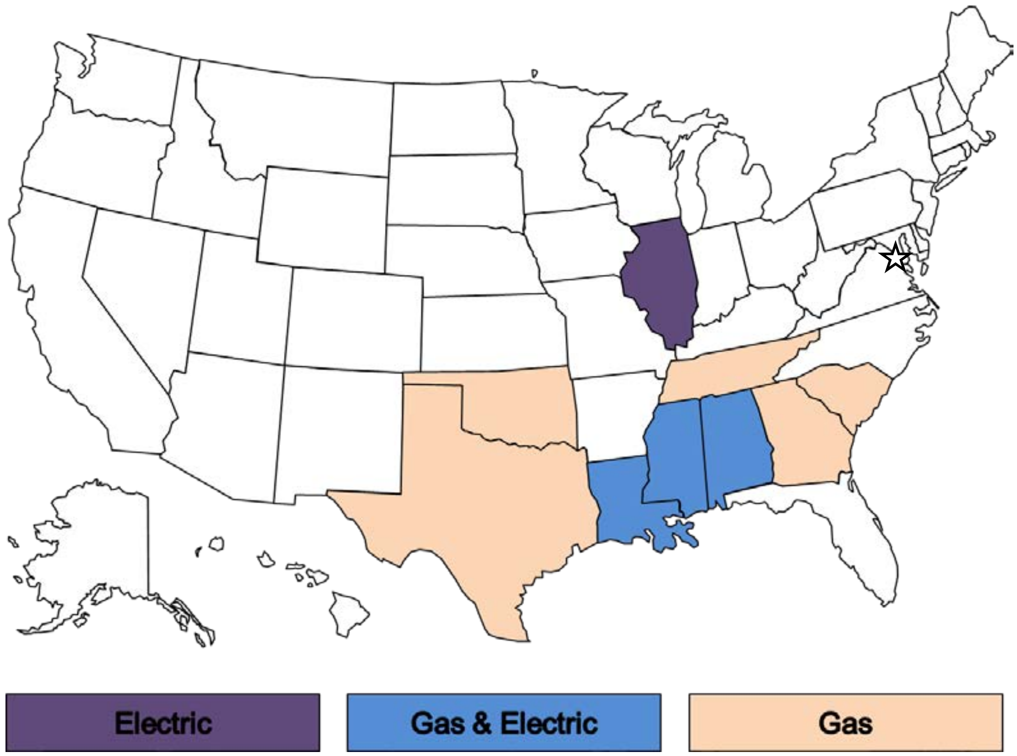
Formula rates have been used at the FERC and its predecessor agency to regulate interstate services of energy utilities for decades. Use of FRPs by the FERC was encouraged in the 1970s and early 1980s by rapid price inflation. Despite slower inflation in recent years, the FERC has made extensive use 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.

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.

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[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 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.

May 1, 2020

TABLE OF SUMMARY & INDEX CONTENTS

Summary & Index Page Number

SCREENS

The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

15.3

26 Weeks Ago	Market Low 3-23-20	Market High 2-19-20
17.3	11.0	18.0

The Median of Estimated
DIVIDEND YIELDS
(next 12 months) of all dividend paying stocks

2.9%

26 Weeks Ago	Market Low 3-23-20	Market High 2-19-20
2.2%	3.7%	2.2%

The Median Estimated
THREE-TO-FIVE YEAR PRICE APPRECIATION POTENTIAL
of all 1700 stocks in the VL Universe

95%

26 Weeks Ago	Market Low 3-23-20	Market High 2-19-20
50%	145%	45%

The Median Estimated
18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE
of all 1700 stocks in the VL Universe

29%

26 Weeks Ago	Market Low 3-23-20	Market High 2-19-20
10%	72%	6%

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 LXXV, No. 38.

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Index to Stocks

Prices quoted are as of April 20, 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 9-30-20	(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	46.38	2	3	1	1.30	40- 65	(N- 40%)	34.9	0.7	1.33	.32	31	12/31	.33	.24	3/31	NIL	NIL	YES
	702	AAR Corp.	AIR	17.19	4	3	3	1.25	40- 60	(135-250%)	6.6	1.7	2.61	.30	53	2/28	.67	.78	6/30	.075	.075	YES
2227	1966	AB InBev ADR	BUD	44.59	4	2	4	.95	95- 130	(115-190%)	18.1	2.2	2.46	.99	34	12/31	.06	.23	3/31	NIL	NIL	YES
	1740	ABB Ltd. ADR	ABB	17.50	–	2	–	1.10	20- 25	(15- 45%)	39.8	4.5	.44	.79	69	12/31	.14	.10	3/31	NIL	NIL	YES
	375	ABM Industries Inc.	ABM	30.69	3	3	5	.90	55- 85	(80-175%)	15.3	2.4	2.00	.74	32	1/31	.39	.31	6/30	.185	.18	YES
1655	1414	ACCO Brands	ACCO	5.58	–	3	–	1.20	19- 30	(240-440%)	4.5	4.7	1.24	.26	70	12/31	.46	.41	3/31	.065	.06	YES
	2614	ACI Worldwide (NDQ)	ACIW	25.79	3	3	3	1.15	35- 45	(35- 75%)	24.1	NIL	1.07	NIL	4	12/31	.47	.74	3/31	NIL	NIL	YES
	1318	ADT Inc.	ADT	5.25	–	3	–	1.45	13- 19	(150-260%)	NMF	2.7	.01	.14	61	12/31	d.10	d.20	6/30	.035	.035	YES
1036	1208	AES Corp.	AES	12.70	3	3	3	1.10	16- 25	(25- 95%)	15.3	4.5	.83	.57	55	12/31	d.12	.19	6/30	◆.143	.137	YES
	148	AGCO Corp.	AGCO	49.16	4	3	4	1.20	95- 145	(95-195%)	10.6	1.3	4.64	.64	59	12/31	.94	1.31	3/31	.16	.15	YES
1421	737	AK Steel Holding	AKS					SEE FINAL SUPPLEMENT														
1423	2302	AMC Entertainment Hldgs.	AMC	3.18	–	3	–	1.00	▼ 9- 14	(185-340%)	NMF	3.8	▼d5.85	.12	73	12/31	.35	.43	3/31	▼.03	.20	YES
	2328	AMC Networks (NDQ)	AMCX	24.08	4	3	3	.85	▼ 90- 130	(275-440%)	3.2	NIL	▼7.59	NIL	80	12/31	1.69	1.92	3/31	NIL	NIL	YES
	1642	AMN Healthcare	AMN	55.13	3	3	1	1.10	65- 100	(20- 80%)	21.8	NIL	2.53	NIL	88	12/31	.58	.74	3/31	NIL	NIL	YES
	2636	ANGI Homeservices (NDQ)	ANGI	5.92	4	3	4	1.00	12- 18	(105-205%)	32.9	NIL	.18	NIL	50	12/31	NIL	.07	3/31	NIL	NIL	YES
	1568	ASA Gold & Precious	ASA	12.83	–	3	–	.70	14- 20	(10- 55%)	NMF	0.2	NMF	.02-NIL	1	2/28	14.36(q)	11.79(q)	6/30	.01	.01	YES
	1643	ASGN Inc.	ASGN	37.41	4	3	3	1.40	95- 140	(155-275%)	12.3	NIL	3.04	NIL	88	12/31	.74	.86	3/31	NIL	NIL	YES
	917	AT&T Inc.	T	30.98	3	1	2	.75	55- 65	(80-110%)	8.5	6.7	3.63	2.09	29	12/31	.89	.86	6/30	.52	.51	YES
1423	942	A10 Networks	ATEN	6.54	–	4	–	1.35	6- 10	(N- 55%)	NMF	NIL	d.15	NIL	42	12/31	NIL	d.02	3/31	NIL	NIL	YES
	918	ATN International (NDQ)	ATNI	63.70	3	3	3	.75	50- 75	(N- 20%)	NMF	1.1	d.01	.68	29	12/31	d.11	d.04	6/30	.17	.17	YES
1845	1319	AVX Corp.	AVX					SEE FINAL SUPPLEMENT														
		AXA Equitable Holdings						NAME CHANGED TO EQUITABLE HOLDINGS														
640	2135	Aaron's Inc.	AAN	24.71	3	3	4	1.10	70- 105	(185-325%)	7.4	0.6	3.35	.16	49	12/31	1.15	1.02	6/30	.04	.035	YES
	200	Abbott Labs.	ABT	98.00	3	1	3	1.05	100- 125	(N- 30%)	28.0	1.5	3.50	1.44	8	3/31	◆.65	.63	6/30	.36	.32	YES
	1609	AbbVie Inc.	ABBV	83.99	1	3	2	1.15	115- 175	(35-110%)	8.9	5.6	9.39	4.72	22	12/31	2.21	1.90	6/30	1.18	1.07	YES
	2193	Abercrombie & Fitch	ANF	10.30	4	4	4	1.25	25- 40	(145-290%)	42.9	7.8	.24	.80	63	1/31	1.29	1.42	3/31	.20	.20	YES
	417	Aberdeen Australia Fd. (ASE)	IAF	3.93	–	3	–	1.00	9- 13	(130-230%)	NMF	4.1	NMF	.16	–	1/31	5.81(q)	5.57(q)	3/31	.02	.08	
	1197	Aberdeen Asia-Pac. Fd. (ASE)	FAX	3.41	–	4	–	.65	4- 7	(15-105%)	NMF	10.3	NMF	.35	–	10/31	4.88(q)	4.59(q)	3/31	.11	.14	
	418	Aberdeen Japan Equity	JEQ	6.66	–	3	–	.90	9- 14	(35-110%)	NMF	0.9	NMF	.06	–	10/31	8.97(q)	8.66(q)	3/31	.07	.069	
	169	ABIOMED Inc. (NDQ)	ABMD	166.20	3	3	5	1.25	210- 315	(25- 90%)	35.6	NIL	4.67	NIL	19	12/31	1.51	.97	3/31	NIL	NIL	YES
	943	Acacia Communications (NDQ)	ACIA	68.00	–	4	–	1.25	55- 85	(N- 25%)	90.7	NIL	.75	NIL	42	12/31	.30	.22	3/31	NIL	NIL	YES
	2615	Accenture Plc	ACN	174.74	1	1	2	1.05	200- 240	(15- 35%)	22.3	1.9	7.85	3.28	4	2/28	1.91	1.73	3/31	.80	NIL	YES
	2007	Activision Blizzard (NDQ)	ATVI	66.50	3	3	2	1.05	50- 70	(N- 5%)	36.3	0.6	1.83	.41	23	12/31	.68	.84	6/30	.41	.37	YES
		Actuant Corp.						NAME CHANGED TO ENERPAC TOOL GROUP														
	1302	Acuity Brands	AYI	82.63	4	3	3	1.30	230- 345	(180-320%)	8.3	0.6	10.00	.52	67	2/28	1.84	1.99	6/30	.13	.13	YES
	1198	Adams Divers. Equity Fd	ADX	13.81	–	2	–	1.00	16- 20	(15- 45%)	NMF	1.8	NMF	.25	–	12/31	17.93(q)	14.89(q)	3/31	.02	.03	
230	975	Adient plc	ADNT	10.75	4	3	3	1.60	35- 50	(225-365%)	5.7	NIL	1.90	NIL	85	12/31	.96	.31	3/31	NIL	NIL	YES
	2585	Adobe Inc. (NDQ)	ADBE	344.88	1	2	2	1.15	435- 590	(25- 70%)	50.8	NIL	6.79	NIL	12	2/28	1.96	1.36	3/31	NIL	NIL	YES
	1998	Adtalem Global Educ.	ATGE	26.88	4	3	3	1.10	40- 60	(50-125%)	12.7	NIL	2.11	NIL	33	12/31	.57	.74	3/31	NIL	NIL	YES
	944	ADTRAN, Inc. (NDQ)	ADTN	9.69	▲4	3	4	.90	16- 10	(65- 5%)	NMF	3.7	d.25	.36	42	12/31	d.13	d.18	3/31	.09	.09	YES
	2118	Advance Auto Parts	AAP	115.40	3	3	4	1.00	165- 250	(45-115%)	16.1	0.9	7.19	1.00	35	12/31	1.64	1.17	6/30	▲.25	.06	YES
	406	Advanced Disposal	ADSW	32.32	–	3	–	.75	25- 35	(N- 10%)	NMF	NIL	.29	NIL	3	12/31	d.04	.03	3/31	NIL	NIL	YES
	1350	Advanced Energy (NDQ)	AEIS	51.71	3	3	2	1.35	75- 115	(45-120%)	15.8	NIL	3.28	NIL	40	12/31	.87	.73	3/31	NIL	NIL	YES
	1351	Advanced Micro Dev. (NDQ)	AMD	56.97	3	4	3	1.90	25- 40	(N- N%)	69.5	NIL	.82	NIL	40	12/31	.32	.08	3/31	NIL	NIL	YES
	559	AdvanSix Inc.	ASIX	9.01	5	3	2	1.60	30- 40	(235-345%)	6.2	NIL	1.46	NIL	77	12/31	d.06	.68	3/31	NIL	NIL	YES
	1227	AECOM	ACM	32.46	–	3	–	1.45	45- 70	(40-115%)	13.8	NIL	2.35	NIL	66	12/31	.46	.56	3/31	NIL	NIL	YES
	1102	Aegion Corp. (NDQ)	AEGN	14.00	3	3	3	1.30	25- 40	(80-185%)	10.8	NIL	1.30	NIL	44	12/31	.39	.27	3/31	NIL	NIL	YES
	2535	AerCap Hldgs. NV	AER	22.96	3	3	3	1.55	75- 105	(225-355%)	2.8	NIL	8.20	NIL	24	12/31	2.34	1.62	3/31	NIL	NIL	YES
	1741	Aerojet Rocketdyne	AJRD	42.21	3	3	2	1.00	50- 70	(20- 65%)	25.9	NIL	1.63	NIL	69	12/31	.27	.29	3/31	NIL	NIL	YES
	703	AeroVironment (NDQ)	AVAV	56.03	3	3	3	1.10	70- 110	(25- 95%)	34.4	NIL	1.63	NIL	53	1/31	d.04	.35	3/31	NIL	NIL	YES
	2536	Affiliated Managers	AMG	61.53	4	3	4	1.50	155- 235	(150-280%)	6.9	2.3	8.87	1.40	24	12/31	.46	d2.88	3/31	.32	.32	YES
2027	1557	Aflac Inc.	AFL	36.15	4	2	4	.95	50- 60	(40- 65%)	7.9	3.1	4.55	1.13	48	12/31	1.03	1.02	3/31	▲.28	.27	YES
	113	Agilent Technologies	A	77.37	▲1	2	2	1.10	100- 140	(30- 80%)	22.8	0.9	3.40	.72	20	1/31	.81	.76	6/30	.18	.164	YES
640	1569	Agnico Eagle Mines	AEM	53.88	2	3	3	.40	70- 105	(30- 95%)	47.3	1.5	1.14	.80	1	12/31	.37	.03	3/31	▲.20	.125	YES
	2436	Air Products & Chem.	APD	214.37	1	1	2	1.00	265- 325	(25- 50%)	23.8	2.5	9.00	5.36	57	12/31	2.14	1.86	6/30	▲1.34	1.16	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 9-30-20, 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 9-30-20	(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?
1845	2537	Aircastle Ltd.	AYR					SEE FINAL SUPPLEMENT													
	1814	Akamai Technologies (NDQ)	AKAM	106.24	1	3	2	1.05	120- 175 (15- 65%)	34.8	NIL	3.05	NIL	43	12/31	.73	.57	3/31	NIL	NIL	YES
	1432	Akorn, Inc.	AKRX					SEE FINAL REPORT													
	1703	Alamo Group	ALG	89.52	3	3	3	.90	135- 200 (50-125%)	15.3	0.6	5.86	.52	31	12/31	.81	1.41	6/30	.13	.12	YES
	302	Alaska Air Group	ALK	29.23	3	3	3	1.05	90- 135 (210-360%)	4.2	5.1	6.96	1.50	74	12/31	1.46	.75	3/31	▲.375	.35	YES
	1704	Albany Int'l 'A'	AIN	47.75	3	3	3	1.15	80- 120 (70-150%)	15.1	1.6	3.17	.76	31	12/31	.97	.74	6/30	.19	.18	YES
	2437	Albemarle Corp.	ALB	60.00	3	3	3	1.40	90- 130 (50-115%)	23.5	2.6	▼2.55	1.54	57	12/31	.85	1.23	6/30	▲.385	.368	YES
	1581	Alcoa Corp.	AA	7.45	5	5	4	1.70	19- 30 (155-305%)	NMF	NIL	d.71	NIL	89	12/31	d.31	.66	3/31	NIL	NIL	YES
	1511	Alexandria Real Estate	ARE	150.99	1	3	1	.85	165- 250 (10- 65%)	38.3	2.7	3.94	4.12	51	12/31	1.74	d.30	6/30	1.03	.97	YES
	1610	Alexion Pharmac. (NDQ)	ALXN	106.72	2	3	5	1.15	105- 155 (N- 45%)	9.0	NIL	11.90	NIL	22	12/31	4.00	d.20	3/31	NIL	NIL	YES
	2637	Alibaba Group	BABA	212.13	1	3	3	1.20	200- 300 (N- 40%)	29.1	NIL	7.29	NIL	50	12/31	2.61	1.77	3/31	NIL	NIL	YES
	201	Align Techn. (NDQ)	ALGN	196.71	3	3	4	1.15	285- 425 (45-115%)	32.2	NIL	6.10	NIL	8	12/31	1.53	1.20	3/31	NIL	NIL	YES
	1946	Ali. Couche-Tard (TSE)	ATDB.TO	40.15b	3	3	2	.75	65- 95 (60-135%)	15.0	0.7	2.67	.28	9	1/31	.73(b)	.73(b)	6/30	.07(b)	.063(b)	YES
	827	Alkermes plc (NDQ)	ALKS	16.61	3	3	5	1.40	70- 100 (320-500%)	17.9	NIL	.93	NIL	21	12/31	.83	.34	3/31	NIL	NIL	YES
	754	Alleghany Corp.	Y	545.92	2	1	3	.90	825-1010 (50- 85%)	17.4	NIL	31.38	NIL	5	12/31	1.98	d48.30	3/31	NIL	NIL	YES
	1582	Allegheny Techn.	ATI	7.19	5	5	3	1.90	20- 35 (180-385%)	7.6	NIL	.94	NIL	89	12/31	.41	.30	3/31	NIL	NIL	YES
	303	Allegiant Travel (NDQ)	ALGT	71.99	3	3	2	.90	270- 400 (275-455%)	4.1	NIL	17.47	NIL	74	12/31	3.72	2.56	6/30	▼NIL	.70	YES
	1320	Allegion plc	ALLE	93.95	1	3	1	1.15	120- 180 (30- 90%)	22.0	1.4	4.28	1.28	61	12/31	1.28	1.22	6/30	.32	.27	YES
	1611	Allergan plc	AGN	187.39	–	3	–	1.10	180- 265 (N- 40%)	10.7	1.6	17.52	2.96	22	12/31	5.22	4.29	6/30	.74	.74	YES
	902	ALLETE	ALE	54.67	3	2	3	.60	65- 90 (20- 65%)	15.5	4.6	3.52	2.50	11	12/31	.92	1.18	3/31	▲.618	.587	YES
	430	Alliance Data Sys.	ADS	36.49	–	3	–	1.20	240- 365 (560-900%)	1.9	6.9	18.82	2.52	2	12/31	4.12	7.04	3/31	.63	.63	YES
2227	1583	Alliance Resource (NDQ)	ARLP	3.43	–	5	–	1.15	12- 20 (250-485%)	5.3	NIL	.65	NIL	89	12/31	.20	.70	6/30	▼NIL	.535	YES
	2538	AllianceBernstein Hldg.	AB	20.14	3	3	3	1.15	35- 50 (75-150%)	8.3	11.4	2.43	2.30	24	12/31	.63	.63	3/31	.85	.64	YES
	903	Alliant Energy (NDQ)	LNT	49.99	1	2	2	.55	40- 55 (N- 10%)	20.6	3.0	2.43	1.52	11	12/31	.46	.37	6/30	.38	.355	YES
	976	Allison Transmission	ALSN	33.53	3	3	3	1.10	70- 110 (110-230%)	8.1	2.0	4.15	.68	85	12/31	.90	1.14	3/31	▲.17	.15	YES
	818	Allscripts Healthcare (NDQ)	MDRX	6.62	4	3	3	1.05	11- 17 (65-155%)	9.2	NIL	.72	NIL	18	12/31	.17	.20	3/31	NIL	NIL	YES
	755	Allstate Corp.	ALL	102.72	2	1	3	.80	160- 200 (55- 95%)	9.5	2.1	10.83	2.16	5	12/31	3.13	1.24	6/30	▲.54	.50	YES
640	2502	Ally Financial	ALLY	15.05	4	3	3	1.20	60- 85 (300-465%)	3.7	5.0	4.04	.76	52	3/31	◆d.85	.80	6/30	◆.19	.17	YES
	828	Alnylam Pharmac. (NDQ)	ALNY	144.87	3	4	3	1.60	105- 180 (N- 25%)	NMF	NIL	d7.87	NIL	21	12/31	d2.47	d2.09	3/31	NIL	NIL	YES
	2638	Alphabet Inc. (NDQ)	GOOG	1266.61	1	1	3	1.05	2115-2575 (65-105%)	22.0	NIL	57.57	NIL	50	12/31	15.35	12.77	3/31	NIL	NIL	YES
	1017	Altice USA	ATUS	25.91	4	3	3	1.25	30- 50 (15- 95%)	51.8	NIL	.50	NIL	14	12/31	NIL	.30	3/31	NIL	NIL	YES
	1705	Altra Industrial Motion (NDQ)	AIMC	18.30	4	3	4	1.35	50- 70 (175-285%)	7.8	3.7	2.34	.68	31	12/31	.66	.65	6/30	.17	.17	YES
2667	1991	Altria Group	MO	39.07	3	3	3	.70	70- 105 (80-170%)	9.4	8.6	4.17	3.36	72	12/31	1.02	.95	6/30	.84	.80	YES
	2639	Amazon.com (NDQ)	AMZN	2393.61	1	3	3	1.15	3300-3440 (40- 45%)	76.1	NIL	31.46	NIL	50	12/31	6.47	6.04	3/31	NIL	NIL	YES
	1352	Ambarella, Inc. (NDQ)	AMBA	50.03	3	4	2	1.45	35- 55 (N- 10%)	NMF	NIL	.45	NIL	40	1/31	.14	.14	3/31	NIL	NIL	YES
	1170	Amcor plc	AMCR	8.64	–	3	–	NMF	15- 25 (75-190%)	13.5	5.6	.64	.48	62	12/31	.12	.12	3/31	.115	NIL	YES
	2616	Amdocs Ltd. (NDQ)	DOX	62.53	2	1	4	.80	70- 85 (10- 35%)	17.1	2.1	3.65	1.31	4	12/31	.85	.72	6/30	▲.328	.285	YES
	791	Amedisys, Inc. (NDQ)	AMED	195.63	2	3	2	1.10	135- 205 (N- 5%)	40.8	NIL	4.79	NIL	15	12/31	.94	.91	3/31	NIL	NIL	YES
	317	AMERCO (NDQ)	UHAL	260.30	4	3	3	.85	335- 505 (30- 95%)	15.3	NIL	17.02	NIL	64	12/31	1.58	4.01	3/31	NIL	NIL	
	904	Ameren Corp.	AEE	73.24	3	2	2	.50	60- 80 (N- 10%)	21.0	2.8	3.48	2.03	11	12/31	.38	.28	3/31	.495	.475	YES
	919	America Movil	AMX	10.92	1	3	2	1.05	17- 25 (55-130%)	8.5	3.7	1.28	.40	29	12/31	.33	.15	3/31	NIL	NIL	YES
	304	Amer. Airlines (NDQ)	AAL	11.06	3	3	3	1.40	50- 75 (350-580%)	2.2	3.6	5.05	.40	74	12/31	1.15	1.04	3/31	.10	.10	YES
1423	977	Amer. Axle	AXL	3.70	–	4	–	1.70	18- 30 (385-710%)	2.8	NIL	1.33	NIL	85	12/31	.13	.45	3/31	NIL	NIL	YES
2027	2194	Amer. Eagle Outfitters	AEO	8.50	4	3	3	1.00	18- 25 (110-195%)	26.6	NIL	.32	NIL	63	1/31	.37	.43	6/30	▼NIL	.138	YES
	905	Amer. Elec. Power	AEP	82.91	3	1	1	.50	85- 105 (5- 25%)	20.2	3.5	4.11	2.88	11	12/31	.51	.74	3/31	.70	.67	YES
	2539	Amer. Express	AXP	84.01	2	1	3	1.05	140- 170 (65-100%)	9.6	2.1	8.79	1.78	24	12/31	2.03	1.74	6/30	.43	.39	YES
	756	Amer. Financial Group	AFG	67.16	3	2	4	.90	110- 150 (65-125%)	7.6	2.7	8.87	1.80	5	12/31	2.22	1.75	6/30	.45	.40	YES
	1512	Amer. Homes 4 Rent	AMH	23.28	3	3	1	.70	25- 40 (5- 70%)	NMF	0.9	.14	.20	51	12/31	.08	.06	3/31	.05	.05	YES
	2540	Amer. Int'l Group	AIG	23.75	4	3	3	1.05	70- 105 (195-340%)	4.6	5.4	5.14	1.28	24	12/31	.97	d.70	3/31	.32	.32	YES
	2303	Amer. Outdoor Brands (NDQ)	AOBC	8.84	3	3	4	.80	▼ 14- 20 (60-125%)	18.8	NIL	.47	NIL	73	1/31	.10	.09	3/31	NIL	NIL	YES
	1785	Amer. States Water	AWR	83.19	2	2	2	.60	60- 80 (N- N%)	37.0	1.5	2.25	1.28	16	12/31	.45	.37	3/31	.305	.275	YES
	594	Amer. Tower 'A'	AMT	248.68	3	2	2	.75	230- 315 (N- 25%)	59.5	1.8	4.18	4.58	41	12/31	1.26	.62	6/30	▲1.08	.90	YES
	560	Amer. Vanguard Corp.	AVD	14.41	3	3	3	1.25	25- 35 (75-145%)	24.8	0.6	.58	.08	77	12/31	.12	.25	6/30	.02	.02	YES
	1786	Amer. Water Works	AWK	126.46	3	3	2	.50	90- 140 (N- 10%)	35.9	1.7	3.52	2.12	16	12/31	.54	.62	3/31	.50	.455	YES
846	1103	Amer. Woodmark (NDQ)	AMWD	44.40	4	3	2	1.15	125- 185 (180-315%)	5.9	NIL	7.58	NIL	44	1/31	1.30	1.40	3/31	NIL	NIL	YES
	2541	Ameriprise Fin'l	AMP	110.11	3	3	3	1.40	175- 260 (60-135%)	7.0	3.5	15.67	3.88	24	12/31	3.53	3.76	3/31	.97	.90	YES
	202	AmerisourceBergen	ABC	89.62	2	3	1	1.05	125- 190 (40-110%)	11.7	1.9	7.65	1.68	8	12/31	1.76	1.60	3/31	▲.42	.40	YES
	1742	AMETEK, Inc.	AME	77.75	2	2	3	1.15	100- 135 (30- 75%)	29.2	0.9	2.66	.72	69	12/31	.96	.91	3/31	▲.18	.14	YES
	829	Amgen (NDQ)	AMGN	236.60	3	1	3	1.05	295- 360 (25- 50%)	15.2	2.8	15.54	6.55	21	12/31	3.64	3.42	6/30	1.60	1.45	YES
447	1387	Amkor Technology (NDQ)	AMKR	9.23	3	4	2	1.30	15- 25 (65-170%)	8.7	NIL	1.06	NIL	38	12/31	.41	.12	3/31	NIL	NIL	YES
	1321	Amphenol Corp.	APH	81.25	3	1	4	1.05	110- 130 (35- 60%)	21.4	1.2	3.80	1.00	61	12/31	1.03	1.09	6/30	.25	.23	YES
	1353	Analog Devices (NDQ)	ADI	100.91	3	2	3	1.20	120- 165 (20- 65%)	21.2	2.5	4.75	2.48	40	1/31	1.03	1.33	3/31	▲.62	.54	YES
	170	AngioDynamics (NDQ)	ANGO	10.30	4	3	4	1.00	20- 30 (95-190%)	NMF	NIL	d.02	NIL	19	2/28	d.15	d.12	3/31	NIL	NIL	YES
846	1570	AngloGold Ashanti ADS	AU	22.87	3	4	3	.25	25- 40 (10- 75%)	22.4	0.5	1.02	.11	1	12/31	.62(p)	.31(p)	6/30	.11	.067	YES
	1322	Anixter Int'l	AXE	90.18	–	3	–	1.40	100- 150 (10- 65%)	11.5	NIL	7.81	NIL	61	12/31	2.93	1.22	3/31	NIL	NIL	YES
	1513	Annaly Capital Mgmt.	NLY	5.82	3	3	2	.65	8- 12 (35-105%)	5.6	17.2	1.04	1.00-.60	51	12/31	.26	.29	6/30	.25	.30	YES
	2586	ANSYS, Inc. (NDQ)	ANSS	266.72	1	2	3	1.05	190- 260 (N- N%)	40.8	NIL	6.53	NIL	12	12/31	2.24	2.13	3/31	NIL	NIL	YES
	609	Antero Midstream Corp.	AM	4.16	–	4	–	NMF	11- 20 (165-380%)	16.0	29.6	.26	1.23-NIL	87	12/31	d.29	NA	6/30	◆.308	.303	YES
1038	524	Antero Resources	AR	1.71	–	5	–	1.60	5- 9 (190-425%)	NMF	NIL	d.12	NIL	93	12/31	d.02	.46	3/31	NIL	NIL	YES
	792	Anthem, Inc.	ANTM	263.20	3	2	3	.95	425- 575 (60-120%)	12.1	1.4	21.83	3.80	15	12/31	3.88	2.44	3/31	▲.95	.80	YES
1239	2542	Aon plc	AON	185.69	1	1	2	.95	205- 250 (10- 35%)	18.5	0.9	10.02	1.76	24	12/31	2.53	2.16	6/30	◆.44	.44	YES
	2400	Apache Corp.	APA	8.48	▼5	4	3	1.75	▼ 20- 35 (135-315%)	NMF	1.2	▼d1.62	.10	94	12/31	.08	.38	6/30	.25	.25	YES
	1514	Apartment Investment	AIV	36.72	3	3	3	.75	60- 90 (65-145%)	9.8	4.5	3.75	1.64	51	12/31	.90	.03	3/31	▲.41	.39	YES
	1612	Aphria Inc.	APHA	3.44	–	4	–	NMF	9- 15 (160-335%)	NMF	NIL	d.07	NIL	22	2/28	◆.01	d.32	3/31	NIL	NIL	YES
	1104	Apogee Enterprises (NDQ)	APOG	18.19	5	3	3	1.40	50- 80 (175-340%)	7.8	4.1	2.33	.75	44	2/28	.45	.85	3/31	▲.188	.175	YES
	2447	Apollo Global Mgmt	APO	37.27	–	3	–	1.20	35- 50 (N- 35%)	47.8	9.6	▼.78	3.56	–	12/31	.68	d1.01	3/31	▲.89	.56	YES
	2448	Apollo Investment (NDQ)	AINV	7.54	3	3	3	.90	▼ 16- 25 (110-230%)	15.1	23.9	▼.50	1.80-NIL	–	12/31	NIL	d.02	6/30	.45	.45	YES
2027	1398	Apple Inc. (NDQ)	AAPL	276.93	1	1	1	1.05	325- 440 (15- 60%)	20.7	1.2	13.35	3.28	56	12/31	4.99	4.18	3/31	.77	.73	YES
	1706	Applied Ind'l Techn.	AIT	46.63	3	3	4	1.05	90- 130 (95-180%)	12.4	2.8	3.75	1.29	31	12/31	.97	.99	3/31	▲.32	.30	YES
	1388	Applied Materials (NDQ)	AMAT	50.63	▼3	3	1	1.35	65- 100 (30-100%)	13.2	1.7	3.85	.88	38	1/31	.98	.81	6/30	▲.22	.21	YES
	1171	AptarGroup	ATR	106.94	3	2	4	.85	110- 145 (5- 35%)	28.7	1.3	3.73	1.44	62	12/31	.80	.62	6/30	◆.36	.36	YES
	978	Aptiv PLC	APTV	59.53	4	3	4	1.30	80- 120 (35-100%)	14.7	NIL	4.05	NIL	85	12/31	.90	.94	6/30	▼NIL	.22	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 and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 9-30-20	(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?
	1743	ARAMARK Holdings	ARMK	20.50	4	3	3	1.00	45- 70 (120-240%)	25.6	2.1	.80	.44	69	12/31	.57	.43	3/31	.11	.11	YES
	318	ArcBest Corp. (NDQ)	ARCB	18.05	4	3	4	1.60	70- 110 (290-510%)	7.3	2.0	2.46	.36	64	12/31	.56	1.01	3/31	.08	.08	YES
	738	ArcelorMittal	MT	9.40	4	3	3	1.90	30- 50 (220-430%)	NMF	3.2	d.96	.30	83	12/31	d1.86	1.17	3/31	NIL	NIL	YES
	757	Arch Capital Group (NDQ)	ACGL	26.70	2	1	2	.80	45- 55 (70-105%)	9.1	NIL	2.92	NIL	5	12/31	.74	.46	3/31	NIL	NIL	YES
	1902	Archer Daniels Midl'd	ADM	36.34	2	2	4	1.05	50- 65 (40- 80%)	12.5	4.0	2.90	1.44	39	12/31	.90	.55	3/31	▲.36	.35	YES
		Arconic Inc.							NAME CHANGED TO HOWMET AEROSPACE												
	2019	Argo Group Int'l	ARGO	35.13	4	2	4	.85	70- 105 (100-200%)	29.5	3.5	1.19	1.24	60	12/31	d3.01	d1.29	3/31	.31	.31	
	1815	Arista Networks	ANET	211.99	4	3	4	1.30	310- 460 (45-115%)	20.6	NIL	10.30	NIL	43	12/31	3.25	2.25	3/31	NIL	NIL	YES
	1105	Armstrong World Inds.	AWI	80.16	2	3	1	1.15	90- 135 (10- 70%)	15.9	1.0	5.04	.80	44	12/31	1.04	.74	3/31	.20	.175	YES
	1323	Arrow Electronics	ARW	53.18	3	3	4	1.35	95- 140 (80-165%)	7.2	NIL	7.40	NIL	61	12/31	2.20	2.57	3/31	NIL	NIL	YES
	2119	Asbury Automotive	ABG	54.82	3	3	2	1.30	90- 130 (65-135%)	7.4	NIL	7.43	NIL	35	12/31	2.53	2.20	3/31	NIL	NIL	YES
	561	Ashland Global Hldgs.	ASH	55.28	3	3	4	1.05	90- 140 (65-155%)	19.1	2.2	2.90	1.20	77	12/31	.56	d1.14	3/31	.275	.25	YES
	775	Assoc. Banc-Corp	ASB	12.40	4	3	2	1.15	30- 40 (140-225%)	6.9	5.8	1.79	.72	75	12/31	.43	.51	3/31	.18	.17	YES
	2543	Assurant Inc.	AIZ	103.02	▲1	2	2	.85	100- 140 (N- 35%)	11.1	2.4	9.27	2.52	24	12/31	1.91	.32	3/31	.63	.60	YES
	2020	Assured Guaranty	AGO	29.41	4	3	3	1.10	45- 65 (55-120%)	9.1	2.7	3.22	.80	60	12/31	1.42	.83	3/31	▲.20	.18	YES
	149	Astec Inds. (NDQ)	ASTE	37.45	3	3	2	1.40	55- 80 (45-115%)	20.4	1.2	1.84	.44	59	12/31	.40	.61	3/31	.11	.11	YES
	1613	AstraZeneca PLC (ADS)	AZN	50.44	3	3	3	.90	50- 75 (N- 50%)	91.7	2.8	.55	1.40	22	12/31	.12	.41	3/31	.95	.95	YES
	704	Astronics Corp. (NDQ)	ATRO	8.09	5	3	3	1.35	50- 75 (520-825%)	42.6	NIL	.19	NIL	53	12/31	.19	.37	3/31	NIL	NIL	
1239	2164	At Home Group	HOME	1.90	–	4	–	1.15	13- 20 (585-955%)	NMF	NIL	d3.75	NIL	76	1/31	d3.50	.45	3/31	NIL	NIL	YES
	2021	Athene Holding Ltd.	ATH	24.11	4	2	3	1.15	75- 100 (210-315%)	3.2	NIL	7.61	NIL	60	12/31	2.21	1.23	3/31	NIL	NIL	YES
	305	Atlas Air Worldwide (NDQ)	AAWW	24.63	4	3	4	1.75	35- 55 (40-125%)	5.4	NIL	4.53	NIL	74	12/31	3.72	3.12	3/31	NIL	NIL	YES
	548	Atmos Energy	ATO	102.53	3	1	2	.55	130- 160 (25- 55%)	22.0	2.3	4.65	2.38	58	12/31	1.47	1.38	3/31	.575	.525	YES
	945	AudioCodes Ltd. (NDQ)	AUDC	23.91	2	4	3	1.05	30- 50 (25-110%)	22.6	1.1	1.06	.26	42	12/31	.26	.20	3/31	▲.13	.11	YES
447	1614	Aurora Cannabis	ACB	0.71	–	4	–	NMF	3- 5 (325-605%)	NMF	NIL	d1.96	NIL	22	12/31	d.90	d.19	3/31	NIL	NIL	YES
	2587	Autodesk, Inc. (NDQ)	ADSK	177.87	1	3	2	1.35	145- 215 (N- 20%)	85.5	NIL	2.08	NIL	12	1/31	.59	.29	3/31	NIL	NIL	YES
	979	Autoliv, Inc.	ALV	55.42	–	3	–	NMF	95- 140 (70-155%)	9.0	NIL	6.13	NIL	85	12/31	1.78	d1.06	6/30	▼NIL	.62	YES
	2617	Automatic Data Proc. (NDQ)	ADP	139.82	2	1	3	1.00	195- 235 (40- 70%)	23.1	2.8	6.06	3.86	4	12/31	1.50	1.27	6/30	.91	.79	YES
	2120	AutoNation, Inc.	AN	30.23	3	3	3	1.10	60- 90 (100-200%)	6.4	NIL	4.69	NIL	35	12/31	1.74	1.02	3/31	NIL	NIL	YES
	2121	AutoZone Inc.	AZO	988.15	2	3	3	.85	1410-2110 (45-115%)	16.4	NIL	60.25	NIL	35	2/28	12.39	11.49	3/31	NIL	NIL	YES
	1816	Avalara, Inc.	AVLR	85.32	–	3	–	.85	75- 115 (N- 35%)	NMF	NIL	d.46	NIL	43	12/31	d.16	d.28	3/31	NIL	NIL	YES
	1515	AvalonBay Communities	AVB	160.51	3	2	3	.75	190- 260 (20- 60%)	29.2	4.0	5.50	6.44	51	12/31	1.20	2.79	6/30	▲1.59	1.52	YES
	136	AVANGRID, Inc.	AGR	44.11	3	2	3	.40	45- 60 (N- 35%)	17.4	4.0	2.54	1.78	13	12/31	.72	.38	6/30	.44	.44	YES
	203	Avanos Medical	AVNS	31.15	3	3	5	1.30	45- 75 (45-140%)	29.1	NIL	1.07	NIL	8	12/31	.34	d.06	3/31	NIL	NIL	YES
	562	Avantor, Inc.	AVTR	13.64	–	3	–	NMF	20- 30 (45-120%)	31.0	NIL	.44	NIL	77	12/31	.09	NA	3/31	NIL	NIL	YES
	946	Avaya Holdings	AVYA	8.30	–	4	–	.65	15- 25 (80-200%)	NMF	NIL	d1.40	NIL	42	12/31	d.54	.08	3/31	NIL	NIL	YES
	563	Avery Dennison	AVY	104.90	2	2	1	1.05	130- 180 (25- 70%)	15.1	2.4	6.93	2.48	77	12/31	1.73	1.11	3/31	.58	.52	YES
1241	2165	Avis Budget Group (NDQ)	CAR	13.51	3	4	3	1.60	25- 40 (85-195%)	NMF	NIL	d2.67	NIL	76	12/31	.73	.53	3/31	NIL	NIL	YES
	2215	Avista Corp.	AVA	43.50	3	2	2	.60	45- 60 (5- 40%)	21.6	3.8	2.01	1.64	25	12/31	.75	.70	3/31	▲.405	.387	YES
	1324	Avnet, Inc. (NDQ)	AVT	26.87	4	3	4	1.25	55- 80 (105-200%)	13.8	3.1	1.95	.84	61	12/31	.40	1.04	3/31	▲.21	.20	YES
	564	Axalta Coating	AXTA	17.37	4	3	4	1.10	35- 50 (100-190%)	15.5	NIL	1.12	NIL	77	12/31	.18	.32	3/31	NIL	NIL	YES
	2022	AXIS Capital Hldgs.	AXS	37.74	3	2	3	.80	65- 90 (70-140%)	8.6	4.3	4.38	1.64	60	12/31	.05	d1.77	6/30	.41	.40	YES
	705	Axon Enterprise (NDQ)	AAXN	76.78	2	4	2	1.25	35- 55 (N- N%)	60.9	NIL	1.26	NIL	53	12/31	.41	.03	3/31	NIL	NIL	YES
	1615	Axsome Therapeutics (NDQ)	AXSM	69.57	3	4	1	1.85	75- 125 (10- 80%)	NMF	NIL	d2.51	NIL	22	12/31	d.71	d.32	3/31	NIL	NIL	YES
846	1903	**B&G Foods**	BGS	18.91	4	3	4	.60	45- 65 (140-245%)	12.0	10.0	1.58	1.90	39	12/31	.28	.34	6/30	.475	.475	YES
	1028	BCE Inc.	BCE	40.99	2	2	4	.70	50- 65 (20- 60%)	14.6	6.3	2.80	2.57	30	12/31	.88	.65	6/30	.625	.793	YES
	1794	BGC Partners (NDQ)	BGCP	2.65	–	3	–	NMF	6- 10 (125-275%)	8.3	1.5	.32	.04	37	12/31	.12	.14	3/31	.14	.14	YES
	1585	BHP Group Ltd. ADR	BHP	38.77	2	3	4	1.35	65- 100 (70-160%)	10.1	7.6	3.85	2.96(h)	89	12/31	1.92(p)	1.53(p)	3/31	1.30	1.10	YES
	349	BJ's Restaurants (NDQ)	BJRI	16.65	5	4	4	.85	80- 125 (380-650%)	8.2	NIL	2.04	NIL	68	12/31	.54	.49	6/30	▼NIL	.12	YES
	2136	BJ's Wholesale Club	BJ	26.34	–	4	–	.55	35- 60 (35-130%)	25.6	NIL	1.03	NIL	49	1/31	.31	.46	3/31	NIL	NIL	YES
	776	BOK Financial (NDQ)	BOKF	45.14	▼4	3	3	1.25	95- 140 (110-210%)	6.6	4.5	6.86	2.04	75	12/31	1.56	1.50	3/31	.51	.50	YES
	502	BP PLC ADR	BP	22.35	4	3	3	1.20	60- 90 (170-305%)	8.7	11.3	2.56	2.52	92	12/31	.01	.23	3/31	▲.63	.615	YES
	1209	BWX Technologies	BWXT	51.79	2	3	3	1.05	70- 100 (35- 95%)	19.6	1.5	2.64	.76	55	12/31	.64	.23	3/31	▲.19	.17	YES
	114	Badger Meter	BMI	56.53	2	3	2	1.00	50- 75 (N- 35%)	33.3	1.2	1.70	.68	20	3/31	◆.41	.37	3/31	.17	.15	YES
	2640	Baidu, Inc. (NDQ)	BIDU	104.68	▲2	3	4	1.35	225- 335 (115-220%)	14.1	NIL	7.42	NIL	50	12/31	1.63	.86	3/31	NIL	NIL	YES
	2416	Baker Hughes	BKR	12.98	–	3	–	NMF	▼ 25- 40 (95-210%)	56.4	5.5	▼.23	.72	95	12/31	.07	.28	3/31	.18	.18	YES
	565	Balchem Corp. (NDQ)	BCPC	94.26	1	3	1	1.15	125- 185 (35- 95%)	34.7	0.6	2.72	.52	77	12/31	.63	.63	3/31	.52	.47	YES
	1172	Ball Corp.	BLL	68.54	3	2	2	.95	100- 135 (45- 95%)	28.3	0.9	2.42	.60	62	12/31	.48	.44	3/31	.15	.10	YES
	2503	BancorpSouth Bank	BXS	20.56	3	3	3	1.20	35- 55 (70-170%)	8.4	3.7	2.44	.77	52	3/31	◆.21	.52	6/30	.185	.17	YES
	920	Bandwidth Inc. (NDQ)	BAND	78.27	3	4	3	1.10	75- 125 (N- 60%)	NMF	NIL	d.21	NIL	29	12/31	d.02	d.04	3/31	NIL	NIL	YES
	2504	Bank of America	BAC	22.50	3	3	3	1.30	35- 55 (55-145%)	7.7	3.4	2.94	.76	52	3/31	◆.40	.70	3/31	.18	.15	YES
	2505	Bank of Hawaii	BOH	59.44	▼3	2	3	1.00	100- 135 (70-125%)	10.4	4.5	5.72	2.68	52	3/31	◆.87	1.43	6/30	◆.67	.65	YES
	2506	Bank of Montreal (TSE)	BMO.TO	69.22b	2	2	4	.80	125- 165 (80-140%)	7.2	6.3	9.60	4.36	52	1/31	2.37(b)	2.28(b)	6/30	1.06(b)	1.00(b)	YES
	2507	Bank of New York Mellon	BK	36.41	3	2	5	1.10	85- 115 (135-215%)	8.8	3.4	4.13	1.24	52	3/31	◆1.05	.94	6/30	◆.31	.28	YES
	2508	Bank of Nova Scotia (TSE)	BNS.TO	54.76b	3	1	3	.85	95- 115 (75-110%)	7.4	6.7	7.40	3.69	52	1/31	1.83(b)	1.75(b)	6/30	.90(b)	.87(b)	YES
	1744	Barnes Group	B	39.54	3	3	3	1.30	60- 90 (50-130%)	13.3	1.6	2.97	.64	69	12/31	.80	.75	3/31	.16	.16	YES
	1644	Barrett Business Serv. (NDQ)	BBSI	41.10	4	3	4	1.15	80- 115 (95-180%)	8.5	2.9	4.86	1.20	88	12/31	1.51	2.21	3/31	.30	.25	YES
	1571	Barrick Gold	GOLD	24.92	1	3	3	.55	18- 25 (N- N%)	39.6	1.1	.63	.28	1	12/31	.17	.06	3/31	▲.07	.07	YES
641	1616	Bausch Health	BHC	17.24	3	5	4	1.45	25- 45 (45-160%)	3.9	NIL	4.43	NIL	22	12/31	1.12	1.04	3/31	NIL	NIL	YES
	171	Baxter Int'l Inc.	BAX	94.14	▲1	1	3	.85	100- 120 (5- 25%)	26.3	0.9	3.58	.88	19	12/31	.97	.78	6/30	.22	.19	YES
	1106	Beacon Roofing (NDQ)	BECN	17.51	4	3	3	1.15	30- 50 (70-185%)	87.6	NIL	.20	NIL	44	12/31	d.43	d.10	3/31	NIL	NIL	YES
1655	1125	Beazer Homes USA	BZH	5.19	–	5	–	1.60	14- 25 (170-380%)	3.1	NIL	1.65	NIL	17	12/31	.09	.06	3/31	NIL	NIL	YES
	172	Becton, Dickinson	BDX	263.44	3	1	4	.95	320- 390 (20- 50%)	22.0	1.2	12.00	3.18	19	12/31	2.65	2.70	3/31	.79	.77	YES
★★	2166	Bed Bath & Beyond (NDQ)	BBBY	4.55	4	4	1	1.20	7- 12 (55-165%)	NMF	NIL	d2.46	NIL	76	2/28	◆d.53	d1.92	9/30	▼NIL	.17	YES
	1303	Belden Inc.	BDC	31.60	4	3	2	1.70	80- 120 (155-280%)	10.0	0.6	3.15	.20	67	12/31	.05	.87	6/30	.05	.05	YES
	1325	Benchmark Electronics	BHE	20.17	4	3	3	1.00	30- 50 (50-150%)	17.2	3.2	1.17	.64	61	12/31	.27	.41	6/30	▲.16	.15	YES
	758	Berkley (W.R.)	WRB	55.25	2	1	3	.85	60- 75 (10- 35%)	18.5	0.8	2.98	.44	5	3/31	◆.69	.66	3/31	.11	.10	YES
	759	Berkshire Hathaway 'B'	BRKB	188.75	3	1	3	.95	215- 265 (15- 40%)	23.0	NIL	8.19	NIL	5	12/31	1.79	2.32	3/31	NIL	NIL	YES
	1173	Berry Global Group	BERY	36.47	4	3	3	1.05	60- 90 (65-145%)	8.9	NIL	4.10	NIL	62	12/31	.56	.77	3/31	NIL	NIL	YES
	2167	Best Buy Co.	BBY	69.79	2	3	2	1.15	100- 150 (45-115%)	13.8	3.2	5.05	2.20	76	1/31	2.90	2.72	6/30	▲.55	.50	YES
★★	1904	Beyond Meat	BYND	79.12	–	4	–	NMF	120- 200 (50-155%)	NMF	NIL	.14	NIL	39	12/31	d.01	NA	3/31	NIL	NIL	YES
1035	2137	Big Lots Inc.	BIG	19.60	4	3	5	1.20	35- 55 (80-180%)	6.7	6.2	2.94	1.22	49	1/31	2.39	2.68	6/30	.30	.30	YES
	204	Bio-Rad Labs. 'A'	BIO	424.95	1	2	2	.95	210- 285 (N- N%)	50.8	NIL	8.37	NIL	8	12/31	2.32	2.13	3/31	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 9-30-20, 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 9-30-20	(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?
	830	Bio-Techne Corp.	(NDQ)	TECH	207.79	2	2	3	1.05	150- 200	(N- N%)	68.6	0.6	3.03	1.29	21	12/31	1.08	.43	3/31	.32	.32	YES
230	1617	Biogen	(NDQ)	BIIB	339.41	1	3	2	1.10	365- 545	(10- 60%)	10.6	NIL	31.93	NIL	22	12/31	8.03	4.71	3/31	NIL	NIL	YES
	831	BioMarin Pharmac.	(NDQ)	BMRN	93.20	2	3	3	1.30	100- 150	(5- 60%)	NMF	NIL	.24	NIL	21	12/31	.08	d.03	3/31	NIL	NIL	YES
	2216	Black Hills		BKH	63.50	3	2	3	.65	65- 90	(N- 40%)	17.5	3.5	3.63	2.20	25	12/31	1.13	1.11	3/31	.535	.505	YES
	1817	Black Knight, Inc.		BKI	67.40	1	3	2	.95	70- 110	(5- 65%)	33.9	NIL	1.99	NIL	43	12/31	.54	.50	3/31	NIL	NIL	YES
	2401	Black Stone Minerals		BSM	5.22	4	4	3	.85	▼ 7- 12	(35-130%)	NMF	23.0	▼d.83	1.20	94	12/31	.22	.78	3/31	▼.30	.313	YES
	595	BlackBerry		BB	4.09	4	4	3	1.50	11- 18	(170-340%)	34.1	NIL	.12	NIL	41	2/28	.09	.11	3/31	NIL	NIL	YES
	2544	BlackRock, Inc.		BLK	470.80	2	2	2	1.25	650- 850	(40- 80%)	15.3	3.1	30.84	14.52	24	3/31	◆6.60	6.61	3/31	▲3.63	3.30	YES
	2449	Blackstone Group		BX	48.18	–	3	–	1.30	▲ 50- 75	(5- 55%)	29.9	5.1	▼1.61	2.44	–	12/31	.71	d.02	3/31	.61	.58	YES
	2545	Block (H&R)		HRB	13.72	3	3	3	.80	35- 50	(155-265%)	6.2	7.8	2.21	1.07	24	1/31	d.59	d.58	6/30	.26	.25	YES
	350	Bloomin' Brands	(NDQ)	BLMN	8.93	–	3	–	1.00	30- 45	(235-405%)	5.3	NIL	1.69	NIL	68	12/31	.32	.30	6/30	▼NIL	.10	YES
★★	706	Boeing		BA	143.61	5	3	3	1.15	155- 230	(10- 60%)	NMF	NIL	d4.29	NIL	53	12/31	d1.79	5.93	6/30	▼NIL	2.055	YES
1041	596	Boingo Wireless	(NDQ)	WIFI	11.78	–	4	–	1.20	15- 25	(25-110%)	NMF	NIL	d.31	NIL	41	12/31	d.12	.01	3/31	NIL	NIL	YES
	1107	Boise Cascade		BCC	27.61	3	3	3	1.25	45- 65	(65-135%)	10.8	1.4	2.56	.40	44	12/31	.37	d.28	3/31	.10	.09	YES
641	707	Bombardier Inc. 'B'	(TSE)	BBDB.TO	0.42b	–	5	–	1.15	4- 7	(NMF)	NMF	NIL	d.57	NIL	53	12/31	d.55(b)	.04(b)	3/31	NIL	NIL	YES
	2641	Booking Holdings	(NDQ)	BKNG	1411.63	3	3	4	1.15	2480-3720	(75-165%)	12.5	NIL	113.30	NIL	50	12/31	23.30	22.49	3/31	NIL	NIL	YES
	2154	Boot Barn Holdings		BOOT	14.17	3	4	2	1.45	30- 50	(110-255%)	8.8	NIL	1.61	NIL	28	12/31	.85	.66	3/31	NIL	NIL	YES
	376	Booz Allen Hamilton		BAH	75.89	2	2	2	.90	75- 110	(N- 45%)	22.1	1.7	3.43	1.26	32	12/31	.80	.72	3/31	▲.31	.23	YES
2662	980	BorgWarner		BWA	25.52	4	3	4	1.45	60- 90	(135-255%)	6.3	2.7	4.07	.68	85	12/31	1.17	1.21	3/31	.17	.17	YES
	1967	Boston Beer 'A'		SAM	413.62	3	3	3	.75	505- 760	(20- 85%)	38.9	NIL	10.62	NIL	34	12/31	1.12	1.86	3/31	NIL	NIL	YES
	2388	Boston Omaha	(NDQ)	BOMN	16.59	2	4	3	.90	25- 40	(50-140%)	NMF	NIL	▲d.08	NIL	36	12/31	.17	d.16	3/31	NIL	NIL	
	1516	Boston Properties		BXP	91.44	3	3	3	.95	150- 230	(65-150%)	26.4	4.4	3.46	3.98	51	12/31	.91	.96	6/30	.98	.95	YES
	173	Boston Scientific		BSX	37.25	▼3	3	4	.95	50- 75	(35-100%)	27.8	NIL	1.34	NIL	19	12/31	.46	.26	3/31	NIL	NIL	YES
1847	2351	Boyd Gaming		BYD	14.40	3	3	3	1.50	▼ 30- 45	(110-215%)	NMF	NIL	▼.10	NIL	81	12/31	.50	.32	6/30	▼NIL	.07	YES
	1745	Brady Corp.		BRC	41.79	3	3	2	1.10	55- 85	(30-105%)	17.1	2.1	2.45	.87	69	1/31	.62	.55	6/30	.218	.213	YES
	2661	Briggs & Stratton		BGG					SEE FINAL SUPPLEMENT														
	525	Brigham Minerals		MNRL	9.15	–	4	–	NMF	25- 40	(175-335%)	17.9	16.6	.51	1.52	93	12/31	.23	NA	3/31	▲.38	NIL	
	1999	Bright Horizons Family		BFAM	120.00	2	2	3	.80	150- 205	(25- 70%)	45.1	NIL	2.66	NIL	33	12/31	1.01	.90	3/31	NIL	NIL	YES
2031	351	Brinker Int'l		EAT	15.28	3	3	3	.85	60- 85	(295-455%)	3.5	NIL	4.36	NIL	68	12/31	1.01	.89	6/30	▼NIL	.38	YES
	377	Brink's (The) Co.		BCO	50.91	3	3	3	1.15	100- 150	(95-195%)	11.8	1.2	4.33	.60	32	12/31	1.18	1.05	3/31	.15	.15	YES
	1618	Bristol-Myers Squibb		BMY	61.68	3	2	3	.80	70- 90	(15- 45%)	29.1	2.9	2.12	1.80	22	12/31	d.74	.71	6/30	.45	.41	YES
	1992	Brit. Am. Tobacco ADR		BTI	36.72	3	3	3	.95	90- 135	(145-270%)	8.2	7.8	4.47	2.86	72	12/31	2.32(p)	2.04(p)	3/31	.657	.632	YES
	1354	Broadcom Inc.	(NDQ)	AVGO	258.28	3	3	4	1.10	265- 395	(5- 55%)	36.9	5.0	7.00	13.00	40	1/31	.73	1.15	3/31	3.25	2.65	YES
	431	Broadridge Fin'l		BR	109.79	2	2	4	.90	145- 195	(30- 80%)	21.4	2.1	5.12	2.34	2	12/31	.53	.56	6/30	.54	.485	YES
1655	793	Brookdale Senior Living		BKD	3.43	–	5	–	1.35	11- 20	(220-485%)	NMF	NIL	d.84	NIL	15	12/31	d.49	.70	3/31	NIL	NIL	YES
	378	Brookfield Asset Mgmt.		BAM	33.02	3	3	2	1.15	40- 65	(20- 95%)	15.4	1.5	2.15	.48	32	12/31	.49	1.25	3/31	▲.12	.107	YES
1240	1746	Brookfield Infrastruc.		BIP	38.29	–	2	–	.90	35- 50	(N- 30%)	NMF	5.6	.33	2.15	69	12/31	d.07	.06	3/31	▲.538	.503	YES
	1707	Brooks Automation	(NDQ)	BRKS	33.89	3	3	3	1.45	45- 70	(35-105%)	37.7	1.2	.90	.40	31	12/31	.23	.17	3/31	.10	.10	YES
	2546	Brown & Brown		BRO	37.32	1	1	2	.85	35- 40	(N- 5%)	24.1	0.9	1.55	.34	24	12/31	.27	.27	3/31	.085	.08	YES
	1968	Brown-Forman 'B'		BFB	61.46	3	1	2	.80	75- 90	(20- 45%)	33.4	1.1	1.84	.70	34	1/31	.48	.47	6/30	.174	.166	YES
	115	Bruker Corp.	(NDQ)	BRKR	36.83	3	3	2	1.15	65- 100	(75-170%)	21.4	0.4	1.72	.16	20	12/31	.45	.50	3/31	.04	.04	YES
	2304	Brunswick Corp.		BC	37.88	▼4	3	3	1.45	110- 160	(190-320%)	10.7	2.5	▼3.54	.96	73	12/31	.82	.98	3/31	.24	.21	YES
	2195	Buckle (The), Inc.		BKE	14.11	2	3	2	.95	20- 35	(40-150%)	12.2	NIL	1.16	NIL	63	1/31	.96	.84	6/30	▼NIL	.25	YES
	1108	Builders FirstSource	(NDQ)	BLDR	13.94	3	4	1	1.55	25- 40	(80-185%)	6.3	NIL	2.20	NIL	44	12/31	.40	.45	3/31	NIL	NIL	YES
	1905	Bunge Ltd.		BG	38.88	3	3	3	.80	65- 95	(65-145%)	24.0	5.1	1.62	2.00	39	12/31	d.03	d.51	6/30	.50	.50	YES
	2138	Burlington Stores		BURL	177.16	▼2	3	2	1.05	185- 280	(5- 60%)	28.6	NIL	6.20	NIL	49	1/31	3.25	2.82	3/31	NIL	NIL	YES
	2618	**CACI Int'l**		CACI	238.58	2	3	3	.95	215- 325	(N- 35%)	18.6	NIL	12.85	NIL	4	12/31	3.11	2.71	3/31	NIL	NIL	YES
2030	708	CAE Inc.	(TSE)	CAE.TO	21.46b	3	3	3	.75	40- 65	(85-205%)	14.2	NIL	1.51	NIL	53	12/31	.37(b)	.29(b)	6/30	▼NIL(b)	.10(b)	
	1795	Cboe Global Markets	(CBOE)	CBOE	102.96	3	2	3	.65	140- 190	(35- 85%)	30.1	1.4	3.42	1.44	37	12/31	.77	1.23	3/31	.36	.31	YES
	379	CBRE Group		CBRE	41.96	2	3	2	1.35	75- 115	(80-175%)	10.2	NIL	4.11	NIL	32	12/31	1.32	1.21	3/31	NIL	NIL	YES
	2389	CDK Global Inc.	(NDQ)	CDK	35.16	3	3	3	1.15	▼ 80- 120	(130-240%)	20.3	1.7	▼1.73	.60	36	12/31	.55	.56	3/31	.15	.15	YES
	2619	CDW Corp.	(NDQ)	CDW	105.60	1	3	2	1.05	90- 130	(N- 25%)	20.6	1.4	5.13	1.52	4	12/31	1.27	1.05	3/31	.38	.295	YES
643	1355	CEVA, Inc.	(NDQ)	CEVA	29.54	3	3	5	1.35	30- 45	(N- 50%)	NMF	NIL	.05	NIL	40	12/31	.14	.10	3/31	NIL	NIL	YES
	1598	CF Industries		CF	27.55	4	3	4	1.40	35- 55	(25-100%)	15.6	4.5	1.77	1.23	65	12/31	.25	.21	3/31	.30	.30	YES
	380	C.H. Robinson	(NDQ)	CHRW	72.32	3	2	4	.85	125- 170	(75-135%)	19.4	2.8	3.73	2.04	32	12/31	.73	1.34	3/31	.51	.50	YES
	2547	CIT Group		CIT	19.72	▼4	3	3	1.30	70- 105	(255-430%)	3.5	7.1	5.67	1.40	24	3/31	◆d2.43	1.18	6/30	◆.35	.35	YES
	1796	CME Group	(NDQ)	CME	184.62	3	2	3	.65	155- 205	(N- 10%)	30.5	1.8	6.06	3.40	37	12/31	1.31	1.09	3/31	▲.85	.75	YES
	906	CMS Energy Corp.		CMS	59.19	3	2	1	.50	50- 70	(N- 20%)	22.1	2.8	2.68	1.66	11	12/31	.58	.38	3/31	▲.408	.382	YES
	760	CNA Fin'l		CNA	31.72	2	2	3	.95	75- 105	(135-230%)	7.8	4.7	4.05	1.48	5	12/31	.97	d.08	3/31	▲.37	.35	YES
	150	CNH Industrial N.V.		CNHI	6.18	4	3	3	1.40	17- 25	(175-305%)	6.5	NIL	.95	NIL	59	12/31	.20	.19	6/30	▼NIL	.202	YES
	526	CNX Resources		CNX	12.88	4	4	5	1.55	25- 40	(95-210%)	36.8	NIL	.35	NIL	93	12/31	d1.45	.50	3/31	NIL	NIL	YES
	2620	CSG Systems Int'l	(NDQ)	CSGS	47.82	2	3	4	.90	40- 60	(N- 25%)	18.6	2.0	2.57	.94	4	12/31	.70	.64	3/31	▲.235	.223	YES
	2402	CSW Industrials	(NDQ)	CSWI	65.56	3	2	1	1.00	95- 125	(45- 90%)	NMF	0.8	d.41	.54	94	12/31	.39	.39	6/30	.135	.135	
	338	CSX Corp.	(NDQ)	CSX	61.00	3	3	3	1.25	85- 130	(40-115%)	15.1	1.7	4.04	1.04	26	12/31	.99	1.01	3/31	▲.26	.24	YES
	1326	CTS Corp.		CTS	21.89	4	3	4	1.20	35- 50	(60-130%)	15.5	0.7	1.41	.16	61	12/31	.37	.41	6/30	.04	.04	YES
1656	503	CVR Energy		CVI	18.39	5	3	3	1.40	65- 100	(255-445%)	4.4	17.4	4.21	3.20	92	12/31	.44	.82	3/31	.80	.75	YES
	1599	CVR Partners, LP		UAN	0.92	–	5	–	1.25	3- 6	(225-550%)	NMF	21.7	d.64	.20-NIL	65	12/31	d.22	d.01	3/31	▼NIL	.12	YES
	970	CVS Health		CVS	62.34	3	2	3	1.00	90- 120	(45- 90%)	8.8	3.2	7.08	2.00	45	12/31	1.73	2.14	6/30	.50	.50	YES
	1018	Cable One		CABO	1783.24	2	2	2	.75	1435-1945	(N- 10%)	47.2	0.5	37.82	9.00	14	12/31	9.32	7.34	3/31	2.25	2.00	
	2438	Cabot Corp.		CBT	29.13	4	3	3	1.35	65- 100	(125-245%)	7.8	5.0	3.75	1.46	57	12/31	.69	.87	3/31	.35	.33	YES
	566	Cabot Microelectr's	(NDQ)	CCMP	111.55	2	3	2	1.20	175- 265	(55-140%)	18.6	1.6	6.00	1.76	77	12/31	1.30	.48	6/30	▲.44	.42	YES
	527	Cabot Oil & Gas 'A'		COG	21.42	4	3	5	1.15	35- 50	(65-135%)	15.5	1.9	1.38	.40	93	12/31	.36	.63	3/31	.10	.07	YES
	2417	Cactus, Inc.		WHD	12.31	–	3	–	1.55	20- 30	(60-145%)	14.0	2.9	.88	.36-NIL	95	12/31	.38	.44	3/31	.09	NIL	YES
	2588	Cadence Design Sys.	(NDQ)	CDNS	77.84	2	3	3	1.05	60- 90	(N- 15%)	34.1	NIL	2.28	NIL	12	3/31	◆.60	.54	3/31	NIL	NIL	YES
	1906	Cal-Maine Foods	(NDQ)	CALM	40.95	3	3	4	.90	45- 70	(10- 70%)	32.2	2.1	1.27	.84	39	2/28	.28	.82	6/30	NIL	.272	YES
1655	597	CalAmp Corp.	(NDQ)	CAMP	5.79	–	4	–	1.35	15- 25	(160-330%)	NMF	NIL	d.64	NIL	41	11/30	d.22	d.02	3/31	NIL	NIL	YES
	1907	Calavo Growers	(NDQ)	CVGW	65.22	4	3	4	.65	80- 120	(25- 85%)	26.1	1.7	2.50	1.10	39	1/31	.07	.74	3/31	NIL	NIL	YES
2030	2155	Caleres Inc.		CAL	5.65	–	3	–	1.15	30- 45	(430-695%)	3.4	5.0	1.64	.28	28	1/31	.34	.38	6/30	.07	.07	YES
1423	528	California Resources		CRC	1.51	–	5	–	3.45	25- 40	(NMF)	0.4	NIL	3.75	NIL	93	12/31	d1.36	7.00	3/31	NIL	NIL	YES
	1787	California Water		CWT	50.03	3	3	2	.60	35- 55	(N- 10%)	34.3	1.7	1.46	.85	16	12/31	.24	.32	3/31	▲.213	.198	YES
	947	Calix, Inc.		CALX	7.97	3	4	2	1.15	13- 20	(65-150%)	46.9	NIL	.17	NIL	42	12/31	.09	.13	3/31	NIL	NIL	YES
	2305	Callaway Golf		ELY	10.64	3	3	3	1.10	▼ 20- 30	(90-180%)	21.7	0.4	▼.49	.04	73	12/31	d.26	d.32	3/31	.01	.01	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	Exch.	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 9-30-20	(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?
	529	Callon Petroleum		CPE	0.41	–	4	–	2.00	18- 30	(NMF)	0.4	NIL	1.15	NIL	93	12/31	d.09	.68	3/31	NIL	NIL	YES
	1517	Camden Property Trust		CPT	83.34	2	2	3	.70	105- 140	(25- 70%)	34.0	4.0	2.45	3.32	51	12/31	.95	.41	6/30	▲.83	.80	YES
	1586	Cameco Corp.	(TSE)	CCO.TO	13.74b	▲3	4	5	1.10	14- 20	(N- 45%)	57.3	0.6	.24	.08	89	12/31	.24(b)	.51(b)	3/31	NIL(b)	NIL(b)	YES
	1908	Campbell Soup		CPB	51.30	3	2	2	.65	40- 55	(N- 5%)	20.0	2.7	2.57	1.40	39	1/31	.72	.65	6/30	.35	.35	YES
1655	2122	Camping World Holdings		CWH	8.08	–	4	–	1.70	20- 35	(150-335%)	80.8	4.0	.10	.32	35	12/31	d.35	d.26	3/31	.08	.08	YES
	2102	Canada Goose Hldgs.	(TSE)	GOOS.TO	31.30	3	3	5	1.20	70- 105	(125-235%)	31.6	NIL	.99	NIL	86	12/31	1.08	.96	3/31	NIL	NIL	
	2509	Can. Imperial Bank	(TSE)	CM.TO	80.83b	3	1	3	.85	130- 160	(60-100%)	6.7	7.3	12.00	5.88	52	1/31	2.63(b)	2.60(b)	6/30	▲1.46(b)	1.40(b)	YES
	339	Can. National Railway		CNI	78.23	3	2	4	1.05	110- 150	(40- 90%)	17.5	2.2	4.48	1.75	26	12/31	.93	1.15	3/31	▲.437	.409	YES
	2403	Can. Natural Res.	(TSE)	CNQ.TO	18.09b	2	3	4	1.40	▼ 35- 55	(95-205%)	NMF	9.4	▼d.42	1.70	94	12/31	.58(b)	d.21(b)	6/30	▲.425(b)	.375(b)	YES
	340	Can. Pacific Railway		CP	219.01	2	3	2	1.15	320- 430	(45- 95%)	16.1	1.5	13.58	3.32	26	3/31	◆3.36	2.10	9/30	▲.83	.631	YES
	2139	Canadian Tire 'A'	(TSE)	CTCA.TO	96.58b	2	2	3	.70	175- 240	(80-150%)	8.5	4.7	11.42	4.55	49	12/31	5.42(b)	3.99(b)	6/30	1.138(b)	1.038(b)	YES
	1983	Canon Inc. ADR(g)		CAJ	20.65	3	1	3	.85	45- 55	(120-165%)	17.5	6.7	1.18	1.38	46	12/31	.28	.60	3/31	NIL	NIL	YES
643	1619	Canopy Growth Corp.		CGC	15.17	–	4	–	1.70	25- 40	(65-165%)	NMF	NIL	d.91	NIL	22	12/31	d.27	.17	3/31	NIL	NIL	YES
	205	Cantel Medical Corp.		CMD	28.83	5	3	2	.90	95- 145	(230-405%)	17.9	0.8	1.61	.22	8	1/31	d.05	.45	3/31	.105	.10	YES
	2548	Capital One Fin'l		COF	53.87	4	3	3	1.25	100- 150	(85-180%)	4.7	3.0	11.50	1.60	24	12/31	2.25	2.49	3/31	.40	.40	YES
	1502	Capitol Fed. Fin'l	(NDQ)	CFFN	11.77	3	2	3	.80	13- 17	(10- 45%)	19.0	2.9	.62	.34	27	12/31	.16	.18	6/30	◆.085	.085	YES
231	2103	Capri Holdings Ltd.		CPRI	12.20	3	4	3	1.20	40- 60	(230-390%)	5.0	NIL	2.43	NIL	86	12/31	1.38	1.33	3/31	NIL	NIL	YES
	206	Cardinal Health		CAH	50.74	▲1	3	2	1.20	80- 120	(60-135%)	9.4	3.8	5.37	1.93	8	12/31	1.52	.93	6/30	.48	.476	YES
	1747	Carlisle Cos.		CSL	122.63	▼3	2	1	1.00	175- 235	(45- 90%)	14.5	1.6	8.46	2.00	69	3/31	◆1.09	1.33	3/31	.50	.40	YES
	2450	Carlyle Group	(NDQ)	CG	21.87	–	3	–	1.30	▲ 40- 60	(85-175%)	52.1	4.6	▼.42	1.00	–	12/31	d.08	d.15	3/31	.25	.43	YES
	2123	CarMax, Inc.		KMX	64.56	3	3	2	1.15	90- 135	(40-110%)	22.0	NIL	2.94	NIL	35	2/28	1.30	1.13	3/31	NIL	NIL	YES
1847	2306	Carnival Corp.		CCL	12.22	5	4	3	1.10	▼ 40- 70	(225-475%)	NMF	NIL	▼d2.63	NIL	73	2/28	d1.14	.48	6/30	▼NIL	.50	YES
	739	Carpenter Technology		CRS	19.22	3	3	3	1.65	70- 110	(265-470%)	4.8	4.2	4.00	.80	83	12/31	.79	.73	3/31	.20	.20	YES
	1841	Carriage Services		CSV	15.21	3	3	3	.80	40- 60	(165-295%)	14.0	2.0	1.09	.30	47	12/31	.14	d.14	3/31	.075	.075	YES
847	2104	Carter's Inc.		CRI	74.35	3	3	3	.95	135- 200	(80-170%)	13.7	3.2	5.41	2.40	86	12/31	2.81	2.83	3/31	▲.60	.50	YES
	2124	Carvana Co.		CVNA	80.30	4	5	4	1.50	60- 115	(N- 45%)	NMF	NIL	d2.97	NIL	35	12/31	d.82	d.74	3/31	NIL	NIL	YES
2662	948	Casa Systems	(NDQ)	CASA	4.42	–	5	–	1.15	4- 8	(N- 80%)	NMF	NIL	d.52	NIL	42	12/31	d.31	.17	3/31	NIL	NIL	YES
	407	Casella Waste Sys.	(NDQ)	CWST	42.87	2	3	1	.95	60- 90	(40-110%)	43.7	NIL	.98	NIL	3	12/31	.19	d.32	3/31	NIL	NIL	YES
	1947	Casey's Gen'l Stores	(NDQ)	CASY	152.86	3	3	2	.70	115- 175	(N- 15%)	29.8	0.8	5.13	1.28	9	1/31	.91	1.13	6/30	.32	.29	YES
	174	Catalent, Inc.		CTLT	58.86	3	3	3	1.10	65- 95	(10- 60%)	60.1	NIL	.98	NIL	19	12/31	.23	.34	3/31	NIL	NIL	YES
	151	Caterpillar Inc.		CAT	114.60	3	2	3	1.35	205- 280	(80-145%)	11.3	3.6	10.18	4.12	59	12/31	2.63	2.55	6/30	1.03	.86	YES
	2196	Cato Corp.		CATO	10.28	4	3	3	.80	25- 35	(145-240%)	10.9	NIL	.94	NIL	63	1/31	d.13	d.13	6/30	▼NIL	.33	YES
	2307	Cedar Fair L.P.		FUN	25.70	3	3	4	.75	80- 120	(210-365%)	NMF	NIL	▼d.05	NIL	73	12/31	.05	d.40	6/30	▼NIL	.925	YES
	2439	Celanese Corp.		CE	76.02	4	3	4	1.25	125- 185	(65-145%)	8.0	3.3	9.45	2.48	57	12/31	1.99	2.38	6/30	◆.62	.62	YES
1655	1327	Celestica Inc.		CLS	4.66	–	3	–	1.00	5- 8	(5- 70%)	12.3	NIL	.38	NIL	61	12/31	.18	.08	3/31	NIL	NIL	YES
	1109	CEMEX ADS		CX	2.10	4	4	2	1.65	6- 10	(185-375%)	8.4	NIL	.25	NIL	44	12/31	d.10	d.02	3/31	NIL	NIL	YES
	504	Cenovus Energy	(TSE)	CVE.TO	3.70b	▼3	4	2	1.30	16- 25	(330-575%)	52.9	NIL	.07	NIL	92	12/31	d.13(b)	d1.10(b)	6/30	▼NIL(b)	.05(b)	YES
	794	Centene Corp.		CNC	68.42	2	3	2	1.10	85- 130	(25- 90%)	14.9	NIL	4.58	NIL	15	12/31	.73	.69	3/31	NIL	NIL	YES
1423	530	Centennial Resource Dev.	(NDQ)	CDEV	0.29	–	4	–	1.80	6- 10	(NMF)	4.1	NIL	.07	NIL	93	12/31	.03	.11	3/31	NIL	NIL	YES
2030	907	CenterPoint Energy		CNP	15.75	3	3	4	.70	25- 35	(60-120%)	10.2	3.8	1.54	.60	11	12/31	.41	.18	6/30	▼.15	.287	YES
	419	Central & East. Europe		CEE	18.34	–	4	–	.95	25- 45	(35-145%)	NMF	6.8	NMF	1.25	–	10/31	31.60(q)	26.98(q)	3/31	1.463	1.008	
	1185	Central Garden & Pet	(NDQ)	CENT	32.57	3	3	4	1.05	60- 90	(85-175%)	19.7	NIL	1.65	NIL	10	12/31	d.08	.03	3/31	NIL	NIL	YES
1239	1587	Century Aluminum	(NDQ)	CENX	4.00	–	5	–	2.35	9- 16	(125-300%)	NMF	NIL	d.39	NIL	89	12/31	d.05	d.74	3/31	NIL	NIL	YES
448	1029	CenturyLink Inc.		CTL	10.14	3	3	3	1.10	14- 20	(40- 95%)	7.6	9.9	1.34	1.00	30	12/31	.33	.37	3/31	.25	.25	YES
	819	Cerner Corp.	(NDQ)	CERN	70.25	1	2	2	.95	90- 125	(30- 80%)	23.2	1.0	3.03	.72	18	12/31	.75	.63	6/30	.18	NIL	YES
	207	Charles River		CRL	144.26	2	3	2	1.15	135- 205	(N- 40%)	26.7	NIL	5.40	NIL	8	12/31	1.61	1.21	3/31	NIL	NIL	YES
	727	Chart Industries	(NDQ)	GTLS	29.78	3	3	3	1.65	75- 115	(150-285%)	7.2	NIL	4.12	NIL	78	12/31	.72	.56	3/31	NIL	NIL	YES
	1019	Charter Communic.	(NDQ)	CHTR	498.67	1	3	2	1.05	425- 635	(N- 25%)	41.1	NIL	12.13	NIL	14	12/31	3.28	1.29	3/31	NIL	NIL	YES
	1818	Check Point Software	(NDQ)	CHKP	105.33	2	1	5	.85	125- 155	(20- 45%)	17.3	NIL	6.09	NIL	43	12/31	1.84	1.51	3/31	NIL	NIL	YES
	352	Cheesecake Factory	(NDQ)	CAKE	18.93	5	3	3	.85	70- 95	(270-400%)	6.8	7.7	2.79	1.46	68	12/31	.58	.60	3/31	.36	.33	YES
	1948	Chefs' Warehouse	(NDQ)	CHEF	11.94	3	4	3	1.00	20- 35	(70-195%)	NMF	NIL	d.89	NIL	9	12/31	.36	.30	3/31	NIL	NIL	YES
	1748	Chemed Corp.		CHE	441.78	1	2	2	.85	415- 565	(N- 30%)	27.7	0.3	15.97	1.32	69	12/31	4.22	3.35	3/31	.32	.30	YES
	567	Chemours Co. (The)		CC	10.41	5	4	3	2.20	25- 45	(140-330%)	30.6	9.6	.34	1.00	77	12/31	d1.94	.81	3/31	.25	.25	YES
	610	Cheniere Energy Inc.	(ASE)	LNG	41.66	3	3	4	1.25	95- 145	(130-250%)	26.9	NIL	1.55	NIL	87	12/31	3.34	.26	3/31	NIL	NIL	YES
	622	Cheniere Energy Part.		CQP	30.70	2	3	5	1.00	50- 75	(65-145%)	15.5	8.5	1.98	2.62	84	12/31	.87	.69	3/31	▲.63	.59	YES
	549	Chesapeake Utilities		CPK	86.32	3	2	2	.60	110- 150	(25- 75%)	24.0	2.0	3.59	1.73	58	12/31	1.04	1.08	6/30	.405	.37	YES
2030	505	Chevron Corp.		CVX	83.57	4	2	3	1.20	120- 150	(45- 80%)	56.1	6.2	1.49	5.16	92	12/31	d3.51	1.95	3/31	▲1.29	1.19	YES
1424	2642	Chewy, Inc.		CHWY	44.72	–	4	–	NMF	30- 50	(N- 10%)	NMF	NIL	d.57	NIL	50	1/31	d.15	NA	3/31	NIL	NIL	YES
	2197	Chico's FAS		CHS	1.18	–	5	–	1.05	8- 15	(NMF)	NMF	30.5	d.34	.36-NIL	63	1/31	d.04	d.14	3/31	.09	.088	YES
	2198	Children's Place	(NDQ)	PLCE	26.38	5	3	4	.85	70- 105	(165-300%)	4.8	NIL	5.45	NIL	63	1/31	1.85	1.10	6/30	▼NIL	1.12	YES
	420	China Fund (The)		CHN	20.00	–	3	–	1.05	20- 35	(N- 75%)	NMF	1.0	NMF	.20	–	10/31	22.80(q)	18.98(q)	3/31	.132	.169	
	921	China Mobile (ADR)		CHL	39.01	3	2	5	.80	55- 80	(40-105%)	9.2	5.4	4.26	2.10	29	6/30	1.94(p)	2.43(p)	3/31	NIL	NIL	YES
	353	Chipotle Mex. Grill		CMG	808.73	▼3	3	3	.95	735-1100	(N- 35%)	50.2	NIL	16.11	NIL	68	3/31	◆3.08	3.13	3/31	NIL	NIL	YES
	2352	Choice Hotels Int'l		CHH	70.13	2	3	2	1.00	95- 140	(35-100%)	18.7	1.3	▼3.76	.90	81	12/31	.75	.56	6/30	.225	.215	YES
	761	Chubb Ltd.		CB	114.64	3	1	4	.85	200- 245	(75-115%)	10.3	2.6	11.13	3.00	5	3/31	◆2.68	2.54	6/30	.75	.73	YES
	1186	Church & Dwight		CHD	72.67	2	1	3	.65	65- 80	(N- 10%)	28.7	1.3	2.53	.96	10	12/31	.58	.57	3/31	▲.24	.228	YES
	2353	Churchill Downs	(NDQ)	CHDN	93.46	3	3	2	1.05	▼ 80- 125	(N- 35%)	64.0	0.6	▼1.46	.58	81	12/31	.11	.18	3/31	.581	.543	YES
	949	Ciena Corp.		CIEN	46.35	2	4	2	1.25	55- 95	(20-105%)	18.9	NIL	2.45	NIL	42	1/31	.52	.33	3/31	NIL	NIL	YES
	795	Cigna Corp.		CI	188.70	2	3	1	1.05	280- 420	(50-125%)	10.4	NIL	18.21	.04	15	12/31	4.31	2.46	6/30	.04	.04	YES
	531	Cimarex Energy		XEC	19.81	5	3	4	1.50	80- 120	(305-505%)	4.0	4.4	4.98	.88	93	12/31	1.18	1.98	6/30	▲.22	.20	YES
	2376	Cimpress plc	(NDQ)	CMPR	46.79	4	3	2	.85	▼ 70- 110	(50-135%)	25.4	NIL	▼1.84	NIL	91	12/31	2.73	2.17	3/31	NIL	NIL	YES
	1030	Cincinnati Bell		CBB	14.76	–	4	–	1.75	8- 13	(N- N%)	NMF	NIL	d.67	NIL	30	12/31	d.22	d.55	3/31	NIL	NIL	YES
2663	762	Cincinnati Financial	(NDQ)	CINF	82.48	▲1	2	3	.85	95- 130	(15- 60%)	19.3	2.9	4.28	2.40	5	12/31	1.23	.98	6/30	▲.60	.56	YES
2227	2308	Cinemark Hldgs.		CNK	13.52	5	3	3	.95	▼ 35- 55	(160-305%)	NMF	NIL	▼d1.28	NIL	73	12/31	.22	.17	6/30	▼NIL	.34	YES
	381	Cintas Corp.	(NDQ)	CTAS	193.91	2	2	1	.95	255- 345	(30- 80%)	21.6	1.5	8.98	2.90	32	2/28	2.16	1.84	3/31	NIL	NIL	YES
	1356	Cirrus Logic	(NDQ)	CRUS	68.98	2	3	2	1.00	70- 105	(N- 50%)	18.4	NIL	3.75	NIL	40	12/31	1.41	.91	3/31	NIL	NIL	YES
448	950	Cisco Systems	(NDQ)	CSCO	42.54	3	1	4	1.15	60- 70	(40- 65%)	13.0	3.4	3.26	1.44	42	1/31	.77	.73	6/30	▲.36	.35	YES
	2199	Citi Trends	(NDQ)	CTRN	10.44	2	4	3	.85	25- 45	(140-330%)	21.3	3.1	.49	.32	63	1/31	.84	.59	3/31	.08	.08	YES
	2510	Citigroup Inc.		C	44.01	3	3	3	1.35	95- 145	(115-230%)	5.1	4.9	8.63	2.16	52	3/31	◆1.05	1.87	3/31	.51	.45	YES
★★	2511	Citizens Fin'l Group		CFG	20.30	4	3	4	1.25	50- 70	(145-245%)	5.2	8.1	3.88	1.64	52	3/31	◆.03	.92	6/30	◆.39	.32	YES
	2589	Citrix Sys.	(NDQ)	CTXS	150.67	3	3	2	1.10	120- 180	(N- 20%)	27.3	0.9	5.51	1.40	12	12/31	1.71	1.67	3/31	.35	.35	YES
	611	Clean Energy Fuels	(NDQ)	CLNE	1.77	–	5	–	1.70	7- 13	(295-635%)	17.7	NIL	.10	NIL	87	12/31	.20	.03	3/31	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 9-30-20, 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 9-30-20	(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	Clean Harbors		CLH	48.62	3	3	3	1.20	100- 155 (105-220%)	22.3	NIL	2.18	NIL	3	12/31	.43	.29	3/31	NIL	NIL	YES
1423	2390	Clear Channel Outdoor		CCO	0.72	–	5	–	1.15	5- 9 (NMF)	NMF	NIL	▼d1.19	NIL	36	12/31	.06	.07	3/31	NIL	NIL	YES
	740	Cleveland-Cliffs Inc.		CLF	3.46	5	5	2	2.05	11- 20 (220-480%)	5.4	NIL	.64	NIL	83	12/31	.23	.44	9/30	▼NIL	.06	YES
	1187	Clorox Co.		CLX	192.43	3	2	3	.70	105- 145 (N- N%)	30.7	2.2	6.26	4.24	10	12/31	1.46	1.40	6/30	1.06	.96	YES
★★	1969	Coca-Cola		KO	46.53	▼2	1	2	.65	55- 70 (20- 50%)	23.1	3.5	2.01	1.64	34	3/31	◆.51	.48	6/30	▲.41	.40	YES
	1970	Coca-Cola Consol.	(NDQ)	COKE	234.90	4	3	4	.80	280- 420 (20- 80%)	24.7	0.4	9.51	1.00	34	12/31	1.51	1.82	6/30	.25	.25	
	1971	Coca-Cola Euro. Part.		CCEP	40.61	3	3	5	.65	60- 90 (50-120%)	14.7	3.6	2.77	1.45	34	12/31	1.32(p)	1.15(p)	3/31	NIL	NIL	YES
	1020	Cogeco Communic.	(TSE)	CCA.TO	99.63b	2	2	2	.55	90- 120 (N- 20%)	13.6	2.3	7.30	2.32	14	2/28	2.22(b)	1.64(b)	3/31	.58(b)	.525(b)	YES
	116	Cognex Corp.	(NDQ)	CGNX	47.97	3	3	3	1.40	50- 70 (5- 45%)	48.5	0.5	.99	.22	20	12/31	.46	.26	3/31	.055	.05	YES
	2621	Cognizant Technology	(NDQ)	CTSH	52.53	3	2	3	1.15	85- 115 (60-120%)	13.0	1.7	4.04	.88	4	12/31	1.07	1.13	3/31	▲.22	.20	YES
	117	Coherent, Inc.	(NDQ)	COHR	108.46	4	3	4	1.45	210- 310 (95-185%)	25.5	NIL	4.25	NIL	20	12/31	.24	1.45	3/31	NIL	NIL	YES
	1749	Colfax Corp.		CFX	23.24	▼4	3	3	1.45	40- 60 (70-160%)	11.0	NIL	2.11	NIL	69	12/31	.61	.69	3/31	NIL	NIL	YES
	1188	Colgate-Palmolive		CL	72.16	3	1	3	.75	70- 85 (N- 20%)	24.7	2.4	2.92	1.76	10	12/31	.75	.70	6/30	▲.44	.43	YES
★★	2105	Columbia Sportswear	(NDQ)	COLM	69.70	3	4	4	1.15	105- 155 (50-120%)	18.7	NIL	3.72	NIL	86	12/31	1.67	1.61	6/30	▼NIL	.24	YES
	1708	Columbus McKinnon	(NDQ)	CMCO	24.37	4	3	4	1.45	55- 80 (125-230%)	8.9	1.0	2.75	.24	31	12/31	.64	.61	6/30	.06	.06	YES
	1021	Comcast Corp.	(NDQ)	CMCSA	37.21	1	2	3	.85	70- 95 (90-155%)	11.6	2.5	3.22	.92	14	12/31	.79	.64	6/30	▲.23	.21	YES
	777	Comerica Inc.		CMA	29.62	4	3	3	1.25	85- 130 (185-340%)	4.3	9.2	6.96	2.72	75	3/31	◆d.46	2.11	6/30	▲.68	.67	YES
	778	Commerce Bancshs.	(NDQ)	CBSH	56.44	3	1	1	1.00	65- 80 (15- 40%)	15.3	1.9	3.68	1.08	75	12/31	.93	.91	6/30	◆.27	.248	YES
	741	Commercial Metals		CMC	15.43	3	3	3	1.50	30- 50 (95-225%)	6.2	3.1	2.50	.48	83	2/28	.53	.13	6/30	.12	.12	YES
231	981	Commercial Vehicle	(NDQ)	CVGI	1.41	–	5	–	1.50	7- 13 (395-820%)	1.9	NIL	.73	NIL	85	12/31	d.24	.29	3/31	NIL	NIL	YES
	951	CommScope Holding	(NDQ)	COMM	9.93	4	3	5	1.45	25- 40 (150-305%)	5.3	NIL	1.86	NIL	42	12/31	.46	.51	3/31	NIL	NIL	YES
	796	Community Health		CYH	3.71	–	5	–	1.80	11- 20 (195-440%)	NMF	NIL	d4.42	NIL	15	12/31	d3.27	d2.91	3/31	NIL	NIL	YES
	2451	Compass Diversified		CODI	17.87	3	3	4	.90	25- 40 (40-125%)	NMF	8.1	d1.01	1.44	–	12/31	d.24	d.25	3/31	.36	.36	YES
	1600	Compass Minerals Int'l		CMP	40.59	2	3	3	1.20	75- 110 (85-170%)	17.8	7.1	2.28	2.88-1.44	65	12/31	1.63	1.42	3/31	.72	.72	YES
448	820	Computer Prog. & Sys.	(NDQ)	CPSI	23.20	3	3	4	.70	45- 65 (95-180%)	8.8	1.7	2.63	.40	18	12/31	.78	.78	3/31	.10	.10	YES
2663	952	Comtech Telecom.	(NDQ)	CMTL	16.92	▼4	4	3	1.35	35- 55 (105-225%)	15.5	2.4	1.09	.40	42	1/31	.14	.32	6/30	.10	.10	YES
642	1909	Conagra Brands		CAG	33.88	2	3	5	.90	35- 55 (5- 60%)	16.2	2.6	2.09	.87	39	2/28	.47	.51	6/30	◆.213	.213	YES
	532	Concho Resources		CXO	50.57	3	3	5	1.70	160- 240 (215-375%)	12.9	1.6	3.93	.80	93	12/31	1.03	.94	3/31	▲.20	.125	YES
	175	CONMED Corp.	(NDQ)	CNMD	68.01	▼3	3	3	.90	110- 165 (60-145%)	40.0	1.2	1.70	.80	19	12/31	.60	.57	6/30	.20	.20	YES
1655	2168	Conn's, Inc.	(NDQ)	CONN	4.22	–	4	–	1.55	9- 16 (115-280%)	2.2	NIL	1.89	NIL	76	1/31	.17	.91	3/31	NIL	NIL	YES
	2404	ConocoPhillips		COP	34.57	4	3	3	1.45	70- 110 (100-220%)	NMF	4.9	▼d1.59	1.68	94	12/31	.66	1.68	3/31	.42	.305	YES
	1031	Consol. Communic.	(NDQ)	CNSL	5.86	–	4	–	1.15	13- 20 (120-240%)	NMF	NIL	d.12	NIL	30	12/31	d.08	d.20	3/31	NIL	.387	YES
	137	Consol. Edison		ED	85.47	3	1	2	.40	85- 100 (N- 15%)	19.6	3.6	4.36	3.09	13	12/31	.88	1.06	6/30	◆.765	.74	YES
	1788	Consolidated Water	(NDQ)	CWCO	14.54	2	3	1	.85	25- 35 (70-140%)	24.6	2.3	.59	.34	16	12/31	.12	.10	6/30	.085	.085	YES
	1972	Constellation Brands		STZ	156.62	3	2	3	.85	255- 345 (65-120%)	17.0	1.9	9.21	3.00	34	2/28	2.06	1.84	3/31	.75	.74	YES
	2405	Continental Resources		CLR	10.72	5	4	4	1.80 ▼	30- 50 (180-365%)	NMF	NIL	▼d.27	NIL	94	12/31	.53	.53	6/30	▼NIL	.05	YES
	208	Cooper Cos.		COO	304.70	3	2	2	.90	305- 415 (N- 35%)	27.7	NIL	11.00	.06	8	1/31	1.82	2.07	3/31	.03	.03	YES
	982	Cooper Tire & Rubber		CTB	18.81	4	3	3	1.05	50- 70 (165-270%)	6.3	2.2	2.97	.42	85	12/31	1.02	.66	3/31	.105	.105	YES
	983	Cooper-Standard		CPS	10.16	5	3	3	1.30	75- 115 (NMF)	NMF	NIL	d5.15	NIL	85	12/31	d4.00	.70	3/31	NIL	NIL	YES
	306	Copa Holdings, S.A.		CPA	48.77	3	3	4	1.25	110- 165 (125-240%)	7.4	6.6	6.56	3.20	74	12/31	.06	d3.67	3/31	▲.80	.65	YES
	2125	Copart, Inc.	(NDQ)	CPRT	68.63	1	2	1	.95	75- 100 (10- 45%)	27.5	NIL	2.50	NIL	35	1/31	.65	.52	3/31	NIL	NIL	YES
1037	1949	Core-Mark Holding	(NDQ)	CORE	27.47	3	3	5	.70	30- 50 (10- 80%)	23.9	1.7	1.15	.48	9	12/31	.35	.26	3/31	.12	.11	YES
	1518	CoreCivic, Inc.		CXW	11.42	4	4	3	1.00	25- 35 (120-205%)	8.5	15.8	1.34	1.80	51	12/31	.36	.40	6/30	.44	.44	YES
	432	CoreLogic		CLGX	35.60	3	3	2	.95	50- 80 (40-125%)	12.3	2.5	2.90	.88	2	12/31	.77	.48	3/31	▲.22	NIL	YES
1425	2418	Core Laboratories		CLB	11.96	5	4	5	1.55 ▼	35- 55 (195-360%)	10.1	0.3	▼1.18	.04	95	12/31	.23	.20	3/31	▼.25	.55	YES
	1110	Cornerstone Building		CNR	4.12	–	5	–	1.50	15- 25 (265-505%)	9.8	NIL	.42	NIL	44	12/31	.02	NA	3/31	NIL	NIL	YES
847	1819	Cornerstone OnDemand	(NDQ)	CSOD	29.76	3	3	3	1.35	50- 75 (70-150%)	20.8	NIL	1.43	NIL	43	12/31	.43	.24	3/31	NIL	NIL	YES
	1304	Corning Inc.		GLW	20.44	4	3	3	1.20	30- 50 (45-145%)	28.8	4.3	.71	.88	67	12/31	.01	.32	3/31	▲.22	.20	YES
	1601	Corteva, Inc.		CTVA	24.63	–	3	–	NMF	30- 50 (20-105%)	17.0	2.2	1.45	.54	65	12/31	.07	NA	3/31	.13	NIL	YES
	433	CoStar Group	(NDQ)	CSGP	603.53	1	2	2	1.05	805-1085 (35- 80%)	57.6	NIL	10.48	NIL	2	12/31	2.82	2.81	3/31	NIL	NIL	YES
	2140	Costco Wholesale	(NDQ)	COST	312.08	1	1	2	.85	380- 460 (20- 45%)	35.3	0.9	8.85	2.84	49	2/28	2.10	2.01	6/30	▲.70	.65	YES
231	1007	Coty Inc.		COTY	5.68	5	4	3	1.10	18- 30 (215-430%)	8.0	8.8	.71	.50	71	12/31	.27	.24	3/31	.125	.125	YES
	1820	Coupa Software	(NDQ)	COUP	166.52	3	3	3	1.10	85- 125 (N- N%)	NMF	NIL	d1.03	NIL	43	1/31	d.38	d.28	3/31	NIL	NIL	YES
	1210	Covanta Holding Corp.		CVA	7.04	4	3	3	1.05	16- 25 (125-255%)	NMF	4.5	.04	.32	55	12/31	.09	.09	6/30	.25	.25	YES
	354	Cracker Barrel	(NDQ)	CBRL	86.47	3	2	4	.70	200- 270 (130-210%)	8.9	4.6	9.70	4.00	68	1/31	2.70	2.52	6/30	▼NIL	1.25	YES
	1973	Craft Brew Alliance	(NDQ)	BREW	15.20	–	4	–	1.10	11- 18 (N- 20%)	NMF	NIL	d.26	NIL	34	12/31	d.36	d.03	3/31	NIL	NIL	YES
	1750	Crane Co.		CR	51.04	4	3	3	1.20	85- 130 (65-155%)	9.8	3.4	5.20	1.72	69	12/31	1.40	1.46	3/31	▲.43	.39	YES
	2549	Credit Acceptance	(NDQ)	CACC	294.71	3	3	3	1.00	55- 85 (N- N%)	8.0	NIL	36.87	NIL	24	12/31	8.60	7.79	3/31	NIL	NIL	YES
	1357	Cree, Inc.	(NDQ)	CREE	35.33	4	3	3	1.25	35- 50 (N- 40%)	NMF	NIL	d.91	NIL	40	12/31	d.49	NIL	3/31	NIL	NIL	YES
1425	2406	Crescent Point Energy	(TSE)	CPG.TO	1.28b	5	5	3	1.70	6- 12 (370-840%)	NMF	0.8	▼d.17	.01	94	12/31	.09(b)	d.03(b)	6/30	.01(b)	.01(b)	YES
	2156	Crocs, Inc.	(NDQ)	CROX	22.79	▼3	3	3	1.00	35- 50 (55-120%)	14.8	NIL	1.54	NIL	28	12/31	.29	d1.72	3/31	NIL	NIL	YES
	1620	Cronos Group	(NDQ)	CRON	6.07	–	4	–	1.10	13- 20 (115-230%)	NMF	NIL	d.04	NIL	22	12/31	.16	d.04	3/31	NIL	NIL	YES
	1645	Cross Country Health.	(NDQ)	CCRN	5.94	3	4	1	1.05	11- 18 (85-205%)	NMF	NIL	d.28	NIL	88	12/31	d.03	d.55	3/31	NIL	NIL	YES
	2590	CrowdStrike Hldgs.	(NDQ)	CRWD	68.43	–	4	–	NMF	85- 135 (25- 95%)	NMF	NIL	d.25	NIL	12	1/31	d.02	NA	3/31	NIL	NIL	YES
	598	Crown Castle Int'l		CCI	162.42	3	3	2	.70	145- 215 (N- 30%)	68.8	3.0	2.36	4.95	41	12/31	.43	.44	3/31	1.20	1.125	YES
	1174	Crown Holdings		CCK	61.28	2	3	2	1.10	85- 130 (40-110%)	11.4	NIL	5.37	NIL	62	3/31	◆1.13	1.05	3/31	NIL	NIL	YES
	176	CryoLife Inc.		CRY	20.39	3	3	4	1.05	18- 25 (N- 25%)	52.3	NIL	.39	NIL	19	12/31	d.02	d.02	3/31	NIL	NIL	YES
	1328	Cubic Corp.		CUB	36.79	4	3	3	1.10	80- 120 (115-225%)	33.4	0.7	1.10	.27	61	12/31	d.64	d.23	3/31	.135	.135	YES
	2512	Cullen/Frost Bankers		CFR	61.31	4	3	3	1.25	95- 145 (55-135%)	9.5	4.7	6.46	2.90	52	12/31	1.60	1.82	3/31	.71	.67	YES
	1146	Culp Inc.		CULP	6.73	4	3	3	1.00	18- 25 (165-270%)	10.7	6.2	.63	.42	54	1/31	.16	.27	6/30	.105	.10	YES
	152	Cummins Inc.		CMI	146.10	3	2	3	1.15	215- 295 (45-100%)	11.4	3.6	12.76	5.24	59	12/31	2.56	3.48	3/31	1.311	1.14	YES
	1709	Curtiss-Wright		CW	95.04	2	3	3	1.10	140- 210 (45-120%)	14.2	0.8	6.68	.72	31	12/31	2.08	1.89	6/30	.17	.17	YES
★★	209	Cutera, Inc.	(NDQ)	CUTR	11.76	3	4	3	.95	25- 40 (115-240%)	40.6	NIL	.29	NIL	8	12/31	.14	d.11	3/31	NIL	NIL	YES
★★	1358	Cypress Semic.		CY					SEE FINAL SUPPLEMENT													
	1519	CyrusOne Inc.	(NDQ)	CONE	68.87	3	3	5	.85	75- 110 (10- 60%)	NMF	2.9	d.50	2.00	51	12/31	d.46	d1.08	3/31	.50	.46	YES
1655	623	**DCP Midstream LP**		DCP	5.68	–	3	–	1.75	40- 55 (605-870%)	6.2	27.5	.92	1.56-.40	84	12/31	d.08	.28	6/30	▼.39	.78	YES
	728	DMC Global	(NDQ)	BOOM	27.23	5	3	4	1.25	70- 105 (155-285%)	9.2	1.8	2.95	.50	78	12/31	.65	.46	6/30	.125	.02	YES
	1199	DNP Select Inc. Fund		DNP	10.59	–	2	–	.60	11- 15 (5- 40%)	NMF	2.5	NMF	.26	–	10/31	10.50(q)	9.06(q)	12/31	NIL	NIL	
	599	DSP Group	(NDQ)	DSPG	16.67	2	3	4	.85	13- 19 (N- 15%)	NMF	NIL	d.05	NIL	41	12/31	NIL	d.01	3/31	NIL	NIL	YES
	908	DTE Energy		DTE	100.76	3	2	4	.50	115- 155 (15- 55%)	15.0	4.2	6.70	4.20	11	12/31	1.40	1.05	6/30	1.013	.945	YES
	2622	DXC Technology		DXC	15.07	5	3	4	1.30	95- 145 (530-860%)	1.6	5.6	9.16	.84	4	12/31	1.25	2.23	6/30	.21	.19	YES
449	102	Daimler AG	(PNK)	DDAIF	30.65	4	3	3	1.20	65- 100 (110-225%)	5.8	3.3	5.24	1.00	82	12/31	d.12	1.68	6/30	▼.983	3.698	

(•) 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	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 9-30-20	(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?
1038	2008	Daktronics Inc.	(NDQ)	DAKT	4.49	–	3	–	1.10	10- 14 (125-210%)	NMF	NIL	d.06	NIL	23	1/31	d.28	d.07	6/30	▼NIL	.05	YES
★★	984	Dana Inc.		DAN	8.33	5	4	3	1.75	25- 35 (200-320%)	2.9	NIL	2.87	NIL	85	12/31	.67	.71	6/30	▼NIL	.10	YES
	1751	Danaher Corp.		DHR	155.83	–	2	–	.85	150- 200 (N- 30%)	33.7	0.5	4.62	.72	69	12/31	1.07	1.05	6/30	▲.18	.17	YES
	355	Darden Restaurants		DRI	61.79	3	3	4	.75	140- 205 (125-230%)	9.2	NIL	6.72	NIL	68	2/28	1.90	1.80	6/30	▼NIL	.75	YES
	409	Darling Ingredients		DAR	19.71	2	3	3	1.15	25- 35 (25- 80%)	14.8	NIL	1.33	NIL	3	12/31	1.44	.24	3/31	NIL	NIL	YES
2033	356	Dave & Buster's Ent.	(NDQ)	PLAY	11.56	3	3	3	1.10	80- 120 (590-940%)	4.0	NIL	2.90	NIL	68	1/31	.80	.75	6/30	▼NIL	.15	YES
	797	DaVita Inc.		DVA	77.52	1	3	1	1.10	95- 140 (25- 80%)	12.9	NIL	6.01	NIL	15	12/31	1.86	.90	3/31	NIL	NIL	YES
232	2157	Deckers Outdoor		DECK	140.66	2	3	2	1.05	175- 260 (25- 85%)	14.8	NIL	9.51	NIL	28	12/31	7.14	6.59	3/31	NIL	NIL	YES
848	153	Deere & Co.		DE	137.30	3	1	3	1.15	205- 250 (50- 80%)	14.6	2.2	9.40	3.04	59	1/31	1.63	1.54	6/30	.76	.76	YES
1656	506	Delek US Holdings		DK	17.12	–	3	–	1.70	75- 115 (340-570%)	3.3	7.2	5.16	1.24	92	12/31	d.11	1.59	3/31	▲.31	.27	YES
	1399	Dell Technologies		DELL	40.96	–	3	–	NMF	75- 115 (85-180%)	6.4	NIL	6.45	NIL	56	1/31	2.00	NA	3/31	NIL	NIL	YES
	307	Delta Air Lines		DAL	23.64	3	3	3	1.15	80- 120 (240-410%)	3.1	NIL	7.55	NIL	74	12/31	1.70	1.30	6/30	▼NIL	.35	YES
	2377	Deluxe Corp.		DLX	25.09	4	3	4	1.20	65- 95 (160-280%)	8.9	4.8	▼2.81	1.20	91	12/31	1.06	1.25	3/31	.30	.30	YES
	2407	Denbury Resources		DNR					SEE FINAL REPORT													
	357	Denny's Corp.	(NDQ)	DENN	9.02	4	3	3	.80	35- 50 (290-455%)	10.0	NIL	.90	NIL	68	12/31	.23	.18	3/31	NIL	NIL	YES
	177	Dentsply Sirona	(NDQ)	XRAY	41.28	▼3	3	3	.90	65- 95 (55-130%)	15.7	1.0	2.63	.40	19	12/31	.73	.58	6/30	.10	.088	YES
2030	2200	Designer Brands		DBI	5.20	–	3	–	1.15	20- 30 (285-475%)	4.0	7.7	1.30	.40	63	1/31	d.05	d.07	6/30	▼.10	.25	YES
	1032	Deutsche Telekom ADR	(PNK)	DTEGY	13.61	2	2	4	.80	25- 35 (85-155%)	14.6	6.4	.93	.87	30	12/31	.16	d.09	3/31	NIL	NIL	
	533	Devon Energy		DVN	9.16	5	3	4	1.90	30- 45 (230-390%)	6.0	5.2	1.53	.48	93	12/31	.33	.10	6/30	▲.11	.09	YES
644	210	DexCom Inc.	(NDQ)	DXCM	323.27	2	4	3	.90	220- 365 (N- 15%)	NMF	NIL	1.88	NIL	8	12/31	1.00	.54	3/31	NIL	NIL	YES
	1974	Diageo plc		DEO	134.05	2	1	4	.80	145- 175 (10- 30%)	19.0	2.6	7.05	3.55	34	12/31	4.16(p)	4.26(p)	3/31	NIL	NIL	YES
1038	2419	Diamond Offshore		DO	0.77	–	5	–	1.85	▼ 3- 6 (290-680%)	NMF	NIL	▼d2.64	NIL	95	12/31	d.54	d.58	3/31	NIL	NIL	YES
	2408	Diamondback Energy	(NDQ)	FANG	30.86	5	3	4	1.40	▼ 70- 110 (125-255%)	NMF	4.9	▼d12.64	1.50	94	12/31	d2.96	2.60	3/31	▲.375	.188	YES
	329	Diana Shipping		DSX	1.82	–	5	–	1.40	6- 12 (230-560%)	NMF	NIL	d.06	NIL	90	12/31	d.17	.01	3/31	NIL	NIL	YES
	2169	Dick's Sporting Goods		DKS	26.53	3	3	3	1.05	45- 65 (70-145%)	11.2	4.7	2.37	1.25	76	1/31	1.32	1.07	3/31	▲.313	.275	YES
1655	1415	Diebold Nixdorf		DBD	3.68	–	5	–	1.85	13- 25 (255-580%)	5.5	NIL	.67	NIL	70	12/31	.47	d.09	3/31	NIL	NIL	YES
	1520	Digital Realty Trust		DLR	143.72	2	3	2	.75	115- 175 (N- 20%)	55.3	3.1	2.60	4.48	51	12/31	1.50	.15	3/31	▲2.20	2.09	YES
	2141	Dillard's, Inc.		DDS	24.66	4	3	3	1.05	65- 100 (165-305%)	17.6	2.4	1.40	.60	49	1/31	2.40	3.22	6/30	.15	.10	YES
	358	Dine Brands Global		DIN	30.54	5	3	3	.85	105- 155 (245-410%)	4.3	10.0	7.08	3.04	68	12/31	1.59	1.47	6/30	▲.76	.69	YES
	1359	Diodes Inc.		DIOD	46.03	3	3	3	1.20	45- 70 (N- 50%)	18.9	NIL	2.44	NIL	40	12/31	.65	.65	3/31	NIL	NIL	YES
	447	Diplomat Pharmacy		DPLO					SEE FINAL SUPPLEMENT													
	2550	Discover Fin'l Svcs.		DFS	35.22	3	2	3	1.15	120- 160 (240-355%)	3.7	5.0	9.40	1.76	24	12/31	2.25	2.03	3/31	.44	.40	YES
	2329	Discovery, Inc.	(NDQ)	DISCA	21.70	2	3	3	1.15	65- 100 (200-360%)	10.7	NIL	▼2.02	NIL	80	12/31	.67	.46	3/31	NIL	NIL	YES
	1022	Dish Network 'A'	(NDQ)	DISH	22.21	4	3	4	1.40	35- 55 (60-150%)	9.7	NIL	2.29	NIL	14	12/31	.69	.64	3/31	NIL	NIL	YES
848	2330	Disney (Walt)		DIS	102.26	3	1	3	.95	155- 185 (50- 80%)	37.2	1.7	▼2.75	1.76	80	12/31	1.17	1.86	3/31	.88	.88	YES
	2009	Dolby Labs.		DLB	57.59	3	2	3	.95	75- 100 (30- 75%)	25.0	1.5	2.30	.88	23	12/31	.47	.93	3/31	.22	.19	YES
	2142	Dollar General		DG	179.00	1	3	3	.80	165- 245 (N- 35%)	28.6	0.8	6.25	1.44	49	1/31	2.10	1.84	6/30	▲.36	.32	YES
	2143	Dollar Tree, Inc.	(NDQ)	DLTR	79.19	4	3	4	.90	110- 165 (40-110%)	18.7	NIL	4.24	NIL	49	1/31	1.79	1.93	3/31	NIL	NIL	YES
	138	Dominion Energy		D	79.11	▼2	2	2	.50	80- 105 (N- 35%)	17.7	4.8	4.48	3.76	13	12/31	1.22	.44	3/31	▲.94	.917	YES
643	359	Domino's Pizza		DPZ	370.48	1	3	2	.85	400- 600 (10- 60%)	36.6	0.8	10.11	3.12	68	12/31	3.13	2.62	3/31	▲.78	.65	YES
	1161	Domtar Corp.		UFS	20.66	4	3	3	1.30	60- 90 (190-335%)	12.7	8.8	1.63	1.82	79	12/31	.03	1.63	6/30	.455	.435	YES
	1710	Donaldson Co.		DCI	42.03	3	2	4	1.20	70- 100 (65-140%)	22.7	2.1	1.85	.88	31	1/31	.50	.46	3/31	.21	.19	YES
	2391	Donnelley (R.R) & Sons		RRD	1.05	–	5	–	1.85	▼ 3- 6 (185-470%)	NMF	NIL	▼d2.41	NIL	36	12/31	d1.26	d.32	6/30	▼NIL	.03	YES
	985	Dorman Products	(NDQ)	DORM	58.48	4	3	3	.90	75- 115 (30- 95%)	19.0	NIL	3.07	NIL	85	12/31	.52	1.10	3/31	NIL	NIL	YES
	154	Douglas Dynamics		PLOW	34.07	2	3	3	1.05	55- 85 (60-150%)	14.5	3.3	2.35	1.12	59	12/31	.72	.62	3/31	▲.28	.265	YES
	1711	Dover Corp.		DOV	85.97	3	2	2	1.25	110- 150 (30- 75%)	14.8	2.3	5.79	1.96	31	3/31	◆1.39	1.24	3/31	.49	.48	YES
2663	1602	Dow Inc.		DOW	31.53	–	2	–	NMF	65- 85 (105-170%)	10.1	9.0	3.13	2.85	65	12/31	.78	NA	6/30	.70	.70	YES
	2420	Dril-Quip, Inc.		DRQ	32.08	2	3	4	1.45	▼ 45- 70 (40-120%)	NMF	NIL	▼d.09	NIL	95	12/31	.21	d.04	3/31	NIL	NIL	YES
847	2643	Dropbox, Inc.	(NDQ)	DBX	20.34	–	3	–	NMF	30- 40 (45- 95%)	37.0	NIL	.55	NIL	50	12/31	.16	.10	3/31	NIL	NIL	YES
	139	Duke Energy		DUK	86.65	3	2	3	.45	80- 105 (N- 20%)	16.9	4.4	5.12	3.83	13	12/31	.89	.61	3/31	.945	.927	YES
	1521	Duke Realty Corp.		DRE	33.76	3	3	2	.80	30- 45 (N- 35%)	56.3	2.8	.60	.96	51	12/31	.23	.18	3/31	.235	.215	YES
	360	Dunkin' Brands Group	(NDQ)	DNKN	57.97	2	3	3	.70	95- 145 (65-150%)	18.3	2.8	3.16	1.61	68	12/31	.73	.68	3/31	▲.403	.375	YES
2663	1603	DuPont de Nemours		DD	39.72	–	2	–	NMF	75- 100 (90-150%)	11.2	3.1	3.55	1.23	65	12/31	.95	NA	3/31	.30	NIL	YES
848	922	Dycom Inds.		DY	26.92	5	3	5	1.55	60- 90 (125-235%)	23.0	NIL	1.17	NIL	29	1/31	d.23	.10	3/31	NIL	NIL	YES
	1008	**e.l.f. Beauty**		ELF	10.52	3	4	2	1.65	15- 25 (45-140%)	18.8	NIL	.56	NIL	71	12/31	.24	NA	3/31	NIL	NIL	YES
644	1797	E*Trade Fin'l	(NDQ)	ETFC	39.25	–	3	–	1.30	60- 85 (55-115%)	12.0	1.4	3.26	.56	37	12/31	.76	1.06	3/31	.14	.14	YES
	534	EOG Resources		EOG	41.17	4	3	4	1.45	140- 210 (240-410%)	8.0	3.6	5.12	1.50	93	12/31	1.35	1.24	6/30	▲.375	.22	YES
	2623	EPAM Systems		EPAM	206.66	2	3	3	1.20	185- 280 (N- 35%)	39.7	NIL	5.21	NIL	4	12/31	1.29	1.05	3/31	NIL	NIL	YES
850	624	EQM Midstream Part.		EQM	19.71	–	3	–	1.15	35- 50 (80-155%)	4.0	7.9	4.92	1.55	84	12/31	1.19	1.28	3/31	1.16	1.13	YES
	535	EQT Corp.		EQT	15.56	–	4	–	NMF	14- 25 (N- 60%)	NMF	NIL	.04	NIL	93	12/31	d.03	.81	6/30	▼NIL	.03	YES
2227	1111	Eagle Materials		EXP	53.55	3	3	3	1.30	100- 150 (85-180%)	9.5	NIL	5.65	NIL	44	12/31	1.51	1.24	9/30	▼NIL	.10	YES
	2513	East West Bancorp	(NDQ)	EWBC	28.00	3	3	2	1.45	70- 100 (150-255%)	5.7	3.9	4.89	1.10	52	12/31	1.29	1.18	3/31	.275	.23	YES
	2440	Eastman Chemical		EMN	53.61	4	3	4	1.30	90- 130 (70-140%)	11.0	4.9	▼4.89	2.64	57	12/31	.21	.28	6/30	.66	.62	YES
	986	Eaton Corp. plc		ETN	77.89	3	2	1	1.20	100- 135 (30- 75%)	13.8	3.7	5.66	2.92	85	12/31	1.46	1.46	3/31	▲.73	.71	YES
	2551	Eaton Vance Corp.		EV	33.17	3	3	3	1.35	65- 100 (95-200%)	9.3	4.5	3.55	1.50	24	1/31	.91	.75	6/30	◆.375	.35	YES
233	2644	eBay Inc.	(NDQ)	EBAY	37.64	3	3	4	1.05	45- 65 (20- 75%)	16.1	1.7	2.34	.64	50	12/31	.69	.80	3/31	▲.16	.14	YES
	1023	EchoStar Corp.	(NDQ)	SATS	30.48	▲3	3	2	1.15	30- 45 (N- 50%)	NMF	NIL	d.58	NIL	14	12/31	d.48	d.01	3/31	NIL	NIL	YES
	568	Ecolab Inc.		ECL	172.96	–	1	–	.95	220- 270 (25- 55%)	28.2	1.1	6.14	1.88	77	12/31	1.17	1.54	6/30	.47	.46	YES
449	1189	Edgewell Personal Care		EPC	25.72	4	3	3	1.00	70- 105 (170-310%)	8.2	NIL	3.15	NIL	10	12/31	.55	.37	3/31	NIL	NIL	YES
	2217	Edison Int'l		EIX	60.01	3	3	3	.55	65- 95 (10- 60%)	15.8	4.3	3.80	2.60	25	12/31	.45	d4.49	6/30	.638	.612	YES
	178	Edwards Lifesciences		EW	224.60	▲1	3	2	.95	240- 360 (5- 60%)	36.5	NIL	6.16	NIL	19	12/31	1.46	1.17	3/31	NIL	NIL	YES
	2218	El Paso Electric		EE	68.09	–	2	–	.60	45- 65 (N- N%)	26.0	2.4	2.62	1.64	25	12/31	.32	d.38	3/31	.385	.36	YES
	1621	Elanco Animal Health		ELAN	24.53	–	3	–	NMF	25- 35 (N- 45%)	NMF	NIL	.04	NIL	22	12/31	d.03	.04	3/31	NIL	NIL	YES
	2624	Elastic N.V.		ESTC	61.28	–	3	–	NMF	60- 95 (N- 55%)	NMF	NIL	d1.90	NIL	4	1/31	d.55	d.29	3/31	NIL	NIL	YES
	709	Elbit Systems	(NDQ)	ESLT	121.99	2	3	3	.90	100- 155 (N- 25%)	20.1	1.4	6.07	1.76	53	12/31	2.46	1.91	6/30	.44	.88	
	2354	Eldorado Resorts	(NDQ)	ERI	16.07	–	3	–	1.30	65- 95 (305-490%)	89.3	NIL	▼.18	NIL	81	12/31	d.17	NIL	3/31	NIL	NIL	YES
	2010	Electronic Arts	(NDQ)	EA	115.41	1	3	3	.95	135- 200 (15- 75%)	26.7	NIL	4.33	NIL	23	12/31	1.18	.86	3/31	NIL	NIL	YES
	569	Element Solutions		ESI	8.84	3	4	4	1.90	12- 19 (35-115%)	10.0	NIL	.88	NIL	77	12/31	.22	d.05	3/31	NIL	NIL	YES
	710	Embraer SA		ERJ	6.87	–	3	–	.90	25- 35 (265-410%)	16.8	NIL	.41	NIL	53	12/31	d1.14	d.10	3/31	NIL	.011	YES
	382	EMCOR Group		EME	61.07	3	3	4	1.10	90- 135 (45-120%)	10.3	0.5	5.93	.32	32	12/31	1.54	1.38	6/30	.08	.08	YES
	1211	Emera Inc.	(TSE)	EMA.TO	55.50b	3	2	2	.50	60- 85 (10- 55%)	19.5	4.4	2.84	2.45	55	12/31	.79(b)	.98(b)	6/30	.613(b)	.588(b)	YES
	1305	Emerson Electric		EMR	50.92	3	1	3	1.20	90- 105 (75-105%)	14.5	3.9	3.50	2.00	67	3/31	◆.84	.84	3/31	.50	.49	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 9-30-20, 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 9-30-20	(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?
	1950	Empire Company Ltd.	(TSE)	EMPA.TO	32.90b	2	3	4	.45	30- 50	(N- 50%)	28.4	1.5	1.16	.48	9	1/31	.46(b)	.27(b)	6/30	.12(b)	.11(b)	YES
	625	Enable Midstream Part.		ENBL	3.09	5	4	3	1.25	20- 30	(545-870%)	3.2	21.4	.97	.66	84	12/31	.18	.37	6/30	▼.165	.318	YES
	612	Enbridge Inc.	(TSE)	ENB.TO	41.40b	1	3	3	1.00	65- 95	(55-130%)	13.7	7.8	3.02	3.24	87	12/31	.61(b)	.65(b)	3/31	▲.81(b)	.738(b)	
		Encana Corp.								NAME CHANGED TO OVINTIV INC.													
	798	Encompass Health		EHC	69.53	2	3	2	1.00	80- 120	(15- 75%)	20.3	1.6	3.43	1.12	15	12/31	.68	.78	6/30	.28	.27	YES
	1622	Endo Int'l plc	(NDQ)	ENDP	3.69	4	5	3	1.50	5- 10	(35-170%)	NMF	NIL	d1.56	NIL	22	12/31	d.96	d1.31	3/31	NIL	NIL	YES
	1190	Energizer Holdings		ENR	34.50	3	3	3	.95	70- 105	(105-205%)	11.0	3.5	3.15	1.20	10	12/31	.85	1.64	3/31	.30	.30	YES
	626	Energy Transfer LP		ET	6.08	2	4	3	2.05	15- 25	(145-310%)	4.3	20.1	1.41	1.22-.61	84	12/31	.38	.26	6/30	.305	.305	YES
	155	Enerpac Tool Group		EPAC	15.83	–	3	–	1.55	25- 35	(60-120%)	19.8	0.3	.80	.04	59	2/28	.09	.01	3/31	NIL	NIL	YES
	536	Enerplus Corp.	(TSE)	ERF.TO	2.58b	5	4	3	2.05	19- 30	(NMF)	2.2	4.7	1.18	.12	93	12/31	d1.93(b)	1.02(b)	3/31	.03(b)	.03(b)	
	1212	EnerSys		ENS	50.56	3	3	4	1.35	90- 140	(80-175%)	11.1	1.4	4.55	.70	55	12/31	.64	1.12	3/31	.175	.175	YES
	613	EnLink Midstream LLC		ENLC	1.19	5	5	2	1.80	8- 14	(NMF)	19.8	31.9	.06	.38-.23	87	12/31	d1.92	d.34	6/30	▼.094	.279	YES
	1416	Ennis, Inc.		EBF	16.62	2	3	3	.75	17- 25	(N- 50%)	11.1	5.4	1.50	.90	70	2/28	◆.33	.32	6/30	.225	.225	YES
	1213	Enphase Energy	(NDQ)	ENPH	39.01	3	3	2	1.00	50- 75	(30- 90%)	25.5	NIL	1.53	NIL	55	12/31	.88	.01	3/31	NIL	NIL	YES
	1753	EnPro Industries		NPO	39.49	4	3	3	1.50	145- 215	(265-445%)	49.4	2.6	.80	1.04	69	12/31	d.40	.98	3/31	▲.26	.25	YES
	1389	Entegris, Inc.	(NDQ)	ENTG	51.68	2	3	2	1.30	55- 80	(5- 55%)	23.9	0.7	2.16	.35	38	3/31	◆.55	.50	6/30	◆.08	.07	YES
	2331	Entercom Communic.		ETM	1.00	–	3	–	1.25	▼ 12- 18	(NMF)	1.8	8.0	▼.55	.08	80	12/31	.40	.35	3/31	.02	.09	YES
	909	Entergy Corp.		ETR	96.45	3	2	2	.60	100- 140	(5- 45%)	14.1	3.9	6.84	3.76	11	12/31	1.94	.39	6/30	.93	.91	YES
	627	Enterprise Products		EPD	15.65	4	3	3	1.25	45- 65	(190-315%)	7.2	11.5	2.18	1.80	84	12/31	.50	.59	3/31	▲.445	.435	YES
	2332	Entravision Communic.		EVC	1.42	–	4	–	1.20	7- 11	(395-675%)	6.5	14.1	▲.22	.20	80	12/31	.09	.08	3/31	.05	.05	YES
	179	Envista Holdings		NVST	17.35	–	3	–	NMF	35- 50	(100-190%)	13.9	NIL	1.25	NIL	19	12/31	.35	NA	3/31	NIL	NIL	YES
	434	Equifax, Inc.		EFX	125.81	▲1	3	1	1.00	180- 270	(45-115%)	21.8	1.2	5.77	1.56	2	3/31	◆1.40	1.20	3/31	.39	.39	YES
	1522	Equinix, Inc.	(NDQ)	EQIX	670.75	1	3	1	.80	575- 865	(N- 30%)	NMF	1.6	4.41	10.83	51	12/31	1.46	1.36	3/31	▲2.66	2.46	YES
	2552	Equitable Holdings		EQH	15.33	–	3	–	NMF	35- 45	(130-195%)	3.2	3.9	4.75	.60	24	12/31	1.37	3.57	3/31	.15	.13	YES
	1523	Equity Residential		EQR	65.61	2	2	3	.70	75- 110	(15- 70%)	35.7	3.7	1.84	2.43	51	12/31	.77	.31	6/30	▲.603	.568	YES
	953	Ericsson ADR(g)	(NDQ)	ERIC	8.50	3	3	5	1.00	10- 14	(20- 65%)	17.7	1.9	.48	.16	42	12/31	.15	d.21	3/31	NIL	NIL	YES
	763	Erie Indemnity	(NDQ)	ERIE	179.24	4	2	5	.80	150- 200	(N- 10%)	27.6	2.2	6.49	3.86	5	12/31	1.14	1.19	3/31	▲.965	.90	YES
	1752	ESCO Technologies		ESE	73.03	3	3	1	.95	80- 120	(10- 65%)	22.5	0.4	3.25	.32	69	12/31	.43	.47	6/30	.08	.08	YES
	1789	Essential Utilities		WTRG	42.24	2	2	1	.60	40- 55	(N- 30%)	31.8	2.3	1.33	.98	16	12/31	.28	d.02	6/30	.234	.219	YES
	1524	Essex Property Trust		ESS	241.90	2	3	3	.70	280- 415	(15- 70%)	40.3	3.5	6.00	8.37	51	12/31	1.95	1.78	6/30	▲2.078	1.95	YES
	1147	Ethan Allen Interiors		ETH	9.87	4	3	3	1.05	25- 35	(155-255%)	8.6	8.5	1.15	.84	54	12/31	.27	.46	6/30	.21	.19	YES
	421	European Equity Fund		EEA	7.30	–	3	–	.90	10- 15	(35-105%)	NMF	1.4	NMF	.10	–	12/31	10.73(q)	9.04(q)	3/31	.093	.043	
	2023	Everest Re Group Ltd.		RE	190.52	▲1	1	3	.80	205- 250	(10- 30%)	13.8	3.3	13.82	6.20	60	12/31	5.32	d9.50	3/31	1.55	1.40	YES
	910	Evergy, Inc.		EVRG	59.12	–	2	–	NMF	55- 75	(N- 25%)	19.5	3.5	3.03	2.08	11	12/31	.28	.07	3/31	.505	.475	YES
	140	Eversource Energy		ES	87.77	1	1	1	.55	75- 90	(N- 5%)	24.7	2.6	3.56	2.27	13	12/31	.76	.73	3/31	▲.568	.535	YES
	799	Exact Sciences	(NDQ)	EXAS	77.36	▲4	4	5	1.00	115- 190	(50-145%)	NMF	NIL	d1.96	NIL	15	12/31	d.79	d.44	3/31	NIL	NIL	YES
★★	832	Exelixis, Inc.	(NDQ)	EXEL	23.57	3	4	5	1.35	35- 55	(50-135%)	26.5	NIL	.89	NIL	21	12/31	.22	.37	3/31	NIL	NIL	YES
	141	Exelon Corp.	(NDQ)	EXC	37.07	3	2	4	.65	45- 60	(20- 60%)	11.3	4.1	3.28	1.53	13	12/31	.79	.16	3/31	▲.383	.362	YES
644	2645	Expedia Group	(NDQ)	EXPE	59.95	3	4	3	1.10	155- 230	(160-285%)	10.1	2.3	5.95	1.36	50	12/31	.52	.11	3/31	.34	.32	YES
	383	Expeditors Int'l	(NDQ)	EXPD	70.67	3	1	5	1.00	100- 125	(40- 75%)	20.8	1.4	3.40	1.00	32	12/31	.79	1.02	3/31	NIL	NIL	YES
	435	Exponent, Inc.	(NDQ)	EXPO	72.11	2	3	2	.85	75- 105	(5- 45%)	45.6	1.1	1.58	.76	2	12/31	.36	.30	3/31	.19	.16	YES
	2355	Extended Stay America		STAY	9.35	4	3	4	1.25	25- 40	(165-330%)	NMF	9.8	▼.02	.92	81	12/31	d.26	d.21	3/31	.23	.22	YES
	1525	Extra Space Storage		EXR	89.36	2	3	3	.65	95- 145	(5- 60%)	26.6	4.1	3.36	3.68	51	12/31	.86	.80	3/31	.90	.86	YES
	1400	Extreme Networks	(NDQ)	EXTR	3.00	–	4	–	1.45	9- 15	(200-400%)	6.8	NIL	.44	NIL	56	12/31	.13	.13	3/31	NIL	NIL	YES
2028	507	Exxon Mobil Corp.		XOM	41.18	4	2	3	1.10	80- 100	(95-145%)	11.5	8.6	3.58	3.54	92	12/31	1.33	1.41	3/31	.87	.82	YES
	954	**F5 Networks**	(NDQ)	FFIV	122.66	3	3	5	1.10	225- 340	(85-175%)	20.4	NIL	6.00	NIL	42	12/31	1.62	2.16	3/31	NIL	NIL	YES
	118	FARO Technologies	(NDQ)	FARO	47.59	3	3	3	1.45	30- 45	(N- N%)	NMF	NIL	.12	NIL	20	12/31	d2.85	.33	3/31	NIL	NIL	YES
	1306	FLIR Systems	(NDQ)	FLIR	38.97	4	3	4	.95	55- 85	(40-120%)	17.4	1.8	2.24	.71	67	12/31	.55	.62	3/31	.17	.17	YES
	1604	FMC Corp.		FMC	84.56	3	3	2	1.35	115- 170	(35-100%)	13.4	2.1	6.31	1.80	65	12/31	1.76	1.69	6/30	.44	.40	YES
	384	FTI Consulting		FCN	131.30	3	3	3	.85	100- 150	(N- 15%)	24.5	NIL	5.36	NIL	32	12/31	.80	.83	3/31	NIL	NIL	YES
	2646	Facebook Inc.	(NDQ)	FB	178.24	1	3	2	1.10	350- 525	(95-195%)	19.0	NIL	9.36	NIL	50	12/31	2.56	2.38	3/31	NIL	NIL	YES
	436	FactSet Research		FDS	276.70	3	2	2	1.00	245- 330	(N- 20%)	30.9	1.1	8.95	3.06	2	2/28	2.30	2.19	3/31	.72	.64	YES
	2625	Fair Isaac		FICO	307.34	3	3	2	1.05	275- 415	(N- 35%)	49.5	NIL	6.21	NIL	4	12/31	1.82	1.32	3/31	NIL	NIL	YES
450	1910	Farmer Bros. Co.	(NDQ)	FARM	8.16	5	3	2	.75	19- 30	(135-270%)	NMF	NIL	d.95	NIL	39	12/31	d.20	d.09	3/31	NIL	NIL	
	1137	Fastenal Co.	(NDQ)	FAST	34.92	1	2	2	1.10	40- 50	(15- 45%)	24.8	2.9	1.41	1.00	7	3/31	.35	.34	6/30	.25	.215	YES
	1526	Federal Rlty. Inv. Trust		FRT	71.58	3	1	3	.75	170- 205	(135-185%)	24.5	5.9	2.92	4.24	51	12/31	1.92	.71	6/30	1.05	1.02	YES
	156	Federal Signal		FSS	27.01	2	3	1	1.15	40- 60	(50-120%)	14.8	1.2	1.83	.32	59	12/31	.48	.39	3/31	.08	.08	YES
	2553	Federated Hermes		FHI	20.66	3	3	3	.95	50- 65	(140-215%)	7.6	5.2	2.72	1.08	24	12/31	.81	.61	3/31	.27	.27	YES
		Federated Investors								NAME CHANGED TO FEDERATED HERMES													
	308	FedEx Corp.		FDX	122.64	4	2	4	1.40	245- 330	(100-170%)	11.4	2.1	10.75	2.60	74	2/28	1.41	3.03	6/30	.65	.65	YES
	103	Ferrari N.V.		RACE	157.01	3	3	2	1.05	155- 235	(N- 50%)	36.0	0.8	4.36	1.25	82	12/31	1.01	1.15	6/30	1.219	1.164	YES
	570	Ferro Corp.		FOE	9.16	–	3	–	1.50	20- 30	(120-230%)	7.2	NIL	1.28	NIL	77	12/31	.17	.33	3/31	NIL	NIL	YES
	104	Fiat Chrysler		FCAU	7.94	–	3	–	1.60	20- 30	(150-280%)	2.8	9.3	2.80	.74	82	12/31	1.12	.78	3/31	NIL	NIL	YES
	2554	Fidelity Nat'l Fin'l		FNF	25.47	2	2	2	.85	60- 80	(135-215%)	6.6	5.2	3.85	1.32	24	12/31	1.22	.16	3/31	.33	.30	YES
	2555	Fidelity Nat'l Info.		FIS	122.62	–	2	–	.85	130- 170	(5- 40%)	32.4	1.1	3.79	1.40	24	12/31	d.26	.91	3/31	.35	.35	YES
1847	361	Fiesta Restaurant	(NDQ)	FRGI	6.51	–	3	–	.75	25- 35	(285-440%)	15.5	NIL	.42	NIL	68	12/31	d.04	.08	3/31	NIL	NIL	YES
	779	Fifth Third Bancorp	(NDQ)	FITB	16.68	▼4	3	4	1.20	35- 50	(110-200%)	6.0	6.5	2.78	1.08	75	3/31	◆.13	.63	6/30	▲.27	.22	YES
	157	Finning Int'l	(TSE)	FTT.TO	16.07b	4	3	4	1.10	40- 60	(150-275%)	8.3	5.1	1.94	.82	59	12/31	.31(b)	.33(b)	3/31	.205(b)	.20(b)	
	2591	FireEye Inc.	(NDQ)	FEYE	10.88	3	4	4	1.60	20- 35	(85-220%)	NMF	NIL	d1.13	NIL	12	12/31	d.23	d.25	3/31	NIL	NIL	YES
	764	First American Fin'l		FAF	41.22	2	2	2	.90	90- 120	(120-190%)	6.4	4.3	6.42	1.76	5	12/31	1.97	.81	3/31	▲.44	.42	YES
	2514	First Commonwealth		FCF	8.82	3	3	3	1.05	25- 35	(185-295%)	7.5	5.0	1.18	.44	52	12/31	.27	.27	3/31	▲.11	.10	YES
	780	First Horizon National		FHN	7.96	▼4	3	3	1.20	20- 30	(150-275%)	5.4	7.5	1.47	.60	75	3/31	◆.04	.31	6/30	▲.15	.14	YES
	781	First Midwest Bancorp	(NDQ)	FMBI	13.74	2	3	3	1.15	30- 45	(120-230%)	7.4	4.4	1.86	.60	75	12/31	.47	.39	6/30	.14	.12	YES
	2515	First Republic Bank		FRC	100.42	2	3	3	1.10	115- 175	(15- 75%)	18.5	0.8	5.44	.80	52	3/31	1.20	1.26	6/30	▲.20	.19	YES
	1214	First Solar, Inc.	(NDQ)	FSLR	41.00	4	3	4	1.25	90- 140	(120-240%)	21.1	NIL	1.94	NIL	55	12/31	d.56	.49	3/31	NIL	NIL	YES
	2556	FirstCash, Inc.	(NDQ)	FCFS	73.17	2	3	3	.80	75- 110	(5- 50%)	16.8	1.5	4.35	1.08	24	12/31	1.27	1.09	3/31	.27	.25	YES
	142	FirstEnergy Corp.		FE	44.49	3	2	2	.60	45- 60	(N- 35%)	38.4	3.5	1.16	1.57	13	12/31	d.19	.34	6/30	.39	.38	YES
	2626	Fiserv Inc.	(NDQ)	FISV	97.24	2	2	2	.90	90- 125	(N- 30%)	22.2	NIL	4.39	NIL	4	12/31	1.13	.84	3/31	NIL	NIL	YES
	1329	Fitbit Inc.		FIT	6.73	–	5	–	1.65	7- 13	(5- 95%)	NMF	NIL	d.42	NIL	61	12/31	d.12	.14	3/31	NIL	NIL	YES
	2144	Five Below, Inc.	(NDQ)	FIVE	83.61	3	3	4	1.15	130- 190	(55-125%)	35.3	NIL	2.37	NIL	49	1/31	1.97	1.59	3/31	NIL	NIL	YES
	2557	FleetCor Technologies		FLT	214.13	3	3	3	1.15	320- 480	(50-125%)	16.4	NIL	13.08	NIL	24	12/31	3.17	3.33	3/31	NIL	NIL	YES
	1330	Flex Ltd.	(NDQ)	FLEX	7.79	3	3	3	1.35	17- 25	(120-220%)	6.3	NIL	1.23	NIL	61	12/31	.38	.34	3/31	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	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 9-30-20	(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?
	1138	Floor & Decor Hldgs.		FND	35.60	3	3	2	1.35	70- 100	(95-180%)	28.5	NIL	1.25	NIL	7	12/31	.26	.20	3/31	NIL	NIL	YES
	1911	Flowers Foods		FLO	23.27	2	3	3	.70	20- 35	(N- 50%)	22.6	3.4	1.03	.79	39	12/31	.18	.16	3/31	.19	.18	YES
	1712	Flowserve Corp.		FLS	24.82	3	3	3	1.45	45- 70	(80-180%)	48.7	3.2	.51	.80	31	12/31	.66	.58	6/30	▲.20	.19	YES
645	1228	Fluor Corp.		FLR	8.11	5	4	4	1.70	16- 25	(95-210%)	7.6	4.9	1.07	.40	66	9/30	d5.57	.55	6/30	.10	.21	YES
	1503	Flushing Financial	(NDQ)	FFIC	11.54	3	3	2	1.00	25- 35	(115-205%)	6.9	7.3	1.68	.84	27	12/31	.45	.44	3/31	.21	.21	YES
	2201	Foot Locker		FL	22.37	4	3	3	.95	55- 80	(145-260%)	5.1	7.2	4.38	1.60	63	1/31	1.63	1.56	6/30	▲.40	.38	YES
1657	105	Ford Motor		F	4.98	4	3	2	1.15	12- 17	(140-240%)	17.8	NIL	.28	NIL	82	12/31	d.42	d.03	6/30	▼NIL	.15	YES
	1390	FormFactor, Inc.	(NDQ)	FORM	22.64	3	3	2	1.45	30- 45	(35-100%)	29.4	NIL	.77	NIL	38	12/31	.24	1.13	3/31	NIL	NIL	YES
	437	Forrester Research	(NDQ)	FORR	32.82	▲2	3	3	.90	60- 90	(85-175%)	18.6	NIL	1.76	NIL	2	12/31	.57	.52	3/31	NIL	NIL	YES
	2592	Fortinet Inc.	(NDQ)	FTNT	112.35	3	3	3	1.15	120- 180	(5- 60%)	58.5	NIL	1.92	NIL	12	12/31	.66	.35	3/31	NIL	NIL	YES
	911	Fortis Inc.	(TSE)	FTS.TO	53.98b	1	2	2	.60	55- 75	(N- 40%)	19.8	3.7	2.72	1.99	11	12/31	.77(b)	.61(b)	6/30	.478(b)	.45(b)	YES
	119	Fortive Corp.		FTV	58.70	3	2	3	1.15	80- 110	(35- 85%)	28.6	0.5	2.05	.28	20	12/31	.48	.66	6/30	.07	.07	YES
	1148	Fortune Brands Home		FBHS	43.92	2	3	2	1.25	80- 120	(80-175%)	11.3	2.2	3.88	.96	54	12/31	1.00	.86	3/31	▲.24	.22	YES
	319	Forward Air	(NDQ)	FWRD	50.49	3	3	4	1.10	85- 125	(70-150%)	15.4	1.4	3.27	.72	64	12/31	.85	.95	3/31	.18	.18	YES
1038	2170	Fossil Group	(NDQ)	FOSL	3.42	–	5	–	1.60	9- 17	(165-395%)	NMF	NIL	d2.39	NIL	76	12/31	d.14	.94	3/31	NIL	NIL	YES
	2333	Fox Corp. 'A'	(NDQ)	FOXA	26.06	–	3	–	NMF ▼	35- 55	(35-110%)	11.8	1.8	▼2.20	.46	80	12/31	.48	.01	6/30	.23	.23	YES
450	2309	Fox Factory Holding	(NDQ)	FOXF	42.09	2	3	3	1.15	80- 120	(90-185%)	16.7	NIL	2.52	NIL	73	12/31	.58	.52	3/31	NIL	NIL	YES
	1572	Franco-Nevada Corp.		FNV	124.09	1	3	2	.55	95- 145	(N- 15%)	56.9	0.8	2.18	1.00	1	12/31	.60	.24	3/31	.25	.24	YES
	1307	Franklin Electric	(NDQ)	FELE	49.00	3	3	1	1.20	50- 70	(N- 45%)	23.0	1.3	2.13	.62	67	12/31	.43	.52	3/31	▲.155	.145	YES
2028	2558	Franklin Resources		BEN	16.28	▲2	2	3	1.25	45- 55	(175-240%)	5.4	6.8	3.00	1.10	24	12/31	.70	.54	6/30	.27	.26	YES
	1588	Freep't-McMoRan Inc.		FCX	8.02	4	5	3	2.20	18- 35	(125-335%)	NMF	NIL	d.98	NIL	89	12/31	.02	.11	6/30	▼NIL	.05	YES
	800	Fresenius Medical ADR		FMS	36.43	3	3	5	1.05	60- 90	(65-145%)	14.1	1.8	2.58	.65	15	12/31	1.22	.68	3/31	NIL	NIL	YES
644	1912	Fresh Del Monte Prod.		FDP	31.70	3	3	3	.85	40- 60	(25- 90%)	15.1	1.3	2.10	.40	39	12/31	d.54	d.70	3/31	▲.10	NIL	YES
	1913	Freshpet, Inc.	(NDQ)	FRPT	73.08	2	4	2	1.25	45- 75	(N- 5%)	NMF	NIL	.07	NIL	39	12/31	.12	.05	3/31	NIL	NIL	YES
	385	frontdoor, inc.	(NDQ)	FTDR	35.01	–	3	–	NMF	50- 75	(45-115%)	19.8	NIL	1.77	NIL	32	12/31	.22	.20	3/31	NIL	NIL	YES
	330	Frontline Ltd.		FRO	10.82	3	5	2	1.35	9- 16	(N- 50%)	15.2	3.7	.71	.40-NIL	90	12/31	.55	.15	3/31	▲.40	NIL	YES
	1984	FUJIFILM Hldgs. ADR(g)	(PNK)	FUJIY	49.05	3	2	2	.90	55- 75	(10- 55%)	14.9	1.8	3.30	.87	46	12/31	1.30	.79	3/31	NIL	NIL	
	571	Fuller (H.B.)		FUL	31.27	4	3	4	1.30	55- 85	(75-170%)	11.1	2.1	2.81	.65	77	2/28	.34	.24	6/30	▲.163	.16	YES
	2106	**G-III Apparel Group**	(NDQ)	GIII	9.10	4	3	3	1.55	40- 60	(340-560%)	6.0	NIL	1.52	NIL	86	1/31	.52	.48	3/31	NIL	NIL	YES
	341	GATX Corp.		GATX	53.04	2	3	3	1.25	80- 125	(50-135%)	9.4	3.6	5.66	1.92	26	12/31	1.36	.84	3/31	▲.48	.46	YES
	572	GCP Applied Tech.		GCP	15.98	3	3	2	1.25	30- 45	(90-180%)	17.6	NIL	.91	NIL	77	12/31	.27	.29	3/31	NIL	NIL	YES
	1527	GEO Group (The)		GEO	12.27	3	4	4	1.15	25- 40	(105-225%)	9.7	15.7	1.27	1.93	51	12/31	.32	.28	6/30	.48	.48	YES
1038	600	GTT Communications		GTT	9.80	4	5	3	1.30	13- 20	(35-105%)	NMF	NIL	d.81	NIL	41	12/31	d.34	d.96	3/31	NIL	NIL	YES
	1200	Gabelli Equity		GAB	4.36	–	3	–	1.10	6- 9	(40-105%)	NMF	1.1	NMF	.05	–	12/31	5.88(q)	6.47(q)	12/31	.018	.001	
	2559	Gallagher (Arthur J.)		AJG	80.78	3	1	1	.95	115- 140	(40- 75%)	20.0	2.2	4.04	1.80	24	12/31	.51	.63	3/31	▲.45	.43	YES
	2171	GameStop Corp.		GME	5.61	–	4	–	1.00	4- 7	(N- 25%)	NMF	NIL	d4.18	NIL	76	1/31	.32	d1.84	3/31	NIL	.38	YES
	1528	Gaming and Leisure	(NDQ)	GLPI	26.33	4	3	3	.75	50- 75	(90-185%)	79.8	10.8	.33	2.84	51	12/31	.53	.21	3/31	.70	.68	YES
	2383	Gannett Co., Inc.		GCI	0.80	–	5	–	NMF ▼	3- 6	(275-650%)	NMF	NIL	▼d1.45	NIL	–	12/31	d1.05	NA	3/31	NIL	.38	YES
1848	2202	Gap (The), Inc.		GPS	7.84	4	4	3	1.05	25- 35	(220-345%)	NMF	NIL	d.17	NIL	63	1/31	.58	.72	6/30	▼NIL	.242	YES
	1034	Gardner Denver Hldgs.		GDI	SEE FINAL SUPPLEMENT																		
	1308	Garmin Ltd.	(NDQ)	GRMN	80.05	1	2	2	.95	90- 120	(10- 50%)	16.2	3.0	4.94	2.44	67	12/31	1.89	1.00	6/30	▲.61	.57	YES
	438	Gartner Inc.		IT	104.17	4	3	4	1.05	220- 335	(110-220%)	27.9	NIL	3.73	NIL	2	12/31	1.18	1.20	3/31	NIL	NIL	YES
1239	331	GasLog Ltd.		GLOG	4.98	–	4	–	1.65	25- 40	(400-705%)	8.7	10.0	.57	.50	90	12/31	.14	.54	3/31	.15	.15	YES
	1713	Gates Industrial plc		GTES	7.18	–	3	–	1.35	15- 20	(110-180%)	8.3	NIL	.87	NIL	31	12/31	.19	.36	3/31	NIL	NIL	YES
	1215	Generac Holdings		GNRC	99.37	3	3	2	1.25	145- 215	(45-115%)	23.0	NIL	4.32	NIL	55	12/31	1.12	1.20	3/31	NIL	NIL	YES
	1201	Gen'l Amer. Invest		GAM	29.43	–	3	–	1.05	45- 65	(55-120%)	NMF	1.4	NMF	.40	–	12/31	43.70(q)	34.51(q)	3/31	NIL	NIL	
	711	Gen'l Dynamics		GD	135.25	2	1	4	.95	230- 280	(70-105%)	10.9	3.3	12.36	4.40	53	12/31	3.51	3.07	6/30	▲1.10	1.02	YES
2664	1754	Gen'l Electric		GE	6.51	–	4	–	1.15	16- 25	(145-285%)	11.2	0.6	.58	.04	69	12/31	.21	.17	6/30	.01	.01	YES
	1914	Gen'l Mills		GIS	60.76	3	1	3	.70	60- 75	(N- 25%)	18.0	3.3	3.37	1.99	39	2/28	.77	.83	6/30	.49	.49	YES
	106	Gen'l Motors		GM	22.38	4	3	3	1.25	55- 85	(145-280%)	4.7	7.0	4.78	1.56	82	12/31	.05	1.43	3/31	.38	.38	YES
	2158	Genesco Inc.		GCO	16.13	5	3	3	1.05	70- 105	(335-550%)	3.6	NIL	4.46	NIL	28	1/31	2.81	2.35	3/31	NIL	NIL	YES
	386	Genpact Limited		G	30.47	2	2	2	.85	55- 80	(80-165%)	13.7	1.3	2.22	.39	32	12/31	.57	.52	3/31	▲.098	.085	YES
	987	Gentex Corp.	(NDQ)	GNTX	22.95	3	3	1	1.05	35- 55	(55-140%)	13.3	2.1	1.72	.48	85	12/31	.39	.41	6/30	▲.12	.115	YES
	988	Gentherm Inc.	(NDQ)	THRM	34.34	3	3	3	1.30	55- 85	(60-150%)	17.9	NIL	1.92	NIL	85	12/31	.32	.36	3/31	NIL	NIL	YES
	989	Genuine Parts		GPC	73.18	3	1	3	.95	130- 160	(80-120%)	12.7	4.3	5.77	3.16	85	12/31	1.35	1.35	9/30	.79	.763	YES
1038	1558	Genworth Fin'l		GNW	3.38	–	5	–	1.60	4- 7	(20-105%)	5.6	NIL	.60	NIL	48	12/31	.05	d.58	3/31	NIL	NIL	YES
1655	120	Geospace Technologies	(NDQ)	GEOS	5.52	–	4	–	1.60	25- 40	(355-625%)	NMF	NIL	d.20	NIL	20	12/31	d.10	d.44	3/31	NIL	NIL	YES
	742	Gibraltar Inds.	(NDQ)	ROCK	43.54	1	3	2	1.30	50- 70	(15- 60%)	16.6	NIL	2.62	NIL	83	12/31	.62	.40	3/31	NIL	NIL	YES
	2107	Gildan Activewear		GIL	15.55	5	3	5	.95	35- 50	(125-220%)	28.8	4.0	.54	.62	86	12/31	.41	.43	6/30	.154	.134	YES
	1623	Gilead Sciences	(NDQ)	GILD	81.26	1	3	1	1.05	70- 110	(N- 35%)	12.7	3.3	6.42	2.72	22	12/31	2.12	NIL	3/31	▲.68	.63	YES
	2452	Gladstone Capital	(NDQ)	GLAD	6.16	–	3	–	1.15	20- 30	(225-385%)	20.5	13.6	▼.30	.84	–	12/31	.02	d.13	3/31	.21	.21	YES
	1175	Glatfelter (P.H.)		GLT	12.59	3	3	4	1.20	30- 45	(140-255%)	NMF	4.1	d.41	.52	62	12/31	d1.01	d.08	6/30	.13	.13	YES
1038	180	Glaukos Corp.		GKOS	34.15	5	4	3	1.20	95- 155	(180-355%)	NMF	NIL	d.52	NIL	19	12/31	d.06	.04	3/31	NIL	NIL	YES
	1624	GlaxoSmithKline ADR(g)		GSK	41.72	2	1	4	.85	55- 65	(30- 55%)	17.2	4.8	2.43	2.00	22	12/31	.65	.62	3/31	.50	.53	YES
	2560	Global Payments		GPN	148.21	–	3	–	1.15	180- 275	(20- 85%)	87.2	0.5	1.70	.78	24	12/31	.34	.47	3/31	.195	.01	YES
	1559	Globe Life Inc.		GL	75.60	2	1	3	1.00	110- 135	(45- 80%)	10.9	1.0	6.93	.75	48	12/31	1.70	1.45	6/30	▲.188	.173	YES
	181	Globus Medical		GMED	47.11	2	3	3	.85	55- 80	(15- 70%)	25.3	NIL	1.86	NIL	19	12/31	.44	.36	3/31	NIL	NIL	YES
	2011	Glu Mobile	(NDQ)	GLUU	7.91	3	5	4	1.10	7- 13	(N- 65%)	29.3	NIL	.27	NIL	23	12/31	.07	d.01	3/31	NIL	NIL	YES
	1821	GoDaddy Inc.		GDDY	67.16	3	3	5	1.05	80- 120	(20- 80%)	65.8	NIL	1.02	NIL	43	12/31	.34	.11	3/31	NIL	NIL	YES
844	923	Gogo Inc.	(NDQ)	GOGO	1.69	–	5	–	1.25	7- 13	(315-670%)	NMF	NIL	d1.55	NIL	29	12/31	d.28	d.50	3/31	NIL	NIL	YES
	332	Golar LNG Ltd.	(NDQ)	GLNG	6.69	5	5	3	1.75	25- 40	(275-500%)	NMF	NIL	d.10	NIL	90	12/31	.25	d3.09	3/31	NIL	.15	YES
2230	1806	Goldman Sachs		GS	180.40	3	1	4	1.25	315- 385	(75-115%)	10.8	2.8	16.69	5.00	6	3/31	◆3.11	5.71	6/30	◆1.25	.85	YES
★★	990	Goodyear Tire	(NDQ)	GT	6.76	5	4	4	1.45	20- 30	(195-345%)	7.2	NIL	.94	NIL	85	12/31	.19	.51	6/30	▼NIL	.16	YES
233	1331	GoPro, Inc.	(NDQ)	GPRO	2.84	–	5	–	1.45	5- 9	(75-215%)	7.9	NIL	.36	NIL	61	12/31	.65	.22	3/31	NIL	NIL	YES
	158	Gorman-Rupp Co.		GRC	27.46	3	3	3	1.10	45- 65	(65-135%)	19.1	2.1	1.44	.58	59	12/31	.32	.43	3/31	.145	.135	YES
	573	Grace (W.R.) & Co.		GRA	39.16	4	3	4	1.00	115- 175	(195-345%)	8.4	3.1	4.66	1.23	77	12/31	1.31	1.14	3/31	▲.30	.27	YES
	1714	Graco Inc.		GGG	46.36	2	3	1	1.10	45- 70	(N- 50%)	41.0	1.5	1.13	.70	31	12/31	.48	.43	6/30	.175	.16	YES
	1755	Graham Hldgs.		GHC	335.30	4	2	3	.90	790-1070	(135-220%)	14.5	1.7	23.13	5.80	69	12/31	9.13	10.61	6/30	1.45	1.39	
	1309	Grainger (W.W.)		GWW	274.51	3	2	4	1.00	365- 495	(35- 80%)	16.3	2.1	16.88	5.76	67	12/31	3.88	3.96	3/31	1.44	1.36	YES
	2000	Grand Canyon Educ.	(NDQ)	LOPE	77.70	3	3	4	.95	120- 180	(55-130%)	14.2	NIL	5.48	NIL	33	12/31	1.63	1.56	3/31	NIL	NIL	YES
	1229	Granite Construction		GVA	14.81	5	3	3	1.25	40- 60	(170-305%)	9.0	3.5	1.65	.52	66	9/30	.58	1.42	6/30	.13	.13	YES
	1176	Graphic Packaging		GPK	13.17	3	3	3	1.05	20- 30	(50-130%)	NMF	2.3	.13	.30	62	3/31	◆d.04	.19	6/30	.075	.075	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 9-30-20, 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	Exch.	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 9-30-20	(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?
	2334	Gray Television		GTN	10.50	3	4	3	1.45 ▼	30- 50	(185-375%)	8.0	NIL	▼1.31	NIL	80	12/31	.81	1.00	3/31	NIL	NIL	YES
1655	1216	Green Plains Inc.	(NDQ)	GPRE	4.84	–	5	–	1.65	11- 19	(125-295%)	NMF	NIL	d3.83	NIL	55	12/31	d1.13	1.13	3/31	NIL	.12	YES
	342	Greenbrier (The) Cos.		GBX	16.33	4	4	3	1.65	30- 50	(85-205%)	6.0	6.6	2.70	1.08	26	2/28	.46	.22	6/30	.27	.25	YES
	1807	Greenhill & Co.		GHL	9.04	3	4	3	1.20	35- 55	(285-510%)	4.5	2.2	2.03	.20	6	12/31	1.05	.48	3/31	.05	.05	YES
	2024	Greenlight Capital Re	(NDQ)	GLRE	6.39	4	4	3	1.05	10- 17	(55-165%)	NMF	NIL	d1.69	NIL	60	12/31	d.84	d2.25	3/31	NIL	NIL	YES
	1177	Greif, Inc.		GEF	30.79	3	3	4	1.65	70- 110	(125-255%)	8.2	5.7	3.75	1.76	62	1/31	.64	.65	6/30	.44	.44	YES
	1756	Griffon Corp.		GFF	14.21	3	3	3	1.35	30- 45	(110-215%)	10.9	2.1	1.30	.30	69	12/31	.36	.22	3/31	.075	.073	YES
	1951	Grocery Outlet	(NDQ)	GO	34.94	–	3	–	NMF	20- 30	(N- N%)	62.4	NIL	.56	NIL	9	12/31	.11	NA	3/31	NIL	NIL	YES
	2126	Group 1 Automotive		GPI	47.53	3	3	2	1.30	95- 140	(100-195%)	6.7	NIL	7.11	NIL	35	12/31	3.01	2.31	6/30	▼NIL	.26	YES
1423	2647	Groupon, Inc.	(NDQ)	GRPN	0.94	–	5	–	1.50	4- 7	(325-645%)	NMF	NIL	d.08	NIL	50	12/31	.13	.08	3/31	NIL	NIL	YES
	2648	Grubhub Inc.		GRUB	42.50	▲4	4	3	1.30	40- 75	(N- 75%)	NMF	NIL	d.69	NIL	50	12/31	d.30	d.06	3/31	NIL	NIL	YES
	2108	Guess?, Inc.		GES	7.70	4	3	3	1.00	20- 30	(160-290%)	24.1	5.8	.32	.45	86	1/31	1.22	.71	3/31	.113	.225	YES
1039	2593	Guidewire Software		GWRE	89.75	3	3	3	1.10	120- 185	(35-105%)	NMF	NIL	.05	NIL	12	1/31	d.24	.01	3/31	NIL	NIL	YES
★★	**801**	**HCA Healthcare**		HCA	110.43	▼3	3	3	1.00	160- 240	(45-115%)	9.8	NIL	11.29	NIL	15	3/31	◆2.33	2.97	6/30	▼NIL	.40	YES
	1112	HD Supply Holdings	(NDQ)	HDS	28.24	–	3	–	1.25	55- 85	(95-200%)	7.4	NIL	3.82	NIL	44	1/31	.64	.70	3/31	NIL	NIL	YES
	1149	HNI Corp.		HNI	23.49	▲2	3	4	1.25	70- 110	(200-370%)	8.6	5.2	2.72	1.22	54	12/31	1.12	.97	3/31	.305	.295	YES
	1401	HP Inc.		HPQ	15.36	3	3	3	1.50	35- 50	(130-225%)	7.0	4.7	2.20	.72	56	1/31	.65	.52	6/30	.176	.16	YES
	2516	HSBC Holdings PLC		HSBC	25.52	3	3	3	1.05	50- 70	(95-175%)	6.1	10.0	4.15	2.55	52	12/31	d1.35	.40	6/30	1.05	1.05	YES
	211	Haemonetics Corp.		HAE	107.30	▲2	3	3	.80	140- 210	(30- 95%)	29.6	NIL	3.62	NIL	8	12/31	.94	.63	3/31	NIL	NIL	YES
	1915	Hain Celestial Group	(NDQ)	HAIN	27.09	3	3	2	1.10	25- 40	(N- 50%)	38.2	NIL	.71	NIL	39	12/31	.17	.14	3/31	NIL	NIL	YES
	2421	Halliburton Co.		HAL	7.63	5	3	4	1.55 ▼	25- 40	(230-425%)	20.1	0.5	▼.38	.04	95	3/31	◆.31	.23	3/31	.18	.18	YES
	782	Hancock Whitney Corp.	(NDQ)	HWC	18.39	4	3	3	1.30	55- 80	(200-335%)	4.6	5.9	4.02	1.08	75	12/31	1.03	1.10	3/31	.27	.27	YES
	2109	Hanesbrands, Inc.		HBI	8.79	4	3	2	1.10	20- 30	(130-240%)	6.2	6.8	1.41	.60	86	12/31	.51	.48	3/31	.15	.15	YES
	765	Hanover Insurance		THG	97.55	2	2	4	.85	120- 160	(25- 65%)	11.3	2.7	8.66	2.60	5	12/31	2.01	1.51	3/31	.65	.60	YES
	2310	Harley-Davidson		HOG	18.53	3	3	2	1.15	70- 110	(280-495%)	8.4	8.2	▼2.20	1.52	73	12/31	.20	.17	3/31	▲.38	.375	YES
1655	955	Harmonic, Inc.	(NDQ)	HLIT	6.76	–	4	–	1.15	10- 17	(50-150%)	42.3	NIL	.16	NIL	42	12/31	.12	.11	3/31	NIL	NIL	YES
2664	387	Harsco Corp.		HSC	7.87	5	3	3	1.85	30- 50	(280-535%)	6.5	NIL	1.22	NIL	32	12/31	.12	.33	3/31	NIL	NIL	YES
	2561	Hartford Fin'l Svcs.		HIG	38.64	3	2	3	.90	60- 80	(55-105%)	7.1	3.4	5.43	1.30	24	12/31	1.43	.78	6/30	▲.325	.30	YES
	2311	Hasbro, Inc.	(NDQ)	HAS	75.68	4	3	5	.95	125- 185	(65-145%)	18.5	3.6	▼4.09	2.72	73	12/31	1.24	1.33	6/30	.68	.68	YES
	2172	Haverty Furniture		HVT	11.96	4	3	2	.95	25- 35	(110-195%)	15.7	6.7	.76	.80	76	12/31	.31	.45	3/31	.20	.18	YES
	2219	Hawaiian Elec.		HE	40.02	3	2	1	.55	35- 50	(N- 25%)	19.2	3.3	2.08	1.33	25	12/31	.61	.45	3/31	▲.33	.32	YES
	309	Hawaiian Hldgs.	(NDQ)	HA	11.54	3	3	3	1.30	30- 50	(160-335%)	2.8	NIL	4.17	NIL	74	12/31	1.07	.64	6/30	▼NIL	.12	YES
	729	Haynes International	(NDQ)	HAYN	19.35	▲2	3	3	1.45	65- 100	(235-415%)	10.2	4.5	1.90	.88	78	12/31	.26	d.13	3/31	.22	.22	YES
	1529	Healthcare R'lty Trust		HR	29.32	1	3	1	.65	30- 45	(N- 55%)	77.2	4.1	.38	1.20	51	12/31	.20	.13	3/31	.30	.30	YES
	388	Healthcare Svcs.	(NDQ)	HCSG	21.85	4	3	3	.90	35- 55	(60-150%)	20.0	3.7	1.09	.81	32	3/31	◆.27	.13	3/31	.201	.196	YES
	821	HealthEquity, Inc.	(NDQ)	HQY	47.96	3	3	3	1.30	105- 155	(120-225%)	26.2	NIL	1.83	NIL	18	1/31	.39	.21	3/31	NIL	NIL	YES
	1530	Healthpeak Properties		PEAK	25.39	3	3	3	.75	30- 45	(20- 75%)	NMF	5.8	.15	1.48	51	12/31	.09	1.73	3/31	.37	.37	YES
	320	Heartland Express	(NDQ)	HTLD	18.68	3	3	4	.90	25- 35	(35- 85%)	23.1	0.4	.81	.08	64	3/31	◆.16	.21	6/30	.02	.02	YES
	712	HEICO Corp.		HEI	80.73	3	3	3	.90	130- 200	(60-150%)	29.4	0.2	2.75	.16	53	1/31	.89	.58	3/31	.08	.07	YES
	1646	Heidrick & Struggles	(NDQ)	HSII	23.04	4	3	3	.90	40- 60	(75-160%)	10.8	2.6	2.14	.60	88	12/31	.54	.58	3/31	.15	.15	YES
	1009	Helen of Troy Ltd.	(NDQ)	HELE	137.05	2	3	2	.90	145- 215	(5- 55%)	14.5	NIL	9.45	NIL	71	11/30	3.12	2.40	3/31	NIL	NIL	YES
	1757	Helios Technologies	(NDQ)	HLIO	31.49	4	3	3	1.30	60- 90	(90-185%)	37.5	1.1	.84	.36	69	12/31	.54	.51	6/30	.09	.09	YES
1423	2422	Helix Energy Solutions		HLX	1.40	–	5	–	2.15 ▼	6- 12	(330-755%)	35.0	NIL	▼.04	NIL	95	12/31	.05	d.09	3/31	NIL	NIL	YES
	2423	Helmerich & Payne		HP	17.64	5	3	4	1.60 ▼	30- 45	(70-155%)	NMF	5.7	▼d2.15	1.00	95	12/31	.13	.42	6/30	▼.25	.71	YES
	2627	Henry (Jack) & Assoc.	(NDQ)	JKHY	166.67	1	1	2	.85	110- 130	(N- N%)	38.4	1.0	4.34	1.72	4	12/31	.94	.88	3/31	▲.43	.40	YES
	1916	Herbalife Nutrition		HLF	32.25	3	3	4	1.10	40- 60	(25- 85%)	12.5	NIL	2.59	NIL	39	12/31	.74	.63	3/31	NIL	NIL	YES
	1917	Hershey Co.		HSY	144.58	2	2	3	.65	130- 175	(N- 20%)	24.4	2.2	5.93	3.25	39	12/31	1.28	1.26	3/31	.773	.722	YES
1241	2173	Hertz Global Hldgs.		HTZ	4.65	4	5	2	1.60	11- 20	(135-330%)	NMF	NIL	d4.83	NIL	76	12/31	d.83	d1.20	3/31	NIL	NIL	YES
	508	Hess Corp.		HES	35.93	4	3	3	1.85	75- 115	(110-220%)	NMF	2.8	d1.18	1.00	92	12/31	d.60	d.31	3/31	.25	.25	YES
1039	1402	Hewlett Packard Ent.		HPE	9.36	4	3	3	1.50	25- 35	(165-275%)	5.2	5.3	1.80	.50	56	1/31	.44	.42	9/30	◆.12	.113	YES
2029	2441	Hexcel Corp.		HXL	31.03	3	3	1	1.05 ▼	60- 90	(95-190%)	18.8	2.2	▼1.65	.68	57	3/31	◆.55	.84	3/31	.17	.15	YES
	2174	Hibbett Sports	(NDQ)	HIBB	13.08	3	3	3	.90	25- 35	(90-170%)	13.0	NIL	1.01	NIL	76	1/31	.51	.57	3/31	NIL	NIL	YES
	212	Hill-Rom Hldgs.		HRC	111.87	2	3	2	.95	110- 165	(N- 45%)	20.3	0.8	5.50	.88	8	12/31	1.13	1.02	3/31	▲.22	.21	YES
	1842	Hillenbrand, Inc.		HI	18.75	▲2	3	4	1.25	45- 65	(140-245%)	8.0	4.5	2.35	.85	47	12/31	.63	.49	3/31	.213	.21	YES
	2356	Hilton Grand Vacations		HGV	18.42	▼5	3	4	1.40 ▼	40- 60	(115-225%)	9.1	NIL	▼2.03	NIL	81	12/31	.83	1.24	3/31	NIL	NIL	YES
1848	2357	Hilton Worldwide Hldgs.		HLT	72.28	▼3	3	2	1.15 ▲	110- 165	(50-130%)	24.3	NIL	▼2.98	NIL	81	12/31	1.00	.75	6/30	▼NIL	.15	YES
	1985	Hitachi, Ltd. ADR(g)	(PNK)	HTHIY	56.05	3	3	3	1.10	75- 115	(35-105%)	21.7	3.4	2.58	1.88	46	12/31	d2.58	d1.96	3/31	NIL	NIL	
	628	Holly Energy Part.		HEP	12.05	3	3	3	1.00	30- 45	(150-275%)	6.5	22.3	1.86	2.69-1.80	84	12/31	.43	.45	3/31	.673	.668	YES
	509	HollyFrontier Corp.		HFC	26.22	4	3	3	1.30	70- 110	(165-320%)	5.0	5.3	5.20	1.40	92	12/31	.48	2.25	3/31	.35	.33	YES
	213	Hologic, Inc.	(NDQ)	HOLX	43.24	2	3	4	1.00	45- 70	(5- 60%)	16.6	NIL	2.60	NIL	8	12/31	.61	.36	3/31	NIL	NIL	YES
1423	1139	Home Depot		HD	206.05	3	1	2	1.05	240- 295	(15- 45%)	19.8	2.9	10.43	6.00	7	1/31	2.28	2.25	3/31	▲1.50	1.36	YES
	107	Honda Motor ADR(g)		HMC	22.33	3	3	3	1.10	40- 60	(80-170%)	6.5	4.7	3.43	1.05	82	12/31	.61	.86	3/31	.26	.251	YES
	1758	Honeywell Int'l		HON	135.70	3	1	3	1.05	185- 230	(35- 70%)	16.2	2.7	8.36	3.60	69	12/31	2.06	1.91	3/31	.90	.82	YES
	1918	Hormel Foods		HRL	49.92	1	2	3	.60	50- 65	(N- 30%)	28.5	2.0	1.75	.98	39	1/31	.45	.44	6/30	.233	.21	YES
	1126	Horton D.R.		DHI	38.29	2	3	2	1.05	55- 80	(45-110%)	7.7	1.8	5.00	.70	17	12/31	1.00	.76	3/31	.175	.15	YES
	1531	Host Hotels & Resorts		HST	10.80	4	3	3	1.25	17- 25	(55-130%)	NMF	7.4	d.04	.80	51	12/31	.11	.41	6/30	.20	.20	YES
	1919	Hostess Brands	(NDQ)	TWNK	11.61	2	3	5	.75	18- 25	(55-115%)	18.7	NIL	.62	NIL	39	12/31	.16	.17	3/31	NIL	NIL	YES
	1808	Houlihan Lokey		HLI	56.41	1	3	2	1.00	60- 85	(5- 50%)	28.2	2.2	2.00	1.24	6	12/31	.75	.67	3/31	.31	.27	YES
	389	Howard Hughes Corp.		HHC	49.57	4	3	3	1.25	150- 225	(205-355%)	36.4	NIL	1.36	NIL	32	12/31	d.03	.86	3/31	NIL	NIL	YES
2031	1584	Howmet Aerospace		HWM	11.64	–	3	–	1.60	40- 60	(245-415%)	5.5	NIL	2.13	NIL	89	12/31	.53	.33	6/30	▼NIL	.02	YES
	321	Hub Group	(NDQ)	HUBG	47.29	3	3	2	1.10	65- 100	(35-110%)	14.1	NIL	3.36	NIL	64	12/31	.84	1.01	3/31	NIL	NIL	YES
	1310	Hubbell Inc.		HUBB	116.96	3	2	2	1.15	170- 235	(45-100%)	14.0	3.2	8.36	3.70	67	12/31	1.91	1.72	3/31	.91	.84	YES
	1822	HubSpot, Inc.		HUBS	142.41	3	4	3	1.25	105- 175	(N- 25%)	NMF	NIL	d1.11	NIL	43	12/31	d.24	d.29	3/31	NIL	NIL	YES
	802	Humana Inc.		HUM	367.33	3	3	2	.95	390- 585	(5- 60%)	20.0	0.7	18.38	2.50	15	12/31	2.28	2.65	6/30	▲.625	.55	YES
	322	Hunt (J.B.)	(NDQ)	JBHT	100.89	3	2	4	1.10	125- 170	(25- 70%)	18.9	1.1	5.35	1.09	64	3/31	◆.98	1.09	3/31	▲.27	.26	YES
	783	Huntington Bancshs.	(NDQ)	HBAN	8.14	4	3	3	1.20	18- 25	(120-205%)	6.6	7.7	1.24	.63	75	12/31	.28	.29	6/30	.15	.14	YES
	713	Huntington Ingalls		HII	192.26	3	3	3	1.15	235- 350	(20- 80%)	11.7	2.1	16.41	4.12	53	12/31	4.36	4.94	3/31	1.03	.86	YES
	2442	Huntsman Corp.		HUN	15.34	4	3	3	1.80 ▼	25- 45	(65-195%)	8.4	4.2	▲1.82	.65	57	12/31	1.32	d.40	3/31	.163	.163	YES
	390	Huron Consulting	(NDQ)	HURN	47.80	2	3	2	.95	65- 95	(35-100%)	17.7	NIL	2.70	NIL	32	12/31	.79	.66	3/31	NIL	NIL	YES
	510	Husky Energy	(TSE)	HSE.TO	3.68b	5	3	3	1.25	12- 18	(225-390%)	5.0	13.6	.73	.50	92	12/31	d2.34(b)	.21(b)	6/30	.125	.125(b)	YES
	2358	Hyatt Hotels		H	54.72	▼3	3	4	1.15 ▼	70- 105	(30- 90%)	NMF	NIL	▼d.43	NIL	81	12/31	.47	.62	6/30	▼NIL	.19	YES
	159	Hyster-Yale Materials		HY	35.06	3	3	3	1.30	90- 135	(155-285%)	8.4	3.6	4.17	1.27	59	12/31	.20	d.07	3/31	.318	.31	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	and % appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 9-30-20	(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?
	2649	**IAC/InterActiveCorp**	(NDQ)	IAC	**224.15**	–	3	–	1.00	190- 280	(N- 25%)	**44.8**	**NIL**	5.00	NIL	**50**	12/31	**1.05**	.76	3/31	NIL	NIL	YES
	803	ICON plc	(NDQ)	ICLR	**158.42**	2	3	3	.90	180- 265	(15- 65%)	**21.2**	**NIL**	7.48	NIL	**15**	12/31	**1.83**	1.62	3/31	NIL	NIL	YES
	182	ICU Medical	(NDQ)	ICUI	**215.39**	4	3	4	.90	180- 270	(N- 25%)	**30.4**	**NIL**	7.08	NIL	**19**	12/31	**1.94**	2.07	3/31	NIL	NIL	YES
	924	IDT Corp.		IDT	**5.54**	–	4	–	1.20	9- 15	(60-170%)	**24.1**	**NIL**	.23	NIL	**29**	1/31	**.04**	d.05	3/31	NIL	NIL	YES
	439	IHS Markit	(NDQ)	INFO	**64.99**	2	3	2	1.05	85- 130	(30-100%)	**23.2**	**1.0**	2.80	.68	**2**	2/28	**.66**	.60	6/30	◆.17	NIL	YES
	121	II-VI Inc.	(NDQ)	IIVI	**28.11**	4	3	3	1.40	65- 95	(130-240%)	**16.5**	**NIL**	1.70	NIL	**20**	12/31	**d1.08**	.44	3/31	NIL	NIL	YES
	1391	IPG Photonics	(NDQ)	IPGP	**117.94**	4	3	3	1.30	190- 280	(60-135%)	**54.4**	**NIL**	2.17	NIL	**38**	12/31	**d.08**	1.40	3/31	NIL	NIL	YES
	804	IQVIA Holdings		IQV	**127.51**	3	3	4	.95	160- 240	(25- 90%)	**18.1**	**NIL**	7.04	NIL	**15**	12/31	**1.74**	1.50	3/31	NIL	NIL	YES
	1759	ITT Inc.		ITT	**48.61**	3	3	3	1.45	75- 110	(55-125%)	**13.5**	**1.4**	3.60	.68	**69**	12/31	**.75**	.81	6/30	▲.169	.147	YES
	2220	IDACORP, Inc.		IDA	**92.62**	3	2	3	.50	85- 115	(N- 25%)	**19.5**	**3.0**	4.74	2.78	**25**	12/31	**.94**	.52	6/30	◆.67	.63	YES
	1715	IDEX Corp.		IEX	**151.58**	3	2	5	1.10	160- 215	(5- 40%)	**29.3**	**1.3**	5.18	2.00	**31**	12/31	**1.33**	1.31	3/31	.50	.43	YES
	214	IDEXX Labs.	(NDQ)	IDXX	**267.34**	2	3	3	.90	290- 430	(10- 60%)	**50.9**	**NIL**	5.25	NIL	**8**	12/31	**1.04**	.98	3/31	NIL	NIL	YES
	2335	iHeartMedia, Inc.	(NDQ)	IHRT	**7.07**	–	4	–	NMF	12- 20	(70-185%)	**26.2**	**NIL**	.27	NIL	**80**	12/31	**.42**	NA	3/31	NIL	NIL	YES
	730	Illinois Tool Works		ITW	**155.21**	3	1	1	1.15	205- 250	(30- 60%)	**19.5**	**2.8**	7.94	4.28	**78**	12/31	**1.99**	1.83	6/30	1.07	1.00	YES
	215	Illumina Inc.	(NDQ)	ILMN	**322.88**	2	3	5	.95	360- 540	(10- 65%)	**48.5**	**NIL**	6.66	NIL	**8**	12/31	**1.61**	1.41	3/31	NIL	NIL	YES
	2312	IMAX Corp.		IMAX	**11.84**	3	3	3	1.00	▼ 35- 55	(195-365%)	**NMF**	**NIL**	▼NIL	NIL	**73**	12/31	**.35**	.03	3/31	NIL	NIL	YES
1423	**2012**	Immersion Corp.	(NDQ)	IMMR	**6.05**	–	5	–	1.30	8- 16	(30-165%)	**NMF**	**NIL**	d.17	NIL	**23**	12/31	**.03**	d.10	3/31	NIL	NIL	YES
	511	Imperial Oil Ltd.	(ASE)	IMO	**12.12**	4	3	4	1.20	30- 50	(150-315%)	**8.0**	**7.3**	1.51	.88	**92**	12/31	**.28**	.80	6/30	▲.22	.144	YES
	833	Incyte Corp.	(NDQ)	INCY	**101.19**	2	3	5	1.15	120- 175	(20- 75%)	**44.8**	**NIL**	2.26	NIL	**21**	12/31	**.51**	.32	3/31	NIL	NIL	YES
	422	India Fund (The)		IFN	**14.08**	–	3	–	.80	18- 30	(30-115%)	**NMF**	**0.4**	NMF	.05	**–**	12/31	**22.60(q)**	23.84(q)	3/31	.011	.116	YES
	956	Infinera Corp.	(NDQ)	INFN	**6.10**	3	5	3	1.55	9- 18	(50-195%)	**NMF**	**NIL**	d1.42	NIL	**42**	12/31	**d.37**	d.68	3/31	NIL	NIL	YES
2031	**2628**	Infosys Ltd. ADR		INFY	**8.51**	▲2	2	4	.85	20- 25	(135-195%)	**13.5**	**4.1**	.63	.35	**4**	3/31	**◆.14**	.13	3/31	NIL	.056	YES
	1034	Ingersoll-Rand plc		IR.D	SEE FINAL SUPPLEMENT																		
	574	Ingevity Corp.		NGVT	**38.28**	3	3	4	1.55	110- 170	(185-345%)	**7.2**	**NIL**	5.32	NIL	**77**	12/31	**1.12**	1.07	3/31	NIL	NIL	YES
	1952	Ingles Markets	(NDQ)	IMKTA	**35.57**	3	3	1	.85	40- 60	(10- 70%)	**12.1**	**1.9**	2.95	.66	**9**	12/31	**1.12**	1.09	6/30	.165	.165	YES
	1920	Ingredion Inc.		INGR	**80.80**	3	3	4	.90	110- 160	(35-100%)	**12.1**	**3.2**	6.70	2.55	**39**	12/31	**1.60**	1.61	6/30	.63	.625	YES
	575	Innospec Inc.	(NDQ)	IOSP	**67.74**	3	3	3	1.05	85- 130	(25- 90%)	**15.1**	**1.6**	4.49	1.07	**77**	12/31	**1.26**	.83	3/31	NIL	NIL	YES
	216	Inogen, Inc.	(NDQ)	INGN	**49.77**	▲4	4	5	1.20	85- 145	(70-190%)	**35.3**	**NIL**	1.41	NIL	**8**	12/31	**d.06**	.44	3/31	NIL	NIL	YES
	1360	Inphi Corp.		IPHI	**96.88**	2	3	3	1.20	110- 185	(15- 90%)	**46.8**	**NIL**	2.07	NIL	**40**	12/31	**.47**	.45	3/31	NIL	NIL	YES
	2175	Insight Enterprises	(NDQ)	NSIT	**48.58**	3	3	4	1.25	85- 125	(75-155%)	**10.2**	**NIL**	4.75	NIL	**76**	12/31	**1.20**	1.31	3/31	NIL	NIL	YES
452	**1647**	Insperity Inc.		NSP	**40.48**	5	3	3	.95	85- 130	(110-220%)	**11.7**	**4.0**	3.46	1.60	**88**	12/31	**.51**	.59	3/31	▲.40	.30	YES
★★	**743**	Insteel Industries	(NDQ)	IIIN	**16.60**	▲3	3	3	1.25	40- 60	(140-260%)	**30.2**	**0.7**	.55	.12	**83**	3/31	**◆.23**	.05	3/31	.06	.06	YES
	183	Insulet Corp.	(NDQ)	PODD	**203.98**	3	3	3	1.00	90- 135	(N- N%)	**NMF**	**NIL**	.64	NIL	**19**	12/31	**.08**	.16	3/31	NIL	NIL	YES
	1332	Integer Holdings		ITGR	**67.33**	2	3	3	1.35	105- 160	(55-140%)	**13.2**	**NIL**	5.10	NIL	**61**	12/31	**1.25**	1.04	3/31	NIL	NIL	YES
	184	Integra LifeSciences	(NDQ)	IART	**48.94**	▲2	3	5	.85	70- 100	(45-105%)	**16.9**	**NIL**	2.89	NIL	**19**	12/31	**.68**	.65	3/31	NIL	NIL	YES
2665	**1361**	Intel Corp.	(NDQ)	INTC	**59.18**	1	1	2	1.10	90- 105	(50- 75%)	**11.2**	**2.2**	5.27	1.32	**40**	12/31	**1.52**	1.28	6/30	.33	.315	YES
2665	**925**	Intelsat S.A.		I	**1.26**	–	5	–	1.45	12- 20	(NMF)	**NMF**	**NIL**	d2.66	NIL	**29**	12/31	**d.81**	d.81	3/31	NIL	NIL	YES
	1010	Inter Parfums	(NDQ)	IPAR	**46.96**	3	3	3	.95	65- 95	(40-100%)	**28.3**	**2.8**	1.66	1.32	**71**	12/31	**.26**	.26	6/30	.33	.275	YES
	1798	Interactive Brokers	(NDQ)	IBKR	**44.37**	3	3	3	1.20	60- 95	(35-115%)	**19.5**	**0.9**	2.28	.40	**37**	3/31	**◆.60**	.64	3/31	.10	.10	YES
	834	Intercept Pharmac.	(NDQ)	ICPT	**82.61**	4	4	5	1.55	125- 210	(50-155%)	**NMF**	**NIL**	d10.69	NIL	**21**	12/31	**d2.99**	d2.97	3/31	NIL	NIL	YES
	1799	Intercontinental Exch.		ICE	**89.40**	3	2	2	.80	100- 135	(10- 50%)	**22.1**	**1.3**	4.05	1.20	**37**	12/31	**.95**	.94	3/31	▲.30	.275	YES
	601	InterDigital Inc.	(NDQ)	IDCC	**46.29**	3	3	4	1.15	75- 110	(60-140%)	**42.5**	**3.0**	1.09	1.40	**41**	12/31	**.44**	.05	6/30	.35	.35	YES
	1150	Interface Inc. 'A'	(NDQ)	TILE	**8.41**	3	3	4	1.25	35- 55	(315-555%)	**5.1**	**3.1**	1.66	.26	**54**	12/31	**.46**	.41	6/30	.065	.065	YES
★★	**1403**	Int'l Business Mach.		IBM	**120.41**	3	1	4	1.10	170- 205	(40- 70%)	**9.2**	**5.5**	13.06	6.60	**56**	3/31	**◆1.84**	2.25	3/31	1.62	1.57	YES
	576	Int'l Flavors & Frag.		IFF	**120.55**	–	1	–	.95	190- 230	(60- 90%)	**19.0**	**2.6**	6.36	3.10	**77**	12/31	**1.46**	1.22	6/30	.75	.73	YES
	2359	Int'l Game Tech. PLC		IGT	**6.70**	5	3	3	1.40	▼ 20- 35	(200-420%)	**12.0**	**11.9**	▼.56	.80	**81**	12/31	**.31**	.24	3/31	.20	NIL	YES
	1162	Int'l Paper		IP	**30.78**	3	3	3	1.30	60- 90	(95-190%)	**13.3**	**6.7**	2.32	2.05	**79**	12/31	**.42**	.78	3/31	.513	.50	YES
	2392	Interpublic Group		IPG	**14.72**	3	3	3	1.05	35- 55	(140-275%)	**9.9**	**6.9**	▼1.49	1.02	**36**	12/31	**.84**	.84	3/31	▲.255	.235	YES
	2594	Intuit Inc.	(NDQ)	INTU	**264.00**	▼3	2	2	1.15	295- 400	(10- 50%)	**34.7**	**0.8**	7.60	2.24	**12**	1/31	**1.16**	1.00	6/30	.53	.47	YES
	185	Intuitive Surgical	(NDQ)	ISRG	**518.33**	2	2	2	1.00	680- 920	(30- 75%)	**41.0**	**NIL**	12.64	NIL	**19**	3/31	**◆2.62**	2.56	3/31	NIL	NIL	YES
	217	Invacare Corp.		IVC	**7.03**	–	4	–	1.30	10- 17	(40-140%)	**NMF**	**0.7**	d.17	.05	**8**	12/31	**d.28**	d.04	6/30	.013	.013	YES
	2562	Invesco Ltd.		IVZ	**9.09**	3	3	3	1.40	40- 65	(340-615%)	**3.5**	**13.6**	2.63	1.24	**24**	12/31	**.39**	.28	3/31	.31	.30	YES
	1504	Investors Bancorp	(NDQ)	ISBC	**8.30**	3	3	3	.95	18- 30	(115-260%)	**10.1**	**5.8**	.82	.48	**27**	12/31	**.19**	.22	3/31	.12	.11	YES
	835	Ionis Pharmac.	(NDQ)	IONS	**55.54**	▲2	4	4	1.25	65- 105	(15- 90%)	**35.2**	**NIL**	1.58	NIL	**21**	12/31	**1.28**	d.09	3/31	NIL	NIL	YES
	926	Iridium Communic.	(NDQ)	IRDM	**22.64**	3	4	2	1.25	30- 55	(35-145%)	**NMF**	**NIL**	d.29	NIL	**29**	12/31	**d.15**	d.09	3/31	NIL	NIL	YES
233	**1333**	iRobot Corp.	(NDQ)	IRBT	**50.55**	▲4	3	5	1.20	90- 140	(80-175%)	**33.7**	**NIL**	1.50	NIL	**61**	12/31	**.70**	.88	3/31	NIL	NIL	YES
	391	Iron Mountain		IRM	**24.67**	2	3	3	.90	40- 60	(60-145%)	**18.5**	**10.1**	1.33	2.48	**32**	12/31	**.31**	.25	6/30	.619	.611	YES
	1625	Ironwood Pharmac.	(NDQ)	IRWD	**10.31**	3	4	3	1.40	19- 30	(85-190%)	**20.6**	**NIL**	.50	NIL	**22**	12/31	**.30**	d.10	3/31	NIL	NIL	YES
	602	Itron Inc.	(NDQ)	ITRI	**61.06**	3	3	1	1.10	85- 130	(40-115%)	**33.2**	**NIL**	1.84	NIL	**41**	12/31	**.36**	.60	3/31	NIL	NIL	YES
	1921	**J&J Snack Foods**	(NDQ)	JJSF	**125.33**	4	1	3	.70	175- 215	(40- 70%)	**28.8**	**1.8**	4.35	2.30	**39**	12/31	**.89**	.93	6/30	.575	.50	YES
2228	**2517**	JPMorgan Chase		JPM	**91.71**	3	2	2	1.15	110- 150	(20- 65%)	**18.0**	**4.0**	5.10	3.70	**52**	3/31	**.78**	2.65	6/30	.90	.80	YES
	927	j2 Global	(NDQ)	JCOM	**73.21**	1	3	3	1.10	100- 150	(35-105%)	**21.0**	**NIL**	3.48	NIL	**29**	12/31	**1.35**	1.03	3/31	NIL	.445	YES
	1334	Jabil Inc.		JBL	**24.41**	3	3	2	1.10	60- 90	(145-270%)	**8.7**	**1.3**	2.80	.32	**61**	2/28	**.50**	.64	6/30	◆.08	.08	YES
★★	**362**	Jack in the Box	(NDQ)	JACK	**54.12**	5	3	4	.80	120- 175	(120-225%)	**11.4**	**3.3**	4.75	1.80	**68**	12/31	**1.17**	1.35	3/31	.40	.40	YES
	1230	Jacobs Engineering		J	**80.70**	3	3	1	1.25	115- 170	(45-110%)	**14.7**	**0.9**	5.50	.76	**66**	12/31	**1.20**	1.14	3/31	▲.19	.17	YES
	2563	Janus Henderson plc		JHG	**15.50**	2	3	3	1.35	35- 50	(125-225%)	**6.5**	**9.3**	2.40	1.44	**24**	12/31	**.59**	.54	3/31	.36	.36	YES
	423	Japan Smaller Cap Fd		JOF	**6.98**	–	3	–	.90	10- 16	(45-130%)	**NMF**	**1.4**	NMF	.10	**–**	8/31	**9.69(q)**	12.67(q)	3/31	NIL	NIL	
	836	Jazz Pharmac. plc	(NDQ)	JAZZ	**108.78**	2	3	4	1.20	220- 330	(100-205%)	**6.5**	**NIL**	16.77	NIL	**21**	12/31	**4.42**	3.64	3/31	NIL	NIL	YES
	1760	Jefferies Fin'l Group		JEF	**12.60**	3	3	2	1.25	35- 55	(180-335%)	**11.3**	**4.8**	1.12	.60	**69**	2/28	**.37**	.14	6/30	.15	.125	YES
	1113	JELD-WEN Holding		JELD	**9.13**	4	3	3	1.45	30- 40	(230-340%)	**11.0**	**NIL**	.83	NIL	**44**	12/31	**.07**	.38	3/31	NIL	NIL	YES
	310	JetBlue Airways	(NDQ)	JBLU	**8.63**	3	3	2	1.20	30- 45	(250-420%)	**3.9**	**NIL**	2.21	NIL	**74**	12/31	**.56**	.50	3/31	NIL	NIL	YES
	1761	John Bean Tech.		JBT	**71.19**	4	3	4	1.25	110- 165	(55-130%)	**14.5**	**0.6**	4.90	.40	**69**	12/31	**1.50**	1.65	3/31	.10	.10	YES
2228	**218**	Johnson & Johnson		JNJ	**151.67**	1	1	2	.80	195- 240	(30- 60%)	**17.4**	**2.7**	8.73	4.04	**8**	3/31	**2.30**	2.10	6/30	▲1.01	.95	YES
	1762	Johnson Ctrls. Int'l plc		JCI	**28.47**	3	3	4	1.15	40- 55	(40- 95%)	**15.8**	**3.7**	1.80	1.04	**69**	12/31	**.40**	.26	6/30	.26	.26	YES
	392	Jones Lang LaSalle		JLL	**99.65**	3	3	2	1.25	240- 355	(140-255%)	**6.8**	**0.9**	14.55	.86	**32**	12/31	**6.35**	5.99	3/31	NIL	NIL	YES
	957	Juniper Networks		JNPR	**23.10**	3	3	4	1.15	30- 45	(30- 95%)	**12.9**	**3.5**	1.79	.80	**42**	12/31	**.58**	.59	3/31	▲.20	.19	YES
	2127	**KAR Auction Svcs.**		KAR	**12.47**	–	3	–	NMF	30- 45	(140-260%)	**39.0**	**6.1**	.32	.76	**35**	12/31	**.12**	.50	6/30	.19	.70	YES
	1127	KB Home		KBH	**20.40**	2	3	2	1.35	35- 55	(70-170%)	**6.0**	**1.8**	3.42	.37	**17**	2/28	**.63**	.31	6/30	.09	.025	YES
	1231	KBR, Inc.		KBR	**19.05**	3	3	2	1.50	40- 60	(110-215%)	**10.5**	**2.1**	1.82	.40	**66**	12/31	**.46**	.39	6/30	▲.10	.08	YES
	2453	KKR & Co.		KKR	**22.95**	–	3	–	1.40	40- 60	(75-160%)	**17.1**	**2.4**	▼1.34	.54	**–**	12/31	**.44**	.55	3/31	.125	.125	YES
	122	KLA Corp.	(NDQ)	KLAC	**156.30**	2	3	2	1.15	160- 245	(N- 55%)	**15.2**	**2.2**	10.27	3.40	**20**	12/31	**2.66**	2.44	3/31	.85	.75	YES
450	**1763**	Kadant Inc.		KAI	**73.90**	3	3	4	1.00	95- 145	(30- 95%)	**16.9**	**1.3**	4.37	.96	**69**	12/31	**1.32**	1.66	6/30	▲.24	.23	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 9-30-20, 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	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 9-30-20	(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?
	1764	Kaman Corp.		KAMN	36.78	4	3	3	.90	60- 80	(65-120%)	19.9	2.2	1.85	.80	69	12/31	.80	1.22	6/30	.20	.20	YES
	343	Kansas City South'n		KSU	131.23	2	3	1	1.10	165- 250	(25- 90%)	17.1	1.2	7.67	1.60	26	3/31	◆1.96	1.54	6/30	.40	.36	YES
	1922	Kellogg		K	66.25	3	1	3	.60	75- 90	(15- 35%)	18.1	3.5	3.66	2.30	39	12/31	.91	.91	3/31	.57	.56	YES
	1648	Kelly Services 'A'	(NDQ)	KELYA	13.77	4	3	4	.95	30- 45	(120-225%)	7.0	NIL	1.97	NIL	88	12/31	.67	.87	6/30	▼NIL	.075	YES
	1335	KEMET Corp.		KEM	25.91	–	4	–	1.75	19- 30	(N- 15%)	22.1	NIL	1.17	NIL	61	12/31	.41	.69	3/31	NIL	.05	YES
	2564	Kemper Corp.		KMPR	67.79	3	3	3	1.10	70- 100	(5- 50%)	11.0	1.8	6.14	1.20	24	12/31	1.45	.91	3/31	▲.30	.25	YES
	731	Kennametal Inc.		KMT	22.39	4	3	3	1.55	40- 65	(80-190%)	14.2	3.6	1.58	.80	78	12/31	.17	.71	3/31	.20	.20	YES
	1975	Keurig Dr Pepper		KDP	26.02	–	3	–	.65	40- 60	(55-130%)	26.0	2.3	1.00	.60	34	12/31	.29	.19	6/30	.15	.15	YES
	2518	KeyCorp		KEY	10.93	4	3	3	1.30	25- 40	(130-265%)	6.2	7.0	1.76	.76	52	3/31	◆.12	.38	3/31	.185	.17	YES
	123	Keysight Technologies		KEYS	95.31	2	3	2	1.10	105- 155	(10- 65%)	18.5	NIL	5.15	NIL	20	1/31	1.26	.93	3/31	NIL	NIL	YES
	1649	Kforce Inc.	(NDQ)	KFRC	27.32	4	3	4	1.05	45- 65	(65-140%)	12.4	2.9	2.21	.80	88	12/31	.66	.65	3/31	.18	.18	YES
	1151	Kimball Int'l	(NDQ)	KBAL	11.14	4	3	3	1.00	25- 35	(125-215%)	8.8	3.2	1.26	.36	54	12/31	.30	.25	6/30	.09	.08	YES
	1191	Kimberly-Clark		KMB	139.72	1	1	2	.70	175- 215	(25- 55%)	19.8	3.1	7.06	4.28	10	12/31	1.71	1.60	6/30	▲1.07	1.03	YES
	1532	Kimco Realty		KIM	8.56	3	3	3	.85	25- 40	(190-365%)	10.3	13.3	.83	1.14	51	12/31	.22	.17	6/30	.28	.28	YES
	614	Kinder Morgan Inc.		KMI	14.69	4	3	4	1.40	40- 60	(170-310%)	13.1	6.8	1.12	1.00	87	12/31	.27	.21	3/31	.25	.20	YES
	1573	Kinross Gold		KGC	6.17	2	5	3	.55	6- 12	(N- 95%)	15.4	NIL	.40	NIL	1	12/31	.13	.01	3/31	NIL	NIL	YES
	333	Kirby Corp.		KEX	46.67	4	3	4	1.20	75- 110	(60-135%)	15.5	NIL	3.02	NIL	90	12/31	.58	.75	3/31	NIL	NIL	YES
	323	Knight-Swift Trans.		KNX	36.07	3	3	4	1.20	50- 75	(40-110%)	18.4	0.9	1.96	.32	64	12/31	.55	.93	3/31	▲.08	.06	YES
	1417	Knoll Inc.		KNL	9.42	4	3	3	1.15	30- 45	(220-380%)	6.2	7.2	1.51	.68	70	12/31	.21	.50	3/31	.17	.15	YES
234	958	Knowles Corp.		KN	14.89	4	3	4	1.45	25- 35	(70-135%)	13.9	NIL	1.07	NIL	42	12/31	.35	.37	3/31	NIL	NIL	YES
	2145	Kohl's Corp.		KSS	17.06	5	3	3	1.10	40- 60	(135-250%)	13.2	8.2	1.29	1.40	49	1/31	1.99	2.24	6/30	▲.704	.67	YES
	424	Korea Fund		KF	23.31	–	3	–	1.00	50- 80	(115-245%)	NMF	0.3	NMF	.07	–	12/31	34.40(q)	32.38(q)	3/31	.071	.608	
	1650	Korn Ferry		KFY	26.56	4	3	3	1.20	55- 80	(105-200%)	11.4	1.5	2.33	.40	88	1/31	.75	.81	6/30	.10	.10	YES
	1923	Kraft Heinz Co.	(NDQ)	KHC	29.17	3	3	5	.90	40- 60	(35-105%)	11.6	5.5	2.52	1.60	39	12/31	.72	.84	3/31	.40	.40	YES
	577	Kraton Corp.		KRA	8.71	5	4	4	1.55	30- 50	(245-475%)	4.9	NIL	1.78	NIL	77	12/31	.13	.56	3/31	NIL	NIL	YES
	714	Kratos Defense & Sec.	(NDQ)	KTOS	14.31	3	4	3	1.50	25- 40	(75-180%)	34.1	NIL	.42	NIL	53	12/31	.09	.06	3/31	NIL	NIL	YES
	1953	Kroger Co.		KR	31.93	1	3	2	.80	35- 50	(10- 55%)	12.7	2.2	2.52	.70	9	1/31	.57	.48	6/30	.16	.14	YES
	578	Kronos Worldwide		KRO	8.89	4	4	3	1.85	19- 30	(115-235%)	14.1	8.1	.63	.72	77	12/31	.08	.21	3/31	.18	.18	YES
	1392	Kulicke & Soffa	(NDQ)	KLIC	23.92	3	3	2	1.10	35- 55	(45-130%)	20.8	2.2	1.15	.52	38	12/31	.24	.25	6/30	.12	.12	YES
1849	**2203**	**L Brands**		LB	12.54	–	4	–	1.10	25- 45	(100-260%)	NMF	NIL	d.80	NIL	63	1/31	d.70	1.94	6/30	▼NIL	.30	YES
		L3Harris Technologies		LHX	194.84	–	2	–	NMF	255- 345	(30- 75%)	22.8	1.7	8.54	3.40	53	12/31	1.79	NA	3/31	▲.85	NIL	YES
	991	LCI Industries		LCII	74.30	2	3	2	1.20	150- 220	(100-195%)	11.4	3.5	6.54	2.60	85	12/31	1.14	.82	3/31	.65	.60	YES
	992	LKQ Corp.	(NDQ)	LKQ	20.34	2	3	2	1.15	55- 80	(170-295%)	8.2	NIL	2.49	NIL	85	12/31	.54	.48	3/31	NIL	NIL	YES
	1800	LPL Financial Hldgs.	(NDQ)	LPLA	52.28	3	3	3	1.15	130- 200	(150-285%)	13.0	1.9	4.03	1.00	37	12/31	1.53	1.36	3/31	.25	.25	YES
	1152	La-Z-Boy Inc.		LZB	20.08	▲2	3	3	.95	50- 75	(150-275%)	8.2	2.8	2.46	.56	54	1/31	.72	.63	3/31	.14	.13	YES
	805	Laboratory Corp.		LH	145.61	2	1	3	.95	230- 280	(60- 90%)	12.3	NIL	11.81	NIL	15	12/31	2.86	2.52	3/31	NIL	NIL	YES
	1393	Lam Research	(NDQ)	LRCX	266.73	3	3	1	1.30	300- 445	(10- 65%)	14.8	1.7	18.07	4.60	38	12/31	4.01	3.87	6/30	1.15	1.10	YES
	2393	Lamar Advertising	(NDQ)	LAMR	49.90	▼3	3	3	.90	95- 145	(90-190%)	17.7	8.0	▼2.82	4.00-1.40	36	12/31	1.02	.96	3/31	▲1.00	.96	YES
	1924	Lamb Weston Holdings		LW	57.51	2	3	2	.65	90- 135	(55-135%)	16.3	1.7	3.52	.95	39	2/28	.77	.95	6/30	.23	.20	YES
	1925	Lancaster Colony	(NDQ)	LANC	143.46	3	2	3	.70	135- 180	(N- 25%)	28.9	2.0	4.97	2.80	39	12/31	1.58	1.73	3/31	.70	.65	YES
	1239	Laredo Petroleum		LPI	SEE FINAL SUPPLEMENT																		
	2360	Las Vegas Sands		LVS	43.13	2	4	3	1.45	70- 120	(60-180%)	26.5	NIL	▼1.63	NIL	81	12/31	.88	.77	6/30	▼NIL	.77	YES
	1362	Lattice Semiconductor	(NDQ)	LSCC	19.70	3	3	3	1.20	25- 40	(25-105%)	29.4	NIL	.67	NIL	40	12/31	.17	.08	3/31	NIL	NIL	YES
	1011	Lauder (Estee)		EL	167.79	▲1	2	1	.85	180- 245	(5- 45%)	28.3	NIL	5.93	NIL	71	12/31	2.11	1.74	6/30	▼NIL	.43	YES
2666	2001	Laureate Education	(NDQ)	LAUR	8.72	–	3	–	.95	20- 30	(130-245%)	25.6	NIL	.34	NIL	33	12/31	.24	.31	3/31	NIL	NIL	YES
	2565	Lazard Ltd.		LAZ	27.74	3	3	3	1.45	70- 100	(150-260%)	7.1	6.8	3.89	1.88	24	12/31	.91	.94	3/31	.47	.44	YES
1849	993	Lear Corp.		LEA	83.16	4	3	3	1.25	170- 255	(105-205%)	6.2	NIL	13.34	NIL	85	12/31	2.64	4.05	6/30	▼NIL	.75	YES
	1153	Leggett & Platt		LEG	27.47	2	3	3	1.10	65- 85	(135-210%)	10.6	5.8	2.58	1.60	54	12/31	.68	.62	6/30	.40	.38	YES
646	2566	Legg Mason		LM	49.61	–	3	–	1.30	60- 90	(20- 80%)	12.9	3.2	3.85	1.60	24	12/31	1.03	.86	6/30	.40	.34	YES
645	393	Leidos Hldgs.		LDOS	98.60	▼2	2	1	1.00	95- 130	(N- 30%)	18.4	1.4	5.35	1.36	32	12/31	1.51	1.10	6/30	.34	.32	YES
	1128	Lennar Corp.		LEN	39.98	2	3	2	1.05	65- 100	(65-150%)	6.5	1.3	6.16	.50	17	2/28	1.27	.74	6/30	.125	.04	YES
	1716	Lennox Int'l		LII	181.00	3	3	3	.95	285- 430	(55-140%)	16.4	1.7	11.05	3.08	31	3/31	◆.56	1.68	6/30	.77	.64	YES
	2110	Levi Strauss & Co.		LEVI	12.86	–	3	–	NMF	20- 30	(55-135%)	17.1	2.6	.75	.34	86	2/28	.37	.37	6/30	.08	NIL	YES
	1202	Liberty All-Star		USA	5.34	–	2	–	1.10	6- 8	(10- 50%)	NMF	12.7	NMF	.68	–	12/31	6.90(q)	5.89(q)	3/31	.34	.31	
	1024	Liberty Global plc	(NDQ)	LBTYA	18.26	4	3	3	1.15	10- 17	(N- N%)	NMF	NIL	d2.80	NIL	14	12/31	d2.20	d.45	3/31	NIL	NIL	YES
	928	Liberty Latin Amer.	(NDQ)	LILA	10.85	–	3	–	1.30	18- 25	(65-130%)	NMF	NIL	d.12	NIL	29	12/31	.23	d1.30	3/31	NIL	NIL	YES
	230	Liberty Property		LPT	SEE FINAL SUPPLEMENT																		
	1626	Lilly (Eli)		LLY	157.79	3	1	3	.75	155- 190	(N- 20%)	23.5	1.9	6.72	2.96	22	12/31	1.73	1.33	3/31	▲.74	.645	YES
	994	Linamar Corp.	(TSE)	LNR.TO	32.61b	4	3	3	1.25	75- 115	(130-255%)	4.7	1.5	6.92	.48	85	12/31	.76(b)	1.88(b)	6/30	.12	.24	
	1717	Lincoln Elec Hldgs.	(NDQ)	LECO	73.80	3	3	3	1.25	100- 150	(35-105%)	17.0	2.7	4.35	1.96	31	12/31	1.15	1.29	6/30	.49	.47	YES
	1560	Lincoln Nat'l Corp.		LNC	29.01	3	3	3	1.55	40- 65	(40-125%)	3.0	5.8	9.55	1.68	48	12/31	2.41	2.15	6/30	.40	.37	YES
	579	Linde plc		LIN	185.00	–	3	–	NMF	230- 345	(25- 85%)	23.3	2.1	7.94	3.85	77	12/31	1.89	NA	3/31	▲.963	.875	YES
	1718	Lindsay Corp.		LNN	89.34	2	3	2	1.05	75- 115	(N- 30%)	49.6	1.4	1.80	1.28	31	2/28	.51	.02	6/30	▲.32	.31	YES
	2336	Lions Gate 'A'		LGFA	7.05	4	3	4	1.20	▼ 16- 25	(125-255%)	NMF	NIL	▼d1.61	NIL	80	12/31	d.42	.10	3/31	NIL	NIL	YES
	2128	Lithia Motors		LAD	90.63	3	3	3	1.20	130- 195	(45-115%)	9.4	1.3	9.69	1.20	35	12/31	2.89	2.54	3/31	.30	.29	YES
	1311	Littelfuse Inc.	(NDQ)	LFUS	131.09	3	3	4	1.15	195- 295	(50-125%)	22.5	1.5	5.82	1.92	67	12/31	1.17	1.87	3/31	.48	.43	YES
	2337	Live Nation Entertain.		LYV	36.66	4	3	3	1.05	65- 100	(75-175%)	NMF	NIL	▼d4.33	NIL	80	12/31	d.83	d.80	3/31	NIL	NIL	YES
	1954	Loblaw Cos. Ltd.	(TSE)	L.TO	74.72b	1	2	2	.50	75- 100	(N- 35%)	25.6	1.7	2.92	1.26	9	12/31	.70(b)	.61(b)	6/30	.315(b)	.295(b)	YES
	716	Lockheed Martin		LMT	383.21	2	1	2	.80	420- 510	(10- 35%)	16.4	2.6	23.34	9.80	53	3/31	◆6.08	5.99	3/31	2.40	2.20	YES
	2567	Loews Corp.		L	34.97	2	2	3	1.00	85- 110	(145-215%)	9.8	0.7	3.56	.25	24	12/31	.73	d.35	3/31	.063	.063	YES
	1404	Logitech Int'l	(NDQ)	LOGI	46.30	2	3	3	1.05	60- 90	(30- 95%)	25.0	1.6	1.85	.74	56	12/31	.69	.67	3/31	NIL	NIL	YES
	1823	LogMeIn Inc.	(NDQ)	LOGM	84.52	–	3	–	1.05	60- 85	(N- N%)	NMF	NIL	.12	NIL	43	12/31	d.08	.49	3/31	▼NIL	.325	YES
	1163	Louisiana-Pacific		LPX	16.71	3	3	3	1.25	30- 50	(80-200%)	11.4	3.5	1.47	.58	79	12/31	.12	.12	3/31	▲.145	.135	YES
	1140	Lowe's Cos.		LOW	95.13	2	2	4	1.10	130- 175	(35- 85%)	15.1	2.5	6.29	2.35	7	1/31	.94	.80	6/30	.55	.55	YES
	2204	lululemon athletica	(NDQ)	LULU	218.59	2	3	3	1.05	210- 315	(N- 45%)	72.1	NIL	3.03	NIL	63	1/31	2.28	1.85	3/31	NIL	NIL	YES
1655	1141	Lumber Liquidators		LL	5.42	–	5	–	1.60	16- 30	(195-455%)	6.6	NIL	.82	NIL	7	12/31	.57	d1.99	3/31	NIL	NIL	YES
	124	Lumentum Holdings	(NDQ)	LITE	76.10	2	3	1	.95	75- 115	(N- 50%)	37.3	NIL	2.04	NIL	20	12/31	.63	.08	3/31	NIL	NIL	YES
451	2595	Lyft, Inc.	(NDQ)	LYFT	30.10	–	4	–	NMF	65- 105	(115-250%)	NMF	NIL	d1.67	NIL	12	12/31	d1.18	NA	3/31	NIL	NIL	YES
	580	LyondellBasell Inds.		LYB	48.41	4	3	4	1.35	95- 145	(95-200%)	5.1	8.7	9.58	4.20	77	12/31	1.85	1.83	3/31	1.05	1.00	YES
	2519	**M&T Bank Corp.**		MTB	105.60	3	2	3	1.00	225- 305	(115-190%)	7.5	4.2	14.05	4.40	52	3/31	◆1.93	3.35	3/31	1.10	1.00	YES
	1129	M.D.C. Holdings		MDC	23.65	3	3	2	1.10	50- 75	(110-215%)	5.7	5.6	4.17	1.32	17	12/31	1.42	.88	6/30	.33	.30	YES
	537	MDU Resources		MDU	21.76	▼2	2	3	.90	40- 55	(85-155%)	12.3	3.8	1.77	.83	93	12/31	.47	.39	6/30	.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).

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 9-30-20	(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?
	1203	MFS Multimarket	MMT	5.30	–	4	–	.55	5- 9	(N- 70%)	NMF	9.1	NMF	.48	–	10/31	6.38(q)	6.06(q)	3/31	.128	.121	
	912	MGE Energy (NDQ)	MGEE	68.26	1	1	2	.50	65- 80	(N- 15%)	26.5	2.1	2.58	1.46	11	12/31	.48	.47	3/31	.353	.338	YES
	2568	MGIC Investment	MTG	5.82	3	3	2	1.15	25- 35	(330-500%)	2.7	4.1	2.18	.24	24	12/31	.49	.42	3/31	.06	NIL	YES
	1533	MGM Growth Properties	MGP	23.63	4	3	5	.80	40- 60	(70-155%)	21.5	8.0	1.10	1.90	51	12/31	.25	.26	6/30	▲.475	.465	YES
	2361	MGM Resorts Int'l	MGM	13.53	▼4	3	3	1.55	50- 75	(270-455%)	NMF	4.4	▼d1.11	.60	81	12/31	d.13	.11	3/31	▲.15	.13	YES
	1976	MGP Ingredients (NDQ)	MGPI	34.61	5	3	5	.90	55- 85	(60-145%)	16.8	1.4	2.06	.48	34	12/31	.76	.69	3/31	▲.12	.10	YES
	1394	MKS Instruments (NDQ)	MKSI	90.94	3	3	2	1.35	110- 165	(20- 80%)	15.7	0.9	5.80	.80	38	12/31	1.20	1.32	3/31	.20	.20	YES
	629	MPLX LP	MPLX	14.15	2	3	4	1.35	35- 55	(145-290%)	6.3	19.4	2.26	2.75-1.75	84	12/31	.55	.52	3/31	▲.688	.648	YES
1655	2424	MRC Global	MRC	3.90	–	4	–	1.75	▼ 15- 25	(285-540%)	NMF	NIL	▼d1.27	NIL	95	12/31	d.37	.07	3/31	NIL	NIL	YES
	1719	MSA Safety	MSA	103.00	1	3	2	1.10	110- 165	(5- 60%)	21.5	1.8	4.79	1.84	31	12/31	1.29	1.27	3/31	.42	.38	YES
	1720	MSC Industrial Direct	MSM	57.53	3	2	3	1.00	130- 175	(125-205%)	12.5	5.2	4.60	3.00	31	2/28	1.00	1.24	6/30	.75	.63	YES
	440	MSCI Inc.	MSCI	321.95	2	3	3	1.05	260- 390	(N- 20%)	45.3	0.9	7.10	2.87	2	12/31	1.67	1.31	3/31	.68	.58	YES
	2338	MSG Networks	MSGN	11.07	4	3	4	.95	25- 40	(125-260%)	4.5	NIL	2.48	NIL	80	12/31	.66	.58	3/31	NIL	NIL	YES
★★	125	MTS Systems (NDQ)	MTSC	17.19	5	4	4	1.20	55- 85	(220-395%)	7.8	NIL	2.20	NIL	20	12/31	.27	.54	6/30	▼NIL	.30	YES
	1534	Macerich Comp. (The)	MAC	6.26	5	4	2	.90	20- 35	(220-460%)	9.8	31.9	.64	2.00-1.00	51	12/31	.19	.08	6/30	▼.50	.75	YES
	1535	Mack-Cali R'lty	CLI	15.35	–	3	–	1.00	20- 35	(30-130%)	NMF	5.2	d.22	.80	51	12/31	.53	.45	6/30	.20	.20	YES
2668	1363	MACOM Tech. Solutions (NDQ)	MTSI	24.23	3	3	3	1.50	30- 45	(25- 85%)	53.8	NIL	.45	NIL	40	12/31	.07	.20	3/31	NIL	NIL	YES
2031	394	Macquarie Infra.	MIC	23.93	4	3	3	1.10	45- 65	(90-170%)	18.4	NIL	1.30	NIL	32	12/31	.18	d.01	6/30	▼NIL	1.00	YES
	2146	Macy's Inc.	M	5.31	5	3	3	1.10	35- 55	(560-935%)	4.5	NIL	1.17	NIL	49	1/31	2.12	2.73	9/30	▼NIL	.378	YES
	2159	Madden (Steven) Ltd. (NDQ)	SHOO	21.99	3	3	3	1.15	40- 65	(80-195%)	15.6	NIL	1.41	NIL	28	12/31	.21	.15	6/30	▼NIL	.14	YES
	2339	Madison Sq. Garden Sport	MSGS	182.44	–	3	–	.95	▼ 190- 290	(5- 60%)	NMF	NIL	▼d1.94	NIL	80	12/31	3.93	3.43	3/31	NIL	NIL	YES
	630	Magellan Midstream	MMP	39.69	4	3	4	1.05	100- 155	(150-290%)	8.6	10.5	4.63	4.16	84	12/31	1.25	1.37	3/31	▲1.028	.998	YES
	995	Magna Int'l 'A'	MGA	35.58	4	3	4	1.35	80- 120	(125-235%)	5.7	4.6	6.26	1.64(h)	85	12/31	1.41	1.63	3/31	▲.40	.365	YES
	2409	Magnolia Oil & Gas	MGY	3.88	–	3	–	NMF	12- 18	(210-365%)	NMF	NIL	▼d1.27	NIL	94	12/31	.05	.21	3/31	NIL	NIL	YES
	2629	Manhattan Assoc. (NDQ)	MANH	55.35	4	3	3	1.25	70- 110	(25-100%)	52.7	NIL	1.05	NIL	4	3/31	◆.35	.32	3/31	NIL	NIL	YES
	160	Manitowoc Co.	MTW	7.91	4	4	2	2.10	30- 45	(280-470%)	5.3	NIL	1.50	NIL	59	12/31	.35	.16	3/31	NIL	NIL	YES
	1651	ManpowerGroup Inc.	MAN	61.92	3	3	3	1.40	105- 155	(70-150%)	10.2	3.5	6.08	2.18	88	3/31	◆.03	.88	3/31	NIL	NIL	YES
	2630	ManTech Int'l 'A' (NDQ)	MANT	78.69	2	3	2	1.00	70- 105	(N- 35%)	31.7	1.6	2.48	1.28	4	12/31	.81	.50	3/31	▲.32	.27	YES
	1561	Manulife Fin'l	MFC	12.12	2	3	4	1.25	25- 35	(105-190%)	5.6	7.0	2.18	.85	48	12/31	.73	.48	3/31	▲.21	.19	YES
	1926	Maple Leaf Foods (TSE)	MFI.TO	25.98	2	3	5	.60	35- 55	(35-110%)	31.7	2.5	.82	.64	39	12/31	.14	.10	3/31	▲.16	.145	YES
	2410	Marathon Oil Corp.	MRO	4.21	5	3	3	2.05	▼ 10- 15	(140-255%)	NMF	4.8	▼d.98	.20	94	12/31	.07	.15	3/31	.05	.05	YES
	512	Marathon Petroleum	MPC	24.85	4	3	3	1.55	75- 110	(200-345%)	4.1	9.3	6.11	2.32	92	12/31	1.56	2.41	3/31	▲.58	.53	YES
	2362	Marcus Corp.	MCS	13.38	4	3	3	.80	45- 65	(235-385%)	NMF	5.1	▼d1.50	.68	81	12/31	.25	.30	3/31	▲.17	.16	YES
	2176	MarineMax	HZO	11.82	3	4	4	1.35	25- 45	(110-280%)	11.8	NIL	1.00	NIL	76	12/31	.41	.21	3/31	NIL	NIL	YES
	766	Markel Corp.	MKL	927.82	2	1	3	.90	1465-1790	(60- 95%)	13.0	NIL	71.26	NIL	5	12/31	36.26	d53.88	3/31	NIL	NIL	YES
	1801	MarketAxess Holdings (NDQ)	MKTX	430.57	2	3	3	.75	240- 365	(N- N%)	70.7	0.6	6.09	2.40	37	12/31	1.32	1.21	3/31	▲.60	.51	YES
	2363	Marriott Int'l (NDQ)	MAR	79.77	▼3	3	3	1.20	140- 210	(75-165%)	20.6	NIL	▼3.87	NIL	81	12/31	.85	.92	6/30	▼NIL	.48	YES
	2364	Marriott Vacations	VAC	76.72	4	3	4	1.50	▼ 150- 225	(95-195%)	10.6	2.8	▼7.21	2.16	81	12/31	2.41	1.49	3/31	1.08	.90	YES
	2569	Marsh & McLennan	MMC	95.76	3	1	2	.90	110- 135	(15- 40%)	19.6	1.9	4.88	1.84	24	12/31	.76	1.17	6/30	.455	.415	YES
	1114	Martin Marietta	MLM	188.64	2	3	2	1.05	260- 385	(40-105%)	17.4	1.2	10.84	2.22	44	12/31	2.09	1.81	3/31	.55	.48	YES
	959	Marvell Technology (NDQ)	MRVL	26.23	▲3	3	3	1.25	35- 55	(35-110%)	35.4	0.9	.74	.24	42	1/31	.17	d.40	6/30	.06	.06	YES
	1115	Masco Corp.	MAS	39.05	–	3	–	1.20	45- 65	(15- 65%)	16.4	1.5	2.38	.58	44	12/31	.54	.64	6/30	.135	.12	YES
	219	Masimo Corp. (NDQ)	MASI	198.25	1	3	2	1.00	105- 155	(N- N%)	56.5	NIL	3.51	NIL	8	12/31	.92	.83	3/31	NIL	NIL	YES
	1154	Masonite Int'l	DOOR	47.05	3	3	1	1.05	100- 150	(115-220%)	15.4	NIL	3.06	NIL	54	12/31	.06	.46	3/31	NIL	NIL	YES
	1232	MasTec	MTZ	32.18	4	3	3	1.45	85- 130	(165-305%)	6.2	NIL	5.15	NIL	66	12/31	1.30	1.07	3/31	NIL	NIL	YES
	2570	MasterCard Inc.	MA	251.73	1	1	1	1.00	260- 315	(5- 25%)	28.7	0.6	8.76	1.60	24	12/31	1.96	1.55	6/30	.40	.33	YES
	2650	Match Group (NDQ)	MTCH	80.03	3	4	3	1.00	50- 80	(N- N%)	41.7	NIL	1.92	NIL	50	12/31	.45	.39	3/31	NIL	NIL	YES
	1589	Materion Corp.	MTRN	42.48	4	3	5	1.25	65- 100	(55-135%)	15.0	1.0	2.83	.44	89	12/31	.68	.65	3/31	.11	.105	YES
	334	Matson, Inc.	MATX	26.99	4	3	3	1.20	45- 65	(65-140%)	13.2	3.3	2.04	.88	90	12/31	.36	.48	3/31	.22	.21	YES
	2313	Mattel, Inc. (NDQ)	MAT	8.96	3	4	4	1.15	▼ 15- 25	(65-180%)	NMF	NIL	▼d.35	NIL	73	12/31	NIL	.04	3/31	NIL	NIL	YES
	1843	Matthews Int'l (NDQ)	MATW	22.39	4	3	3	1.10	45- 70	(100-215%)	7.5	3.8	3.00	.84	47	12/31	.47	.50	3/31	.21	.20	YES
	717	Maxar Technologies	MAXR	10.82	3	5	4	.55	9- 15	(N- 40%)	NMF	0.4	d2.37	.04	53	12/31	.87	d6.34	3/31	.01	.01	YES
	1364	Maxim Integrated (NDQ)	MXIM	51.82	3	3	4	1.15	55- 85	(5- 65%)	21.8	3.7	2.38	1.92	40	12/31	.56	.60	3/31	▲.48	.46	YES
	395	MAXIMUS Inc.	MMS	64.56	2	3	5	.95	95- 145	(45-125%)	15.9	1.7	4.05	1.12	32	12/31	.91	.86	6/30	.28	.25	YES
	1365	MaxLinear, Inc.	MXL	14.86	5	3	5	1.10	30- 45	(100-205%)	25.6	NIL	.58	NIL	40	12/31	.16	NIL	3/31	NIL	NIL	YES
	1927	McCormick & Co.	MKC	156.12	3	1	3	.70	155- 190	(N- 20%)	29.9	1.6	5.22	2.48	39	2/28	1.08	1.12	6/30	.62	.57	YES
2666	363	McDonald's Corp.	MCD	181.65	3	1	4	.70	205- 255	(15- 40%)	21.8	2.8	8.32	5.10	68	12/31	1.97	1.97	3/31	1.25	1.16	YES
	220	McKesson Corp.	MCK	140.49	2	2	2	1.20	315- 430	(125-205%)	9.5	1.2	14.79	1.64	8	12/31	3.81	3.40	6/30	.41	.39	YES
	1824	Medallia Inc	MDLA	21.04	–	4	–	NMF	25- 40	(20- 90%)	NMF	NIL	d.73	NIL	43	1/31	d.25	NA	3/31	NIL	NIL	YES
	2028	Medicines Company	MDCO	SEE FINAL SUPPLEMENT																		
	1928	Medifast, Inc.	MED	64.29	3	3	4	.90	145- 215	(125-235%)	10.6	7.0	6.06	4.52	39	12/31	1.66	1.30	6/30	1.13	.75	YES
	806	MEDNAX, Inc.	MD	12.40	4	3	3	1.00	60- 95	(385-665%)	3.7	NIL	3.34	NIL	15	12/31	.91	.92	3/31	NIL	NIL	YES
	807	Medpace Holdings (NDQ)	MEDP	85.53	2	3	2	1.25	85- 125	(N- 45%)	26.9	NIL	3.18	NIL	15	12/31	.78	.60	3/31	NIL	NIL	YES
	186	Medtronic plc	MDT	101.54	2	1	2	.85	130- 160	(30- 60%)	17.6	2.2	5.78	2.20	19	1/31	1.44	1.27	6/30	.54	.505	YES
	2365	Melco Resorts & Entert. (NDQ)	MLCO	14.23	4	3	4	1.45	30- 45	(110-215%)	NMF	4.6	▼d.52	.66	81	12/31	.14	.27	3/31	.165	.155	YES
	1366	Mellanox Technologies (NDQ)	MLNX	124.79	–	3	–	1.00	115- 175	(N- 40%)	31.7	NIL	3.94	NIL	40	12/31	1.29	.78	3/31	NIL	NIL	YES
	1825	Mercadolibre Inc. (NDQ)	MELI	601.64	3	3	2	1.35	655- 980	(10- 65%)	NMF	NIL	d2.31	NIL	43	12/31	d1.11	d.05	3/31	NIL	NIL	YES
234	1627	Merck & Co.	MRK	83.10	1	1	2	.90	100- 125	(20- 50%)	15.1	2.9	5.50	2.44	22	12/31	1.16	1.04	6/30	.61	.55	YES
	767	Mercury General	MCY	40.61	2	3	4	.85	65- 100	(60-145%)	13.7	6.2	2.97	2.52	5	12/31	.21	d.26	3/31	.63	.628	YES
	1405	Mercury Systems (NDQ)	MRCY	78.12	3	3	2	.95	80- 120	(N- 55%)	35.3	NIL	2.21	NIL	56	12/31	.54	.47	3/31	NIL	NIL	YES
	2378	Meredith Corp.	MDP	13.02	5	4	2	1.15	▼ 55- 95	(320-630%)	5.5	NIL	2.37	NIL	91	12/31	1.14	1.55	6/30	▼NIL	.575	YES
2670	221	Meridian Bioscience (NDQ)	VIVO	10.96	4	4	5	.75	17- 25	(55-130%)	21.9	NIL	.50	NIL	8	12/31	.10	.20	3/31	NIL	.125	YES
	996	Meritor, Inc.	MTOR	15.25	3	4	3	1.55	30- 55	(95-260%)	5.5	NIL	2.75	NIL	85	12/31	.64	.79	3/31	NIL	NIL	YES
	1130	Meritage Homes	MTH	39.25	3	3	2	1.20	80- 120	(105-205%)	5.3	NIL	7.35	NIL	17	12/31	2.65	1.91	3/31	NIL	NIL	YES
	581	Methanex Corp. (NDQ)	MEOH	12.82	5	3	3	1.75	50- 80	(290-525%)	11.4	11.2	1.12	1.44	77	12/31	.13	1.15	3/31	.36	.33	YES
	1336	Methode Electronics	MEI	27.30	▲2	3	3	1.45	50- 70	(85-155%)	7.6	1.6	3.61	.44	61	1/31	1.05	.83	6/30	.11	.11	YES
	1562	MetLife Inc.	MET	32.55	3	3	4	1.25	60- 90	(85-175%)	6.2	5.4	5.28	1.76	48	12/31	1.98	1.35	3/31	.44	.42	YES
	1955	Metro Inc. (TSE)	MRU.TO	60.00b	1	2	1	.50	55- 75	(N- 25%)	18.8	1.5	3.20	.90	9	12/31	.71(b)	.66(b)	3/31	▲.225(b)	.20(b)	YES
	126	Mettler-Toledo Int'l	MTD	707.63	2	2	1	1.10	630- 855	(N- 20%)	30.6	NIL	23.15	NIL	20	12/31	7.84	6.36	3/31	NIL	NIL	YES
	425	Mexico Fund	MXF	8.57	–	4	–	1.00	16- 25	(85-190%)	NMF	1.8	NMF	.15	–	1/31	15.77(q)	16.51(q)	6/30	.066	.037	
1423	2177	Michaels Cos. (The) (NDQ)	MIK	2.18	–	4	–	1.25	20- 35	(NMF)	1.2	NIL	1.76	NIL	76	1/31	1.26	1.33	3/31	NIL	NIL	YES
	1367	Microchip Technology (NDQ)	MCHP	77.71	3	3	3	1.30	115- 170	(50-120%)	13.7	1.9	5.66	1.50	40	12/31	1.32	1.66	3/31	.367	.365	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 9-30-20, 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 9-30-20	(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?
	1368	Micron Technology	(NDQ)	MU	43.40	3	3	2	1.75	105- 155	(140-255%)	19.7	NIL	2.20	NIL	40	2/28	.45	1.71	3/31	NIL	NIL	YES
	2596	Microsoft Corp.	(NDQ)	MSFT	175.06	1	1	3	1.10	170- 205	(N- 15%)	30.6	1.2	5.72	2.04	12	12/31	1.51	1.10	6/30	.51	.46	YES
	1536	Mid-America Apartment		MAA	108.49	2	2	1	.70	105- 145	(N- 35%)	38.1	3.7	2.85	4.00	51	12/31	1.30	.53	6/30	1.00	.96	YES
	1721	Middleby Corp. (The)	(NDQ)	MIDD	48.56	3	3	2	1.10	135- 205	(180-320%)	13.6	NIL	3.56	NIL	31	12/31	1.96	1.71	3/31	NIL	NIL	YES
	1790	Middlesex Water	(NDQ)	MSEX	58.52	3	2	2	.70	45- 60	(N- 5%)	28.0	1.8	2.09	1.03	16	12/31	.46	.43	3/31	.256	.24	YES
2032	1155	Miller (Herman)	(NDQ)	MLHR	19.29	3	3	3	1.25	55- 80	(185-315%)	5.7	NIL	3.41	NIL	54	2/28	.74	.64	6/30	▼NIL	.198	YES
	929	Millicom Int'l Cellular	(NDQ)	TIGO	28.16	–	3	–	NMF	55- 85	(95-200%)	9.4	9.4	3.00	2.64	29	12/31	2.20	NA	3/31	NIL	NIL	
	582	Minerals Techn.		MTX	36.77	4	3	3	1.50	80- 120	(120-225%)	8.3	0.5	4.42	.20	77	12/31	.95	1.22	3/31	.05	.05	YES
1039	396	Mobile Mini	(NDQ)	MINI	24.15	–	3	–	1.25	65- 100	(170-315%)	10.4	5.0	2.32	1.21	32	12/31	.67	.53	3/31	▲.303	.275	YES
451	837	Moderna, Inc.	(NDQ)	MRNA	51.69	–	4	–	NMF	10- 17	(N- N%)	NMF	NIL	d1.59	NIL	21	12/31	d.37	NA	3/31	NIL	NIL	YES
1655	997	Modine Mfg.		MOD	3.93	–	4	–	1.50	20- 45	(NMF)	4.3	NIL	.91	NIL	85	12/31	.37	.42	3/31	NIL	NIL	YES
	1156	Mohawk Inds.		MHK	76.24	4	3	2	1.20	185- 280	(145-265%)	7.7	NIL	9.95	NIL	54	12/31	2.25	2.53	3/31	NIL	NIL	YES
	808	Molina Healthcare		MOH	164.30	3	3	1	1.15	190- 290	(15- 75%)	14.1	NIL	11.63	NIL	15	12/31	2.73	3.01	3/31	NIL	NIL	YES
	1977	Molson Coors Beverage		TAP	43.49	2	3	3	.95	65- 95	(50-120%)	11.6	5.2	3.75	2.28	34	12/31	.75	.35	3/31	.57	.41	YES
	2366	Monarch Casino	(NDQ)	MCRI	25.11	4	3	3	1.10	▼ 50- 75	(100-200%)	19.6	NIL	▼1.28	NIL	81	12/31	.33	.39	3/31	NIL	NIL	YES
	1929	Mondelez Int'l	(NDQ)	MDLZ	53.49	3	2	3	.90	65- 85	(20- 60%)	20.3	2.2	2.64	1.20	39	12/31	.61	.63	6/30	.285	.26	YES
	1369	Monolithic Power Sys.	(NDQ)	MPWR	184.23	2	3	2	1.20	175- 260	(N- 40%)	46.1	1.1	4.00	2.00	40	12/31	.70	.61	6/30	▲.50	.40	YES
	2129	Monro, Inc.	(NDQ)	MNRO	47.11	4	3	3	.80	75- 110	(60-135%)	41.7	1.9	1.13	.88	35	12/31	.56	.61	3/31	.22	.20	YES
	1978	Monster Beverage	(NDQ)	MNST	61.38	1	3	2	.85	80- 115	(30- 85%)	29.0	NIL	2.12	NIL	34	12/31	.47	.43	3/31	NIL	NIL	YES
	441	Moody's Corp.		MCO	239.47	2	3	2	1.15	230- 345	(N- 45%)	27.7	0.9	8.65	2.24	2	12/31	2.00	1.63	3/31	.56	.50	YES
	718	Moog Inc. 'A'		MOGA	53.34	3	3	4	1.30	80- 120	(50-125%)	10.0	1.9	5.35	1.00	53	12/31	1.44	1.25	3/31	.25	.25	YES
644	1809	Morgan Stanley		MS	38.36	2	3	3	1.40	75- 115	(95-200%)	10.7	3.6	3.60	1.40	6	3/31	◆1.01	1.39	6/30	◆.35	.30	YES
	1605	Mosaic Company		MOS	11.14	3	3	4	1.60	25- 40	(125-260%)	NMF	2.0	d.29	.22	65	12/31	d.41	.29	3/31	.05	.025	YES
451	998	Motorcar Parts Of Amer.	(NDQ)	MPAA	11.43	3	3	3	1.35	30- 45	(160-295%)	6.6	NIL	1.73	NIL	85	12/31	.28	.35	3/31	NIL	NIL	YES
	960	Motorola Solutions		MSI	155.38	1	2	1	.85	180- 240	(15- 55%)	18.3	1.7	8.49	2.68	42	12/31	2.94	2.63	6/30	.64	.57	YES
1849	2178	Movado Group		MOV	9.39	5	3	3	1.35	35- 55	(275-485%)	18.8	NIL	.50	NIL	76	1/31	.15	.67	6/30	▼NIL	.40	YES
	732	Mueller Inds.		MLI	24.24	3	3	3	1.35	50- 70	(105-190%)	12.1	1.7	2.00	.40	78	3/31	◆.57	.27	6/30	.10	.10	YES
	1722	Mueller Water Prod.		MWA	8.67	▲2	3	3	1.20	18- 30	(110-245%)	12.9	2.4	.67	.21	31	12/31	.08	.07	3/31	.053	.05	YES
2032	513	Murphy Oil Corp.		MUR	7.91	5	4	4	1.75	55- 95	(NMF)	4.7	6.3	1.69	.50	92	12/31	d.46	.59	6/30	▼.125	.25	YES
	2179	Murphy USA Inc.		MUSA	110.07	3	3	2	.85	115- 175	(5- 60%)	20.2	NIL	5.44	NIL	76	3/31	◆2.92	.16	3/31	NIL	NIL	YES
	1765	Myers Inds.		MYE	10.45	4	3	3	1.20	19- 30	(80-185%)	33.7	5.2	.31	.54	69	12/31	.16	.13	6/30	.135	.135	YES
	1628	Mylan N.V.	(NDQ)	MYL	15.86	–	3	–	1.35	25- 35	(60-120%)	46.6	NIL	.34	NIL	22	12/31	.04	.10	3/31	NIL	NIL	YES
451	838	Myriad Genetics	(NDQ)	MYGN	15.20	5	3	4	.80	19- 30	(25- 95%)	32.3	NIL	.47	NIL	21	12/31	.23	.38	3/31	NIL	NIL	YES
	1337	**NCR Corp.**		NCR	18.56	3	3	4	1.60	45- 70	(140-275%)	6.8	NIL	2.73	NIL	61	12/31	.85	.84	3/31	NIL	NIL	YES
452	768	NMI Holdings	(NDQ)	NMIH	10.71	3	3	1	1.10	40- 60	(275-460%)	3.7	NIL	2.90	NIL	5	12/31	.71	.46	3/31	NIL	NIL	YES
1423	733	NN Inc.	(NDQ)	NNBR	2.41	–	5	–	1.80	6- 11	(150-355%)	NMF	NIL	d.75	NIL	78	12/31	d.35	d.50	3/31	NIL	.07	YES
	1217	NRG Energy		NRG	31.03	3	3	4	1.25	40- 60	(30- 95%)	2.1	3.9	15.09	1.20	55	12/31	12.89	.02	6/30	◆.30	.03	YES
	1131	NVR, Inc.		NVR	2846.86	3	2	1	.80	3160-4280	(10- 50%)	12.3	NIL	231.41	NIL	17	12/31	64.41	58.57	3/31	NIL	NIL	
	1371	NXP Semiconductors NV	(NDQ)	NXPI	86.70	3	3	2	1.25	175- 260	(100-200%)	11.7	1.7	7.43	1.50	40	12/31	1.99	2.13	6/30	.375	.25	YES
1239	2425	Nabors Inds.(•)		NBR	13.50	–	5	–	2.25	▼ 45- 80	(235-495%)	NMF	NIL	▼d99.50	NIL	95	12/31	d12.00	d11.50	6/30	NIL	.50	YES
	1802	Nasdaq, Inc.	(NDQ)	NDAQ	109.78	3	2	2	.85	95- 130	(N- 20%)	21.4	1.8	5.14	1.96	37	12/31	1.29	1.26	3/31	▲.47	.44	YES
	2520	Nat'l Bank of Canada	(TSE)	NA.TO	53.84b	2	2	3	.85	80- 110	(50-105%)	8.2	5.5	6.60	2.96	52	1/31	1.67(b)	1.50(b)	6/30	.71(b)	.65(b)	YES
	1979	National Beverage	(NDQ)	FIZZ	49.57	3	3	5	.70	60- 90	(20- 80%)	20.2	NIL	2.46	NIL	34	1/31	.57	.53	3/31	NIL	NIL	YES
1423	2394	National CineMedia	(NDQ)	NCMI	3.04	–	5	–	.85	▼ 8- 15	(165-395%)	NMF	25.0	▼NIL	.76-NIL	36	12/31	.25	.21	3/31	▲.19	.17	YES
	538	National Fuel Gas		NFG	41.05	3	3	5	.95	100- 150	(145-265%)	13.5	4.2	3.05	1.74	93	12/31	1.00	1.18	6/30	.435	.425	YES
	127	National Instruments	(NDQ)	NATI	36.69	3	3	5	1.05	45- 65	(25- 75%)	26.4	2.8	1.39	1.04	20	12/31	.45	.42	3/31	▲.26	.25	YES
452	2426	National Oilwell Varco		NOV	11.50	▼5	3	3	1.35	▼ 19- 30	(65-160%)	NMF	1.7	▼d1.71	.20	95	12/31	d1.01	.03	3/31	.05	.05	YES
	1766	National Presto Ind.		NPK	88.55	3	3	5	.95	85- 125	(N- 40%)	20.0	6.8	4.42	6.00	69	12/31	1.67	1.69	3/31	6.00	6.00	
	2180	National Vision Holdings	(NDQ)	EYE	24.19	3	3	3	1.25	25- 40	(5- 65%)	60.5	NIL	.40	NIL	76	12/31	.05	d.24	3/31	NIL	NIL	YES
	1590	Natural Resource		NRP	14.13	4	4	4	1.40	20- 35	(40-150%)	3.5	12.7	4.00	1.80	89	12/31	d10.15	1.69	3/31	.45	.45	YES
	222	Natus Medical	(NDQ)	NTUS	23.90	3	3	4	.90	45- 65	(90-170%)	36.8	NIL	.65	NIL	8	12/31	.09	d.35	3/31	NIL	NIL	YES
	2571	Navient Corp.	(NDQ)	NAVI	7.06	4	3	4	1.50	17- 25	(140-255%)	2.6	9.1	2.74	.64	24	3/31	◆d.53	.52	3/31	.16	.16	YES
	161	Navistar Int'l		NAV	19.41	–	5	–	2.00	40- 75	(105-285%)	8.4	NIL	2.30	NIL	59	1/31	d.36	.11	3/31	NIL	NIL	YES
	1164	Neenah, Inc.		NP	43.80	3	3	3	1.00	75- 115	(70-165%)	11.5	4.3	3.82	1.88	79	12/31	.92	.53	3/31	▲.47	.45	YES
	1629	Nektar Therapeutics	(NDQ)	NKTR	20.11	4	5	5	1.30	20- 40	(N-100%)	NMF	NIL	d2.64	NIL	22	12/31	d.64	d.39	3/31	NIL	NIL	YES
	223	Neogen Corp.	(NDQ)	NEOG	64.61	3	3	4	1.10	70- 100	(10- 55%)	52.5	NIL	1.23	NIL	8	2/28	.23	.25	3/31	NIL	NIL	YES
	1930	Nestle SA ADS	(PNK)	NSRGY	110.81	3	1	3	.65	120- 145	(10- 30%)	24.5	2.4	4.52	2.65	39	12/31	2.62(p)	1.44(p)	3/31	NIL	NIL	
453	1406	NetApp, Inc.	(NDQ)	NTAP	40.95	4	3	3	1.35	75- 115	(85-180%)	10.3	5.1	3.97	2.10	56	1/31	1.21	.98	6/30	.48	.40	YES
	2340	Netflix, Inc.	(NDQ)	NFLX	437.49	▲1	3	3	1.25	▲ 440- 660	(N- 50%)	70.6	NIL	6.20	NIL	80	3/31	◆1.57	.76	3/31	NIL	NIL	YES
	961	NETGEAR	(NDQ)	NTGR	24.93	–	3	–	NMF	40- 60	(60-140%)	17.0	NIL	1.47	NIL	42	12/31	.34	.68	3/31	NIL	NIL	YES
	187	Nevro Corp.		NVRO	117.50	3	4	1	1.10	85- 145	(N- 25%)	NMF	NIL	d2.86	NIL	19	12/31	d.44	d.32	3/31	NIL	NIL	YES
	539	New Fortress Energy LLC	(NDQ)	NFE	11.37	–	3	–	NMF	25- 40	(120-250%)	NMF	NIL	d.01	NIL	93	12/31	d.30	NA	3/31	NIL	NIL	
	426	New Germany Fund		GF	12.47	–	3	–	.90	17- 25	(35-100%)	NMF	1.2	NMF	.15	–	12/31	17.97(q)	13.53(q)	3/31	.136	.087	
2032	550	New Jersey Resources		NJR	31.30	4	2	4	.65	35- 45	(10- 45%)	15.3	4.0	2.05	1.25	58	12/31	.44	.61	3/31	.313	.293	YES
	2002	New Orient. Ed. ADS		EDU	109.37	1	3	1	1.15	130- 195	(20- 80%)	30.3	NIL	3.61	NIL	33	2/28	◆.93	.69	3/31	NIL	NIL	YES
	1826	New Relic, Inc.		NEWR	50.05	4	3	4	1.00	85- 130	(70-160%)	NMF	NIL	d1.17	NIL	43	12/31	d.46	d.18	3/31	NIL	NIL	YES
	1505	New York Community		NYCB	9.97	3	3	3	.95	13- 20	(30-100%)	12.0	6.8	.83	.68	27	12/31	.20	.19	3/31	.17	.17	YES
	2384	New York Times		NYT	31.04	2	3	2	1.05	30- 40	(N- 30%)	28.0	0.8	1.11	.24	–	12/31	.41	.33	6/30	▲.06	.05	YES
	1192	Newell Brands	(NDQ)	NWL	12.78	2	3	3	1.15	50- 75	(290-485%)	4.7	7.2	2.74	.92	10	12/31	1.84	.45	3/31	.23	.23	YES
	583	NewMarket Corp.		NEU	391.57	3	2	3	.85	410- 550	(5- 40%)	18.5	1.9	21.13	7.60	77	12/31	4.48	5.58	6/30	1.90	1.75	YES
	1574	Newmont Corp.		NEM	59.54	1	3	2	.70	45- 70	(N- 20%)	29.8	1.7	2.00	1.00	1	12/31	.50	.40	6/30	▲.25	.14	YES
	2385	News Corp. 'A'	(NDQ)	NWSA	8.77	3	3	3	1.25	▼ 20- 30	(130-240%)	NMF	2.3	▼d.06	.20	–	12/31	.14	.16	6/30	.10	.10	YES
	2341	Nexstar Media Group	(NDQ)	NXST	61.75	4	3	2	1.35	225- 340	(265-450%)	4.8	3.6	▲12.76	2.24	80	12/31	2.36	3.22	3/31	▲.56	.45	YES
	143	NextEra Energy		NEE	237.61	2	1	2	.50	240- 295	(N- 25%)	25.7	2.4	9.24	5.65	13	12/31	1.99	.88	3/31	▲1.40	1.25	YES
	822	NextGen Healthcare	(NDQ)	NXGN	10.86	3	3	4	.70	19- 30	(75-175%)	13.1	NIL	.83	NIL	18	12/31	.23	.20	3/31	NIL	NIL	YES
	442	Nielsen Hldgs. plc		NLSN	12.77	2	3	3	1.00	35- 55	(175-330%)	12.5	1.9	1.02	.24	2	12/31	d.31	d2.68	6/30	◆.06	.35	YES
1655	2160	NIKE, Inc. 'B'		NKE	87.90	▼2	1	2	1.00	110- 130	(25- 50%)	35.3	1.1	2.49	.98	28	2/28	.78	.68	6/30	.245	.22	YES
	551	NiSource Inc.		NI	25.48	3	2	3	.55	30- 40	(20- 55%)	17.8	3.3	1.43	.84	58	12/31	.45	.38	6/30	.21	.20	YES
	108	Nissan Motor ADR(g)	(PNK)	NSANY	6.70	4	3	3	.95	17- 25	(155-275%)	8.0	6.0	.84	.40	82	12/31	d.12	.32	3/31	NIL	NIL	
	1239	Noble Corp. plc		NE	SEE FINAL SUPPLEMENT																		
	2411	Noble Energy		NBL	6.86	5	3	4	1.65	▼ 25- 35	(265-410%)	NMF	1.2	▼d4.23	.08	94	12/31	d2.53	d.86	6/30	▼.02	.11	YES
	962	Nokia Corp. ADR		NOK	3.44	4	4	4	.85	5- 8	(45-135%)	13.2	NIL	.26	NIL	42	12/31	.16	.15	3/31	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	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 9-30-20	(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?
	1723	Nordson Corp. (NDQ)	NDSN	151.87	3	3	2	1.25	160- 240 (5- 60%)	24.7	1.1	6.15	1.61	31	1/31	.89	.92	3/31	.76	.70	YES
	2147	Nordstrom, Inc.	JWN	17.40	4	4	3	1.05	45- 80 (160-360%)	7.0	NIL	2.47	NIL	49	1/31	1.42	1.43	6/30	▼NIL	.37	YES
	344	Norfolk Southern	NSC	153.70	3	2	3	1.20	255- 350 (65-130%)	14.2	2.4	10.80	3.76	26	12/31	2.55	2.57	3/31	.94	.86	YES
	784	Northern Trust Corp. (NDQ)	NTRS	79.33	▲2	3	5	1.25	110- 165 (40-110%)	11.4	3.5	6.95	2.80	75	3/31	◆1.55	1.48	6/30	.70	.60	YES
	1218	Northland Power (TSE)	NPI.TO	29.33b	▼2	3	1	.60	40- 60 (35-105%)	21.3	4.1	1.38	1.20	55	12/31	.23(b)	.20(b)	3/31	.30(b)	.30(b)	YES
	719	Northrop Grumman	NOC	343.91	2	1	2	.80	465- 565 (35- 65%)	15.6	1.5	22.11	5.28	53	12/31	5.61	2.07	3/31	1.32	1.20	YES
	1506	Northwest Bancshares (NDQ)	NWBI	10.21	3	3	3	.80	18- 25 (75-145%)	10.0	7.4	1.02	.76	27	12/31	.24	.26	3/31	▲.19	.18	YES
	552	Northwest Natural	NWN	61.40	2	1	3	.55	70- 85 (15- 40%)	26.8	3.1	2.29	1.91	58	12/31	1.26	1.27	6/30	.478	.475	YES
	2221	NorthWestern Corp.	NWE	58.30	2	2	3	.55	65- 85 (10- 45%)	16.5	4.2	3.53	2.43	25	12/31	1.18	1.06	3/31	▲.60	.575	YES
452	2597	NortonLifeLock Inc. (NDQ)	NLOK	20.01	–	3	–	NMF	40- 60 (N- 50%)	21.3	2.5	.94	.50	12	12/31	.25	.44	3/31	.125	.075	YES
	2314	Norwegian Cruise Line	NCLH	11.49	5	4	3	1.20	▼ 45- 70 (290-510%)	NMF	NIL	▼d1.34	NIL	73	12/31	.56	.70	3/31	NIL	NIL	YES
	1630	Novartis AG ADR	NVS	89.78	3	1	5	.85	110- 135 (25- 50%)	27.2	3.4	3.30	3.09	22	12/31	.50	.52	3/31	3.087	2.834	YES
	1631	Novo Nordisk ADR(g)	NVO	64.11	3	2	2	.90	70- 90 (10- 40%)	25.5	2.0	2.51	1.30	22	12/31	.56	.53	3/31	NIL	NIL	YES
	224	NovoCure Limited (NDQ)	NVCR	74.41	3	4	2	1.25	80- 135 (10- 80%)	NMF	NIL	.13	NIL	8	12/31	.04	d.17	3/31	NIL	NIL	YES
457	1012	Nu Skin Enterprises	NUS	23.91	5	3	4	1.10	60- 85 (150-255%)	10.5	6.3	2.27	1.51	71	12/31	.72	1.05	3/31	▲.375	.37	YES
	2598	Nuance Communic. (NDQ)	NUAN	18.97	–	3	–	1.15	17- 25 (N- 30%)	94.9	NIL	.20	NIL	12	12/31	.19	.06	3/31	NIL	NIL	YES
	744	Nucor Corp.	NUE	36.53	4	3	4	1.35	120- 180 (230-395%)	9.5	4.4	3.85	1.61	83	12/31	.35	2.07	6/30	.403	.40	YES
	631	NuStar Energy L.P.	NS	9.26	▼5	3	4	1.50	35- 50 (280-440%)	6.2	25.9	1.50	2.40-1.80	84	12/31	.40	.09	3/31	.60	.60	YES
	1827	Nutanix, Inc. (NDQ)	NTNX	16.85	4	4	4	1.80	55- 95 (225-465%)	NMF	NIL	d3.54	NIL	43	1/31	d1.13	d.68	3/31	NIL	NIL	YES
	1606	Nutrien Ltd.	NTR	35.74	–	3	–	1.25	50- 75 (40-110%)	24.3	5.0	1.47	1.80	65	12/31	.05	.58	6/30	.45	.43	YES
	188	NuVasive, Inc. (NDQ)	NUVA	56.87	3	3	3	.80	85- 130 (50-130%)	43.1	NIL	1.32	NIL	19	12/31	.55	.23	3/31	NIL	NIL	YES
	1204	Nuveen Muni Value Fund	NUV	9.73	–	1	–	.40	9- 12 (N- 25%)	NMF	4.1	NMF	.40	–	10/31	10.57(q)	9.84(q)	3/31	.062	.062	
	1312	nVent Electric plc	NVT	17.26	–	3	–	1.60	25- 40 (45-130%)	13.4	4.1	1.29	.70	67	12/31	.27	.37	6/30	.175	.175	YES
	1370	NVIDIA Corp. (NDQ)	NVDA	287.05	2	3	2	1.40	170- 250 (N- N%)	47.2	0.2	6.08	.64	40	1/31	1.53	.92	3/31	.16	.16	YES
	1178	**O-I Glass**	OI	6.23	4	3	3	1.50	19- 30 (205-380%)	3.5	3.2	1.77	.20	62	12/31	.20	.61	3/31	.05	.05	YES
	913	OGE Energy	OGE	30.25	3	2	3	.70	40- 55 (30- 80%)	13.4	5.4	2.26	1.62	11	12/31	.26	.27	6/30	.388	.365	YES
	128	OSI Systems (NDQ)	OSIS	71.66	2	3	4	.85	110- 165 (55-130%)	16.3	NIL	4.40	NIL	20	12/31	1.12	1.03	3/31	NIL	NIL	YES
	1421	Oasis Petroleum	OAS	SEE FINAL SUPPLEMENT																	
1241	514	Occidental Petroleum	OXY	12.59	5	4	4	1.20	65- 100 (415-695%)	15.4	3.5	.82	.44	92	12/31	d.30	1.22	6/30	.79	.78	YES
1423	2427	Oceaneering Int'l	OII	3.20	–	3	–	1.75	▼ 13- 19 (305-495%)	NMF	NIL	▼d.97	NIL	95	12/31	.03	d.71	3/31	NIL	NIL	YES
	1418	Office Depot (NDQ)	ODP	1.87	4	5	2	1.45	4- 7 (115-275%)	4.6	5.3	.41	.10	70	12/31	.12	.09	3/31	.025	.025	YES
1423	2428	Oil States Int'l	OIS	2.39	–	5	–	1.70	▼ 11- 20 (360-735%)	NMF	NIL	▼d1.17	NIL	95	12/31	d.16	d.19	3/31	NIL	NIL	YES
	2599	Okta, Inc. (NDQ)	OKTA	152.60	3	3	3	.95	105- 150 (N- N%)	NMF	NIL	d.24	NIL	12	1/31	d.01	d.04	3/31	NIL	NIL	YES
	324	Old Dominion Freight (NDQ)	ODFL	129.89	3	2	1	1.15	100- 140 (N- 10%)	25.1	0.5	5.17	.63	64	12/31	1.20	1.30	3/31	▲.153	.113	YES
	785	Old Nat'l Bancorp (NDQ)	ONB	13.37	3	3	3	1.05	20- 35 (50-160%)	9.3	4.2	1.44	.56	75	3/31	◆.13	.32	3/31	▲.14	.13	YES
	769	Old Republic	ORI	15.69	2	3	4	.90	40- 60 (155-280%)	9.2	5.4	1.70	.84	5	12/31	.47	.45	3/31	▲.21	.20	YES
	1607	Olin Corp.	OLN	13.19	▲4	3	4	1.45	19- 30 (45-125%)	NMF	6.1	d.18	.80	65	12/31	d.08	.37	3/31	.20	.20	YES
	2148	Ollie's Bargain Outlet (NDQ)	OLLI	59.01	3	3	5	1.30	75- 110 (25- 85%)	41.0	NIL	1.44	NIL	49	1/31	.74	.71	3/31	NIL	NIL	YES
	225	Omnicell, Inc. (NDQ)	OMCL	72.52	2	3	2	1.00	100- 150 (40-105%)	25.4	NIL	2.86	NIL	8	12/31	.51	.70	3/31	NIL	NIL	YES
	2395	Omnicom Group	OMC	53.92	1	2	3	.95	110- 150 (105-180%)	9.7	4.8	▼5.54	2.60	36	12/31	1.89	1.77	6/30	.65	.65	YES
235	1372	ON Semiconductor (NDQ)	ON	13.36	4	3	4	1.60	30- 50 (125-275%)	11.1	NIL	1.20	NIL	40	12/31	.30	.53	3/31	NIL	NIL	YES
	553	ONE Gas, Inc.	OGS	83.99	3	2	4	.60	105- 145 (25- 75%)	22.9	2.6	3.66	2.20	58	12/31	.96	.84	3/31	▲.54	.50	YES
	2651	1-800-FLOWERS.COM (NDQ)	FLWS	14.92	▲2	4	3	1.20	18- 30 (20-100%)	24.9	NIL	.60	NIL	50	12/31	1.12	1.04	3/31	NIL	NIL	YES
	615	ONEOK Inc.	OKE	28.21	▼5	3	4	1.45	95- 140 (235-395%)	7.9	13.8	3.55	3.90	87	12/31	.77	.70	6/30	◆.935	.865	YES
	930	Ooma, Inc.	OOMA	11.57	3	4	4	1.00	12- 18 (5- 55%)	NMF	NIL	d.53	NIL	29	1/31	d.11	d.17	3/31	NIL	NIL	YES
	1828	Open Text Corp. (NDQ)	OTEX	38.58	2	3	2	.95	45- 70 (15- 80%)	29.0	1.9	1.33	.73	43	12/31	.40	.39	3/31	.175	.152	YES
	1632	Opko Health (NDQ)	OPK	1.98	4	5	3	1.65	2- 4 (N-100%)	NMF	NIL	d.18	NIL	22	12/31	d.18	d.13	3/31	NIL	NIL	YES
1424	2600	Oracle Corp.	ORCL	53.91	2	1	5	1.00	70- 90 (30- 65%)	13.4	1.8	4.01	.96	12	2/28	.97	.87	6/30	.24	.24	YES
	2130	O'Reilly Automotive (NDQ)	ORLY	373.66	2	3	4	.90	415- 625 (10- 65%)	22.1	NIL	16.90	NIL	35	12/31	4.25	3.72	3/31	NIL	NIL	YES
	1219	Ormat Technologies	ORA	59.17	3	3	1	.80	70- 100 (20- 70%)	37.2	0.7	1.59	.44	55	12/31	.24	.36	3/31	.11	.11	YES
	162	Oshkosh Corp.	OSK	65.00	3	3	3	1.30	110- 165 (70-155%)	8.5	1.8	7.65	1.20	59	12/31	1.10	1.61	3/31	.30	.27	YES
	914	Otter Tail Corp. (NDQ)	OTTR	43.93	3	2	4	.70	45- 60 (N- 35%)	19.4	3.4	2.26	1.50	11	12/31	.51	.35	3/31	▲.37	.35	YES
	2396	OUTFRONT Media	OUT	12.20	4	4	3	1.05	35- 50 (185-310%)	23.9	12.5	▼.51	1.52	36	12/31	.31	.40	3/31	▲.38	.36	YES
	540	Ovintiv Inc.	OVV	3.74	5	4	3	1.90	45- 75 (NMF)	1.3	10.2	2.86	.38	93	12/31	.81	1.60	3/31	.094	.094	YES
	1116	Owens Corning	OC	37.67	3	3	3	1.10	80- 120 (110-220%)	10.9	2.5	3.46	.96	44	12/31	.66	1.55	6/30	.24	.22	YES
	2111	Oxford Inds.	OXM	38.26	4	3	3	1.15	85- 125 (120-225%)	33.6	2.6	1.14	1.00	86	1/31	1.09	1.08	6/30	▼.25	.37	YES
	515	**PBF Energy**	PBF	7.16	▼3	3	3	1.50	75- 110 (NMF)	2.1	NIL	3.44	NIL	92	12/31	.44	d2.97	6/30	▼NIL	.30	YES
230	2181	PC Connection (NDQ)	CNXN	39.97	2	3	2	1.00	45- 65 (15- 65%)	19.7	NIL	2.03	NIL	76	12/31	.83	.80	3/31	NIL	NIL	YES
	541	PDC Energy (NDQ)	PDCE	8.51	5	4	4	1.60	50- 85 (490-900%)	2.6	NIL	3.23	NIL	93	12/31	d.34	2.71	3/31	NIL	NIL	YES
	1633	PDL BioPharma (NDQ)	PDLI	3.11	–	4	–	1.05	4- 6 (30- 95%)	NMF	NIL	d.39	NIL	22	12/31	d.44	.10	3/31	NIL	NIL	YES
	2521	PNC Financial Serv.	PNC	102.55	3	2	3	1.10	165- 220 (60-115%)	8.6	4.5	11.87	4.60	52	3/31	◆1.95	2.61	6/30	1.15	.95	YES
	2222	PNM Resources	PNM	40.63	3	3	3	.50	33- 55 (N- 35%)	21.4	3.1	1.90	1.26	25	3/31	d.19	.23	6/30	.308	.29	YES
	2443	PPG Inds.	PPG	91.10	1	1	3	1.10	120- 150 (30- 65%)	25.2	2.2	▼3.62	2.04	57	12/31	1.22	1.08	6/30	◆.51	.48	YES
	144	PPL Corp.	PPL	25.25	3	2	3	.65	35- 45 (40- 80%)	10.3	6.6	2.46	1.66	13	12/31	.48	.57	6/30	▲.415	.412	YES
	584	PQ Group Holdings	PQG	9.98	4	3	3	1.20	20- 30 (100-200%)	20.0	NIL	.50	NIL	77	12/31	.14	.21	3/31	NIL	NIL	YES
	809	PRA Health Sciences (NDQ)	PRAH	89.24	3	3	4	1.15	140- 210 (55-135%)	15.9	NIL	5.62	NIL	15	12/31	1.54	1.31	3/31	NIL	NIL	YES
	2601	PTC Inc. (NDQ)	PTC	66.99	3	3	4	1.10	65- 95 (N- 40%)	67.0	NIL	1.00	NIL	12	12/31	.31	.18	3/31	NIL	NIL	YES
	2112	PVH Corp.	PVH	40.88	▼5	3	3	1.30	150- 225 (265-450%)	29.6	NIL	1.38	NIL	86	1/31	1.88	1.84	6/30	▼NIL	.038	YES
	163	PACCAR Inc. (NDQ)	PCAR	67.20	3	2	4	1.20	90- 125 (35- 85%)	11.9	4.2	5.63	2.80	59	3/31	◆1.03	1.81	6/30	◆.32	.32	YES
	1179	Packaging Corp.	PKG	86.12	3	3	4	1.20	135- 200 (55-130%)	14.6	3.9	5.90	3.40	62	12/31	1.44	2.16	6/30	.79	.79	YES
849	2602	Palo Alto Networks	PANW	194.29	▲3	3	5	1.15	320- 485 (65-150%)	NMF	NIL	d.80	NIL	12	1/31	d.03	d.03	3/31	NIL	NIL	YES
	1575	Pan Amer. Silver (NDQ)	PAAS	19.83	2	4	2	.85	25- 40 (25-100%)	22.0	1.0	.90	.20	1	12/31	.33	d.01	3/31	▲.05	.035	YES
235	1986	Panasonic Corp.(g) (PNK)	PCRFY	7.09	3	3	3	1.20	18- 25 (155-255%)	8.1	3.9	.88	.28	46	12/31	.30	.24	3/31	NIL	NIL	
	364	Papa John's Int'l (NDQ)	PZZA	67.49	2	3	3	.85	55- 85 (N- 25%)	42.2	1.3	1.60	.90	68	12/31	.37	.15	3/31	.225	.225	YES
	516	Par Pacific Holdings	PARR	6.51	2	3	3	1.00	40- 60 (515-820%)	4.3	NIL	1.51	NIL	92	12/31	.68	.30	3/31	NIL	NIL	YES
1239	542	Paramount Resources (TSE)	POU.TO	1.30	–	4	–	2.25	18- 30 (NMF)	NMF	NIL	d.76	NIL	93	12/31	d.24	d1.31	3/31	NIL	NIL	YES
	1537	Park Hotels & Resorts	PK	7.72	3	4	3	1.05	40- 70 (420-805%)	5.5	NIL	1.41	NIL	51	12/31	.51	.27	9/30	▼NIL	.45	YES
	786	Park National (ASE)	PRK	73.30	3	2	3	1.00	110- 150 (50-105%)	11.0	5.6	6.68	4.08	75	12/31	1.45	1.67	3/31	▲1.02	1.01	YES
	1767	Park-Ohio (NDQ)	PKOH	15.06	4	3	3	1.70	60- 85 (300-465%)	5.2	3.3	2.90	.50	69	12/31	.65	1.19	3/31	.125	.125	YES
	1768	Parker-Hannifin	PH	134.37	3	2	3	1.35	235- 315 (75-135%)	14.6	2.6	9.19	3.52	69	12/31	2.54	2.51	3/31	.88	.76	YES
	2412	Parsley Energy	PE	6.64	5	3	3	1.60	▼ 12- 18 (80-170%)	NMF	3.0	▼d.93	.20	94	12/31	d.12	.24	3/31	▲.05	NIL	YES
	720	Parsons Corp.	PSN	35.98	–	3	–	NMF	40- 55 (10- 55%)	25.0	NIL	1.44	NIL	53	12/31	.14	NA	3/31	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 9-30-20, 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 rank 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	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 9-30-20	(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?
	1220	Pattern Energy Group		PEGI					SEE FINAL REPORT														
	226	Patterson Cos.	(NDQ)	PDCO	15.52	2	3	3	1.10	35- 50	(125-220%)	10.9	6.7	1.43	1.04	8	1/31	.47	.33	6/30	.26	.26	YES
1423	2429	Patterson-UTI Energy	(NDQ)	PTEN	2.07	–	5	–	1.80 ▼	7- 13	(240-530%)	NMF	7.7	▼d2.09	.16	95	12/31	d.44	d.04	3/31	.04	.04	YES
	2631	Paychex, Inc.	(NDQ)	PAYX	66.46	2	1	3	1.00	105- 125	(60- 90%)	20.6	4.1	3.22	2.72	4	2/28	.98	.90	3/31	.62	.56	YES
	2603	Paycom Software		PAYC	222.36	3	3	1	1.25	205- 305	(N- 35%)	56.2	NIL	3.96	NIL	12	12/31	.86	.61	3/31	NIL	NIL	YES
	1829	Paylocity Holding	(NDQ)	PCTY	92.72	3	3	1	1.20	95- 145	(N- 55%)	74.2	NIL	1.25	NIL	43	12/31	.10	.10	3/31	NIL	NIL	YES
	2572	PayPal Holdings	(NDQ)	PYPL	112.17	3	3	3	1.15	105- 155	(N- 40%)	46.9	NIL	2.39	NIL	24	12/31	.43	.49	3/31	NIL	NIL	YES
1239	1591	Peabody Energy		BTU	3.48	–	4	–	1.15	9- 15	(160-330%)	NMF	NIL	d4.02	NIL	89	12/31	d3.12	1.97	3/31	▼NIL	.13	YES
236	2315	Peloton Interactive	(NDQ)	PTON	31.07	–	3	–	NMF ▲	60- 90	(95-190%)	NMF	NIL	d1.05	NIL	73	12/31	d.20	NA	3/31	NIL	NIL	YES
	616	Pembina Pipeline	(TSE)	PPL.TO	27.55b	4	3	4	1.00	65- 100	(135-265%)	10.2	9.1	2.71	2.52	87	12/31	.21(b)	.66(b)	3/31	.62(b)	.57(b)	
	2367	Penn Nat'l Gaming	(NDQ)	PENN	13.87	3	3	3	1.35 ▼	30- 45	(115-225%)	NMF	NIL	▼d.35	NIL	81	12/31	.70	d.37	3/31	NIL	NIL	YES
2668	1538	Penn. R.E.I.T.		PEI					SEE LATEST REPORT														
	2131	Penske Auto		PAG	30.16	3	3	3	1.20	55- 85	(80-180%)	6.6	5.6	4.60	1.68	35	12/31	1.25	1.15	3/31	▲.42	.38	YES
	1769	Pentair plc		PNR	31.36	–	3	–	NMF	55- 85	(75-170%)	12.9	2.4	2.43	.76	69	12/31	.68	.60	6/30	.19	.18	YES
	189	Penumbra Inc.		PEN	181.07	2	3	2	1.20	165- 245	(N- 35%)	NMF	NIL	1.27	NIL	19	12/31	.22	.13	3/31	NIL	NIL	YES
	1507	People's United Fin'l	(NDQ)	PBCT	11.47	▲1	3	2	1.10	19- 25	(65-120%)	9.0	6.3	1.28	.72	27	12/31	.31	.35	3/31	.178	.175	YES
	1980	PepsiCo, Inc.	(NDQ)	PEP	134.55	3	1	2	.75	140- 175	(5- 30%)	23.4	3.0	5.75	4.09	34	12/31	1.45	1.49	3/31	.955	1.855	YES
	2003	Perdoceo Education	(NDQ)	PRDO	11.93	3	4	5	1.10	25- 40	(110-235%)	8.6	NIL	1.38	NIL	33	12/31	.33	.30	3/31	NIL	NIL	YES
	1956	Performance Food		PFGC	24.13	▼3	3	3	.90	35- 55	(45-130%)	18.7	NIL	1.29	NIL	9	12/31	.58	.46	3/31	NIL	NIL	YES
	129	PerkinElmer Inc.		PKI	84.52	2	3	4	1.15	105- 160	(25- 90%)	19.2	0.3	4.40	.28	20	12/31	1.35	1.18	6/30	.07	.07	YES
	1634	Perrigo Co. plc		PRGO	50.86	2	3	5	1.25	80- 120	(55-135%)	12.5	1.8	4.06	.93	22	12/31	1.06	.97	3/31	▲.225	.19	YES
	971	PetMed Express	(NDQ)	PETS	32.27	3	3	2	.85	30- 45	(N- 40%)	22.1	3.5	1.46	1.12	45	12/31	.34	.38	3/31	.27	.27	YES
	517	Petroleo Brasileiro ADR		PBR	6.27	5	5	3	1.75	20- 35	(220-460%)	4.1	NIL	1.53	NIL	92	12/31	.30	.08	3/31	NIL	NIL	YES
2668	1635	Pfizer, Inc.		PFE	36.08	–	1	–	.95	45- 60	(25- 65%)	16.0	4.2	2.26	1.52	22	12/31	d.06	d.07	3/31	▲.38	.36	YES
	1931	Phibro Animal Health	(NDQ)	PAHC	23.90	4	3	5	.70	40- 60	(65-150%)	26.6	2.0	.90	.48	39	12/31	.29	.36	3/31	.12	.12	YES
	1987	Philips Electronics NV(g)		PHG	42.83	3	3	3	1.10	50- 75	(15- 75%)	30.0	2.3	1.43	.97	46	3/31	◆.04	.21	3/31	NIL	NIL	YES
	1993	Philip Morris Int'l		PM	76.86	▲2	3	4	.85	90- 130	(15- 70%)	14.7	6.1	5.22	4.68	72	3/31	◆1.21	1.09	6/30	1.17	1.14	YES
	518	Phillips 66		PSX	58.12	4	2	4	1.25	130- 175	(125-200%)	7.1	6.9	8.14	4.00	92	12/31	1.64	4.82	3/31	.90	.80	YES
	632	Phillips 66 Partners		PSXP	40.75	2	3	4	.95	75- 110	(85-170%)	9.3	8.6	4.36	3.50	84	12/31	1.06	1.09	3/31	▲.875	.835	YES
	1395	Photronics Inc.	(NDQ)	PLAB	11.06	2	3	2	.80	19- 30	(70-170%)	14.7	NIL	.75	NIL	38	1/31	.16	.08	3/31	NIL	NIL	YES
	1932	Pilgrim's Pride Corp.	(NDQ)	PPC	18.93	2	3	5	.85	35- 55	(85-190%)	10.1	NIL	1.87	NIL	39	12/31	.37	d.03	3/31	NIL	NIL	YES
	2223	Pinnacle West Capital		PNW	76.60	3	1	3	.45	95- 115	(25- 50%)	15.3	4.2	5.02	3.22	25	12/31	.57	.23	3/31	.783	.737	YES
453	2652	Pinterest, Inc.		PINS	17.43	–	4	–	NMF	20- 35	(15-100%)	NMF	NIL	d1.15	NIL	50	12/31	d.06	NA	3/31	NIL	NIL	YES
	2413	Pioneer Natural Res.		PXD	71.28	2	3	3	1.45 ▼	185- 280	(160-295%)	14.7	3.1	▼4.86	2.20	94	12/31	2.36	1.18	6/30	▲.55	.32	YES
	1810	Piper Sandler Cos.		PIPR	52.12	3	3	5	1.15	85- 130	(65-150%)	7.1	5.1	7.39	2.65	6	12/31	2.89	1.99	3/31	1.125	1.385	YES
	1419	Pitney Bowes		PBI	2.23	–	4	–	1.35	7- 12	(215-440%)	3.7	9.0	.61	.20	70	12/31	.14	.38	3/31	.05	.05	YES
	633	Plains All Amer. Pipe.		PAA	7.12	5	3	4	1.45	40- 60	(460-745%)	4.2	20.2	1.70	1.44-.50	84	12/31	.35	1.38	3/31	.36	.30	YES
	634	Plains GP Holdings L.P.		PAGP	7.36	5	4	4	1.50	25- 45	(240-510%)	4.9	19.6	1.51	1.44-1.05	84	12/31	.26	1.12	3/31	.36	.30	YES
	2316	Planet Fitness		PLNT	56.10	3	3	3	1.00	95- 145	(70-160%)	44.9	NIL	▼1.25	NIL	73	12/31	.44	.34	3/31	NIL	NIL	YES
235	1338	Plantronics Inc.		PLT	11.46	5	4	4	1.15	40- 65	(250-465%)	14.5	NIL	.79	NIL	61	12/31	.30	1.36	6/30	▼NIL	.15	YES
	1339	Plexus Corp.	(NDQ)	PLXS	56.87	2	3	2	1.05	70- 105	(25- 85%)	15.2	NIL	3.75	NIL	61	12/31	1.00	.91	3/31	NIL	NIL	YES
	2317	Polaris Inc.		PII	59.05	3	3	3	1.35	150- 220	(155-275%)	16.5	4.2	▼3.58	2.48	73	12/31	1.83	1.83	3/31	▲.62	.61	YES
	585	PolyOne Corp.		POL	19.52	–	3	–	1.40	35- 55	(80-180%)	12.3	4.1	1.59	.81	77	3/31	◆.48	.64	6/30	.203	.195	YES
	2318	Pool Corp.	(NDQ)	POOL	191.60	1	2	1	.90	160- 220	(N- 15%)	48.8	1.1	▼3.93	2.20	73	12/31	.43	.41	3/31	.55	.45	YES
	2522	Popular Inc.	(NDQ)	BPOP	34.61	3	3	4	1.20	80- 120	(130-245%)	4.9	4.6	7.02	1.60	52	12/31	1.72	1.05	6/30	▲.40	.30	YES
	2224	Portland General		POR	47.95	1	2	1	.55	45- 60	(N- 25%)	19.3	3.4	2.48	1.64	25	12/31	.68	.55	6/30	.385	.363	YES
2229	745	POSCO ADR(g)		PKX	34.88	4	3	4	1.30	70- 105	(100-200%)	8.0	6.7	4.38	2.35	83	12/31	1.38(p)	.59(p)	3/31	NIL	NIL	YES
	1933	Post Holdings		POST	92.22	3	3	4	1.05	130- 190	(40-105%)	18.8	NIL	4.90	NIL	39	12/31	.76	1.11	3/31	NIL	NIL	YES
	1165	PotlatchDeltic Corp.	(NDQ)	PCH	31.48	4	3	4	1.20	45- 65	(45-105%)	34.2	5.1	.92	1.60	79	12/31	.17	.03	3/31	.40	.40	YES
	640	Power Financial		PWF.TO					SEE FINAL SUPPLEMENT														
	1373	Power Integrations	(NDQ)	POWI	94.39	3	3	1	1.15	85- 125	(N- 30%)	42.7	0.8	2.21	.76	40	12/31	.50	.77	3/31	.19	.17	YES
	823	Premier, Inc.	(NDQ)	PINC	33.06	3	3	3	.90	45- 65	(35- 95%)	11.4	NIL	2.89	NIL	18	12/31	.74	.66	3/31	NIL	NIL	YES
453	1576	Pretium Resources		PVG	7.96	3	5	5	.50	17- 30	(115-275%)	14.2	NIL	.56	NIL	1	12/31	.18	.11	3/31	NIL	NIL	YES
	2573	Price (T. Rowe) Group	(NDQ)	TROW	101.15	1	1	1	1.15	165- 200	(65-100%)	11.3	3.6	8.96	3.60	24	12/31	2.24	1.36	3/31	▲.90	.76	YES
	2149	PriceSmart	(NDQ)	PSMT	61.54	2	3	5	.95	85- 125	(40-105%)	21.6	1.1	2.85	.70	49	2/28	.85	.79	9/30	.35	.35	YES
	1563	Primerica, Inc.		PRI	96.31	2	3	3	1.15	135- 200	(40-110%)	11.0	1.7	8.79	1.60	48	12/31	2.24	1.99	3/31	▲.40	.34	YES
	1034	Primo Water Corp		PRMW.D					SEE FINAL SUPPLEMENT														
	1981	Primo Water Corp.		PRMW	9.64	2	3	4	.95	7- 11	(N- 15%)	68.9	2.5	.14	.24	34	12/31	.05	.03	3/31	.06	.06	YES
	1233	Primoris Services	(NDQ)	PRIM	14.18	4	3	4	1.30	35- 55	(145-290%)	7.7	1.7	1.83	.24	66	12/31	.53	.63	6/30	.06	.06	YES
	2574	Principal Fin'l Group	(NDQ)	PFG	29.79	3	3	3	1.35	60- 90	(100-200%)	4.8	7.5	6.17	2.24	24	12/31	1.41	1.11	3/31	▲.56	.54	YES
★★	1193	Procter & Gamble		PG	120.60	1	1	3	.65	110- 135	(N- 10%)	24.2	2.6	4.98	3.16	10	3/31	◆1.17	1.06	6/30	▲.791	.746	YES
	770	Progressive Corp.		PGR	81.94	2	2	2	.85	95- 130	(15- 60%)	15.6	0.5	5.26	.40	5	3/31	◆1.92	1.27	6/30	.10	.10	YES
	1539	Prologis		PLD	88.50	3	2	3	1.00	85- 115	(N- 30%)	39.7	2.7	2.23	2.36	51	3/31	◆.70	.55	3/31	▲.58	.53	YES
1423	2430	ProPetro Holding		PUMP	3.27	–	4	–	1.75 ▼	11- 20	(235-510%)	4.8	NIL	▼.68	NIL	95	12/31	.23	.59	3/31	NIL	NIL	YES
	1508	Provident Fin'l Svcs.		PFS	13.17	4	3	3	.85	25- 35	(90-165%)	8.2	7.0	1.61	.92	27	12/31	.40	.55	3/31	.23	.23	YES
	1564	Prudential Fin'l		PRU	54.25	4	3	3	1.40	135- 200	(150-270%)	4.8	8.1	11.33	4.40	48	12/31	2.33	2.44	3/31	▲1.10	1.00	YES
	145	Public Serv. Enterprise		PEG	51.84	2	1	5	.60	55- 70	(5- 35%)	15.4	3.8	3.36	1.96	13	12/31	.86	.32	3/31	.49	.47	YES
	1540	Public Storage		PSA	193.32	3	1	4	.60	230- 285	(20- 45%)	25.9	4.1	7.47	8.00	51	12/31	1.87	3.04	3/31	2.00	2.00	YES
	1132	PulteGroup, Inc.		PHM	24.31	2	3	1	1.05	40- 65	(65-165%)	5.9	2.1	4.14	.50	17	12/31	1.22	.84	6/30	.12	.11	YES
	1407	Pure Storage		PSTG	12.86	3	4	3	1.30	25- 45	(95-250%)	NMF	NIL	d.02	NIL	56	1/31	d.02	d.11	3/31	NIL	NIL	YES
1239	543	**QEP Resources**		QEP	0.30	–	5	–	2.10	14- 25	(NMF)	0.6	NIL	.52	NIL	93	12/31	d.10	d.13	6/30	▼NIL	NIL	YES
1040	839	QIAGEN N.V.	(NDQ)	QGEN	40.68	–	3	–	1.10	45- 65	(10- 60%)	50.2	NIL	.81	NIL	21	12/31	.19	.26	3/31	NIL	NIL	YES
	1374	Qorvo Inc.	(NDQ)	QRVO	84.77	2	3	1	1.15	95- 140	(10- 65%)	30.6	NIL	2.77	NIL	40	12/31	1.00	.55	3/31	NIL	NIL	YES
646	2379	Quad/Graphics Inc.		QUAD	2.34	–	5	–	1.25 ▼	5- 8	(115-240%)	NMF	NIL	▼d.42	NIL	91	12/31	.38	.53	6/30	▼NIL	.30	YES
	586	Quaker Chemical		KWR	124.99	2	3	3	1.25	200- 295	(60-135%)	19.3	1.2	6.47	1.54	77	12/31	1.34	1.51	6/30	.385	.37	YES
	963	Qualcomm Inc.	(NDQ)	QCOM	74.31	3	3	2	1.15	100- 150	(35-100%)	17.5	3.5	4.25	2.60	42	12/31	.99	1.20	6/30	▲.65	.62	YES
	1117	Quanex Bldg. Prod.		NX	10.37	4	3	3	1.25	20- 35	(95-240%)	9.4	3.1	1.10	.32	44	1/31	.04	d.07	3/31	.08	.08	YES
	1234	Quanta Services		PWR	33.64	3	3	3	1.35	70- 100	(110-195%)	9.0	0.6	3.73	.20	66	12/31	.93	.96	6/30	.05	.04	YES
	810	Quest Diagnostics		DGX	95.03	2	2	2	.95	120- 165	(25- 75%)	14.2	2.4	6.67	2.24	15	12/31	1.67	1.36	6/30	▲.56	.53	YES
	2182	Qurate Retail	(NDQ)	QRTEA	7.61	5	3	5	1.10	19- 30	(150-295%)	8.7	NIL	.87	NIL	76	12/31	.34	.61	3/31	NIL	NIL	YES
	1724	**RBC Bearings**	(NDQ)	ROLL	121.17	3	3	3	1.05	140- 210	(15- 75%)	23.9	NIL	5.07	NIL	31	12/31	1.24	1.15	3/31	NIL	NIL	YES
	1157	RH		RH	124.51	3	4	2	1.20	270- 450	(115-260%)	9.5	NIL	13.16	NIL	54	1/31	3.72	3.00	3/31	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	Exch.	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 9-30-20	(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?
	771	RLI Corp.		RLI	**82.66**	**▼3**	**3**	**2**	.85	75- 115	(N- 40%)	**32.7**	**1.1**	2.53	.92	**5**	3/31	**◆.66**	.71	3/31	.23	.22	YES
1423	**2431**	RPC Inc.		RES	**2.27**	**–**	**4**	**–**	1.45	▼ 5- 8	(120-250%)	**NMF**	**NIL**	▼d.57	NIL	**95**	12/31	**d.07**	.06	3/31	NIL	.10	YES
	587	RPM Int'l		RPM	**64.37**	**2**	**3**	**2**	1.10	80- 120	(25- 85%)	**20.2**	**2.2**	3.18	1.44	**77**	2/28	**.09**	.14	6/30	.36	.35	YES
	2113	Ralph Lauren		RL	**69.58**	**2**	**3**	**3**	1.25	135- 205	(95-195%)	**18.7**	**4.0**	3.73	2.75	**86**	12/31	**2.86**	2.32	6/30	.688	.625	YES
	1375	Rambus Inc.	(NDQ)	RMBS	**12.08**	**2**	**3**	**2**	1.15	17- 25	(40-105%)	**12.3**	**NIL**	.98	NIL	**40**	12/31	**.28**	.28	3/31	NIL	NIL	YES
	2414	Range Resources		RRC	**5.14**	**5**	**4**	**5**	1.65	10- 16	(95-210%)	**NMF**	**NIL**	▼d.22	NIL	**94**	12/31	**.08**	.21	3/31	▼NIL	.02	YES
	635	Rattler Midstream LP	(NDQ)	RTLR	**5.33**	**–**	**3**	**–**	NMF	25- 35	(370-555%)	**4.2**	**21.8**	1.26	1.16-.85	**84**	12/31	**.27**	NA	3/31	.29	NIL	YES
	1770	Raven Inds.	(NDQ)	RAVN	**20.91**	**4**	**3**	**3**	1.30	40- 60	(90-185%)	**47.5**	**2.5**	.44	.52	**69**	1/31	**.09**	.08	6/30	.13	.13	YES
	1811	Raymond James Fin'l		RJF	**62.36**	**2**	**3**	**3**	1.25	110- 165	(75-165%)	**9.2**	**2.4**	6.80	1.50	**6**	12/31	**1.89**	1.79	3/31	.37	.34	YES
	588	Rayonier Advanced Mat.		RYAM	**1.02**	**–**	**5**	**–**	2.30	7- 13	(NMF)	**NMF**	**NIL**	d.52	NIL	**77**	12/31	**d.91**	.19	3/31	NIL	.07	YES
	1166	Rayonier Inc.		RYN	**23.23**	**2**	**3**	**4**	1.00	25- 35	(10- 50%)	**50.5**	**4.6**	.46	1.08	**79**	12/31	**.12**	.02	3/31	.27	.27	YES
1845	721	Raytheon Co.		RTN					SEE FINAL SUPPLEMENT														
2670	**1780**	Raytheon Technologies		RTX	**64.98**	**–**	**1**	**–**	1.05	90- 110	(40- 70%)	**10.8**	**4.5**	6.00	2.94	**69**	12/31	**1.94**	1.95	3/31	.735	.735	YES
1655	**1771**	Realogy Holdings		RLGY	**3.50**	**–**	**4**	**–**	1.15	14- 25	(300-615%)	**23.3**	**NIL**	.15	NIL	**69**	12/31	**.15**	d.19	3/31	NIL	.09	YES
	2205	RealReal (The)	(NDQ)	REAL	**9.88**	**–**	**4**	**–**	NMF	17- 25	(70-155%)	**NMF**	**NIL**	d1.20	NIL	**63**	12/31	**d.25**	NA	3/31	NIL	NIL	YES
	1541	Realty Income Corp.		O	**50.87**	**3**	**2**	**2**	.65	75- 105	(45-105%)	**34.6**	**5.6**	1.47	2.83	**51**	12/31	**.39**	.29	3/31	▲.693	.672	YES
	365	Red Robin Gourmet	(NDQ)	RRGB	**11.30**	**5**	**3**	**3**	1.05	50- 80	(340-610%)	**17.4**	**NIL**	.65	NIL	**68**	12/31	**d.36**	.43	3/31	NIL	NIL	YES
	2368	Red Rock Resorts	(NDQ)	RRR	**9.46**	**4**	**3**	**4**	1.50	▼ 20- 30	(110-215%)	**NMF**	**4.2**	▼d.12	.40	**81**	12/31	**.18**	.30	3/31	.10	.10	YES
	1725	Regal Beloit		RBC	**63.82**	**3**	**3**	**3**	1.30	85- 125	(35- 95%)	**14.7**	**1.9**	4.35	1.20	**31**	12/31	**1.25**	1.41	6/30	.30	.28	YES
	1542	Regency Centers Corp.		REG	**37.19**	**4**	**3**	**3**	.80	55- 85	(50-130%)	**27.8**	**6.4**	1.34	2.38	**51**	12/31	**.24**	.46	3/31	▲.595	.585	YES
	840	Regeneron Pharmac.	(NDQ)	REGN	**567.99**	**3**	**3**	**2**	1.10	530- 800	(N- 40%)	**25.3**	**NIL**	22.43	NIL	**21**	12/31	**6.93**	7.15	3/31	NIL	NIL	YES
	2523	Regions Financial		RF	**9.40**	**4**	**3**	**4**	1.35	20- 30	(115-220%)	**6.0**	**6.8**	1.56	.64	**52**	3/31	**◆.14**	.37	6/30	.155	.14	YES
2030	**1013**	Regis Corp.		RGS	**8.42**	**–**	**3**	**–**	1.05	18- 30	(115-255%)	**13.4**	**NIL**	.63	NIL	**71**	12/31	**.13**	.18	3/31	NIL	NIL	YES
	1565	Reinsurance Group		RGA	**98.23**	**4**	**2**	**4**	1.00	95- 130	(N- 30%)	**7.1**	**3.2**	13.82	3.10	**48**	12/31	**3.43**	3.46	3/31	.70	.60	YES
	746	Reliance Steel		RS	**85.04**	**3**	**3**	**1**	1.25	130- 195	(55-130%)	**8.5**	**2.9**	10.04	2.50	**83**	12/31	**2.44**	1.22	3/31	▲.625	.55	YES
	2025	RenaissanceRe Hldgs.		RNR	**153.46**	**2**	**2**	**2**	.75	160- 215	(5- 40%)	**13.9**	**0.9**	11.07	1.40	**60**	12/31	**.52**	.02	3/31	▲.35	.34	YES
	2150	Rent-A-Center	(NDQ)	RCII	**17.43**	**3**	**4**	**3**	1.00	30- 55	(70-215%)	**8.0**	**6.7**	2.18	1.16	**49**	12/31	**.58**	.35	3/31	▲.29	NIL	YES
	410	Republic Services		RSG	**78.29**	**1**	**2**	**1**	.75	95- 125	(20- 60%)	**21.5**	**2.1**	3.64	1.68	**3**	12/31	**.91**	.80	6/30	.405	.375	YES
	1340	Resideo Technologies		REZI	**4.38**	**–**	**3**	**–**	NMF	14- 20	(220-355%)	**8.8**	**NIL**	.50	NIL	**61**	12/31	**d.07**	.13	3/31	NIL	NIL	YES
	227	ResMed Inc.		RMD	**164.28**	**▼2**	**3**	**3**	.85	110- 165	(N- N%)	**39.1**	**0.9**	4.20	1.56	**8**	12/31	**1.10**	.86	3/31	.39	.37	YES
	397	Resources Connection	(NDQ)	RGP	**10.46**	**4**	**3**	**3**	1.15	30- 40	(185-280%)	**9.1**	**5.4**	1.15	.56	**32**	2/28	**.21**	.18	6/30	◆.14	.13	YES
	366	Restaurant Brands Int'l		QSR	**44.08**	**3**	**3**	**4**	.95	100- 155	(125-250%)	**14.4**	**4.7**	3.07	2.08	**68**	12/31	**.75**	.68	6/30	▲.52	.50	YES
	1014	Revlon Inc.		REV	**10.33**	**–**	**4**	**–**	.90	17- 30	(65-190%)	**NMF**	**NIL**	d2.45	NIL	**71**	12/31	**.44**	d.86	3/31	NIL	NIL	YES
	2206	Revolve Group		RVLV	**11.94**	**–**	**3**	**–**	NMF	20- 30	(70-150%)	**33.2**	**NIL**	.36	NIL	**63**	12/31	**.12**	NA	3/31	NIL	NIL	YES
	1726	Rexnord Corp.		RXN	**24.67**	**3**	**3**	**3**	1.40	50- 75	(105-205%)	**15.9**	**1.3**	1.55	.32	**31**	12/31	**.39**	.43	3/31	▲.08	NIL	YES
	964	Ribbon Communications	(NDQ)	RBBN	**2.94**	**–**	**5**	**–**	1.10	4- 8	(35-170%)	**NMF**	**NIL**	d1.66	NIL	**42**	12/31	**d1.36**	d.02	3/31	NIL	NIL	YES
	2604	RingCentral, Inc.		RNG	**253.11**	**2**	**3**	**2**	1.20	190- 280	(N- 10%)	**NMF**	**NIL**	.85	NIL	**12**	12/31	**.22**	d.07	3/31	NIL	NIL	YES
	1592	Rio Tinto plc		RIO	**46.40**	**3**	**3**	**5**	1.30	65- 95	(40-105%)	**7.2**	**7.3**	6.44	3.40	**89**	12/31	**3.34(p)**	2.58(p)	6/30	2.31	1.80	YES
	398	Ritchie Brothers		RBA	**41.18**	**3**	**3**	**3**	.85	45- 70	(10- 70%)	**28.2**	**1.9**	1.46	.80	**32**	12/31	**.47**	.32	3/31	.20	.18	YES
★★	**972**	Rite Aid Corp.		RAD	**13.93**	**3**	**5**	**3**	1.30	11- 20	(N- 45%)	**33.2**	**NIL**	.42	NIL	**45**	2/28	**◆d.37**	d.25	3/31	NIL	NIL	YES
	1652	Robert Half Int'l		RHI	**41.19**	**3**	**3**	**3**	1.25	75- 105	(80-155%)	**10.9**	**3.4**	3.78	1.38	**88**	12/31	**.98**	.95	3/31	▲.34	.31	YES
	1313	Rockwell Automation		ROK	**168.54**	**3**	**2**	**2**	1.25	205- 280	(20- 65%)	**18.9**	**2.4**	8.90	4.10	**67**	12/31	**2.11**	2.21	6/30	1.02	.97	YES
	1772	Rogers Communications	(TSE)	RCIB.TO	**60.16b**	**3**	**2**	**4**	.55	75- 100	(25- 65%)	**15.0**	**3.5**	4.00	2.10	**69**	12/31	**1.00(b)**	.97(b)	6/30	.50(b)	.50(b)	YES
	1341	Rogers Corp.		ROG	**100.76**	**4**	**3**	**4**	1.30	120- 185	(20- 85%)	**23.2**	**NIL**	4.34	NIL	**61**	12/31	**1.14**	1.67	3/31	NIL	NIL	YES
2229	**2342**	Roku, Inc.	(NDQ)	ROKU	**130.04**	**4**	**4**	**3**	1.65	▲ 150- 250	(15- 90%)	**NMF**	**NIL**	▼d1.28	NIL	**80**	12/31	**d.13**	.05	3/31	NIL	NIL	YES
	399	Rollins, Inc.		ROL	**37.98**	**3**	**2**	**2**	.90	35- 50	(N- 30%)	**50.0**	**1.3**	.76	.48	**32**	12/31	**.16**	.16	3/31	▲.12	.105	YES
	1727	Roper Tech.		ROP	**320.32**	**▲1**	**1**	**2**	1.05	365- 445	(15- 40%)	**26.6**	**0.6**	12.04	2.05	**31**	12/31	**3.39**	3.22	6/30	.513	.463	YES
	2004	Rosetta Stone		RST	**15.57**	**4**	**4**	**4**	.75	18- 30	(15- 95%)	**NMF**	**NIL**	d.93	NIL	**33**	12/31	**d.28**	d.19	3/31	NIL	NIL	YES
	2207	Ross Stores	(NDQ)	ROST	**86.51**	**2**	**2**	**3**	1.00	120- 160	(40- 85%)	**25.6**	**1.3**	3.38	1.16	**63**	1/31	**1.28**	1.20	3/31	▲.285	.255	YES
	2524	Royal Bank of Canada	(TSE)	RY.TO	**86.81b**	**2**	**1**	**4**	.80	125- 150	(45- 75%)	**9.5**	**5.1**	9.15	4.44	**52**	1/31	**2.40(b)**	2.15(b)	6/30	▲1.08(b)	1.02(b)	YES
	2319	Royal Caribbean		RCL	**35.99**	**5**	**4**	**3**	1.20	▼ 95- 160	(165-345%)	**NMF**	**8.7**	▼d3.20	3.12-NIL	**73**	12/31	**1.30**	1.50	6/30	.78	.70	YES
	519	Royal Dutch Shell 'B'		RDSB	**32.71**	**4**	**2**	**3**	1.25	90- 120	(175-265%)	**6.9**	**11.5**	4.74	3.76	**92**	12/31	**.24**	1.36	3/31	.94	.94	YES
	1577	Royal Gold	(NDQ)	RGLD	**111.60**	**▲2**	**3**	**5**	.75	150- 225	(35-100%)	**44.6**	**1.0**	2.50	1.12	**1**	12/31	**.63**	.36	6/30	.28	.265	YES
	1205	Royce Value Trust		RVT	**10.41**	**–**	**3**	**–**	1.15	16- 25	(55-140%)	**NMF**	**1.2**	NMF	.13	**–**	12/31	**16.58(q)**	13.73(q)	12/31	NIL	NIL	
	2132	Rush Enterprises 'A'	(NDQ)	RUSHA	**32.83**	**3**	**3**	**3**	1.15	50- 75	(50-130%)	**19.4**	**1.6**	1.69	.52	**35**	12/31	**.64**	1.20	3/31	.13	.12	YES
	747	Russel Metals	(TSE)	RUS.TO	**14.41b**	**3**	**3**	**3**	1.15	45- 65	(210-350%)	**10.4**	**10.5**	1.39	1.52	**83**	12/31	**d.11(b)**	.74(b)	3/31	.38(b)	.38(b)	YES
	325	Ryder System		R	**26.54**	**4**	**3**	**2**	1.40	80- 120	(200-350%)	**16.2**	**8.4**	1.64	2.24	**64**	12/31	**d.01**	1.82	3/31	▲.56	.54	YES
1425	**1543**	Ryman Hospitality		RHP	**27.98**	**▼5**	**3**	**3**	1.00	90- 135	(220-380%)	**NMF**	**NIL**	d.55	NIL	**51**	12/31	**.85**	3.09	9/30	▼NIL	.90	YES
	443	**S&P Global**		SPGI	**279.17**	**2**	**2**	**2**	1.05	270- 365	(N- 30%)	**27.2**	**1.0**	10.28	2.68	**2**	12/31	**2.53**	2.22	3/31	▲.67	.57	YES
	2605	SAP SE		SAP	**122.56**	**3**	**2**	**4**	1.00	150- 200	(20- 65%)	**28.0**	**1.4**	4.38	1.67	**12**	3/31	**◆.75**	.51	3/31	NIL	NIL	YES
	603	SBA Communications	(NDQ)	SBAC	**300.27**	**▼2**	**3**	**2**	.90	255- 385	(N- 30%)	**NMF**	**0.6**	2.24	1.86	**41**	12/31	**.59**	.50	3/31	▲.465	NIL	YES
	2632	SEI Investments	(NDQ)	SEIC	**49.90**	**2**	**2**	**3**	1.25	80- 105	(60-110%)	**14.1**	**1.4**	3.53	.72	**4**	12/31	**.84**	.73	3/31	.35	.33	YES
	335	SFL Corp. Ltd		SFL	**10.15**	**3**	**3**	**4**	1.15	14- 20	(40- 95%)	**11.4**	**13.8**	.89	1.40-.80	**90**	12/31	**.22**	.03	3/31	.35	.35	YES
	1791	SJW Group		SJW	**58.73**	**–**	**3**	**–**	.60	65- 95	(10- 60%)	**28.1**	**2.2**	2.09	1.28	**16**	12/31	**.34**	.38	3/31	▲.32	.30	YES
	1544	SL Green Realty		SLG	**47.53**	**3**	**3**	**3**	1.05	85- 125	(80-165%)	**37.1**	**7.4**	1.28	3.54	**51**	12/31	**.21**	d.73	3/31	▲.885	.85	YES
	2575	SLM Corporation	(NDQ)	SLM	**6.83**	**3**	**3**	**2**	1.25	30- 40	(340-485%)	**5.0**	**1.8**	1.36	.12	**24**	12/31	**.32**	.33	3/31	.03	.03	YES
	1235	SNC-Lavalin Group	(TSE)	SNC.TO	**23.41b**	**3**	**3**	**3**	1.10	35- 55	(50-135%)	**10.8**	**0.3**	2.16	.08	**66**	12/31	**.56(b)**	d1.31(b)	3/31	.02(b)	.10(b)	YES
	1773	SPX Corp.		SPXC	**34.21**	**3**	**3**	**2**	1.55	45- 70	(30-105%)	**12.8**	**NIL**	2.67	NIL	**69**	12/31	**.96**	.89	3/31	NIL	NIL	YES
	1728	SPX FLOW, Inc.		FLOW	**29.26**	**–**	**3**	**–**	1.85	40- 60	(35-105%)	**24.4**	**NIL**	1.20	NIL	**31**	12/31	**.30**	.66	3/31	NIL	NIL	YES
	2606	SS&C Techn. Hldgs	(NDQ)	SSNC	**51.19**	**3**	**3**	**4**	1.15	75- 115	(45-125%)	**13.1**	**1.0**	3.90	.50	**12**	12/31	**1.08**	.95	3/31	.125	.10	YES
	2525	SVB Fin'l Group	(NDQ)	SIVB	**174.67**	**3**	**3**	**4**	1.60	345- 520	(100-200%)	**8.8**	**NIL**	19.91	NIL	**52**	12/31	**5.06**	4.96	3/31	NIL	NIL	YES
	1830	Sabre Corp.	(NDQ)	SABR	**5.69**	**5**	**4**	**3**	.95	35- 55	(515-865%)	**21.9**	**NIL**	.26	NIL	**43**	12/31	**.16**	.34	6/30	▼NIL	.14	YES
	1636	Sage Therapeutics	(NDQ)	SAGE	**34.84**	**5**	**4**	**3**	1.50	75- 125	(115-260%)	**NMF**	**NIL**	d13.05	NIL	**22**	12/31	**d3.25**	d3.38	3/31	NIL	NIL	YES
	1236	St. Joe Corp.		JOE	**16.75**	**1**	**3**	**1**	.90	25- 40	(50-140%)	**30.5**	**NIL**	.55	NIL	**66**	12/31	**.15**	NIL	3/31	NIL	NIL	YES
	1831	salesforce.com		CRM	**162.76**	**3**	**3**	**3**	1.10	160- 240	(N- 45%)	**NMF**	**NIL**	.27	NIL	**43**	1/31	**d.28**	.46	3/31	NIL	NIL	YES
	1015	Sally Beauty		SBH	**7.52**	**4**	**3**	**3**	.75	35- 25	(365-230%)	**3.3**	**NIL**	2.30	NIL	**71**	12/31	**.45**	.54	3/31	NIL	NIL	YES
	1934	Sanderson Farms	(NDQ)	SAFM	**128.61**	**3**	**3**	**3**	.75	125- 190	(N- 50%)	**21.4**	**1.0**	6.00	1.28	**39**	1/31	**d1.76**	d.82	6/30	◆.32	.32	YES
	1935	Sanfilippo (John B.)	(NDQ)	JBSS	**87.69**	**3**	**3**	**3**	.65	65- 95	(N- 10%)	**22.0**	**0.7**	3.99	.65	**39**	12/31	**1.52**	.98	3/31	NIL	NIL	YES
	1342	Sanmina Corp.	(NDQ)	SANM	**26.35**	**3**	**3**	**5**	1.25	45- 65	(70-145%)	**9.4**	**NIL**	2.80	NIL	**61**	12/31	**.79**	.83	3/31	NIL	NIL	YES
	1637	Sanofi ADR	(NDQ)	SNY	**48.28**	**3**	**1**	**2**	.90	50- 60	(5- 25%)	**32.4**	**3.6**	1.49	1.75	**22**	12/31	**d.01**	.11	3/31	NIL	NIL	YES
	2576	Santander Consumer USA		SC	**13.34**	**3**	**3**	**2**	1.10	30- 50	(125-275%)	**4.7**	**6.6**	2.86	.88	**24**	12/31	**.43**	.29	3/31	.22	.20	YES
	1936	Saputo Inc.	(TSE)	SAP.TO	**35.82b**	**2**	**1**	**3**	.55	50- 60	(40- 70%)	**19.1**	**1.9**	1.88	.68	**39**	12/31	**.50(b)**	.44(b)	3/31	.17(b)	.165(b)	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 9-30-20, 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 9-30-20	(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?
	1408	ScanSource	(NDQ)	SCSC	22.49	4	3	5	1.20	45- 70 (100-210%)	8.3	NIL	2.70	NIL	56	12/31	.77	.99	3/31	NIL	NIL	YES
	228	Schein (Henry)	(NDQ)	HSIC	53.15	–	3	–	NMF	85- 125 (60-135%)	14.4	NIL	3.70	NIL	8	12/31	.97	.87	3/31	NIL	NIL	YES
	2432	Schlumberger Ltd.		SLB	15.21	▼4	3	3	1.35	▼ 40- 60 (165-295%)	18.1	3.3	▼.84	.50	95	3/31	◆.25	.30	9/30	▼.125	.50	YES
	748	Schnitzer Steel	(NDQ)	SCHN	14.08	▲4	3	4	1.55	45- 65 (220-360%)	15.6	5.3	.90	.75	83	2/28	.14	.46	3/31	.188	.188	YES
	2380	Scholastic Corp.	(NDQ)	SCHL	27.51	4	3	3	.90	35- 50 (25- 80%)	NMF	2.2	▼d.26	.60	91	2/28	d.34	d.32	6/30	.15	.15	YES
	1803	Schwab (Charles)	(NDQ)	SCHW	36.59	3	3	4	1.30	55- 80 (50-120%)	15.6	2.0	2.35	.72	37	3/31	◆.58	.69	3/31	▲.18	.17	YES
	1994	Schweitzer-Mauduit Int'l		SWM	28.20	4	3	4	.85	40- 60 (40-115%)	9.4	6.2	2.99	1.76	72	12/31	.64	.23	3/31	.44	.44	YES
	400	Science Applications		SAIC	80.60	2	3	4	1.05	130- 195 (60-140%)	13.4	1.8	6.03	1.48	32	1/31	1.58	1.02	6/30	.37	.37	YES
647	2369	Scientific Games	(NDQ)	SGMS	9.65	4	5	4	2.05	▼ 25- 50 (160-420%)	NMF	NIL	▼d.50	NIL	81	12/31	.10	.23	3/31	NIL	NIL	YES
	2013	SciPlay Corp.	(NDQ)	SCPL	10.49	–	3	–	NMF	20- 30 (90-185%)	10.6	NIL	.99	NIL	23	12/31	.19	NA	3/31	NIL	NIL	YES
	1194	Scotts Miracle-Gro		SMG	118.79	2	3	2	.95	90- 135 (N- 15%)	23.3	2.0	5.10	2.32	10	12/31	d1.12	d1.49	3/31	.58	.55	YES
	2343	Scripps (E.W.) 'A'	(NDQ)	SSP	6.81	4	3	2	1.20	30- 40 (340-485%)	NMF	2.9	▼d.12	.20	80	12/31	.13	.44	3/31	.05	.05	YES
	1988	Sea Limited ADS		SE	54.22	3	4	2	1.00	40- 70 (N- 30%)	NMF	NIL	d2.02	NIL	46	12/31	d.62	d.81	3/31	NIL	NIL	YES
	1409	Seagate Technology	(NDQ)	STX	50.83	3	3	2	1.40	45- 70 (N- 40%)	11.0	5.2	4.62	2.65	56	12/31	1.35	1.41	6/30	.65	.63	YES
	1180	Sealed Air		SEE	28.64	4	3	4	1.00	60- 90 (110-215%)	10.4	2.2	2.75	.64	62	12/31	.80	1.28	3/31	.16	.16	YES
	841	Seattle Genetics	(NDQ)	SGEN	142.55	1	4	3	1.25	165- 275 (15- 95%)	NMF	NIL	d2.16	NIL	21	12/31	.14	d.75	3/31	NIL	NIL	YES
	2320	SeaWorld Entertainment		SEAS	10.76	3	3	3	1.10	30- 50 (180-365%)	NMF	NIL	▼d.23	NIL	73	12/31	.02	d.13	3/31	NIL	NIL	YES
	811	Select Med. Hldgs.		SEM	15.98	2	3	1	1.30	25- 35 (55-120%)	12.4	NIL	1.29	NIL	15	12/31	.24	.18	3/31	NIL	NIL	YES
	772	Selective Ins. Group	(NDQ)	SIGI	50.29	2	3	4	.80	55- 85 (10- 70%)	10.8	1.8	4.67	.92	5	12/31	1.37	1.20	3/31	.23	.20	YES
	2225	Sempra Energy		SRE	122.57	3	2	3	.65	140- 190 (15- 55%)	19.0	3.5	6.44	4.26	25	12/31	1.34	1.55	6/30	▲1.045	.967	YES
	1376	Semtech Corp.	(NDQ)	SMTC	41.28	4	3	5	1.40	55- 85 (35-105%)	27.0	NIL	1.53	NIL	40	1/31	.39	.55	3/31	NIL	NIL	YES
	130	Sensata Techn. plc		ST	32.32	4	3	4	1.30	80- 120 (150-270%)	8.7	NIL	3.70	NIL	20	12/31	.89	.95	3/31	NIL	NIL	YES
	1937	Sensient Techn.		SXT	42.06	4	3	3	1.05	60- 80 (45- 90%)	16.4	3.7	2.57	1.56	39	12/31	.62	.78	3/31	.39	.36	YES
	1844	Service Corp. Int'l		SCI	39.22	2	3	2	1.05	55- 80 (40-105%)	21.2	1.9	1.85	.76	47	12/31	.60	.54	3/31	▲.19	.18	YES
	1545	Service Properties	(NDQ)	SVC	5.64	3	3	2	1.10	25- 40 (345-610%)	NMF	0.7	d.09	.04	51	12/31	d.09	d.66	6/30	▼.01	.54	YES
	401	ServiceMaster Global		SERV	28.07	–	3	–	NMF	45- 65 (60-130%)	23.0	NIL	1.22	NIL	32	12/31	d.19	.09	3/31	NIL	NIL	YES
	2633	ServiceNow, Inc.		NOW	302.46	▼3	3	2	1.20	240- 360 (N- 20%)	NMF	NIL	.96	NIL	4	12/31	3.03	.04	3/31	NIL	NIL	YES
	367	Shake Shack		SHAK	46.43	3	4	4	1.15	65- 105 (40-125%)	57.3	NIL	.81	NIL	68	12/31	.06	.06	3/31	NIL	NIL	YES
	1025	Shaw Commun. 'B'	(TSE)	SJRB.TO	23.65b	2	2	5	.60	25- 35 (5- 50%)	18.2	5.1	1.30	1.20	14	2/28	.32(b)	.30(b)	3/31	.296(b)	.296(b)	YES
	636	Shell Midstream L.P.		SHLX	11.37	4	3	3	1.25	35- 50 (210-340%)	6.8	16.5	1.68	1.88-.60	84	12/31	.36	.45	3/31	▲.46	.40	YES
	931	Shenandoah Telecom.	(NDQ)	SHEN	50.78	3	3	2	1.00	45- 70 (N- 40%)	39.1	0.6	1.30	.32	29	12/31	.27	.30	3/31	NIL	NIL	YES
	1142	Sherwin-Williams		SHW	495.87	2	2	2	1.05	585- 795 (20- 60%)	22.1	1.1	22.42	5.36	7	12/31	4.27	3.54	3/31	▲1.34	1.13	YES
454	1832	Shopify Inc.		SHOP	629.90	2	4	3	1.35	360- 600 (N- N%)	NMF	NIL	.03	NIL	43	12/31	.43	.26	3/31	NIL	NIL	YES
	1774	Siemens AG (ADS)	(PNK)	SIEGY	43.48	3	2	5	1.10	70- 90 (60-105%)	15.3	4.9	2.85	2.12	69	12/31	.74	.74	3/31	2.119	2.175	
	604	Sierra Wireless	(NDQ)	SWIR	9.08	4	4	5	1.45	12- 20 (30-120%)	NMF	NIL	d.55	NIL	41	12/31	d.30	d.11	3/31	NIL	NIL	YES
	2526	Signature Bank	(NDQ)	SBNY	89.12	3	3	3	1.05	180- 270 (100-205%)	7.7	2.5	11.58	2.24	52	12/31	2.78	2.94	3/31	.56	.56	YES
	2183	Signet Jewelers Ltd.		SIG	7.63	4	4	2	1.30	35- 60 (360-685%)	7.5	NIL	1.02	NIL	76	1/31	3.67	3.96	6/30	▼NIL	.37	YES
	1181	Silgan Holdings	(NDQ)	SLGN	32.65	▲2	3	3	.95	35- 55 (5- 70%)	14.8	1.5	2.20	.48	62	12/31	.31	.34	3/31	▲.12	.11	YES
	1377	Silicon Labs.	(NDQ)	SLAB	88.42	4	3	4	1.25	90- 135 (N- 55%)	35.9	NIL	2.46	NIL	40	12/31	.22	.35	3/31	NIL	NIL	YES
	190	Silk Road Medical	(NDQ)	SILK	39.09	–	3	–	NMF	25- 35 (N- N%)	NMF	NIL	d.76	NIL	19	12/31	d.27	NA	3/31	NIL	NIL	YES
	1546	Simon Property Group		SPG	53.83	5	2	3	.85	130- 175 (140-225%)	12.2	15.6	4.41	8.40-1.04	51	12/31	1.66	2.30	3/31	2.10	2.05	YES
	1938	Simply Good Foods	(NDQ)	SMPL	18.16	–	3	–	.90	15- 25 (N- 40%)	21.6	NIL	.84	NIL	39	2/28	.11	.15	3/31	NIL	NIL	YES
	1118	Simpson Manufacturing		SSD	61.20	▼2	3	1	.95	75- 110 (25- 80%)	17.8	1.5	3.43	.92	44	12/31	.63	.34	6/30	.23	.22	YES
	2344	Sinclair Broadcast	(NDQ)	SBGI	15.19	5	3	3	1.20	▼ 40- 60 (165-295%)	9.4	5.3	▼1.62	.80	80	12/31	.47	2.10	3/31	.20	.20	YES
	2345	Sirius XM Holdings	(NDQ)	SIRI	5.22	3	4	2	1.00	▼ 18- 30 (245-475%)	17.4	1.0	.30	.05	80	12/31	.05	.06	3/31	.013	.012	YES
	1547	SITE Centers		SITC	5.06	3	3	3	.90	8- 12 (60-135%)	84.3	15.8	.06	.80	51	12/31	.05	.93	6/30	.20	.20	YES
	2184	SiteOne Landscape		SITE	71.71	2	3	1	1.25	90- 135 (25- 90%)	74.7	NIL	.96	NIL	76	12/31	.06	d.05	3/31	NIL	NIL	YES
2230	2321	Six Flags Entertainment		SIX	15.67	5	4	3	.90	▼ 40- 70 (155-345%)	NMF	NIL	▼d.38	NIL	73	12/31	d.13	.93	6/30	▼NIL	.82	YES
454	2161	Skechers U.S.A.		SKX	25.02	2	3	3	1.40	55- 80 (120-220%)	16.9	NIL	1.48	NIL	28	12/31	.39	.31	3/31	NIL	NIL	YES
2230	311	SkyWest	(NDQ)	SKYW	25.02	5	3	3	1.35	80- 120 (220-380%)	4.1	NIL	6.13	NIL	74	12/31	1.43	1.28	9/30	▼NIL	.12	YES
	1378	Skyworks Solutions	(NDQ)	SWKS	92.53	3	3	1	1.20	135- 205 (45-120%)	14.3	1.9	6.45	1.76	40	12/31	1.68	1.83	3/31	.44	.38	YES
1424	1833	Slack Technologies		WORK	29.25	–	3	–	NMF	30- 45 (5- 55%)	NMF	NIL	d.56	NIL	43	1/31	d.16	NA	3/31	NIL	NIL	YES
	2185	Sleep Number Corp.	(NDQ)	SNBR	22.77	4	3	1	1.25	65- 95 (185-315%)	12.5	NIL	1.82	NIL	76	12/31	.82	.78	3/31	NIL	NIL	YES
	1834	Smartsheet Inc.		SMAR	53.68	–	4	–	.65	55- 90 (N- 70%)	NMF	NIL	d.79	NIL	43	1/31	d.24	d.14	3/31	NIL	NIL	YES
	1729	Smith (A.O.)		AOS	40.35	3	3	3	1.20	55- 85 (35-110%)	19.0	2.4	2.12	.96	31	12/31	.56	.74	6/30	◆.24	.22	YES
	1939	Smucker (J.M.)		SJM	121.62	3	2	4	.65	120- 160 (N- 30%)	18.7	2.9	6.49	3.55	39	1/31	1.64	2.18	3/31	.88	.85	YES
236	2653	Snap Inc.		SNAP	12.92	▲3	4	3	1.15	14- 25 (10- 95%)	NMF	NIL	d.42	NIL	50	3/31	◆d.21	d.23	3/31	NIL	NIL	YES
	1730	Snap-on Inc.		SNA	114.66	3	2	3	1.15	185- 250 (60-120%)	9.4	3.8	12.18	4.32	31	3/31	◆2.49	3.16	3/31	1.08	.95	YES
	2607	SolarWinds Corp.		SWI	16.34	–	3	–	NMF	25- 35 (55-115%)	18.8	NIL	.87	NIL	12	12/31	.24	.19	3/31	NIL	NIL	YES
646	2133	Sonic Automotive		SAH	15.75	3	3	2	1.30	30- 45 (90-185%)	11.1	2.5	1.42	.40	35	12/31	.97	.76	6/30	.10	.10	YES
	1182	Sonoco Products		SON	47.40	3	2	4	1.00	60- 80 (25- 70%)	13.4	3.6	3.55	1.72	62	3/31	◆.94	.85	6/30	◆.43	.43	YES
236	1343	Sonos, Inc.	(NDQ)	SONO	8.70	–	3	–	NMF	16- 25 (85-185%)	58.0	NIL	.15	NIL	61	12/31	.60	.55	3/31	NIL	NIL	YES
	1989	Sony Corp. ADR(g)		SNE	63.55	3	3	2	1.10	70- 105 (10- 65%)	14.9	0.7	4.27	.43	46	12/31	1.66	2.98	3/31	NIL	NIL	YES
	554	South Jersey Inds.		SJI	25.90	3	2	3	.80	35- 45 (35- 75%)	16.8	4.6	1.54	1.20	58	12/31	.46	.39	6/30	▲.295	.288	YES
	146	Southern Co.		SO	55.53	3	2	1	.50	50- 70 (N- 25%)	17.9	4.6	3.11	2.56	13	12/31	.32	.17	6/30	▲.64	.62	YES
	1593	Southern Copper		SCCO	29.59	▼2	3	4	1.30	45- 70 (50-135%)	18.0	5.4	1.64	1.60	89	12/31	.40	.38	3/31	.40	.40	YES
	312	Southwest Airlines		LUV	31.06	3	3	3	1.15	90- 130 (190-320%)	6.7	2.3	4.66	.72	74	12/31	1.16	1.17	3/31	.36	.16	YES
	555	Southwest Gas		SWX	75.89	3	3	5	.65	75- 115 (N- 50%)	19.1	3.0	3.97	2.30	58	12/31	1.67	1.36	6/30	▲.57	.545	YES
	544	Southwestern Energy		SWN	2.94	▲4	4	4	1.75	12- 20 (310-580%)	5.4	NIL	.54	NIL	93	12/31	.20	.31	3/31	NIL	NIL	YES
	164	Spartan Motors	(NDQ)	SPAR	13.16	3	3	2	1.00	20- 35 (50-165%)	12.4	0.8	1.06	.10	59	12/31	.47	.10	3/31	NIL	NIL	YES
	1957	SpartanNash Co.	(NDQ)	SPTN	16.43	3	4	5	1.30	20- 35 (20-115%)	20.5	4.7	.80	.77	9	12/31	.15	d.39	3/31	▲.193	.19	YES
	1775	Spectrum Brands		SPB	36.28	–	3	–	NMF	55- 85 (50-135%)	11.0	4.6	3.30	1.68	69	12/31	.20	d.20	3/31	.42	.42	YES
	556	Spire Inc.		SR	73.58	3	2	3	.60	90- 120 (20- 65%)	19.4	3.4	3.80	2.52	58	12/31	1.24	1.32	6/30	.623	.593	YES
454	722	Spirit AeroSystems		SPR	20.87	5	3	2	1.10	105- 155 (405-645%)	6.5	0.2	3.21	.04	53	12/31	.79	1.85	6/30	▼.01	.12	YES
	313	Spirit Airlines		SAVE	12.95	5	3	3	1.15	70- 100 (440-670%)	2.5	NIL	5.19	NIL	74	12/31	1.24	1.38	3/31	NIL	NIL	YES
	1835	Splunk Inc.	(NDQ)	SPLK	133.38	3	3	3	1.50	160- 235 (20- 75%)	NMF	NIL	d.95	NIL	43	1/31	d.15	.01	3/31	NIL	NIL	YES
	2346	Spotify Tech. S.A.		SPOT	144.54	–	4	–	.75	165- 275 (15- 90%)	NMF	NIL	▼d2.21	NIL	80	12/31	d1.26	2.79	3/31	NIL	NIL	YES
1845	932	Sprint Corp.		S	SEE FINAL SUPPLEMENT																	
	1958	Sprouts Farmers Market	(NDQ)	SFM	20.06	▲2	3	5	.85	30- 45 (50-125%)	14.1	NIL	1.42	NIL	9	12/31	.27	.19	3/31	NIL	NIL	YES
	2608	Square, Inc.		SQ	61.06	3	4	4	1.55	80- 130 (30-115%)	NMF	NIL	.08	NIL	12	12/31	.04	d.07	3/31	NIL	NIL	YES
	999	Standard Motor Prod.		SMP	41.00	3	3	4	.95	60- 90 (45-120%)	12.6	2.5	3.26	1.03	85	12/31	.56	.53	3/31	▲.25	.23	YES
	1776	Standex Int'l		SXI	46.62	4	3	3	1.00	95- 145 (105-210%)	10.5	1.9	4.43	.88	69	12/31	1.03	.98	3/31	.22	.20	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 9-30-20	(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?
	1731	Stanley Black & Decker	SWK	110.48	3	2	3	1.25	150- 200	(35- 80%)	13.0	2.6	8.48	2.82	31	12/31	2.18	2.11	6/30	◆.69	.66	YES
	1237	Stantec Inc. (TSE)	STN.TO	39.97b	1	3	2	.75	45- 70	(15- 75%)	18.9	1.6	2.12	.62	66	12/31	.47(b)	.41(b)	6/30	▲.155(b)	.145(b)	YES
	368	Starbucks Corp. (NDQ)	SBUX	75.32	3	1	3	.90	120- 145	(60- 95%)	24.7	2.3	3.05	1.74	68	12/31	.79	.75	3/31	.41	.36	YES
	2370	Stars Group (The) (NDQ)	TSG	24.94	–	3	–	1.35	25- 40	(N- 60%)	11.1	NIL	2.24	NIL	81	12/31	.49	.52	3/31	NIL	NIL	YES
	2527	State Street Corp.	STT	58.18	2	3	4	1.30	85- 130	(45-125%)	9.2	3.7	6.33	2.14	52	3/31	◆1.62	1.18	6/30	.52	.47	YES
	749	Steel Dynamics (NDQ)	STLD	22.57	4	3	3	1.50	65- 100	(190-345%)	8.1	4.4	2.77	1.00	83	3/31	◆.88	.91	6/30	▲.25	.24	YES
	1158	Steelcase, Inc. 'A'	SCS	9.25	3	3	3	1.15	25- 40	(170-330%)	6.4	3.0	1.45	.28	54	2/28	.39	.29	6/30	▼.07	.145	YES
	589	Stepan Company	SCL	91.32	3	3	2	1.15	105- 160	(15- 75%)	19.8	1.3	4.62	1.15	77	3/31	◆1.18	1.07	6/30	◆.275	.25	YES
	411	Stericycle Inc. (NDQ)	SRCL	47.03	3	3	1	1.10	60- 90	(30- 90%)	16.4	NIL	2.87	NIL	3	12/31	.72	1.03	3/31	NIL	NIL	YES
	191	STERIS plc	STE	157.45	2	2	3	1.00	160- 215	(N- 35%)	26.9	0.9	5.85	1.48	19	12/31	1.45	1.26	3/31	.37	.34	YES
	1812	Stifel Financial Corp.	SF	41.63	2	3	4	1.45	75- 115	(80-175%)	7.3	1.7	5.67	.70	6	12/31	1.88	1.57	3/31	▲.17	.15	YES
	1379	STMicroelectronics	STM	22.64	3	3	2	1.25	40- 60	(75-165%)	16.4	1.1	1.38	.24	40	12/31	.43	.46	3/31	.06	.06	YES
	1000	Stoneridge, Inc.	SRI	16.58	4	3	3	1.20	30- 45	(80-170%)	11.4	NIL	1.45	NIL	85	12/31	.15	.42	3/31	NIL	NIL	YES
	1344	Stratasys Ltd. (NDQ)	SSYS	17.11	4	4	4	1.60	19- 30	(10- 75%)	NMF	NIL	d.50	NIL	61	12/31	d.05	.12	3/31	NIL	NIL	YES
	2005	Strategic Education (NDQ)	STRA	146.58	–	3	–	NMF	165- 245	(15- 65%)	19.3	1.6	7.58	2.40	33	12/31	2.13	1.08	3/31	.60	.50	YES
	192	Stryker Corp.	SYK	184.72	2	1	3	.90	230- 285	(25- 55%)	20.8	1.2	8.89	2.30	19	12/31	2.49	2.18	6/30	.575	.52	YES
	2322	Sturm, Ruger & Co.	RGR	52.87	3	3	5	.90	55- 85	(5- 60%)	13.2	2.3	▲4.01	1.20	73	12/31	.46	.69	3/31	.18	.28	YES
	637	Suburban Propane	SPH	14.24	4	3	4	1.00	30- 45	(110-215%)	8.6	16.9	1.65	2.40-1.55	84	12/31	.65	.45	3/31	.60	.60	YES
	1119	Summit Materials	SUM	12.62	3	3	3	1.55	30- 45	(140-255%)	11.3	NIL	1.12	NIL	44	12/31	.32	d.17	3/31	NIL	NIL	YES
	2577	Sun Life Fin'l Svcs. (TSE)	SLF.TO	45.27b	▼2	2	3	.90	60- 80	(35- 75%)	8.6	4.9	5.29	2.20	24	12/31	1.22(b)	.96(b)	3/31	.55(b)	.50(b)	YES
	520	Suncor Energy (TSE)	SU.TO	20.88b	2	3	3	1.05	75- 110	(260-425%)	26.8	8.9	.78	1.86	92	12/31	d1.52(b)	d.18(b)	3/31	▲.465(b)	.42(b)	YES
	2186	Sunoco LP	SUN	20.17	3	4	5	1.20	30- 50	(50-150%)	9.6	16.4	2.10	3.30	76	12/31	.75	d1.11	6/30	.826	.826	YES
457	1221	SunPower Corp. (NDQ)	SPWR	6.30	–	5	–	1.50	14- 25	(120-295%)	NMF	NIL	d.87	NIL	55	12/31	.03	d1.12	3/31	NIL	NIL	YES
	193	SurModics, Inc. (NDQ)	SRDX	37.84	4	3	5	.80	50- 70	(30- 85%)	NMF	NIL	d.30	NIL	19	12/31	.01	.09	3/31	NIL	NIL	YES
	965	Switch, Inc.	SWCH	17.24	1	4	4	.95	20- 35	(15-105%)	78.4	0.7	.22	.12	42	12/31	.04	.05	3/31	.029	NIL	YES
455	966	Synaptics (NDQ)	SYNA	59.40	3	3	1	1.30	75- 110	(25- 85%)	15.5	NIL	3.82	NIL	42	12/31	1.21	.95	3/31	NIL	NIL	YES
	2578	Synchrony Financial	SYF	15.59	4	3	3	1.15	50- 75	(220-380%)	3.5	5.6	4.45	.88	24	3/31	◆.45	1.56	3/31	.22	.21	YES
	812	Syneos Health (NDQ)	SYNH	50.17	▼3	4	2	1.35	75- 125	(50-150%)	14.2	NIL	3.53	NIL	15	12/31	1.03	.44	3/31	NIL	NIL	YES
	402	SYNNEX Corp.	SNX	74.29	2	3	1	1.20	170- 255	(130-245%)	5.3	NIL	14.06	NIL	32	2/28	3.26	2.84	6/30	▼NIL	.375	YES
	2609	Synopsys, Inc. (NDQ)	SNPS	151.01	3	1	3	1.10	135- 170	(N- 15%)	28.8	NIL	5.25	NIL	12	1/31	1.01	1.08	3/31	NIL	NIL	YES
	2528	Synovus Financial	SNV	17.37	3	3	3	1.15	75- 110	(330-535%)	4.6	7.6	3.81	1.32	52	12/31	.97	.87	3/31	.30	.25	YES
1657	1959	Sysco Corp.	SYY	49.61	▼3	1	3	.70	85- 105	(70-110%)	14.3	3.6	3.47	1.80	9	12/31	.85	.75	6/30	.45	.39	YES
455	933	**T-Mobile US** (NDQ)	TMUS	89.94	–	3	–	.90	120- 175	(35- 95%)	19.7	NIL	4.57	NIL	29	12/31	.87	.75	3/31	NIL	NIL	YES
	617	TC Energy Corp.	TRP	44.86	3	3	2	1.05	70- 105	(55-135%)	13.0	5.6	3.46	2.50	87	12/31	.91	.87	6/30	.611	.563	YES
	787	TCF Financial (NDQ)	TCF	24.45	–	3	–	NMF	60- 90	(145-270%)	6.6	5.7	3.69	1.40	75	12/31	.72	NA	3/31	.35	NIL	YES
	1804	TD Ameritrade Holding (NDQ)	AMTD	37.97	–	3	–	1.20	55- 85	(45-125%)	11.7	3.3	3.25	1.24	37	12/31	.70	1.07	3/31	.31	.30	YES
	1345	TE Connectivity	TEL	66.58	3	2	4	1.20	110- 150	(65-125%)	12.9	2.8	5.15	1.84	61	12/31	1.21	1.29	3/31	.46	.44	YES
845	2208	TJX Companies	TJX	47.79	2	1	2	.95	80- 100	(65-110%)	27.9	0.5	1.71	.23	63	1/31	.81	.68	3/31	.23	.195	YES
	1222	TPI Composites (NDQ)	TPIC	15.01	4	4	3	1.30	35- 55	(135-265%)	23.8	NIL	.63	NIL	55	12/31	d.02	d.26	3/31	NIL	NIL	YES
	1133	TRI Pointe Group	TPH	9.83	2	3	3	1.25	30- 45	(205-360%)	4.9	NIL	2.00	NIL	17	12/31	.85	.70	3/31	NIL	NIL	YES
	403	TTEC Holdings (NDQ)	TTEC	36.30	3	3	4	1.10	60- 85	(65-135%)	15.8	1.9	2.30	.68	32	12/31	.65	.63	6/30	.34	.30	YES
	1380	TTM Technologies (NDQ)	TTMI	10.63	3	3	3	1.35	25- 35	(135-230%)	10.0	NIL	1.06	NIL	40	12/31	.41	.52	3/31	NIL	NIL	YES
	2209	Tailored Brands	TLRD	1.54	–	5	–	1.75	6- 11	(290-615%)	NMF	NIL	d.75	NIL	63	1/31	d.80	.12	3/31	NIL	.18	YES
	427	Taiwan Fund	TWN	17.69	–	4	–	1.00	25- 40	(40-125%)	NMF	NIL	NMF	NIL	–	8/31	20.80(q)	23.05(q)	3/31	1.47	NIL	
	1381	Taiwan Semic. ADR	TSM	52.59	1	2	2	1.00	55- 70	(5- 35%)	18.7	3.2	2.81	1.68	40	3/31	◆.75	.38	3/31	.417	NIL	YES
455	2014	Take-Two Interactive (NDQ)	TTWO	125.35	3	3	3	.90	125- 190	(N- 50%)	33.3	NIL	3.76	NIL	23	12/31	1.43	.62	3/31	NIL	NIL	YES
★★	638	Tallgrass Energy LP	TGE	SEE FINAL SUPPLEMENT																		
	194	Tandem Diabetes Care (NDQ)	TNDM	72.78	3	4	3	1.20	80- 135	(10- 85%)	NMF	NIL	d.23	NIL	19	12/31	.04	.60	3/31	NIL	NIL	YES
1848	2187	Tapestry Inc.	TPR	14.21	4	3	3	1.20	35- 50	(145-250%)	8.1	NIL	1.75	NIL	76	12/31	1.10	1.07	6/30	▼NIL	.338	YES
	545	Targa Resources	TRGP	7.88	5	4	4	1.95	70- 115	(NMF)	98.5	5.1	.08	.40	93	12/31	.17	.26	6/30	▼.10	.91	YES
	2151	Target Corp.	TGT	108.98	1	3	2	.90	115- 170	(5- 55%)	16.7	2.4	6.53	2.64	49	1/31	1.63	1.53	6/30	.66	.64	YES
	109	Tata Motors ADR	TTM	5.11	4	4	2	1.30	18- 30	(250-485%)	5.0	NIL	1.03	NIL	82	12/31	.41	d.49	3/31	NIL	NIL	YES
	1134	Taylor Morrison Home	TMHC	11.18	3	3	3	1.20	40- 60	(260-435%)	3.5	NIL	3.21	NIL	17	12/31	1.06	.86	3/31	NIL	NIL	YES
	1410	Tech Data (NDQ)	TECD	140.00	–	3	–	1.20	160- 240	(15- 70%)	10.7	NIL	13.03	NIL	56	1/31	4.88	4.55	3/31	NIL	NIL	YES
	1594	Teck Resources 'B' (TSE)	TECKB.TO	10.58b	5	3	3	1.55	25- 35	(135-230%)	NMF	1.9	d2.67	.20	89	12/31	d1.62(b)	.75(b)	6/30	◆.05(b)	.05(b)	YES
★★	336	Teekay Corp.	TK	3.93	–	5	–	2.25	5- 9	(25-130%)	11.2	NIL	.35	NIL	90	12/31	.31	d.02	3/31	NIL	.055	YES
1240	2347	TEGNA Inc.	TGNA	10.75	–	3	–	1.20	▼ 25- 40	(135-270%)	10.0	2.6	▼1.08	.28	80	12/31	.38	.74	6/30	.07	.07	YES
	824	Teladoc Health	TDOC	181.46	2	4	3	1.20	115- 190	(N- 5%)	NMF	NIL	d1.16	NIL	18	12/31	d.26	d.35	3/31	NIL	NIL	YES
	723	Teledyne Technologies	TDY	317.69	2	3	2	1.10	305- 460	(N- 45%)	28.6	NIL	11.11	NIL	53	12/31	3.06	2.45	3/31	NIL	NIL	YES
	195	Teleflex Inc.	TFX	344.85	2	2	3	.95	385- 520	(10- 50%)	43.3	0.4	7.97	1.36	19	12/31	2.28	1.87	3/31	.34	.34	YES
	1033	Telefonica SA ADR(g)	TEF	4.46	4	4	2	1.05	9- 15	(100-235%)	8.7	9.9	.51	.44	30	12/31	d.06	.13	3/31	.222	.228	YES
	934	Telephone & Data	TDS	18.90	4	3	4	1.15	35- 50	(85-165%)	17.5	3.6	1.08	.68	29	12/31	.10	.14	3/31	▲.17	.165	YES
1239	618	Tellurian Inc. (NDQ)	TELL	1.43	–	5	–	1.75	12- 20	(NMF)	NMF	NIL	d.57	NIL	87	12/31	d.17	d.15	3/31	NIL	NIL	YES
	935	TELUS Corporation (TSE)	T.TO	22.54b	1	2	3	.60	35- 45	(55-100%)	15.9	5.4	1.42	1.22	29	12/31	.31(b)	.30(b)	6/30	.292(b)	.273(b)	YES
	428	Templeton Emerg'g	EMF	12.04	–	4	–	1.05	17- 30	(40-150%)	NMF	2.9	NMF	.35	–	11/30	17.35(q)	16.06(q)	3/31	NIL	NIL	
	1159	Tempur Sealy Int'l	TPX	42.59	3	4	2	1.35	80- 135	(90-215%)	11.4	NIL	3.75	NIL	54	12/31	.85	.35	3/31	NIL	NIL	YES
	734	Tenaris S.A. ADS	TS	12.14	4	3	4	1.45	40- 55	(230-355%)	10.9	6.8	1.11	.82	78	12/31	.26	.38	3/31	NIL	NIL	YES
	813	Tenet Healthcare	THC	20.97	3	4	2	1.45	50- 85	(140-305%)	7.3	NIL	2.87	NIL	15	12/31	.99	.51	3/31	NIL	NIL	YES
	1732	Tennant Co.	TNC	61.16	2	3	3	1.00	85- 125	(40-105%)	19.2	1.5	3.18	.90	31	12/31	.64	.54	3/31	.22	.22	YES
1655	1001	Tenneco Inc.	TEN	3.69	–	4	–	1.55	19- 30	(415-715%)	1.7	NIL	2.18	NIL	85	12/31	.03	1.30	3/31	NIL	.25	YES
	2610	Teradata Corp.	TDC	22.72	4	3	5	1.20	55- 80	(140-250%)	NMF	NIL	.16	NIL	12	12/31	d.17	.13	3/31	NIL	NIL	YES
	1396	Teradyne Inc. (NDQ)	TER	62.47	▲2	3	2	1.25	50- 80	(N- 30%)	22.5	0.6	2.78	.40	38	3/31	◆.97	.62	3/31	▲.10	.09	YES
	165	Terex Corp.	TEX	13.51	4	3	2	1.70	45- 65	(235-380%)	6.1	3.6	2.20	.48	59	12/31	.36	.51	3/31	▲.12	.11	YES
	1223	TerraForm Power (NDQ)	TERP	17.07	–	4	–	1.55	19- 30	(10- 75%)	NMF	4.7	.11	.81	55	12/31	d.36	d.07	3/31	.201	.201	YES
2028	110	Tesla, Inc. (NDQ)	TSLA	746.36	3	4	2	1.30	500- 835	(N- 10%)	NMF	NIL	2.41	NIL	82	12/31	.56	.78	3/31	NIL	NIL	YES
	412	Tetra Tech (NDQ)	TTEK	78.81	2	3	2	1.05	70- 110	(N- 40%)	22.8	0.8	3.45	.60	3	12/31	.84	.70	3/31	.15	.12	YES
455	1638	Teva Pharmac. ADR	TEVA	10.32	▲3	4	4	1.35	20- 35	(95-240%)	4.2	NIL	2.43	NIL	22	12/31	.62	.53	3/31	NIL	NIL	YES
	1382	Texas Instruments (NDQ)	TXN	111.53	3	1	3	1.10	110- 135	(N- 20%)	20.8	3.2	5.35	3.60	40	3/31	◆1.24	1.26	3/31	▲.90	.77	YES
	369	Texas Roadhouse (NDQ)	TXRH	43.47	2	3	4	.85	80- 125	(85-190%)	16.6	NIL	2.62	NIL	68	12/31	.61	.42	6/30	▼NIL	.30	YES
	1777	Textron, Inc.	TXT	26.67	3	3	3	1.35	60- 90	(125-235%)	12.6	0.3	2.11	.08	69	12/31	1.11	.98	6/30	.02	.02	YES
1040	131	Thermo Fisher Sci.	TMO	327.16	1	2	2	1.05	245- 335	(N- N%)	37.6	0.3	8.69	.88	20	12/31	2.49	2.22	6/30	▲.22	.19	YES
	1733	Thermon Group	THR	14.10	4	3	4	1.20	30- 45	(115-220%)	28.2	NIL	.50	NIL	31	12/31	.20	.29	3/31	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 9-30-20, 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 rank 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	% appreciation potential	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earns. 12 mos. to 9-30-20	(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?
	2026	Third Point Reinsurance	TPRE	7.86	3	3	3	1.05	14- 20	(80-155%)	9.0	NIL	.87	NIL	60	12/31	.32	d3.24	3/31	NIL	NIL	YES
	444	Thomson Reuters (TSE)	TRI.TO	100.20b	–	2	–	.75	100- 135	(N- 35%)	57.9	1.5	1.73	1.52	2	12/31	.37(b)	.20(b)	3/31	▲.38(b)	.36(b)	YES
	2323	Thor Inds.	THO	52.09	2	3	3	1.40	115- 170	(120-225%)	7.5	3.1	6.90	1.63	73	1/31	1.24	.65	6/30	.40	.39	YES
	1346	3D Systems	DDD	7.77	3	5	3	1.50	7- 13	(N- 65%)	NMF	NIL	d.31	NIL	61	12/31	d.04	d.04	3/31	NIL	NIL	YES
2667	1778	3M Company	MMM	143.67	3	1	3	1.00	200- 245	(40- 70%)	18.3	4.1	7.85	5.88	69	12/31	1.95	2.31	3/31	▲1.47	1.44	YES
	2188	Tiffany & Co.	TIF	128.95	–	3	–	1.20	125- 185	(N- 45%)	44.3	1.8	2.91	2.32	76	1/31	1.66	1.67	6/30	.58	.55	YES
1655	2210	Tilly's, Inc.	TLYS	4.60	–	4	–	1.05	16- 25	(250-445%)	11.2	NIL	.41	NIL	63	1/31	.21	.27	3/31	NIL	NIL	YES
1040	1639	Tilray, Inc. (NDQ)	TLRY	6.76	–	4	–	NMF	12- 20	(80-195%)	NMF	NIL	d2.92	NIL	22	12/31	d2.14	d.33	3/31	NIL	NIL	YES
	735	Timken Co.	TKR	34.24	3	3	3	1.45	50- 75	(45-120%)	8.1	3.3	4.24	1.12	78	12/31	.84	1.00	3/31	.28	.28	YES
1423	750	TimkenSteel Corp.	TMST	2.46	–	4	–	2.45	15- 25	(510-915%)	NMF	NIL	d.78	NIL	83	12/31	d1.89	d.89	3/31	NIL	NIL	YES
	1002	Titan Int'l	TWI	1.25	–	5	–	2.00	4- 7	(220-460%)	NMF	1.6	d.70	.02	85	12/31	d.40	d.21	6/30	.005	.005	YES
1423	814	Tivity Health (NDQ)	TVTY	6.79	–	3	–	.90	25- 35	(270-415%)	21.2	NIL	.32	NIL	15	12/31	d.08	.67	3/31	NIL	NIL	YES
647	2015	TiVo Corp. (NDQ)	TIVO	6.62	–	4	–	1.40	8- 13	(20- 95%)	NMF	NIL	d1.97	NIL	23	12/31	d1.72	d2.33	3/31	NIL	.18	YES
845	1135	Toll Brothers	TOL	20.28	4	3	3	1.10	45- 65	(120-220%)	5.6	2.2	3.60	.44	17	1/31	.41	.76	6/30	.11	.11	YES
	1940	Tootsie Roll	TR	35.29	2	1	3	.70	35- 45	(N- 30%)	35.3	1.0	1.00	.37	39	12/31	.21	.18	3/31	.175	.17	YES
	1120	TopBuild Corp.	BLD	75.31	2	3	1	1.10	100- 140	(35- 85%)	13.2	NIL	5.71	NIL	44	12/31	1.36	1.10	3/31	NIL	NIL	YES
	1734	Toro Co.	TTC	63.24	2	2	1	.95	70- 95	(10- 50%)	20.7	1.6	3.05	1.00	31	1/31	.65	.55	6/30	▲.25	.225	YES
	166	Toromont Inds. (TSE)	TIH.TO	64.86	1	3	2	.80	70- 110	(10- 70%)	17.1	1.9	3.79	1.24	59	12/31	1.10	1.03	6/30	▲.31	.27	YES
	2529	Toronto-Dominion (TSE)	TD.TO	56.97b	2	1	3	.75	100- 125	(75-120%)	8.4	5.6	6.80	3.20	52	1/31	1.61(b)	1.27(b)	6/30	▲.79(b)	.74(b)	YES
2027	521	Total S.A. ADR	TOT	33.00	4	2	3	1.20	80- 100	(140-205%)	6.3	8.9	5.22	2.93	92	12/31	.97	.40	3/31	.732	.736	YES
	1383	Tower Semiconductor (NDQ)	TSEM	17.86	3	3	4	1.35	35- 55	(95-210%)	18.0	NIL	.99	NIL	40	12/31	.22	.36	3/31	NIL	NIL	YES
	111	Toyota Motor ADR(g)	TM	121.71	3	2	2	1.00	185- 250	(50-105%)	8.0	3.6	15.19	4.40	82	12/31	4.78	1.12	3/31	NIL	NIL	YES
	1143	Tractor Supply (NDQ)	TSCO	93.43	2	3	5	1.05	110- 170	(20- 80%)	19.4	1.7	4.81	1.56	7	12/31	1.21	1.11	3/31	.35	.31	YES
1036	2397	Trade Desk (The) (NDQ)	TTD	233.00	3	3	3	1.75 ▼	145- 220	(N- N%)	94.7	NIL	2.46	NIL	36	12/31	1.06	.84	3/31	NIL	NIL	YES
	1224	TransAlta Corp. (TSE)	TA.TO	7.96b	3	4	2	.95	11- 20	(40-150%)	24.1	2.5	.33	.20	55	12/31	.23(b)	d.43(b)	9/30	◆.043(b)	.04(b)	YES
	724	TransDigm Group	TDG	316.40	3	3	1	1.00	615- 925	(95-190%)	21.0	NIL	15.10	NIL	53	12/31	2.07	3.05	3/31	NIL	NIL	YES
	2433	Transocean Ltd.	RIG	1.17	5	5	2	2.00 ▼	3- 6	(155-415%)	NMF	NIL	▼d.98	NIL	95	12/31	d.08	d.34	3/31	NIL	NIL	YES
	445	TransUnion	TRU	72.85	2	3	1	1.00	95- 145	(30-100%)	24.4	0.4	2.98	.30	2	12/31	.75	.66	3/31	.075	.075	YES
★★	773	Travelers Cos.	TRV	101.78	2	1	4	.85	200- 240	(95-135%)	9.4	3.3	10.84	3.40	5	3/31	◆2.62	2.83	6/30	▲.85	.82	YES
	590	Tredegar Corp.	TG	15.43	3	3	4	1.40	30- 40	(95-160%)	10.3	3.4	1.50	.52	77	12/31	d.09	.79	6/30	.12	.11	YES
	1941	TreeHouse Foods	THS	49.03	4	3	5	.95	50- 80	(N- 65%)	21.0	NIL	2.33	NIL	39	12/31	1.10	1.03	3/31	NIL	NIL	YES
	1121	Trex Co.	TREX	85.75	2	3	1	1.35	90- 140	(5- 65%)	31.1	NIL	2.76	NIL	44	12/31	.61	.43	3/31	NIL	NIL	YES
	1206	Tri-Continental	TY	22.76	–	2	–	.95	35- 45	(55-100%)	NMF	4.3	NMF	.98	–	12/31	28.20(q)	26.58(q)	3/31	.265	.24	
	2386	Tribune Publishing Co. (NDQ)	TPCO	7.62	–	4	–	1.30 ▼	12- 20	(55-160%)	NMF	NIL	▼d.46	NIL-1.00	–	12/31	d.46	.10	3/31	.25	NIL	YES
	1779	TriMas Corp. (NDQ)	TRS	23.08	–	3	–	1.15	35- 50	(50-115%)	24.0	NIL	.96	NIL	69	12/31	.31	.38	3/31	NIL	NIL	YES
	1314	Trimble Inc. (NDQ)	TRMB	32.32	3	3	4	1.35	50- 70	(55-115%)	21.7	NIL	1.49	NIL	67	12/31	.53	.34	3/31	NIL	NIL	YES
647	1653	TriNet Group	TNET	45.40	3	3	4	1.10	70- 105	(55-130%)	16.3	NIL	2.78	NIL	88	12/31	.68	.40	3/31	NIL	NIL	YES
	345	Trinity Inds.	TRN	15.74	–	3	–	NMF	30- 45	(90-185%)	12.8	4.8	1.23	.76	26	12/31	.35	.19	6/30	.19	.17	YES
	2444	Trinseo S.A.	TSE	18.76	5	3	4	1.65	55- 85	(195-355%)	22.6	8.5	▼.83	1.60	57	12/31	.14	d.02	6/30	.40	.40	YES
	2654	Trip.com Ltd. (NDQ)	TCOM	23.66	3	4	2	1.25	50- 70	(110-195%)	23.7	NIL	1.00	NIL	50	12/31	.46	d.32	3/31	NIL	NIL	YES
	2655	TripAdvisor, Inc. (NDQ)	TRIP	18.07	5	4	4	1.10	55- 80	(205-345%)	14.0	NIL	1.29	NIL	50	12/31	.11	.05	3/31	NIL	NIL	YES
1655	725	Triumph Group	TGI	6.51	–	4	–	1.50	30- 45	(360-590%)	2.3	NIL	2.85	NIL	53	12/31	.69	.42	6/30	▼NIL	.04	YES
	591	Tronox Holding plc	TROX	5.89	3	5	3	2.60	11- 20	(85-240%)	34.6	4.8	.17	.28	77	12/31	d.01	d.05	3/31	▲.07	.045	YES
237	1654	TrueBlue, Inc.	TBI	14.12	4	3	3	1.25	25- 35	(75-150%)	9.2	NIL	1.53	NIL	88	12/31	.23	.37	3/31	NIL	NIL	YES
	2530	Truist Fin'l	TFC	34.13	3	3	3	1.10	60- 80	(75-135%)	8.3	5.4	4.11	1.84	52	3/31	◆.87	1.05	3/31	.45	.405	YES
	1195	Tupperware Brands	TUP	SEE FINAL SUPPLEMENT																		
	1995	Turning Point Brands	TPB	20.05	5	4	4	.90	30- 50	(50-150%)	11.7	1.0	1.71	.20	72	12/31	.41	.49	6/30	▲.05	.045	YES
1036	1238	Tutor Perini	TPC	5.76	–	4	–	1.50	25- 40	(335-595%)	NMF	NIL	d.56	NIL	66	12/31	d1.71	.98	3/31	NIL	NIL	YES
	1836	Twilio Inc.	TWLO	108.37	3	4	5	1.50	110- 185	(N- 70%)	NMF	NIL	d.21	NIL	43	12/31	.04	.04	3/31	NIL	NIL	YES
237	2656	Twitter Inc.	TWTR	27.01	4	4	3	1.25	35- 55	(30-105%)	45.0	NIL	.60	NIL	50	12/31	.15	.33	3/31	NIL	NIL	YES
	2634	Tyler Technologies	TYL	328.05	1	3	2	.90	300- 445	(N- 35%)	57.3	NIL	5.73	NIL	4	12/31	1.43	1.26	3/31	NIL	NIL	YES
	1942	Tyson Foods 'A'	TSN	63.86	3	3	5	.75	95- 145	(50-125%)	11.1	2.7	5.75	1.72	39	12/31	1.66	1.58	6/30	.42	.375	YES
	1548	**UDR, Inc.**	UDR	36.37	2	3	3	.75	45- 65	(25- 80%)	75.8	3.8	.48	1.37	51	12/31	.33	.30	6/30	▲.36	.343	YES
	557	UGI Corp.	UGI	27.15	4	2	4	.75	55- 75	(105-175%)	9.2	4.8	2.95	1.30	58	12/31	1.17	.81	6/30	.325	.26	YES
	413	US Ecology (NDQ)	ECOL	30.92	4	3	3	1.00	70- 100	(125-225%)	15.3	NIL	2.02	NIL	3	12/31	.38	.65	6/30	▼NIL	.18	YES
	1960	US Foods Hldg.	USFD	17.34	3	3	4	.80	40- 60	(130-245%)	12.8	NIL	1.36	NIL	9	12/31	.66	.56	3/31	NIL	NIL	YES
237	1943	USANA Health Sciences	USNA	66.91	4	3	3	.85	60- 90	(N- 35%)	16.5	NIL	4.06	NIL	39	3/31	◆1.23	1.01	3/31	NIL	NIL	YES
456	2611	Uber Technologies	UBER	28.19	–	4	–	NMF	40- 70	(40-150%)	NMF	NIL	d2.32	NIL	12	12/31	d.64	NA	3/31	NIL	NIL	YES
456	605	Ubiquiti Inc.	UI	156.67	2	3	2	.95	155- 230	(N- 45%)	27.4	0.8	5.72	1.20	41	12/31	1.32	1.09	3/31	.30	.25	YES
	2189	Ulta Beauty (NDQ)	ULTA	208.07	▲3	3	4	1.00	295- 440	(40-110%)	16.7	NIL	12.44	NIL	76	1/31	3.89	3.61	3/31	NIL	NIL	YES
456	2114	Under Armour 'A'	UAA	9.65	3	4	3	1.30	20- 35	(105-265%)	NMF	NIL	d.05	NIL	86	12/31	.10	.09	3/31	NIL	NIL	YES
2669	2115	Unifi, Inc.	UFI	9.50	4	3	3	1.05	19- 30	(100-215%)	NMF	NIL	d.05	NIL	86	12/31	.02	.06	3/31	NIL	NIL	YES
	404	UniFirst Corp.	UNF	159.52	2	2	2	1.00	200- 270	(25- 70%)	19.5	0.6	8.20	1.00	32	2/28	1.82	1.67	6/30	.25	.113	YES
	1944	Unilever PLC ADR(g)	UL	53.59	3	1	4	.80	70- 85	(30- 60%)	20.6	3.5	2.60	1.85	39	12/31	1.11(p)	1.41(p)	3/31	.452	.442	YES
	346	Union Pacific	UNP	146.61	3	1	3	1.15	230- 280	(55- 90%)	16.6	2.6	8.82	3.88	26	12/31	2.02	2.12	3/31	.97	.88	YES
237	1411	Unisys Corp.	UIS	11.58	–	5	–	1.45	12- 25	(5-115%)	12.9	NIL	.90	NIL	56	12/31	d.17	.41	3/31	NIL	NIL	YES
	314	United Airlines Hldgs. (NDQ)	UAL	27.79	3	3	3	1.25	130- 190	(370-585%)	2.3	NIL	12.07	NIL	74	12/31	2.67	2.41	3/31	NIL	NIL	YES
	1961	United Natural Foods	UNFI	11.92	4	4	5	1.45	20- 35	(70-195%)	9.0	NIL	1.33	NIL	9	1/31	.32	.44	3/31	NIL	NIL	YES
	315	United Parcel Serv.	UPS	101.20	2	2	4	1.00	150- 200	(50-100%)	13.0	4.0	7.76	4.04	74	12/31	2.11	1.94	3/31	▲1.01	.96	YES
	1735	United Rentals	URI	100.60	3	3	3	1.70	220- 335	(120-235%)	5.3	NIL	18.90	NIL	31	12/31	5.60	4.85	3/31	NIL	NIL	YES
	788	U.S. Bancorp	USB	34.25	4	2	4	1.05	65- 80	(90-135%)	8.4	5.0	4.08	1.72	75	3/31	◆.72	1.00	6/30	.42	.37	YES
	936	U.S. Cellular	USM	31.43	4	3	4	1.10	40- 60	(25- 90%)	21.1	NIL	1.49	NIL	29	12/31	.20	.23	3/31	NIL	NIL	YES
	1595	U.S. Silica Holdings	SLCA	1.29	–	5	–	2.10	4- 8	(210-520%)	NMF	6.2	d2.23	.08	89	12/31	d.53	d.04	6/30	▼.02	.063	YES
	751	U.S. Steel Corp.	X	6.59	5	4	4	2.20	30- 50	(355-660%)	NMF	0.6	d3.53	.04	83	12/31	d3.93	1.23	3/31	▼.01	.05	YES
		United Technologies		NAME CHANGED TO RAYTHEON TECHNOLOGIES																		
	842	United Therapeutics (NDQ)	UTHR	106.44	3	3	5	.90	130- 200	(20- 90%)	9.6	NIL	11.06	NIL	21	12/31	1.96	3.24	3/31	NIL	NIL	YES
2231	815	UnitedHealth Group	UNH	282.14	2	1	2	1.00	360- 440	(30- 55%)	17.6	1.5	16.05	4.32	15	3/31	◆3.72	3.73	3/31	1.08	.90	YES
	2445	Univar Solutions	UNVR	11.49	2	3	4	1.35 ▼	40- 60	(250-420%)	9.5	NIL	▼1.21	NIL	57	12/31	.29	.01	3/31	NIL	NIL	YES
	1996	Universal Corp.	UVV	44.99	3	3	3	.75	50- 70	(10- 55%)	13.0	6.8	3.46	3.04	72	12/31	1.04	1.11	6/30	.76	.75	YES
	1315	Universal Display (NDQ)	OLED	140.06	3	3	3	1.20	140- 210	(N- 50%)	45.3	0.4	3.09	.61	67	12/31	.56	.40	3/31	▲.15	.10	YES
	2016	Universal Electronics (NDQ)	UEIC	39.13	3	3	3	1.15	55- 85	(40-115%)	29.9	NIL	1.31	NIL	23	12/31	.49	d.80	3/31	NIL	NIL	YES
	1122	Universal Forest (NDQ)	UFPI	36.83	2	3	1	1.20	60- 90	(65-145%)	11.7	1.4	3.16	.50	44	12/31	.61	.50	3/31	▲.125	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).

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 9-30-20	(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?
	816	Universal Health 'B'		UHS	102.69	3	3	4	.95	195- 290	(90-180%)	9.6	0.8	10.69	.80	15	12/31	2.79	1.70	3/31	.20	.10	YES
	1566	Unum Group		UNM	15.15	3	3	4	1.30	45- 65	(195-330%)	2.7	7.5	5.71	1.14	48	12/31	1.41	1.30	6/30	.285	.26	YES
1041	2211	Urban Outfitters	(NDQ)	URBN	17.49	4	3	3	1.00	55- 80	(215-355%)	15.9	NIL	1.10	NIL	63	1/31	.20	.80	3/31	NIL	NIL	YES
	2116	**V.F. Corp.**		VFC	55.83	4	3	3	1.20	85- 125	(50-125%)	28.1	3.4	1.99	1.92	86	12/31	1.23	1.31	3/31	.48	.51	YES
	2371	Vail Resorts		MTN	157.93	3	3	3	.90	250- 375	(60-135%)	37.7	2.2	▼4.19	3.52	81	1/31	d5.04	5.02	6/30	1.76	1.47	YES
	2434	Valaris plc		VAL	0.43	–	5	–	2.30	▼ 2- 4	(365-830%)	NMF	NIL	▼d5.55	NIL	95	12/31	d1.55	d1.56	3/31	NIL	.04	YES
	1596	Vale S.A. ADR		VALE	7.99	4	5	3	1.65	14- 25	(75-215%)	NMF	NIL	d.36	NIL	89	12/31	d.30	.73	3/31	NIL	NIL	YES
	522	Valero Energy		VLO	50.31	4	3	4	1.30	95- 145	(90-190%)	14.4	7.8	3.50	3.92	92	12/31	2.58	2.24	3/31	▲.98	.90	YES
648	1781	Valmont Inds.		VMI	106.53	3	2	5	1.15	170- 230	(60-115%)	14.8	1.7	7.21	1.80	69	12/31	1.66	1.87	6/30	▲.45	.375	YES
	1003	Valvoline Inc.		VVV	13.70	3	3	3	.75	30- 45	(120-230%)	9.1	3.4	1.50	.47	85	12/31	.35	.27	3/31	.113	.106	YES
	196	Varian Medical Sys.		VAR	112.04	3	2	2	1.00	150- 200	(35- 80%)	23.8	NIL	4.70	NIL	19	12/31	.96	1.12	3/31	NIL	NIL	YES
	132	Veeco Instruments	(NDQ)	VECO	9.86	3	4	3	1.40	20- 35	(105-255%)	NMF	NIL	d.72	NIL	20	12/31	d.69	d3.11	3/31	NIL	NIL	YES
	825	Veeva Systems		VEEV	184.40	▲2	3	3	1.25	180- 270	(N- 45%)	76.8	NIL	2.40	NIL	18	1/31	.54	.45	3/31	NIL	NIL	YES
	1549	Ventas, Inc.		VTR	28.65	5	3	4	.65	45- 65	(55-125%)	23.3	11.1	1.23	3.17	51	12/31	.03	.17	6/30	.793	.793	YES
1655	2212	Vera Bradley Inc.	(NDQ)	VRA	4.30	–	3	–	1.15	15- 20	(250-365%)	6.4	NIL	.67	NIL	63	1/31	.37	.25	3/31	NIL	NIL	YES
	2657	VeriSign Inc.	(NDQ)	VRSN	210.90	3	3	3	.95	155- 225	(N- 5%)	37.6	NIL	5.61	NIL	50	12/31	1.26	1.50	3/31	NIL	NIL	YES
	446	Verisk Analytics	(NDQ)	VRSK	149.32	3	2	2	.90	135- 180	(N- 20%)	35.7	0.7	4.18	1.08	2	12/31	.80	.87	3/31	▲.27	.25	YES
2671	937	Verizon Communic.		VZ	58.13	1	1	4	.70	80- 110	(40- 90%)	11.9	4.2	4.90	2.47	29	12/31	1.13	1.12	6/30	.615	.603	YES
	843	Vertex Pharmac.	(NDQ)	VRTX	273.26	1	3	3	1.20	300- 450	(10- 65%)	41.2	NIL	6.63	NIL	21	12/31	2.23	d.05	3/31	NIL	NIL	YES
648	2348	ViacomCBS Inc.	(NDQ)	VIAC	15.52	3	3	3	1.05	▼ 65- 100	(320-545%)	3.7	6.2	▼4.22	.96	80	12/31	.97	1.49	6/30	.24	.18	YES
	1782	Viad Corp.		VVI	20.58	3	3	3	.80	45- 65	(120-215%)	11.8	1.9	1.74	.40	69	12/31	d.01	d.09	6/30	.10	.10	YES
	606	ViaSat, Inc.	(NDQ)	VSAT	41.75	3	3	3	1.10	60- 90	(45-115%)	NMF	NIL	.34	NIL	41	12/31	.10	d.17	3/31	NIL	NIL	YES
	1347	Viavi Solutions	(NDQ)	VIAV	11.66	2	3	3	1.00	17- 25	(45-115%)	15.3	NIL	.76	NIL	61	12/31	.23	.22	3/31	NIL	NIL	YES
	1550	VICI Properties		VICI	15.68	–	4	–	1.55	25- 40	(60-155%)	13.4	7.6	1.17	1.19	51	12/31	.21	.37	6/30	.298	.288	YES
	1962	Village Super Market	(NDQ)	VLGEA	22.49	3	3	3	.70	35- 50	(55-120%)	17.7	4.4	1.27	1.00	9	1/31	.14	.53	6/30	.25	.25	
	2324	Virgin Galactic		SPCE	19.00	–	4	–	NMF	17- 30	(N- 60%)	NMF	NIL	d1.02	NIL	73	12/31	d.37	NA	3/31	NIL	NIL	YES
	2579	Visa Inc.		V	164.22	3	1	1	1.00	220- 270	(35- 65%)	26.5	0.8	6.20	1.25	24	12/31	1.46	1.30	3/31	.30	.25	YES
	1348	Vishay Intertechnology		VSH	14.66	3	3	4	1.45	35- 55	(140-275%)	15.8	2.6	.93	.38	61	12/31	.13	.58	3/31	.095	.085	YES
	1004	Visteon Corp.		VC	48.65	4	3	4	1.50	95- 145	(95-200%)	19.9	NIL	2.44	NIL	85	12/31	1.24	1.52	3/31	NIL	NIL	YES
	1225	Vistra Energy		VST	16.89	3	3	4	.85	40- 60	(135-255%)	7.1	3.2	2.39	.54	55	12/31	.49	d.37	3/31	▲.135	.125	YES
1037	2612	VMware, Inc.		VMW	132.62	3	3	5	1.00	190- 290	(45-120%)	19.3	NIL	6.86	NIL	12	1/31	2.05	1.98	3/31	NIL	NIL	YES
	967	Vocera Communications		VCRA	18.25	3	3	3	.70	30- 50	(65-175%)	NMF	NIL	d.58	NIL	42	12/31	d.05	d.04	3/31	NIL	NIL	YES
	938	Vodafone Group ADR(g)	(NDQ)	VOD	13.68	3	3	3	1.00	25- 40	(85-190%)	52.6	7.9	.26	1.08	29	9/30	.09(p)	.41(p)	3/31	.496	.55	YES
647	939	Vonage Holdings		VG	8.15	3	3	5	.80	12- 17	(45-110%)	40.8	NIL	.20	NIL	29	12/31	.06	.04	3/31	NIL	NIL	YES
	1551	Vornado R'lty Trust		VNO	38.15	4	3	3	.95	60- 90	(55-135%)	25.3	6.9	1.51	2.64	51	12/31	1.01	.53	3/31	.66	.66	YES
	2580	Voya Financial		VOYA	42.82	3	3	3	1.40	85- 125	(100-190%)	8.0	1.4	5.38	.60	24	12/31	d5.45	.76	3/31	.15	.01	YES
	1123	Vulcan Materials		VMC	108.00	2	3	3	1.10	150- 225	(40-110%)	20.1	1.3	5.37	1.36	44	12/31	1.07	.93	3/31	▲.34	.31	YES
	1005	**WABCO Hldgs.**		WBC	135.05	–	3	–	1.10	140- 210	(5- 55%)	26.2	NIL	5.15	NIL	85	12/31	.65	2.20	3/31	NIL	NIL	YES
	1195	WD-40 Co.	(NDQ)	WDFC	172.11	3	2	1	.70	110- 150	(N- N%)	35.9	1.6	4.80	2.68	10	2/28	1.04	1.14	6/30	.67	.61	YES
	915	WEC Energy Group		WEC	95.88	3	1	1	.45	80- 100	(N- 5%)	25.6	2.7	3.75	2.57	11	12/31	.77	.65	6/30	◆.633	.59	YES
	1552	W.P. Carey Inc.		WPC	60.45	4	2	3	.75	80- 110	(30- 80%)	28.1	6.9	2.15	4.16	51	12/31	.75	1.33	6/30	▲1.04	1.032	YES
1847	2398	WPP PLC ADR		WPP	33.70	4	3	3	1.10	▼ 100- 150	(195-345%)	11.3	NIL	▼2.98	NIL	36	12/31	1.73(p)	2.41(p)	6/30	NIL	NIL	YES
	546	WPX Energy		WPX	4.06	2	4	3	2.15	15- 25	(270-515%)	11.6	NIL	.35	NIL	93	12/31	.10	.83	3/31	NIL	NIL	YES
	2190	WW International	(NDQ)	WW	20.08	4	4	5	1.15	40- 65	(100-225%)	10.2	NIL	1.97	NIL	76	12/31	.42	.63	3/31	NIL	NIL	YES
	167	Wabash National		WNC	7.19	4	3	2	1.35	25- 40	(250-455%)	5.5	4.5	1.31	.32	59	12/31	.34	.38	6/30	.08	.08	YES
	347	Wabtec Corp.		WAB	48.95	–	3	–	1.25	115- 175	(135-260%)	11.0	1.0	4.44	.48	26	12/31	1.04	.97	3/31	.12	.12	YES
2028	973	Walgreens Boots	(NDQ)	WBA	42.85	3	2	3	1.00	75- 105	(75-145%)	7.3	4.3	5.90	1.83	45	2/28	1.52	1.64	3/31	.458	.44	YES
642	2152	Walmart Inc.		WMT	129.85	3	1	3	.75	145- 175	(10- 35%)	25.1	1.7	5.18	2.16	49	1/31	1.38	1.41	6/30	▲1.08	1.06	YES
	1509	Washington Federal	(NDQ)	WAFD	24.63	2	3	3	1.00	35- 55	(40-125%)	9.7	3.6	2.55	.88	27	12/31	.84	.65	3/31	▲.22	.20	YES
	1553	Washington R.E.I.T.		WRE	22.16	2	3	3	.90	25- 35	(15- 60%)	25.2	5.4	.88	1.20	51	12/31	.66	.07	3/31	.30	.30	YES
	414	Waste Connections		WCN	86.33	2	2	1	.80	105- 145	(20- 70%)	35.2	0.9	2.45	.74	3	12/31	.50	.50	3/31	.185	.16	YES
	415	Waste Management		WM	98.20	1	1	1	.75	105- 130	(5- 30%)	21.4	2.2	4.59	2.18	3	12/31	1.19	1.13	3/31	▲.545	.513	YES
	133	Waters Corp.		WAT	194.33	2	2	4	1.00	265- 355	(35- 85%)	20.1	NIL	9.65	NIL	20	12/31	3.12	2.59	3/31	NIL	NIL	YES
	1144	Watsco, Inc.		WSO	147.77	3	2	1	1.05	185- 245	(25- 65%)	22.3	4.8	6.62	7.10	7	12/31	.92	1.02	6/30	▲1.775	1.60	YES
	1736	Watts Water Techn.		WTS	78.55	2	3	1	1.15	90- 140	(15- 80%)	19.4	1.3	4.05	1.00	31	12/31	1.00	.88	3/31	.23	.21	YES
2033	2658	Wayfair Inc.		W	100.93	5	4	5	1.30	140- 225	(40-125%)	NMF	NIL	d7.23	NIL	50	12/31	d3.54	d1.59	3/31	NIL	NIL	YES
	2531	Webster Fin'l		WBS	23.56	4	3	3	1.20	70- 105	(195-345%)	5.8	6.8	4.06	1.60	52	3/31	◆.39	1.06	6/30	◆.40	.40	YES
	1554	Weingarten Realty		WRI	13.95	3	3	3	.90	30- 45	(115-225%)	8.0	11.3	1.75	1.58	51	12/31	.58	.47	3/31	.395	.395	YES
	1963	Weis Markets		WMK	44.87	2	3	5	.80	40- 65	(N- 45%)	15.7	2.8	2.85	1.24	9	12/31	.70	.49	3/31	.31	.31	YES
	1737	Welbilt, Inc.		WBT	4.36	5	4	2	1.15	14- 20	(220-360%)	11.2	NIL	.39	NIL	31	12/31	.19	.18	3/31	NIL	NIL	YES
	2661	WellCare Health Plans		WCG					SEE FINAL SUPPLEMENT														
	2532	Wells Fargo		WFC	27.68	4	3	3	1.10	70- 95	(155-245%)	7.6	7.5	3.63	2.08	52	3/31	.01	1.20	3/31	.51	.45	YES
	1555	Welltower Inc.		WELL	45.38	3	3	4	.65	65- 95	(45-110%)	16.8	7.7	2.70	3.48	51	12/31	.55	.27	3/31	.87	.87	YES
	370	Wendy's Company	(NDQ)	WEN	18.06	4	3	5	.85	30- 40	(65-120%)	25.4	2.7	.71	.49	68	12/31	.08	.18	3/31	.12	.10	YES
	326	Werner Enterprises	(NDQ)	WERN	39.01	3	3	2	1.05	45- 65	(15- 65%)	18.0	0.9	2.17	.36	64	12/31	.67	.75	6/30	.09	.09	YES
	1316	WESCO Int'l		WCC	23.19	▼5	3	3	1.45	75- 110	(225-375%)	4.4	NIL	5.26	NIL	67	12/31	1.26	1.26	3/31	NIL	NIL	YES
	1167	West Fraser Timber	(TSE)	WFT.TO	29.98b	4	3	3	1.20	85- 125	(185-315%)	13.4	2.7	2.24	.80	79	12/31	d.16(b)	.29(b)	6/30	.20(b)	.20(b)	YES
	229	West Pharmac. Svcs.		WST	170.37	1	2	2	.90	160- 220	(N- 30%)	51.6	0.4	3.30	.64	8	12/31	.84	.69	6/30	.16	.15	YES
	1412	Western Digital	(NDQ)	WDC	39.55	4	3	3	1.55	70- 110	(75-180%)	9.8	5.1	4.04	2.00	56	12/31	.62	1.45	6/30	.50	.50	YES
	639	Western Midstream Part.		WES	5.60	3	3	3	1.45	35- 55	(525-880%)	3.2	44.5	1.74	2.49-1.25	84	12/31	.62	.43	3/31	▲.622	.603	YES
	2581	Western Union		WU	19.33	3	3	1	.95	30- 40	(55-105%)	9.9	4.7	1.95	.90	24	12/31	.38	.48	3/31	▲.225	.20	YES
	592	Westlake Chemical		WLK	38.92	4	3	3	1.55	105- 160	(170-310%)	10.8	2.7	3.61	1.05	77	12/31	.56	.95	3/31	.263	.25	YES
	1964	Weston (George)	(TSE)	WN.TO	105.81b	1	2	3	.60	120- 165	(15- 55%)	13.9	2.0	7.60	2.10	9	12/31	1.69(b)	1.59(b)	6/30	.525(b)	.515(b)	YES
	1183	WestRock Co.		WRK	29.66	3	3	4	1.50	65- 95	(120-220%)	9.3	6.3	3.20	1.88	62	12/31	.58	.83	3/31	.465	.455	YES
	2582	WEX Inc.		WEX	109.81	3	3	3	1.35	165- 250	(50-130%)	10.7	NIL	10.31	NIL	24	12/31	2.81	2.11	3/31	NIL	NIL	YES
	1168	Weyerhaeuser Co.		WY	19.18	4	3	3	1.25	30- 45	(55-135%)	38.4	7.1	.50	1.36	79	12/31	d.02	d.12	3/31	.34	.34	YES
	1578	Wheaton Precious Met.		WPM	34.98	2	3	2	.75	25- 40	(N- 15%)	43.7	1.1	.80	.40	1	12/31	.17	.08	6/30	▲.10	.18	YES
	1783	Whirlpool Corp.		WHR	100.00	4	3	4	1.20	190- 290	(90-190%)	6.7	4.8	14.91	4.80	69	12/31	4.91	4.75	3/31	1.20	1.15	YES
	844	Whiting Petroleum		WLL					SEE FINAL SUPPLEMENT														
1423	1026	WideOpenWest, Inc.		WOW	5.49	–	4	–	1.65	7- 13	(30-135%)	11.2	NIL	.49	NIL	14	12/31	.08	.20	3/31	NIL	NIL	YES
	2381	Wiley (John) & Sons		JWA	35.35	2	3	2	1.15	▼ 65- 95	(85-170%)	16.8	3.8	▼2.10	1.36	91	1/31	.63	.61	6/30	.34	.33	YES
	619	Williams Cos.		WMB	18.49	4	3	5	1.90	30- 50	(60-170%)	17.6	8.7	1.05	1.60	87	12/31	.24	.19	3/31	▲.40	.38	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 9-30-20, 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	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 9-30-20	(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?
	2191	Williams-Sonoma		WSM	50.77	3	3	4	1.00	65- 100	(30- 95%)	21.2	3.8	2.40	1.92	76	1/31	2.10	1.93	6/30	.48	.48	YES
1239	2583	Willis Towers Wat. plc	(NDQ)	WLTW	188.89	–	2	–	.95	250- 335	(30- 75%)	15.4	1.4	12.28	2.72	24	12/31	4.90	4.00	6/30	▲.68	.65	YES
	371	Wingstop Inc.	(NDQ)	WING	109.35	▲3	3	4	1.05	75- 110	(N- N%)	NMF	0.4	.85	.48	68	12/31	.14	.15	3/31	.11	.09	YES
	2325	Winnebago		WGO	35.01	2	3	2	1.35	70- 110	(100-215%)	9.9	1.3	▼3.55	.44	73	2/28	.67	.68	6/30	.11	.11	YES
	789	Wintrust Financial	(NDQ)	WTFC	33.85	3	3	3	1.20	80- 120	(135-255%)	5.8	3.3	5.81	1.12	75	12/31	1.44	1.35	3/31	▲.28	.25	YES
	2162	Wolverine World Wide		WWW	18.32	3	3	4	1.25	45- 70	(145-280%)	9.1	2.2	2.01	.40	28	12/31	.59	.52	6/30	.10	.10	YES
2029	134	Woodward, Inc.	(NDQ)	WWD	55.06	3	3	3	1.15	105- 155	(90-180%)	10.5	0.6	5.25	.33	20	12/31	.83	.77	3/31	.28	.163	YES
	1837	Workday, Inc.		WDAY	150.90	4	3	4	1.25	165- 250	(10- 65%)	NMF	NIL	d1.81	NIL	43	1/31	d.56	d.47	3/31	NIL	NIL	YES
	620	World Fuel Services		INT	23.39	4	3	3	1.25	40- 65	(70-180%)	9.1	1.7	2.57	.40	87	12/31	.86	.44	6/30	.10	.06	YES
238	2349	World Wrestling Ent.		WWE	40.57	3	3	5	1.10	70- 105	(75-160%)	36.2	1.2	▼1.12	.48	80	12/31	.77	.46	6/30	◆.12	.12	YES
	752	Worthington Inds.		WOR	23.62	4	3	4	1.35	65- 100	(175-325%)	7.9	4.1	2.99	.96	83	2/28	.65	.46	6/30	.24	.23	YES
	197	Wright Medical N.V.	(NDQ)	WMGI	28.84	–	3	–	1.05	15- 25	(N- N%)	NMF	NIL	d.20	NIL	19	12/31	d.05	d.18	3/31	NIL	NIL	YES
	2372	Wyndham Destinations		WYND	22.27	–	3	–	NMF	▼ 55- 85	(145-280%)	5.6	9.0	▼3.98	2.00	81	12/31	1.58	1.27	3/31	▲.50	.45	YES
	2373	Wyndham Hotels		WH	32.99	–	3	–	1.45	▼ 60- 90	(80-175%)	12.2	3.9	▼2.71	1.28	81	12/31	.68	.43	3/31	▲.32	.29	YES
	2374	Wynn Resorts	(NDQ)	WYNN	73.29	4	3	4	1.75	150- 225	(105-205%)	NMF	5.5	▼d2.48	4.00	81	12/31	d.68	.70	3/31	1.00	.75	YES
	327	**XPO Logistics**		XPO	58.68	3	4	2	1.75	125- 210	(115-260%)	13.1	NIL	4.47	NIL	64	12/31	1.12	.72	3/31	NIL	NIL	YES
	2226	Xcel Energy Inc.	(NDQ)	XEL	64.35	3	1	1	.45	55- 65	(N- N%)	22.9	2.7	2.81	1.75	25	12/31	.56	.42	6/30	▲.43	.405	YES
	1420	Xerox Holdings		XRX	17.83	3	3	3	1.45	40- 60	(125-235%)	5.0	5.6	3.58	1.00	70	12/31	1.33	1.14	6/30	.25	.25	YES
2671	1384	Xilinx Inc.	(NDQ)	XLNX	89.08	4	3	5	1.20	90- 135	(N- 50%)	32.5	1.7	2.74	1.48	40	12/31	.68	.91	3/31	.37	.36	YES
648	1385	Xperi Corp.	(NDQ)	XPER	14.35	–	3	–	1.10	30- 45	(110-215%)	5.5	5.6	2.59	.80	40	12/31	1.19	1.19	3/31	.20	.20	YES
	1738	Xylem Inc.		XYL	69.26	3	3	3	1.05	75- 115	(10- 65%)	33.1	1.5	2.09	1.04	31	12/31	.89	.88	3/31	▲.26	.24	YES
	1579	**Yamana Gold**		AUY	4.39	3	5	4	.85	3- 5	(N- 15%)	48.8	1.1	.09	.05	1	12/31	.02	.03	6/30	▲.013	.005	YES
649	2659	Yelp, Inc.		YELP	19.99	4	3	3	1.30	45- 75	(125-275%)	21.5	NIL	.93	NIL	50	12/31	.24	.37	3/31	NIL	NIL	YES
	2326	YETI Holdings		YETI	24.06	–	3	–	NMF	45- 70	(85-190%)	23.4	NIL	▼1.03	NIL	73	12/31	.48	.38	3/31	NIL	NIL	YES
	1792	York Water Co. (The)	(NDQ)	YORW	42.12	3	3	1	.65	30- 45	(N- 5%)	37.9	1.7	1.11	.72	16	12/31	.26	.29	3/31	▲.18	.173	YES
	372	Yum! Brands		YUM	82.07	2	2	3	.60	115- 160	(40- 95%)	21.6	2.3	3.80	1.88	68	12/31	1.05	.81	3/31	▲.47	.42	YES
	373	Yum China Holdings		YUMC	45.21	–	3	–	1.05	60- 90	(35-100%)	NMF	1.1	d.22	.48	68	12/31	.23	.12	3/31	.12	.12	YES
	968	**Zayo Group Holdings**		ZAYO					SEE FINAL REPORT														
	607	Zebra Techn. 'A'	(NDQ)	ZBRA	202.35	2	3	2	1.35	245- 365	(20- 80%)	14.9	NIL	13.56	NIL	41	12/31	3.56	3.10	3/31	NIL	NIL	YES
	1838	Zendesk Inc.		ZEN	72.37	3	4	3	1.15	80- 135	(10- 85%)	NMF	NIL	d1.32	NIL	43	12/31	d.32	d.31	3/31	NIL	NIL	YES
649	2660	Zillow Group 'C'	(NDQ)	Z	36.46	3	3	2	1.10	35- 55	(N- 50%)	NMF	NIL	d.79	NIL	50	12/31	d.49	d.18	3/31	NIL	NIL	YES
	198	Zimmer Biomet Hldgs.		ZBH	117.00	2	2	3	1.00	135- 185	(15- 60%)	14.1	0.8	8.30	.96	19	12/31	2.30	2.18	6/30	.24	.24	YES
	2533	Zions Bancorp.	(NDQ)	ZION	29.27	3	3	4	1.25	60- 90	(105-205%)	7.1	4.6	4.12	1.36	52	3/31	◆.04	1.03	3/31	.34	.30	YES
	1640	Zoetis Inc.		ZTS	127.39	1	3	2	.95	135- 200	(5- 55%)	33.2	0.6	3.84	.80	22	12/31	.92	.79	6/30	.20	.164	YES
	940	Zoom Video Communic.	(NDQ)	ZM	148.99	–	4	–	NMF	100- 165	(N- 10%)	NMF	NIL	.05	NIL	29	1/31	.05	NA	3/31	NIL	NIL	YES
	1839	Zscaler, Inc.	(NDQ)	ZS	70.51	–	4	–	.65	55- 90	(N- 30%)	NMF	NIL	d.72	NIL	43	1/31	d.23	d.03	3/31	NIL	NIL	YES
	2213	Zumiez Inc.	(NDQ)	ZUMZ	20.42	2	3	2	1.10	35- 55	(70-170%)	22.0	NIL	.93	NIL	63	1/31	1.48	1.18	3/31	NIL	NIL	YES
239	2017	Zynga Inc.	(NDQ)	ZNGA	7.64	3	3	3	.90	4- 6	(N- N%)	NMF	NIL	d.12	NIL	23	12/31	NIL	NIL	3/31	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	Precious Metals	**26**	Railroad	**51**	R.E.I.T.	**76**	Retail (Hardlines)
2	Information Services	**27▲**	Thrift	**52**	Bank	**77**	Chemical (Specialty)
3	Environmental	**28▼**	Shoe	**53**	Aerospace/Defense	**78**	Metal Fabricating
4	IT Services	**29**	Telecom. Services	**54**	Furn/Home Furnishings	**79**	Paper/Forest Products
5	Insurance (Prop/Cas.)	**30**	Telecom. Utility	**55**	Power	**80**	Entertainment
6	Investment Banking	**31**	Machinery	**56**	Computers/Peripherals	**81**	Hotel/Gaming
7	Retail Building Supply	**32**	Industrial Services	**57**	Chemical (Diversified)	**82**	Automotive
8	Med Supp Non-Invasive	**33**	Educational Services	**58**	Natural Gas Utility	**83**	Steel
9	Retail/Wholesale Food	**34**	Beverage	**59**	Heavy Truck & Equip	**84**	Pipeline MLPs
10	Household Products	**35**	Retail Automotive	**60**	Reinsurance	**85**	Auto Parts
11	Electric Util. (Central)	**36▼**	Advertising	**61**	Electronics	**86**	Apparel
12	Computer Software	**37**	Brokers & Exchanges	**62**	Packaging & Container	**87**	Oil/Gas Distribution
13	Electric Utility (East)	**38**	Semiconductor Equip	**63**	Retail (Softlines)	**88**	Human Resources
14	Cable TV	**39**	Food Processing	**64**	Trucking	**89**	Metals & Mining (Div.)
15	Medical Services	**40**	Semiconductor	**65▲**	Chemical (Basic)	**90**	Maritime
16	Water Utility	**41**	Wireless Networking	**66**	Engineering & Const	**91**	Publishing
17	Homebuilding	**42**	Telecom. Equipment	**67**	Electrical Equipment	**92**	Petroleum (Integrated)
18▲	Healthcare Information	**43**	E-Commerce	**68**	Restaurant	**93**	Natural Gas (Div.)
19	Med Supp Invasive	**44**	Building Materials	**69**	Diversified Co.	**94**	Petroleum (Producing)
20	Precision Instrument	**45**	Pharmacy Services	**70**	Office Equip/Supplies	**95**	Oilfield Svcs/Equip.
21	Biotechnology	**46**	Foreign Electronics	**71**	Toiletries/Cosmetics		
22	Drug	**47**	Funeral Services	**72**	Tobacco		
23	Entertainment Tech	**48**	Insurance (Life)	**73**	Recreation		
24	Financial Svcs. (Div.)	**49**	Retail Store	**74**	Air Transport		
25	Electric Utility (West)	**50**	Internet	**75**	Bank (Midwest)		

***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 9-30-20
Agilent Technologies	2	1	Dynamism of the ranking system.	
Assurant Inc.	2	1	Dynamism of the ranking system.	
Baxter Int'l Inc.	2	1	Dynamism of the ranking system.	
Cardinal Health	2	1	Dynamism of the ranking system.	
Cincinnati Financial	2	1	Dynamism of the ranking system.	
Edwards Lifesciences	2	1	Dynamism of the ranking system.	
Equifax, Inc.	2	1	Surprise factor, greater than average gain. Mar. quarter $1.40 vs. year ago $1.20. Our estimate was $1.25.	Under Review
Everest Re Group Ltd.	2	1	Dynamism of the ranking system.	
Lauder (Estee)	2	1	Dynamism of the ranking system.	
Netflix, Inc.	2	1	Dynamism of the ranking system.	(A)
Northern Trust Corp.	3	2	Earnings turnaround. Mar. quarter $1.55 vs. year ago $1.48. Our estimate was $1.61.	$6.95
People's United Fin'l	2	1	Dynamism of the ranking system.	
Philip Morris Int'l	3	2	Earnings turnaround. Mar. quarter $1.21 vs. year ago $1.09. Our estimate was $1.15.	5.22
Roper Tech.	2	1	Dynamism of the ranking system.	
Silgan Holdings	3	2	Earnings turnaround. Mar. quarter 52¢ vs. year ago 42¢. Our estimate was 50¢.	2.20
Teradyne Inc.	3	2	Surprise factor, earnings turnaround. Mar. quarter 97¢ vs. year ago 62¢. Our estimate was 65¢.	Under Review

STOCKS MOVING DOWN IN TIMELINESS RANK

Stock Name	Old Rank	New Rank	Reason for Change	Earnings Est. 12 months to 9-30-20
BOK Financial	3	4	Surprise factor, earnings reversal. Mar. quarter 88¢ vs. year ago $1.54. Our estimate was $1.69.	Under Review
Bank of Hawaii	2	3	Surprise factor, earnings reversal. Mar. quarter 87¢ vs. year ago $1.43. Our estimate was $1.47.	Under Review
Burlington Stores	1	2	Dynamism of the ranking system.	
CIT Group	3	4	Surprise factor, earnings reversal. Mar. quarter d$2.43 vs. year ago $1.18. Our estimate was $1.30.	Under Review
Carlisle Cos.	2	3	Surprise factor, earnings reversal. Mar. quarter $1.09 vs. year ago $1.33. Our estimate was $1.47.	Under Review
Chipotle Mex. Grill	2	3	Surprise factor, earnings reversal. Mar. quarter $3.08 vs. year ago $3.13. Our estimate was $3.90.	Under Review

KPSC Case No. 2020-00174
Commission Staff's Third Set of Data Requests
Dated July 22, 2020
Item No. 1
Attachment 6
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STOCKS MOVING DOWN IN TIMELINESS RANK

Stock Name	Old Rank	New Rank	Reason for Change	Earnings Est. 12 months to 9-30-20
Coca-Cola (B)	1	2	Dynamism of the ranking system.	
Dominion Energy	1	2	Dynamism of the ranking system.	
Fifth Third Bancorp	3	4	Surprise factor, decreasing profit growth. Mar. quarter 13¢ vs. year ago 63¢. Our estimate was 63¢.	Under Review
First Horizon National	3	4	Surprise factor, earnings reversal. Mar. quarter 4¢ vs. year ago 31¢. Our estimate was 35¢.	Under Review
HCA Healthcare (B)	2	3	Surprise factor, earnings reversal. Mar. quarter $2.33 vs. year ago $2.97. Our estimate was $2.85.	Under Review
Leidos Hldgs.	1	2	Dynamism of the ranking system.	
MDU Resources	1	2	Dynamism of the ranking system.	
NIKE, Inc. 'B'	1	2	Dynamism of the ranking system.	
Northland Power	1	2	Dynamism of the ranking system.	
RLI Corp.	2	3	Earnings reversal, as forecast. Mar. quarter 66¢ vs. year ago 71¢. Our estimate was 66¢.	$2.53
ResMed Inc.	1	2	Dynamism of the ranking system.	
SBA Communications	1	2	Dynamism of the ranking system.	
Schlumberger Ltd.	3	4	Surprise factor, earnings reversal. Mar. quarter 25¢ vs. year ago 30¢. Our estimate was 30¢.	(A)
Simpson Manufacturing	1	2	Dynamism of the ranking system.	
Southern Copper	1	2	Dynamism of the ranking system.	
Sun Life Fin'l Svcs.	1	2	Dynamism of the ranking system.	

(A) New full-page report in this week's Ratings & Reports.
(B) Supplementary report in this week's Ratings & Reports.

TIMELY STOCKS IN TIMELY INDUSTRIES

Page No.	Industry (Industry Rank)	Recent Price	RANKS Timeliness	Safety	Technical	Beta	Current P/E Ratio	% Est'd Yield	Est'd. 3-5 Year Price Apprec.
	Precious Metals (INDUSTRY RANK 1)								
1569	Agnico Eagle Mines	53.88	2	3	3	0.40	47.3	1.5	30- 95%
1571	Barrick Gold	24.92	1	3	3	0.55	39.6	1.1	N- N%
1572	Franco-Nevada Corp.	124.09	1	3	2	0.55	56.9	0.8	N- 15%
1573	Kinross Gold	6.17	2	5	3	0.55	15.4	NIL	N- 95%
1574	Newmont Corp.	59.54	1	3	2	0.70	29.8	1.7	N- 20%
1575	Pan Amer. Silver	19.83	2	4	2	0.85	22.0	1.0	25-100%
1577	Royal Gold	111.60	2	3	5	0.75	44.6	1.0	35-100%
1578	Wheaton Precious Met.	34.98	2	3	2	0.75	43.7	1.1	N- 15%
	Information Services (INDUSTRY RANK 2)								
431	Broadridge Fin'l	109.79	2	2	4	0.90	21.4	2.1	30- 80%
433	CoStar Group	603.53	1	2	2	1.05	57.6	NIL	35- 80%
434	Equifax, Inc.	125.81	1	3	1	1.00	21.8	1.2	45-115%
435	Exponent, Inc.	72.11	2	3	2	0.85	45.6	1.1	5- 45%
437	Forrester Research	32.82	2	3	3	0.90	18.6	NIL	85-175%
439	IHS Markit	64.99	2	3	2	1.05	23.2	1.0	30-100%
440	MSCI Inc.	321.95	2	3	3	1.05	45.3	0.9	N- 20%
441	Moody's Corp.	239.47	2	3	2	1.15	27.7	0.9	N- 45%
442	Nielsen Hldgs. plc	12.77	2	3	3	1.00	12.5	1.9	175-330%
443	S&P Global	279.17	2	2	2	1.05	27.2	1.0	N- 30%
445	TransUnion	72.85	2	3	1	1.00	24.4	0.4	30-100%
	Environmental (INDUSTRY RANK 3)								
407	Casella Waste Sys.	42.87	2	3	1	0.95	43.7	NIL	40-110%
409	Darling Ingredients	19.71	2	3	3	1.15	14.8	NIL	25- 80%
410	Republic Services	78.29	1	2	1	0.75	21.5	2.1	20- 60%
412	Tetra Tech	78.81	2	3	2	1.05	22.8	0.8	N- 40%
414	Waste Connections	86.33	2	2	1	0.80	35.2	0.9	20- 70%
415	Waste Management	98.20	1	1	1	0.75	21.4	2.2	5- 30%
	IT Services (INDUSTRY RANK 4)								
2615	Accenture Plc	174.74	1	1	2	1.05	22.3	1.9	15- 35%
2616	Amdocs Ltd.	62.53	2	1	4	0.80	17.1	2.1	10- 35%
2617	Automatic Data Proc.	139.82	2	1	3	1.00	23.1	2.8	40- 70%
2618	CACI Int'l	238.58	2	3	3	0.95	18.6	NIL	N- 35%
2619	CDW Corp.	105.60	1	3	2	1.05	20.6	1.4	N- 25%
2620	CSG Systems Int'l	47.82	2	3	4	0.90	18.6	2.0	N- 25%
2623	EPAM Systems	206.66	2	3	3	1.20	39.7	NIL	N- 35%
2626	Fiserv Inc.	97.24	2	2	2	0.90	22.2	NIL	N- 30%
2627	Henry (Jack) & Assoc.	166.67	1	1	2	0.85	38.4	1.0	N- N%
2628	Infosys Ltd. ADR	8.51	2	2	4	0.85	13.5	4.1	135-195%
2630	ManTech Int'l 'A'	78.69	2	3	2	1.00	31.7	1.6	N- 35%
2631	Paychex, Inc.	66.46	2	1	3	1.00	20.6	4.1	60- 90%
2632	SEI Investments	49.90	2	2	3	1.25	14.1	1.4	60-110%
2634	Tyler Technologies	328.05	1	3	2	0.90	57.3	NIL	N- 35%
	Insurance (Prop/Cas.) (INDUSTRY RANK 5)								
754	Alleghany Corp.	545.92	2	1	3	0.90	17.4	NIL	50- 85%
755	Allstate Corp.	102.72	2	1	3	0.80	9.5	2.1	55- 95%
757	Arch Capital Group	26.70	2	1	2	0.80	9.1	NIL	70-105%
758	Berkley (W.R.)	55.25	2	1	3	0.85	18.5	0.8	10- 35%
760	CNA Fin'l	31.72	2	2	3	0.95	7.8	4.7	135-230%
762	Cincinnati Financial	82.48	1	2	3	0.85	19.3	2.9	15- 60%
764	First American Fin'l	41.22	2	2	2	0.90	6.4	4.3	120-190%
765	Hanover Insurance	97.55	2	2	4	0.85	11.3	2.7	25- 65%
766	Markel Corp.	927.82	2	1	3	0.90	13.0	NIL	60- 95%
767	Mercury General	40.61	2	3	4	0.85	13.7	6.2	60-145%
769	Old Republic	15.69	2	3	4	0.90	9.2	5.4	155-280%
770	Progressive Corp.	81.94	2	2	2	0.85	15.6	0.5	15- 60%
772	Selective Ins. Group	50.29	2	3	4	0.80	10.8	1.8	10- 70%
773	Travelers Cos.	101.78	2	1	4	0.85	9.4	3.3	95-135%
	Investment Banking (INDUSTRY RANK 6)								
1808	Houlihan Lokey	56.41	1	3	2	1.00	28.2	2.2	5- 50%
1809	Morgan Stanley	38.36	2	3	3	1.40	10.7	3.6	95-200%
1811	Raymond James Fin'l	62.36	2	3	3	1.25	9.2	2.4	75-165%
1812	Stifel Financial Corp.	41.63	2	3	4	1.45	7.3	1.7	80-175%
	Retail Building Supply (INDUSTRY RANK 7)								
1137	Fastenal Co.	34.92	1	2	2	1.10	24.8	2.9	15- 45%
1140	Lowe's Cos.	95.13	2	2	4	1.10	15.1	2.5	35- 85%
1142	Sherwin-Williams	495.87	2	2	2	1.05	22.1	1.1	20- 60%
1143	Tractor Supply	93.43	2	3	5	1.05	19.4	1.7	20- 80%
	Med Supp Non-Invasive (INDUSTRY RANK 8)								
202	AmerisourceBergen	89.62	2	3	1	1.05	11.7	1.9	40-110%
204	Bio-Rad Labs. 'A'	424.95	1	2	2	0.95	50.8	NIL	N- N%
206	Cardinal Health	50.74	1	3	2	1.20	9.4	3.8	60-135%
207	Charles River	144.26	2	3	2	1.15	26.7	NIL	N- 40%
210	DexCom Inc.	323.27	2	4	3	0.90	NMF	NIL	N- 15%
211	Haemonetics Corp.	107.30	2	3	3	0.80	29.6	NIL	30- 95%
212	Hill-Rom Hldgs.	111.87	2	3	2	0.95	20.3	0.8	N- 45%
213	Hologic, Inc.	43.24	2	3	4	1.00	16.6	NIL	5- 60%
214	IDEXX Labs.	267.34	2	3	3	0.90	50.9	NIL	10- 60%
215	Illumina Inc.	322.88	2	3	5	0.95	48.5	NIL	10- 65%
218	Johnson & Johnson	151.67	1	1	2	0.80	17.4	2.7	30- 60%
219	Masimo Corp.	198.25	1	3	2	1.00	56.5	NIL	N- N%
220	McKesson Corp.	140.49	2	2	2	1.20	9.5	1.2	125-205%
225	Omnicell, Inc.	72.52	2	3	2	1.00	25.4	NIL	40-105%
226	Patterson Cos.	15.52	2	3	3	1.10	10.9	6.7	125-220%
227	ResMed Inc.	164.28	2	3	3	0.85	39.1	0.9	N- N%
229	West Pharmac. Svcs.	170.37	1	2	2	0.90	51.6	0.4	N- 30%

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.
	Retail/Wholesale Food (INDUSTRY RANK 9)								
1950	Empire Company Ltd.	32.90	2	3	4	0.45	28.4	1.5	N- 50%
1953	Kroger Co.	31.93	1	3	2	0.80	12.7	2.2	10- 55%
1954	Loblaw Cos. Ltd.	74.72	1	2	2	0.50	25.6	1.7	N- 35%
1955	Metro Inc.	60.00	1	2	1	0.50	18.8	1.5	N- 25%
1958	Sprouts Farmers Market	20.06	2	3	5	0.85	14.1	NIL	50-125%
1963	Weis Markets	44.87	2	3	5	0.80	15.7	2.8	N- 45%
1964	Weston (George)	105.81	1	2	3	0.60	13.9	2.0	15- 55%
	Household Products (INDUSTRY RANK 10)								
1186	Church & Dwight	72.67	2	1	3	0.65	28.7	1.3	N- 10%
1191	Kimberly-Clark	139.72	1	1	2	0.70	19.8	3.1	25- 55%
1192	Newell Brands	12.78	2	3	3	1.15	4.7	7.2	290-485%
1193	Procter & Gamble	120.60	1	1	3	0.65	24.2	2.6	N- 10%
1194	Scotts Miracle-Gro	118.79	2	3	2	0.95	23.3	2.0	N- 15%
	Electric Util. (Central) (INDUSTRY RANK 11)								
903	Alliant Energy	49.99	1	2	2	0.55	20.6	3.0	N- 10%
911	Fortis Inc.	53.98	1	2	2	0.60	19.8	3.7	N- 40%
912	MGE Energy	68.26	1	1	2	0.50	26.5	2.1	N- 15%
	Computer Software (INDUSTRY RANK 12)								
2585	Adobe Inc.	344.88	1	2	2	1.15	50.8	NIL	25- 70%
2586	ANSYS, Inc.	266.72	1	2	3	1.05	40.8	NIL	N- N%
2587	Autodesk, Inc.	177.87	1	3	2	1.35	85.5	NIL	N- 20%
2588	Cadence Design Sys.	77.84	2	3	3	1.05	34.1	NIL	N- 15%
2596	Microsoft Corp.	175.06	1	1	3	1.10	30.6	1.2	N- 15%
2600	Oracle Corp.	53.91	2	1	5	1.00	13.4	1.8	30- 65%
2604	RingCentral, Inc.	253.11	2	3	2	1.20	NMF	NIL	N- 10%
	Electric Utility (East) (INDUSTRY RANK 13)								
138	Dominion Energy	79.11	2	2	2	0.50	17.7	4.8	N- 35%
140	Eversource Energy	87.77	1	1	1	0.55	24.7	2.6	N- 5%
143	NextEra Energy	237.61	2	1	2	0.50	25.7	2.4	N- 25%
145	Public Serv. Enterprise	51.84	2	1	5	0.60	15.4	3.8	5- 35%
	Cable TV (INDUSTRY RANK 14)								
1018	Cable One	1783.24	2	2	2	0.75	47.2	0.5	N- 10%
1019	Charter Communic.	498.67	1	3	2	1.05	41.1	NIL	N- 25%
1020	Cogeco Communic.	99.63	2	2	2	0.55	13.6	2.3	N- 20%
1021	Comcast Corp.	37.21	1	2	3	0.85	11.6	2.5	90-155%
1025	Shaw Commun. 'B'	23.65	2	2	5	0.60	18.2	5.1	5- 50%
	Medical Services (INDUSTRY RANK 15)								
791	Amedisys, Inc.	195.63	2	3	2	1.10	40.8	NIL	N- 5%
794	Centene Corp.	68.42	2	3	2	1.10	14.9	NIL	25- 90%
795	Cigna Corp.	188.70	2	3	1	1.05	10.4	NIL	50-125%
797	DaVita Inc.	77.52	1	3	1	1.10	12.9	NIL	25- 80%
798	Encompass Health	69.53	2	3	2	1.00	20.3	1.6	15- 75%
803	ICON plc	158.42	2	3	3	0.90	21.2	NIL	15- 65%
805	Laboratory Corp.	145.61	2	1	3	0.95	12.3	NIL	60- 90%
807	Medpace Holdings	85.53	2	3	2	1.25	26.9	NIL	N- 45%
810	Quest Diagnostics	95.03	2	2	2	0.95	14.2	2.4	25- 75%
811	Select Med. Hldgs.	15.98	2	3	1	1.30	12.4	NIL	55-120%
815	UnitedHealth Group	282.14	2	1	2	1.00	17.6	1.5	30- 55%
	Water Utility (INDUSTRY RANK 16)								
1785	Amer. States Water	83.19	2	2	2	0.60	37.0	1.5	N- N%
1788	Consolidated Water	14.54	2	3	1	0.85	24.6	2.3	70-140%
1789	Essential Utilities	42.24	2	2	1	0.60	31.8	2.3	N- 30%
	Homebuilding (INDUSTRY RANK 17)								
1126	Horton D.R.	38.29	2	3	2	1.05	7.7	1.8	45-110%
1127	KB Home	20.40	2	3	2	1.35	6.0	1.8	70-170%
1128	Lennar Corp.	39.98	2	3	2	1.05	6.5	1.3	65-150%
1132	PulteGroup, Inc.	24.31	2	3	1	1.05	5.9	2.1	65-165%
1133	TRI Pointe Group	9.83	2	3	3	1.25	4.9	NIL	205-360%
	Healthcare Information (INDUSTRY RANK 18)								
819	Cerner Corp.	70.25	1	2	2	0.95	23.2	1.0	30- 80%
824	Teladoc Health	181.46	2	4	3	1.20	NMF	NIL	N- 5%
825	Veeva Systems	184.40	2	3	3	1.25	76.8	NIL	N- 45%
	Med Supp Invasive (INDUSTRY RANK 19)								
171	Baxter Int'l Inc.	94.14	1	1	3	0.85	26.3	0.9	5- 25%
178	Edwards Lifesciences	224.60	1	3	2	0.95	36.5	NIL	5- 60%
181	Globus Medical	47.11	2	3	3	0.85	25.3	NIL	15- 70%
184	Integra LifeSciences	48.94	2	3	5	0.85	16.9	NIL	45-105%
185	Intuitive Surgical	518.33	2	2	2	1.00	41.0	NIL	30- 75%
186	Medtronic plc	101.54	2	1	2	0.85	17.6	2.2	30- 60%
189	Penumbra Inc.	181.07	2	3	2	1.20	NMF	NIL	N- 35%
191	STERIS plc	157.45	2	2	3	1.00	26.9	0.9	N- 35%
192	Stryker Corp.	184.72	2	1	3	0.90	20.8	1.2	25- 55%
195	Teleflex Inc.	344.85	2	2	3	0.95	43.3	0.4	10- 50%
198	Zimmer Biomet Hldgs.	117.00	2	2	3	1.00	14.1	0.8	15- 60%
	Precision Instrument (INDUSTRY RANK 20)								
113	Agilent Technologies	77.37	1	2	2	1.10	22.8	0.9	30- 80%
114	Badger Meter	56.53	2	3	2	1.00	33.3	1.2	N- 35%
122	KLA Corp.	156.30	2	3	2	1.15	15.2	2.2	N- 55%
123	Keysight Technologies	95.31	2	3	2	1.10	18.5	NIL	10- 65%
124	Lumentum Holdings	76.10	2	3	1	0.95	37.3	NIL	N- 50%
126	Mettler-Toledo Int'l	707.63	2	2	1	1.10	30.6	NIL	N- 20%
128	OSI Systems	71.66	2	3	4	0.85	16.3	NIL	55-130%
129	PerkinElmer Inc.	84.52	2	3	4	1.15	19.2	0.3	25- 90%
131	Thermo Fisher Sci.	327.16	1	2	2	1.05	37.6	0.3	N- N%
133	Waters Corp.	194.33	2	2	4	1.00	20.1	NIL	35- 85%
	Biotechnology (INDUSTRY RANK 21)								
830	Bio-Techne Corp.	207.79	2	2	3	1.05	68.6	0.6	N- N%
831	BioMarin Pharmac.	93.20	2	3	3	1.30	NMF	NIL	5- 60%
833	Incyte Corp.	101.19	2	3	5	1.15	44.8	NIL	20- 75%
835	Ionis Pharmac.	55.54	2	4	4	1.25	35.2	NIL	15- 90%
836	Jazz Pharmac. plc	108.78	2	3	4	1.20	6.5	NIL	100-205%
841	Seattle Genetics	142.55	1	4	3	1.25	NMF	NIL	15- 95%
843	Vertex Pharmac.	273.26	1	3	3	1.20	41.2	NIL	10- 65%
	Drug (INDUSTRY RANK 22)								
1609	AbbVie Inc.	83.99	1	3	2	1.15	8.9	5.6	35-110%
1610	Alexion Pharmac.	106.72	2	3	5	1.15	9.0	NIL	N- 45%
1617	Biogen	339.41	1	3	2	1.10	10.6	NIL	10- 60%
1623	Gilead Sciences	81.26	1	3	1	1.05	12.7	3.3	N- 35%
1624	GlaxoSmithKline ADR	41.72	2	1	4	0.85	17.2	4.8	30- 55%
1627	Merck & Co.	83.10	1	1	2	0.90	15.1	2.9	20- 50%
1634	Perrigo Co. plc	50.86	2	3	5	1.25	12.5	1.8	55-135%
1640	Zoetis Inc.	127.39	1	3	2	0.95	33.2	0.6	5- 55%
	Entertainment Tech (INDUSTRY RANK 23)								
2010	Electronic Arts	115.41	1	3	3	0.95	26.7	NIL	15- 75%
	Financial Svcs. (Div.) (INDUSTRY RANK 24)								
2539	Amer. Express	84.01	2	1	3	1.05	9.6	2.1	65-100%
2542	Aon plc	185.69	1	1	2	0.95	18.5	0.9	10- 35%
2543	Assurant Inc.	103.02	1	2	2	0.85	11.1	2.4	N- 35%
2544	BlackRock, Inc.	470.80	2	2	2	1.25	15.3	3.1	40- 80%
2546	Brown & Brown	37.32	1	1	2	0.85	24.1	0.9	N- 5%
2554	Fidelity Nat'l Fin'l	25.47	2	2	2	0.85	6.6	5.2	135-215%
2556	FirstCash, Inc.	73.17	2	3	3	0.80	16.8	1.5	5- 50%
2558	Franklin Resources	16.28	2	2	3	1.25	5.4	6.8	175-240%
2563	Janus Henderson plc	15.50	2	3	3	1.35	6.5	9.3	125-225%
2567	Loews Corp.	34.97	2	2	3	1.00	9.8	0.7	145-215%
2570	MasterCard Inc.	251.73	1	1	1	1.00	28.7	0.6	5- 25%
2573	Price (T. Rowe) Group	101.15	1	1	1	1.15	11.3	3.6	65-100%
2577	Sun Life Fin'l Svcs.	45.27	2	2	3	0.90	8.6	4.9	35- 75%
	Electric Utility (West) (INDUSTRY RANK 25)								
2221	NorthWestern Corp.	58.30	2	2	3	0.55	16.5	4.2	10- 45%
2224	Portland General	47.95	1	2	1	0.55	19.3	3.4	N- 25%
	Railroad (INDUSTRY RANK 26)								
340	Can. Pacific Railway	219.01	2	3	2	1.15	16.1	1.5	45- 95%
341	GATX Corp.	53.04	2	3	3	1.25	9.4	3.6	50-135%
343	Kansas City South'n	131.23	2	3	1	1.10	17.1	1.2	25- 90%
	Thrift (INDUSTRY RANK 27)								
1507	People's United Fin'l	11.47	1	3	2	1.10	9.0	6.3	65-120%
1509	Washington Federal	24.63	2	3	3	1.00	9.7	3.6	40-125%
	Shoe (INDUSTRY RANK 28)								
2157	Deckers Outdoor	140.66	2	3	2	1.05	14.8	NIL	25- 85%
2160	NIKE, Inc. 'B'	87.90	2	1	2	1.00	35.3	1.1	25- 50%
2161	Skechers U.S.A.	25.02	2	3	3	1.40	16.9	NIL	120-220%
	Telecom. Services (INDUSTRY RANK 29)								
919	America Movil	10.92	1	3	2	1.05	8.5	3.7	55-130%
927	j2 Global	73.21	1	3	3	1.10	21.0	NIL	35-105%
935	TELUS Corporation	22.54	1	2	3	0.60	15.9	5.4	55-100%
937	Verizon Communic.	58.13	1	1	4	0.70	11.9	4.2	40- 90%
	Telecom. Utility (INDUSTRY RANK 30)								
1028	BCE Inc.	40.99	2	2	4	0.70	14.6	6.3	20- 60%
1032	Deutsche Telekom ADR	13.61	2	2	4	0.80	14.6	6.4	85-155%

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
1609	AbbVie Inc.	ABBV	83.99	3	2	8.9	5.6	Drug	22
2615	Accenture Plc	ACN	174.74	1	2	22.3	1.9	IT Services	4
2585	Adobe Inc.	ADBE	344.88	2	2	50.8	NIL	Computer Software	12
113	Agilent Technologies ■	A	77.37	2	2	22.8	0.9	Precision Instrument	20
2436	Air Products & Chem.	APD	214.37	1	2	23.8	2.5	Chemical (Diversified)	57
1814	Akamai Technologies	AKAM	106.24	3	2	34.8	NIL	E-Commerce	43
1511	Alexandria Real Estate	ARE	150.99	3	1	38.3	2.7	R.E.I.T.	51
2637	Alibaba Group	BABA	212.13	3	3	29.1	NIL	Internet	50
1320	Allegion plc	ALLE	93.95	3	1	22.0	1.4	Electronics	61
903	Alliant Energy	LNT	49.99	2	2	20.6	3.0	Electric Util. (Central)	11
2638	Alphabet Inc.	GOOG	1266.61	1	3	22.0	NIL	Internet	50
2639	Amazon.com	AMZN	2393.61	3	3	76.1	NIL	Internet	50
919	America Movil	AMX	10.92	3	2	8.5	3.7	Telecom. Services	29
2586	ANSYS, Inc.	ANSS	266.72	2	3	40.8	NIL	Computer Software	12
2542	Aon plc	AON	185.69	1	2	18.5	0.9	Financial Svcs. (Div.)	24
1398	Apple Inc.	AAPL	276.93	1	1	20.7	1.2	Computers/Peripherals	56
2543	Assurant Inc. ■	AIZ	103.02	2	2	11.1	2.4	Financial Svcs. (Div.)	24
2587	Autodesk, Inc.	ADSK	177.87	3	2	85.5	NIL	Computer Software	12
565	Balchem Corp.	BCPC	94.26	3	1	34.7	0.6	Chemical (Specialty)	77
1571	Barrick Gold	GOLD	24.92	3	3	39.6	1.1	Precious Metals	1
171	Baxter Int'l Inc. ■	BAX	94.14	1	3	26.3	0.9	Med Supp Invasive	19
204	Bio-Rad Labs. 'A'	BIO	424.95	2	2	50.8	NIL	Med Supp Non-Invasive	8
1617	Biogen	BIIB	339.41	3	2	10.6	NIL	Drug	22
1817	Black Knight, Inc.	BKI	67.40	3	2	33.9	NIL	E-Commerce	43
2546	Brown & Brown	BRO	37.32	1	2	24.1	0.9	Financial Svcs. (Div.)	24
2619	CDW Corp.	CDW	105.60	3	2	20.6	1.4	IT Services	4
206	Cardinal Health ■	CAH	50.74	3	2	9.4	3.8	Med Supp Non-Invasive	8
819	Cerner Corp.	CERN	70.25	2	2	23.2	1.0	Healthcare Information	18
1019	Charter Communic.	CHTR	498.67	3	2	41.1	NIL	Cable TV	14
1748	Chemed Corp.	CHE	441.78	2	2	27.7	0.3	Diversified Co.	69
762	Cincinnati Financial ■	CINF	82.48	2	3	19.3	2.9	Insurance (Prop/Cas.)	5
1021	Comcast Corp.	CMCSA	37.21	2	3	11.6	2.5	Cable TV	14
2125	Copart, Inc.	CPRT	68.63	2	1	27.5	NIL	Retail Automotive	35
433	CoStar Group	CSGP	603.53	2	2	57.6	NIL	Information Services	2
2140	Costco Wholesale	COST	312.08	1	2	35.3	0.9	Retail Store	49
797	DaVita Inc.	DVA	77.52	3	1	12.9	NIL	Medical Services	15
2142	Dollar General	DG	179.00	3	3	28.6	0.8	Retail Store	49
359	Domino's Pizza	DPZ	370.48	3	2	36.6	0.8	Restaurant	68
178	Edwards Lifesciences ■	EW	224.60	3	2	36.5	NIL	Med Supp Invasive	19
2010	Electronic Arts	EA	115.41	3	3	26.7	NIL	Entertainment Tech	23
612	Enbridge Inc.	ENB.TO	41.40	3	3	13.7	7.8	Oil/Gas Distribution	87
434	Equifax, Inc. ■	EFX	125.81	3	1	21.8	1.2	Information Services	2
1522	Equinix, Inc.	EQIX	670.75	3	1	NMF	1.6	R.E.I.T.	51
2023	Everest Re Group Ltd. ■	RE	190.52	1	3	13.8	3.3	Reinsurance	60
140	Eversource Energy	ES	87.77	1	1	24.7	2.6	Electric Utility (East)	13
2646	Facebook Inc.	FB	178.24	3	2	19.0	NIL	Internet	50
1137	Fastenal Co.	FAST	34.92	2	2	24.8	2.9	Retail Building Supply	7
911	Fortis Inc.	FTS.TO	53.98	2	2	19.8	3.7	Electric Util. (Central)	11
1572	Franco-Nevada Corp.	FNV	124.09	3	2	56.9	0.8	Precious Metals	1
1308	Garmin Ltd.	GRMN	80.05	2	2	16.2	3.0	Electrical Equipment	67
742	Gibraltar Inds.	ROCK	43.54	3	2	16.6	NIL	Steel	83
1623	Gilead Sciences	GILD	81.26	3	1	12.7	3.3	Drug	22
1529	Healthcare R'lty Trust	HR	29.32	3	1	77.2	4.1	R.E.I.T.	51
2627	Henry (Jack) & Assoc.	JKHY	166.67	1	2	38.4	1.0	IT Services	4
1918	Hormel Foods	HRL	49.92	2	3	28.5	2.0	Food Processing	39
1808	Houlihan Lokey	HLI	56.41	3	2	28.2	2.2	Investment Banking	6
1361	Intel Corp.	INTC	59.18	1	2	11.2	2.2	Semiconductor	40
927	j2 Global	JCOM	73.21	3	3	21.0	NIL	Telecom. Services	29
218	Johnson & Johnson	JNJ	151.67	1	2	17.4	2.7	Med Supp Non-Invasive	8
1191	Kimberly-Clark	KMB	139.72	1	2	19.8	3.1	Household Products	10
1953	Kroger Co.	KR	31.93	3	2	12.7	2.2	Retail/Wholesale Food	9
1011	Lauder (Estee) ■	EL	167.79	2	1	28.3	NIL	Toiletries/Cosmetics	71
1954	Loblaw Cos. Ltd.	L.TO	74.72	2	2	25.6	1.7	Retail/Wholesale Food	9
912	MGE Energy	MGEE	68.26	1	2	26.5	2.1	Electric Util. (Central)	11
1719	MSA Safety	MSA	103.00	3	2	21.5	1.8	Machinery	31
219	Masimo Corp.	MASI	198.25	3	2	56.5	NIL	Med Supp Non-Invasive	8
2570	MasterCard Inc.	MA	251.73	1	1	28.7	0.6	Financial Svcs. (Div.)	24
1627	Merck & Co.	MRK	83.10	1	2	15.1	2.9	Drug	22
1955	Metro Inc.	MRU.TO	60.00	2	1	18.8	1.5	Retail/Wholesale Food	9
2596	Microsoft Corp.	MSFT	175.06	1	3	30.6	1.2	Computer Software	12
1978	Monster Beverage	MNST	61.38	3	2	29.0	NIL	Beverage	34
960	Motorola Solutions	MSI	155.38	2	1	18.3	1.7	Telecom. Equipment	42
2340	Netflix, Inc. ■	NFLX	437.49	3	3	70.6	NIL	Entertainment	80
2002	New Orient. Ed. ADS	EDU	109.37	3	1	30.3	NIL	Educational Services	33
1574	Newmont Corp.	NEM	59.54	3	2	29.8	1.7	Precious Metals	1
2395	Omnicom Group	OMC	53.92	2	3	9.7	4.8	Advertising	36
2443	PPG Inds.	PPG	91.10	1	3	25.2	2.2	Chemical (Diversified)	57
1507	People's United Fin'l ■	PBCT	11.47	3	2	9.0	6.3	Thrift	27
2318	Pool Corp.	POOL	191.60	2	1	48.8	1.1	Recreation	73
2224	Portland General	POR	47.95	2	1	19.3	3.4	Electric Utility (West)	25
2573	Price (T. Rowe) Group	TROW	101.15	1	1	11.3	3.6	Financial Svcs. (Div.)	24
1193	Procter & Gamble	PG	120.60	1	3	24.2	2.6	Household Products	10
410	Republic Services	RSG	78.29	2	1	21.5	2.1	Environmental	3
1727	Roper Tech. ■	ROP	320.32	1	2	26.6	0.6	Machinery	31
1236	St. Joe Corp.	JOE	16.75	3	1	30.5	NIL	Engineering & Const	66
841	Seattle Genetics	SGEN	142.55	4	3	NMF	NIL	Biotechnology	21
1237	Stantec Inc.	STN.TO	39.97	3	2	18.9	1.6	Engineering & Const	66
965	Switch, Inc.	SWCH	17.24	4	4	78.4	0.7	Telecom. Equipment	42
1381	Taiwan Semic. ADR	TSM	52.59	2	2	18.7	3.2	Semiconductor	40
2151	Target Corp.	TGT	108.98	3	2	16.7	2.4	Retail Store	49
935	TELUS Corporation	T.TO	22.54	2	3	15.9	5.4	Telecom. Services	29
131	Thermo Fisher Sci.	TMO	327.16	2	2	37.6	0.3	Precision Instrument	20
166	Toromont Inds.	TIH.TO	64.86	3	2	17.1	1.9	Heavy Truck & Equip	59
2634	Tyler Technologies	TYL	328.05	3	2	57.3	NIL	IT Services	4
937	Verizon Communic.	VZ	58.13	1	4	11.9	4.2	Telecom. Services	29
843	Vertex Pharmac.	VRTX	273.26	3	3	41.2	NIL	Biotechnology	21
415	Waste Management	WM	98.20	1	1	21.4	2.2	Environmental	3
229	West Pharmac. Svcs.	WST	170.37	2	2	51.6	0.4	Med Supp Non-Invasive	8
1964	Weston (George)	WN.TO	105.81	2	3	13.9	2.0	Retail/Wholesale Food	9
1640	Zoetis Inc.	ZTS	127.39	3	2	33.2	0.6	Drug	22

■ **Newly added this week.**

Rank 1 Deletions:
Burlington Stores; Coca-Cola; Dominion Energy; Leidos Hldgs.; MDU Resources; NIKE, Inc. 'B'; Northland Power; ResMed Inc.; SBA Communications; Simpson Manufacturing; Southern Copper; Sun Life Fin'l Svcs.

Rank removed–see supplement or report:
None.

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Commission Staff's Third Set of Data Requests
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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
1702	AAON, Inc.	AAON	46.38	3	1	34.9	0.7	Machinery	31
1569	Agnico Eagle Mines	AEM	53.88	3	3	47.3	1.5	Precious Metals	1
1610	Alexion Pharmac.	ALXN	106.72	3	5	9.0	NIL	Drug	22
754	Alleghany Corp.	Y	545.92	1	3	17.4	NIL	Insurance (Prop/Cas.)	5
755	Allstate Corp.	ALL	102.72	1	3	9.5	2.1	Insurance (Prop/Cas.)	5
2616	Amdocs Ltd.	DOX	62.53	1	4	17.1	2.1	IT Services	4
791	Amedisys, Inc.	AMED	195.63	3	2	40.8	NIL	Medical Services	15
2539	Amer. Express	AXP	84.01	1	3	9.6	2.1	Financial Svcs. (Div.)	24
1785	Amer. States Water	AWR	83.19	2	2	37.0	1.5	Water Utility	16
202	AmerisourceBergen	ABC	89.62	3	1	11.7	1.9	Med Supp Non-Invasive	8
1742	AMETEK, Inc.	AME	77.75	2	3	29.2	0.9	Diversified Co.	69
757	Arch Capital Group	ACGL	26.70	1	2	9.1	NIL	Insurance (Prop/Cas.)	5
1902	Archer Daniels Midl'd	ADM	36.34	2	4	12.5	4.0	Food Processing	39
1105	Armstrong World Inds.	AWI	80.16	3	1	15.9	1.0	Building Materials	44
945	AudioCodes Ltd.	AUDC	23.91	4	3	22.6	1.1	Telecom. Equipment	42
2617	Automatic Data Proc.	ADP	139.82	1	3	23.1	2.8	IT Services	4
2121	AutoZone Inc.	AZO	988.15	3	3	16.4	NIL	Retail Automotive	35
563	Avery Dennison	AVY	104.90	2	1	15.1	2.4	Chemical (Specialty)	77
705	Axon Enterprise	AAXN	76.78	4	2	60.9	NIL	Aerospace/Defense	53
1028	BCE Inc.	BCE	40.99	2	4	14.6	6.3	Telecom. Utility	30
1585	BHP Group Ltd. ADR	BHP	38.77	3	4	10.1	7.6	Metals & Mining (Div.)	89
1209	BWX Technologies	BWXT	51.79	3	3	19.6	1.5	Power	55
114	Badger Meter	BMI	56.53	3	2	33.3	1.2	Precision Instrument	20
2640	Baidu, Inc. ▲	BIDU	104.68	3	4	14.1	NIL	Internet	50
2506	Bank of Montreal	BMO.TO	69.22	2	4	7.2	6.3	Bank	52
758	Berkley (W.R.)	WRB	55.25	1	3	18.5	0.8	Insurance (Prop/Cas.)	5
2167	Best Buy Co.	BBY	69.79	3	2	13.8	3.2	Retail (Hardlines)	76
830	Bio-Techne Corp.	TECH	207.79	2	3	68.6	0.6	Biotechnology	21
831	BioMarin Pharmac.	BMRN	93.20	3	3	NMF	NIL	Biotechnology	21
2544	BlackRock, Inc.	BLK	470.80	2	2	15.3	3.1	Financial Svcs. (Div.)	24
376	Booz Allen Hamilton	BAH	75.89	3	2	22.1	1.7	Industrial Services	32
2388	Boston Omaha	BOMN	16.59	4	3	NMF	NIL	Advertising	36
1999	Bright Horizons Family	BFAM	120.00	2	3	45.1	NIL	Educational Services	33
431	Broadridge Fin'l	BR	109.79	2	4	21.4	2.1	Information Services	2
2195	Buckle (The), Inc.	BKE	14.11	3	2	12.2	NIL	Retail (Softlines)	63
2138	Burlington Stores ▼	BURL	177.16	3	2	28.6	NIL	Retail Store	49
2618	CACI Int'l	CACI	238.58	3	3	18.6	NIL	IT Services	4
379	CBRE Group	CBRE	41.96	3	2	10.2	NIL	Industrial Services	32
760	CNA Fin'l	CNA	31.72	2	3	7.8	4.7	Insurance (Prop/Cas.)	5
2620	CSG Systems Int'l	CSGS	47.82	3	4	18.6	2.0	IT Services	4
1018	Cable One	CABO	1783.24	2	2	47.2	0.5	Cable TV	14
566	Cabot Microelectr's	CCMP	111.55	3	2	18.6	1.6	Chemical (Specialty)	77
2588	Cadence Design Sys.	CDNS	77.84	3	3	34.1	NIL	Computer Software	12
1517	Camden Property Trust	CPT	83.34	2	3	34.0	4.0	R.E.I.T.	51
2403	Can. Natural Res.	CNQ.TO	18.09	3	4	NMF	9.4	Petroleum (Producing)	94
340	Can. Pacific Railway	CP	219.01	3	2	16.1	1.5	Railroad	26
2139	Canadian Tire 'A'	CTCA.TO	96.58	2	3	8.5	4.7	Retail Store	49
407	Casella Waste Sys.	CWST	42.87	3	1	43.7	NIL	Environmental	3
794	Centene Corp.	CNC	68.42	3	2	14.9	NIL	Medical Services	15
207	Charles River	CRL	144.26	3	2	26.7	NIL	Med Supp Non-Invasive	8
1818	Check Point Software	CHKP	105.33	1	5	17.3	NIL	E-Commerce	43
622	Cheniere Energy Part.	CQP	30.70	3	5	15.5	8.5	Pipeline MLPs	84
2352	Choice Hotels Int'l	CHH	70.13	3	2	18.7	1.3	Hotel/Gaming	81
1186	Church & Dwight	CHD	72.67	1	3	28.7	1.3	Household Products	10
949	Ciena Corp.	CIEN	46.35	4	2	18.9	NIL	Telecom. Equipment	42
795	Cigna Corp.	CI	188.70	3	1	10.4	NIL	Medical Services	15
381	Cintas Corp.	CTAS	193.91	2	1	21.6	1.5	Industrial Services	32
1356	Cirrus Logic	CRUS	68.98	3	2	18.4	NIL	Semiconductor	40
2199	Citi Trends	CTRN	10.44	4	3	21.3	3.1	Retail (Softlines)	63
1969	Coca-Cola ▼	KO	46.53	1	2	23.1	3.5	Beverage	34
1020	Cogeco Communic.	CCA.TO	99.63	2	2	13.6	2.3	Cable TV	14
1600	Compass Minerals Int'l	CMP	40.59	3	3	17.8	7.1	Chemical (Basic)	65
1909	Conagra Brands	CAG	33.88	3	5	16.2	2.6	Food Processing	39
1788	Consolidated Water	CWCO	14.54	3	1	24.6	2.3	Water Utility	16
1174	Crown Holdings	CCK	61.28	3	2	11.4	NIL	Packaging & Container	62
1709	Curtiss-Wright	CW	95.04	3	3	14.2	0.8	Machinery	31
599	DSP Group	DSPG	16.67	3	4	NMF	NIL	Wireless Networking	41
409	Darling Ingredients	DAR	19.71	3	3	14.8	NIL	Environmental	3
2157	Deckers Outdoor	DECK	140.66	3	2	14.8	NIL	Shoe	28
1032	Deutsche Telekom ADR	DTEGY	13.61	2	4	14.6	6.4	Telecom. Utility	30
210	DexCom Inc.	DXCM	323.27	4	3	NMF	NIL	Med Supp Non-Invasive	8
1974	Diageo plc	DEO	134.05	1	4	19.0	2.6	Beverage	34
1520	Digital Realty Trust	DLR	143.72	3	2	55.3	3.1	R.E.I.T.	51
2329	Discovery, Inc.	DISCA	21.70	3	3	10.7	NIL	Entertainment	80
138	Dominion Energy ▼	D	79.11	2	2	17.7	4.8	Electric Utility (East)	13
154	Douglas Dynamics	PLOW	34.07	3	3	14.5	3.3	Heavy Truck & Equip	59
2420	Dril-Quip, Inc.	DRQ	32.08	3	4	NMF	NIL	Oilfield Svcs/Equip.	95
360	Dunkin' Brands Group	DNKN	57.97	3	3	18.3	2.8	Restaurant	68
2623	EPAM Systems	EPAM	206.66	3	3	39.7	NIL	IT Services	4
709	Elbit Systems	ESLT	121.99	3	3	20.1	1.4	Aerospace/Defense	53
1950	Empire Company Ltd.	EMPA.TO	32.90	3	4	28.4	1.5	Retail/Wholesale Food	9
798	Encompass Health	EHC	69.53	3	2	20.3	1.6	Medical Services	15
626	Energy Transfer LP	ET	6.08	4	3	4.3	20.1	Pipeline MLPs	84
1416	Ennis, Inc.	EBF	16.62	3	3	11.1	5.4	Office Equip/Supplies	70
1389	Entegris, Inc.	ENTG	51.68	3	2	23.9	0.7	Semiconductor Equip	38

Page No.	Stock Name	Ticker	Recent Price	Ranks Technical	Ranks Safety	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
1523	Equity Residential	EQR	65.61	2	3	35.7	3.7	R.E.I.T.	51
1789	Essential Utilities	WTRG	42.24	2	1	31.8	2.3	Water Utility	16
1524	Essex Property Trust	ESS	241.90	3	3	40.3	3.5	R.E.I.T.	51
435	Exponent, Inc.	EXPO	72.11	3	2	45.6	1.1	Information Services	2
1525	Extra Space Storage	EXR	89.36	3	3	26.6	4.1	R.E.I.T.	51
156	Federal Signal	FSS	27.01	3	1	14.8	1.2	Heavy Truck & Equip	59
2554	Fidelity Nat'l Fin'l	FNF	25.47	2	2	6.6	5.2	Financial Svcs. (Div.)	24
764	First American Fin'l	FAF	41.22	2	2	6.4	4.3	Insurance (Prop/Cas.)	5
781	First Midwest Bancorp	FMBI	13.74	3	3	7.4	4.4	Bank (Midwest)	75
2515	First Republic Bank	FRC	100.42	3	3	18.5	0.8	Bank	52
2556	FirstCash, Inc.	FCFS	73.17	3	3	16.8	1.5	Financial Svcs. (Div.)	24
2626	Fiserv Inc.	FISV	97.24	2	2	22.2	NIL	IT Services	4
1911	Flowers Foods	FLO	23.27	3	3	22.6	3.4	Food Processing	39
437	Forrester Research ▲	FORR	32.82	3	3	18.6	NIL	Information Services	2
1148	Fortune Brands Home	FBHS	43.92	3	2	11.3	2.2	Furn/Home Furnishings	54
2309	Fox Factory Holding	FOXF	42.09	3	3	16.7	NIL	Recreation	73
2558	Franklin Resources ▲	BEN	16.28	2	3	5.4	6.8	Financial Svcs. (Div.)	24
1913	Freshpet, Inc.	FRPT	73.08	4	2	NMF	NIL	Food Processing	39
341	GATX Corp.	GATX	53.04	3	3	9.4	3.6	Railroad	26
711	Gen'l Dynamics	GD	135.25	1	4	10.9	3.3	Aerospace/Defense	53
386	Genpact Limited	G	30.47	2	2	13.7	1.3	Industrial Services	32
1624	GlaxoSmithKline ADR	GSK	41.72	1	4	17.2	4.8	Drug	22
1559	Globe Life Inc.	GL	75.60	1	3	10.9	1.0	Insurance (Life)	48
181	Globus Medical	GMED	47.11	3	3	25.3	NIL	Med Supp Invasive	19
1714	Graco Inc.	GGG	46.36	3	1	41.0	1.5	Machinery	31
1149	HNI Corp. ▲	HNI	23.49	3	4	8.6	5.2	Furn/Home Furnishings	54
211	Haemonetics Corp. ▲	HAE	107.30	3	3	29.6	NIL	Med Supp Non-Invasive	8
765	Hanover Insurance	THG	97.55	2	4	11.3	2.7	Insurance (Prop/Cas.)	5
729	Haynes International ▲	HAYN	19.35	3	3	10.2	4.5	Metal Fabricating	78
1009	Helen of Troy Ltd.	HELE	137.05	3	2	14.5	NIL	Toiletries/Cosmetics	71
1917	Hershey Co.	HSY	144.58	2	3	24.4	2.2	Food Processing	39
212	Hill-Rom Hldgs.	HRC	111.87	3	2	20.3	0.8	Med Supp Non-Invasive	8
1842	Hillenbrand, Inc. ▲	HI	18.75	3	4	8.0	4.5	Funeral Services	47
213	Hologic, Inc.	HOLX	43.24	3	4	16.6	NIL	Med Supp Non-Invasive	8
1126	Horton D.R.	DHI	38.29	3	2	7.7	1.8	Homebuilding	17
1919	Hostess Brands	TWNK	11.61	3	5	18.7	NIL	Food Processing	39
390	Huron Consulting	HURN	47.80	3	2	17.7	NIL	Industrial Services	32
803	ICON plc	ICLR	158.42	3	3	21.2	NIL	Medical Services	15
439	IHS Markit	INFO	64.99	3	2	23.2	1.0	Information Services	2
214	IDEXX Labs.	IDXX	267.34	3	3	50.9	NIL	Med Supp Non-Invasive	8
215	Illumina Inc.	ILMN	322.88	3	5	48.5	NIL	Med Supp Non-Invasive	8
833	Incyte Corp.	INCY	101.19	3	5	44.8	NIL	Biotechnology	21
2628	Infosys Ltd. ADR ▲	INFY	8.51	2	4	13.5	4.1	IT Services	4
1360	Inphi Corp.	IPHI	96.88	3	3	46.8	NIL	Semiconductor	40
1332	Integer Holdings	ITGR	67.33	3	3	13.2	NIL	Electronics	61
184	Integra LifeSciences ▲	IART	48.94	3	5	16.9	NIL	Med Supp Invasive	19
185	Intuitive Surgical	ISRG	518.33	2	2	41.0	NIL	Med Supp Invasive	19
835	Ionis Pharmac. ▲	IONS	55.54	4	4	35.2	NIL	Biotechnology	21
391	Iron Mountain	IRM	24.67	3	3	18.5	10.1	Industrial Services	32
2563	Janus Henderson plc	JHG	15.50	3	3	6.5	9.3	Financial Svcs. (Div.)	24
836	Jazz Pharmac. plc	JAZZ	108.78	3	4	6.5	NIL	Biotechnology	21
1127	KB Home	KBH	20.40	3	2	6.0	1.8	Homebuilding	17
122	KLA Corp.	KLAC	156.30	3	2	15.2	2.2	Precision Instrument	20
343	Kansas City South'n	KSU	131.23	3	1	17.1	1.2	Railroad	26
123	Keysight Technologies	KEYS	95.31	3	2	18.5	NIL	Precision Instrument	20
1573	Kinross Gold	KGC	6.17	5	3	15.4	NIL	Precious Metals	1
991	LCI Industries	LCII	74.30	3	2	11.4	3.5	Auto Parts	85
992	LKQ Corp.	LKQ	20.34	3	2	8.2	NIL	Auto Parts	85
1152	La-Z-Boy Inc. ▲	LZB	20.08	3	3	8.2	2.8	Furn/Home Furnishings	54
805	Laboratory Corp.	LH	145.61	1	3	12.3	NIL	Medical Services	15
1924	Lamb Weston Holdings	LW	57.51	3	2	16.3	1.7	Food Processing	39
2360	Las Vegas Sands	LVS	43.13	4	3	26.5	NIL	Hotel/Gaming	81
1153	Leggett & Platt	LEG	27.47	3	3	10.6	5.8	Furn/Home Furnishings	54
393	Leidos Hldgs. ▼	LDOS	98.60	2	1	18.4	1.4	Industrial Services	32
1128	Lennar Corp.	LEN	39.98	3	2	6.5	1.3	Homebuilding	17
1718	Lindsay Corp.	LNN	89.34	3	2	49.6	1.4	Machinery	31
716	Lockheed Martin	LMT	383.21	1	2	16.4	2.6	Aerospace/Defense	53
2567	Loews Corp.	L	34.97	2	3	9.8	0.7	Financial Svcs. (Div.)	24
1404	Logitech Int'l	LOGI	46.30	3	3	25.0	1.6	Computers/Peripherals	56
1140	Lowe's Cos.	LOW	95.13	2	4	15.1	2.5	Retail Building Supply	7
2204	lululemon athletica	LULU	218.59	3	3	72.1	NIL	Retail (Softlines)	63
124	Lumentum Holdings	LITE	76.10	3	1	37.3	NIL	Precision Instrument	20
537	MDU Resources ▼	MDU	21.76	2	3	12.3	3.8	Natural Gas (Div.)	93
629	MPLX LP	MPLX	14.15	3	4	6.3	19.4	Pipeline MLPs	84
440	MSCI Inc.	MSCI	321.95	3	3	45.3	0.9	Information Services	2
2630	ManTech Int'l 'A'	MANT	78.69	3	2	31.7	1.6	IT Services	4
1561	Manulife Fin'l	MFC	12.12	3	4	5.6	7.0	Insurance (Life)	48
1926	Maple Leaf Foods	MFI.TO	25.98	3	5	31.7	2.5	Food Processing	39
766	Markel Corp.	MKL	927.82	1	3	13.0	NIL	Insurance (Prop/Cas.)	5
1801	MarketAxess Holdings	MKTX	430.57	3	3	70.7	0.6	Brokers & Exchanges	37
1114	Martin Marietta	MLM	188.64	3	2	17.4	1.2	Building Materials	44
395	MAXIMUS Inc.	MMS	64.56	3	5	15.9	1.7	Industrial Services	32
220	McKesson Corp.	MCK	140.49	2	2	9.5	1.2	Med Supp Non-Invasive	8
807	Medpace Holdings	MEDP	85.53	3	2	26.9	NIL	Medical Services	15
186	Medtronic plc	MDT	101.54	1	2	17.6	2.2	Med Supp Invasive	19

▲ 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
767	Mercury General	MCY	40.61	3	4	13.7	6.2	Insurance (Prop/Cas.)	5
1336	Methode Electronics ▲	MEI	27.30	3	3	7.6	1.6	Electronics	61
126	Mettler-Toledo Int'l	MTD	707.63	2	1	30.6	NIL	Precision Instrument	20
1536	Mid-America Apartment	MAA	108.49	2	1	38.1	3.7	R.E.I.T.	51
1977	Molson Coors Beverage	TAP	43.49	3	3	11.6	5.2	Beverage	34
1369	Monolithic Power Sys.	MPWR	184.23	3	2	46.1	1.1	Semiconductor	40
441	Moody's Corp.	MCO	239.47	3	2	27.7	0.9	Information Services	2
1809	Morgan Stanley	MS	38.36	3	3	10.7	3.6	Investment Banking	6
1722	Mueller Water Prod. ▲	MWA	8.67	3	3	12.9	2.4	Machinery	31
2520	Nat'l Bank of Canada	NA.TO	53.84	2	3	8.2	5.5	Bank	52
2384	New York Times	NYT	31.04	3	2	28.0	0.8	Newspaper	–
1192	Newell Brands	NWL	12.78	3	3	4.7	7.2	Household Products	10
143	NextEra Energy	NEE	237.61	1	2	25.7	2.4	Electric Utility (East)	13
442	Nielsen Hldgs. plc	NLSN	12.77	3	3	12.5	1.9	Information Services	2
2160	NIKE, Inc. 'B' ▼	NKE	87.90	1	2	35.3	1.1	Shoe	28
784	Northern Trust Corp. ▲	NTRS	79.33	3	5	11.4	3.5	Bank (Midwest)	75
1218	Northland Power ▼	NPI.TO	29.33	3	1	21.3	4.1	Power	55
719	Northrop Grumman	NOC	343.91	1	2	15.6	1.5	Aerospace/Defense	53
552	Northwest Natural	NWN	61.40	1	3	26.8	3.1	Natural Gas Utility	58
2221	NorthWestern Corp.	NWE	58.30	2	3	16.5	4.2	Electric Utility (West)	25
1370	NVIDIA Corp.	NVDA	287.05	3	2	47.2	0.2	Semiconductor	40
128	OSI Systems	OSIS	71.66	3	4	16.3	NIL	Precision Instrument	20
769	Old Republic	ORI	15.69	3	4	9.2	5.4	Insurance (Prop/Cas.)	5
225	Omnicell, Inc.	OMCL	72.52	3	2	25.4	NIL	Med Supp Non-Invasive	8
2651	1-800-FLOWERS.COM ▲	FLWS	14.92	4	3	24.9	NIL	Internet	50
1828	Open Text Corp.	OTEX	38.58	3	2	29.0	1.9	E-Commerce	43
2600	Oracle Corp.	ORCL	53.91	1	5	13.4	1.8	Computer Software	12
2130	O'Reilly Automotive	ORLY	373.66	3	4	22.1	NIL	Retail Automotive	35
2181	PC Connection	CNXN	39.97	3	2	19.7	NIL	Retail (Hardlines)	76
1575	Pan Amer. Silver	PAAS	19.83	4	2	22.0	1.0	Precious Metals	1
364	Papa John's Int'l	PZZA	67.49	3	3	42.2	1.3	Restaurant	68
516	Par Pacific Holdings	PARR	6.51	3	3	4.3	NIL	Petroleum (Integrated)	92
226	Patterson Cos.	PDCO	15.52	3	3	10.9	6.7	Med Supp Non-Invasive	8
2631	Paychex, Inc.	PAYX	66.46	1	3	20.6	4.1	IT Services	4
189	Penumbra Inc.	PEN	181.07	3	2	NMF	NIL	Med Supp Invasive	19
129	PerkinElmer Inc.	PKI	84.52	3	4	19.2	0.3	Precision Instrument	20
1634	Perrigo Co. plc	PRGO	50.86	3	5	12.5	1.8	Drug	22
1993	Philip Morris Int'l ▲	PM	76.86	3	4	14.7	6.1	Tobacco	72
632	Phillips 66 Partners	PSXP	40.75	3	4	9.3	8.6	Pipeline MLPs	84
1395	Photronics Inc.	PLAB	11.06	3	2	14.7	NIL	Semiconductor Equip	38
1932	Pilgrim's Pride Corp.	PPC	18.93	3	5	10.1	NIL	Food Processing	39
2413	Pioneer Natural Res.	PXD	71.28	3	3	14.7	3.1	Petroleum (Producing)	94
1339	Plexus Corp.	PLXS	56.87	3	2	15.2	NIL	Electronics	61
2149	PriceSmart	PSMT	61.54	3	5	21.6	1.1	Retail Store	49
1563	Primerica, Inc.	PRI	96.31	3	3	11.0	1.7	Insurance (Life)	48
1981	Primo Water Corp.	PRMW	9.64	3	4	68.9	2.5	Beverage	34
770	Progressive Corp.	PGR	81.94	2	2	15.6	0.5	Insurance (Prop/Cas.)	5
145	Public Serv. Enterprise	PEG	51.84	1	5	15.4	3.8	Electric Utility (East)	13
1132	PulteGroup, Inc.	PHM	24.31	3	1	5.9	2.1	Homebuilding	17
1374	Qorvo Inc.	QRVO	84.77	3	1	30.6	NIL	Semiconductor	40
586	Quaker Chemical	KWR	124.99	3	3	19.3	1.2	Chemical (Specialty)	77
810	Quest Diagnostics	DGX	95.03	2	2	14.2	2.4	Medical Services	15
587	RPM Int'l	RPM	64.37	3	2	20.2	2.2	Chemical (Specialty)	77
2113	Ralph Lauren	RL	69.58	3	3	18.7	4.0	Apparel	86
1375	Rambus Inc.	RMBS	12.08	3	2	12.3	NIL	Semiconductor	40
1811	Raymond James Fin'l	RJF	62.36	3	3	9.2	2.4	Investment Banking	6
1166	Rayonier Inc.	RYN	23.23	3	4	50.5	4.6	Paper/Forest Products	79
2025	RenaissanceRe Hldgs.	RNR	153.46	2	2	13.9	0.9	Reinsurance	60
227	ResMed Inc. ▼	RMD	164.28	3	3	39.1	0.9	Med Supp Non-Invasive	8
2604	RingCentral, Inc.	RNG	253.11	3	2	NMF	NIL	Computer Software	12
2207	Ross Stores	ROST	86.51	2	3	25.6	1.3	Retail (Softlines)	63
2524	Royal Bank of Canada	RY.TO	86.81	1	4	9.5	5.1	Bank	52
1577	Royal Gold ▲	RGLD	111.60	3	5	44.6	1.0	Precious Metals	1
443	S&P Global	SPGI	279.17	2	2	27.2	1.0	Information Services	2
603	SBA Communications ▼	SBAC	300.27	3	2	NMF	0.6	Wireless Networking	41
2632	SEI Investments	SEIC	49.90	2	3	14.1	1.4	IT Services	4
1936	Saputo Inc.	SAP.TO	35.82	1	3	19.1	1.9	Food Processing	39
400	Science Applications	SAIC	80.60	3	4	13.4	1.8	Industrial Services	32
1194	Scotts Miracle-Gro	SMG	118.79	3	2	23.3	2.0	Household Products	10
811	Select Med. Hldgs.	SEM	15.98	3	1	12.4	NIL	Medical Services	15
772	Selective Ins. Group	SIGI	50.29	3	4	10.8	1.8	Insurance (Prop/Cas.)	5
1844	Service Corp. Int'l	SCI	39.22	3	2	21.2	1.9	Funeral Services	47
1025	Shaw Commun. 'B'	SJRB.TO	23.65	2	5	18.2	5.1	Cable TV	14
1142	Sherwin-Williams	SHW	495.87	2	2	22.1	1.1	Retail Building Supply	7
1832	Shopify Inc.	SHOP	629.90	4	3	NMF	NIL	E-Commerce	43
1181	Silgan Holdings ▲	SLGN	32.65	3	3	14.8	1.5	Packaging & Container	62
1118	Simpson Manufacturing ▼	SSD	61.20	3	1	17.8	1.5	Building Materials	44
2184	SiteOne Landscape	SITE	71.71	3	1	74.7	NIL	Retail (Hardlines)	76
2161	Skechers U.S.A.	SKX	25.02	3	3	16.9	NIL	Shoe	28
1593	Southern Copper ▼	SCCO	29.59	3	4	18.0	5.4	Metals & Mining (Div.)	89
1958	Sprouts Farmers Market ▲	SFM	20.06	3	5	14.1	NIL	Retail/Wholesale Food	9
2527	State Street Corp.	STT	58.18	3	4	9.2	3.7	Bank	52
191	STERIS plc	STE	157.45	2	3	26.9	0.9	Med Supp Invasive	19
1812	Stifel Financial Corp.	SF	41.63	3	4	7.3	1.7	Investment Banking	6
192	Stryker Corp.	SYK	184.72	1	3	20.8	1.2	Med Supp Invasive	19
2577	Sun Life Fin'l Svcs. ▼	SLF.TO	45.27	2	3	8.6	4.9	Financial Svcs. (Div.)	24
520	Suncor Energy	SU.TO	20.88	3	3	26.8	8.9	Petroleum (Integrated)	92
402	SYNNEX Corp.	SNX	74.29	3	1	5.3	NIL	Industrial Services	32
2208	TJX Companies	TJX	47.79	1	2	27.9	0.5	Retail (Softlines)	63
1133	TRI Pointe Group	TPH	9.83	3	3	4.9	NIL	Homebuilding	17
824	Teladoc Health	TDOC	181.46	4	3	NMF	NIL	Healthcare Information	18
723	Teledyne Technologies	TDY	317.69	3	2	28.6	NIL	Aerospace/Defense	53
195	Teleflex Inc.	TFX	344.85	2	3	43.3	0.4	Med Supp Invasive	19
1732	Tennant Co.	TNC	61.16	3	3	19.2	1.5	Machinery	31
1396	Teradyne Inc. ▲	TER	62.47	3	2	22.5	0.6	Semiconductor Equip	38
412	Tetra Tech	TTEK	78.81	3	2	22.8	0.8	Environmental	3
369	Texas Roadhouse	TXRH	43.47	3	4	16.6	NIL	Restaurant	68
2323	Thor Inds.	THO	52.09	3	3	7.5	3.1	Recreation	73
1940	Tootsie Roll	TR	35.29	1	3	35.3	1.0	Food Processing	39
1120	TopBuild Corp.	BLD	75.31	3	1	13.2	NIL	Building Materials	44
1734	Toro Co.	TTC	63.24	2	1	20.7	1.6	Machinery	31
2529	Toronto-Dominion	TD.TO	56.97	1	3	8.4	5.6	Bank	52
1143	Tractor Supply	TSCO	93.43	3	5	19.4	1.7	Retail Building Supply	7
445	TransUnion	TRU	72.85	3	1	24.4	0.4	Information Services	2
773	Travelers Cos.	TRV	101.78	1	4	9.4	3.3	Insurance (Prop/Cas.)	5
1121	Trex Co.	TREX	85.75	3	1	31.1	NIL	Building Materials	44
1548	UDR, Inc.	UDR	36.37	3	3	75.8	3.8	R.E.I.T.	51
605	Ubiquiti Inc.	UI	156.67	3	2	27.4	0.8	Wireless Networking	41
404	UniFirst Corp.	UNF	159.52	2	2	19.5	0.6	Industrial Services	32
315	United Parcel Serv.	UPS	101.20	2	4	13.0	4.0	Air Transport	74
815	UnitedHealth Group	UNH	282.14	1	2	17.6	1.5	Medical Services	15
2445	Univar Solutions	UNVR	11.49	3	4	9.5	NIL	Chemical (Diversified)	57
1122	Universal Forest	UFPI	36.83	3	1	11.7	1.4	Building Materials	44
825	Veeva Systems ▲	VEEV	184.40	3	3	76.8	NIL	Healthcare Information	18
1347	Viavi Solutions	VIAV	11.66	3	3	15.3	NIL	Electronics	61
1123	Vulcan Materials	VMC	108.00	3	3	20.1	1.3	Building Materials	44
546	WPX Energy	WPX	4.06	4	3	11.6	NIL	Natural Gas (Div.)	93
1509	Washington Federal	WAFD	24.63	3	3	9.7	3.6	Thrift	27
1553	Washington R.E.I.T.	WRE	22.16	3	3	25.2	5.4	R.E.I.T.	51
414	Waste Connections	WCN	86.33	2	1	35.2	0.9	Environmental	3
133	Waters Corp.	WAT	194.33	2	4	20.1	NIL	Precision Instrument	20
1736	Watts Water Techn.	WTS	78.55	3	1	19.4	1.3	Machinery	31
1963	Weis Markets	WMK	44.87	3	5	15.7	2.8	Retail/Wholesale Food	9
1578	Wheaton Precious Met.	WPM	34.98	3	2	43.7	1.1	Precious Metals	1
2381	Wiley (John) & Sons	JWA	35.35	3	2	16.8	3.8	Publishing	91
2325	Winnebago	WGO	35.01	3	2	9.9	1.3	Recreation	73
372	Yum! Brands	YUM	82.07	2	3	21.6	2.3	Restaurant	68
607	Zebra Techn. 'A'	ZBRA	202.35	3	2	14.9	NIL	Wireless Networking	41
198	Zimmer Biomet Hldgs.	ZBH	117.00	2	3	14.1	0.8	Med Supp Invasive	19
2213	Zumiez Inc.	ZUMZ	20.42	3	2	22.0	NIL	Retail (Softlines)	63

▲ Arrow indicates the direction of a change in Timeliness. ■ Newly added this week.

Rank 2 Deletions:
Applied Materials; Bank of Hawaii; Boston Scientific; Carlisle Cos.; Cenovus Energy; Chipotle Mex. Grill; CONMED Corp.; Crocs, Inc.; Dentsply Sirona; HCA Healthcare; Hilton Worldwide Hldgs.; Hyatt Hotels; Intuit Inc.; Lamar Advertising; Marriott Int'l; PBF Energy; Performance Food; RLI Corp.; ServiceNow, Inc.; Syneos Health; Sysco Corp.

Rank removed–see supplement or report:
None.

Rank 3 Deletions:
BOK Financial; Brunswick Corp.; CIT Group; Colfax Corp.; Comtech Telecom.; Fifth Third Bancorp; First Horizon National; MGM Resorts Int'l; Schlumberger Ltd.

Rank removed–see supplement or report:
None.

Stocks Ranked 1 (Highest) for Relative Safety

Page No.	Stock Name	Recent Price	Rank Timeliness	Rank Technical	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
917	AT&T Inc.	30.98	3	2	8.5	6.7	Telecom. Services	29
200	Abbott Labs.	98.00	3	3	28.0	1.5	Med Supp Non-Invasive	8
2615	Accenture Plc	174.74	1	2	22.3	1.9	IT Services	4
2436	Air Products & Chem.	214.37	1	2	23.8	2.5	Chemical (Diversified)	57
754	Alleghany Corp.	545.92	2	3	17.4	NIL	Insurance (Prop/Cas.)	5
755	Allstate Corp.	102.72	2	3	9.5	2.1	Insurance (Prop/Cas.)	5
2638	Alphabet Inc. (NDQ)	1266.61	1	3	22.0	NIL	Internet	50
2616	Amdocs Ltd. (NDQ)	62.53	2	4	17.1	2.1	IT Services	4
905	Amer. Elec. Power	82.91	3	1	20.2	3.5	Electric Util. (Central)	11
2539	Amer. Express	84.01	2	3	9.6	2.1	Financial Svcs. (Div.)	24
829	Amgen (NDQ)	236.60	3	3	15.2	2.8	Biotechnology	21
1321	Amphenol Corp.	81.25	3	4	21.4	1.2	Electronics	61
2542	Aon plc	185.69	1	2	18.5	0.9	Financial Svcs. (Div.)	24
1398	Apple Inc. (NDQ)	276.93	1	1	20.7	1.2	Computers/Peripherals	56
757	Arch Capital Group (NDQ)	26.70	2	2	9.1	NIL	Insurance (Prop/Cas.)	5
548	Atmos Energy	102.53	3	2	22.0	2.3	Natural Gas Utility	58
2617	Automatic Data Proc. (NDQ)	139.82	2	3	23.1	2.8	IT Services	4
2508	Bank of Nova Scotia (TSE)	54.76	3	3	7.4	6.7	Bank	52
171	Baxter Int'l Inc.	94.14	1	3	26.3	0.9	Med Supp Invasive	19
172	Becton, Dickinson	263.44	3	4	22.0	1.2	Med Supp Invasive	19
758	Berkley (W.R.)	55.25	2	3	18.5	0.8	Insurance (Prop/Cas.)	5
759	Berkshire Hathaway 'B'	188.75	3	3	23.0	NIL	Insurance (Prop/Cas.)	5
2546	Brown & Brown	37.32	1	2	24.1	0.9	Financial Svcs. (Div.)	24
1968	Brown-Forman 'B'	61.46	3	2	33.4	1.1	Beverage	34
2509	Can. Imperial Bank (TSE)	80.83	3	3	6.7	7.3	Bank	52
1983	Canon Inc. ADR	20.65	3	3	17.5	6.7	Foreign Electronics	46
1818	Check Point Software (NDQ)	105.33	2	5	17.3	NIL	E-Commerce	43
761	Chubb Ltd.	114.64	3	4	10.3	2.6	Insurance (Prop/Cas.)	5
1186	Church & Dwight	72.67	2	3	28.7	1.3	Household Products	10
950	Cisco Systems (NDQ)	42.54	3	4	13.0	3.4	Telecom. Equipment	42
1969	Coca-Cola	46.53	2	2	23.1	3.5	Beverage	34
1188	Colgate-Palmolive	72.16	3	3	24.7	2.4	Household Products	10
778	Commerce Bancshs. (NDQ)	56.44	3	1	15.3	1.9	Bank (Midwest)	75
137	Consol. Edison	85.47	3	2	19.6	3.6	Electric Utility (East)	13
2140	Costco Wholesale (NDQ)	312.08	1	2	35.3	0.9	Retail Store	49
153	Deere & Co.	137.30	3	3	14.6	2.2	Heavy Truck & Equip	59
1974	Diageo plc	134.05	2	4	19.0	2.6	Beverage	34
2330	Disney (Walt)	102.26	3	3	37.2	1.7	Entertainment	80
568	Ecolab Inc.	172.96	–	–	28.2	1.1	Chemical (Specialty)	77
1305	Emerson Electric	50.92	3	3	14.5	3.9	Electrical Equipment	67
2023	Everest Re Group Ltd.	190.52	1	3	13.8	3.3	Reinsurance	60
140	Eversource Energy	87.77	1	1	24.7	2.6	Electric Utility (East)	13
383	Expeditors Int'l (NDQ)	70.67	3	5	20.8	1.4	Industrial Services	32
1526	Federal Rlty. Inv. Trust	71.58	3	3	24.5	5.9	R.E.I.T.	51
2559	Gallagher (Arthur J.)	80.78	3	1	20.0	2.2	Financial Svcs. (Div.)	24
711	Gen'l Dynamics	135.25	2	4	10.9	3.3	Aerospace/Defense	53
1914	Gen'l Mills	60.76	3	3	18.0	3.3	Food Processing	39
989	Genuine Parts	73.18	3	3	12.7	4.3	Auto Parts	85
1624	GlaxoSmithKline ADR	41.72	2	4	17.2	4.8	Drug	22
1559	Globe Life Inc.	75.60	2	3	10.9	1.0	Insurance (Life)	48
1806	Goldman Sachs	180.40	3	4	10.8	2.8	Investment Banking	6
2627	Henry (Jack) & Assoc. (NDQ)	166.67	1	2	38.4	1.0	IT Services	4
1139	Home Depot	206.05	3	2	19.8	2.9	Retail Building Supply	7
1758	Honeywell Int'l	135.70	3	3	16.2	2.7	Diversified Co.	69
730	Illinois Tool Works	155.21	3	1	19.5	2.8	Metal Fabricating	78
1361	Intel Corp. (NDQ)	59.18	1	2	11.2	2.2	Semiconductor	40
1403	Int'l Business Mach.	120.41	3	4	9.2	5.5	Computers/Peripherals	56
576	Int'l Flavors & Frag.	120.55	–	–	19.0	2.6	Chemical (Specialty)	77
1921	J&J Snack Foods (NDQ)	125.33	4	3	28.8	1.8	Food Processing	39
218	Johnson & Johnson	151.67	1	2	17.4	2.7	Med Supp Non-Invasive	8
1922	Kellogg	66.25	3	3	18.1	3.5	Food Processing	39
1191	Kimberly-Clark	139.72	1	2	19.8	3.1	Household Products	10
805	Laboratory Corp.	145.61	2	3	12.3	NIL	Medical Services	15
1626	Lilly (Eli)	157.79	3	3	23.5	1.9	Drug	22
716	Lockheed Martin	383.21	2	2	16.4	2.6	Aerospace/Defense	53
912	MGE Energy (NDQ)	68.26	1	2	26.5	2.1	Electric Util. (Central)	11
766	Markel Corp.	927.82	2	3	13.0	NIL	Insurance (Prop/Cas.)	5
2569	Marsh & McLennan	95.76	3	2	19.6	1.9	Financial Svcs. (Div.)	24
2570	MasterCard Inc.	251.73	1	1	28.7	0.6	Financial Svcs. (Div.)	24
1927	McCormick & Co.	156.12	3	3	29.9	1.6	Food Processing	39
363	McDonald's Corp.	181.65	3	4	21.8	2.8	Restaurant	68
186	Medtronic plc	101.54	2	2	17.6	2.2	Med Supp Invasive	19
1627	Merck & Co.	83.10	1	2	15.1	2.9	Drug	22
2596	Microsoft Corp. (NDQ)	175.06	1	3	30.6	1.2	Computer Software	12
1930	Nestle SA ADS (PNK)	110.81	3	3	24.5	2.4	Food Processing	39
143	NextEra Energy	237.61	2	2	25.7	2.4	Electric Utility (East)	13
2160	NIKE, Inc. 'B'	87.90	2	2	35.3	1.1	Shoe	28
719	Northrop Grumman	343.91	2	2	15.6	1.5	Aerospace/Defense	53
552	Northwest Natural	61.40	2	3	26.8	3.1	Natural Gas Utility	58
1630	Novartis AG ADR	89.78	3	5	27.2	3.4	Drug	22
1204	Nuveen Muni Value Fund	9.73	–	–	NMF	4.1	Investment Co.	–
2600	Oracle Corp.	53.91	2	5	13.4	1.8	Computer Software	12
2443	PPG Inds.	91.10	1	3	25.2	2.2	Chemical (Diversified)	57
2631	Paychex, Inc. (NDQ)	66.46	2	3	20.6	4.1	IT Services	4
1980	PepsiCo, Inc. (NDQ)	134.55	3	2	23.4	3.0	Beverage	34
1635	Pfizer, Inc.	36.08	–	–	16.0	4.2	Drug	22
2223	Pinnacle West Capital	76.60	3	3	15.3	4.2	Electric Utility (West)	25
2573	Price (T. Rowe) Group (NDQ)	101.15	1	1	11.3	3.6	Financial Svcs. (Div.)	24
1193	Procter & Gamble	120.60	1	3	24.2	2.6	Household Products	10
145	Public Serv. Enterprise	51.84	2	5	15.4	3.8	Electric Utility (East)	13
1540	Public Storage	193.32	3	4	25.9	4.1	R.E.I.T.	51
1780	Raytheon Technologies	64.98	–	–	10.8	4.5	Diversified Co.	69
1727	Roper Tech.	320.32	1	2	26.6	0.6	Machinery	31
2524	Royal Bank of Canada (TSE)	86.81	2	4	9.5	5.1	Bank	52
1637	Sanofi ADR (NDQ)	48.28	3	2	32.4	3.6	Drug	22
1936	Saputo Inc. (TSE)	35.82	2	3	19.1	1.9	Food Processing	39
368	Starbucks Corp. (NDQ)	75.32	3	3	24.7	2.3	Restaurant	68
192	Stryker Corp.	184.72	2	3	20.8	1.2	Med Supp Invasive	19
2609	Synopsys, Inc. (NDQ)	151.01	3	3	28.8	NIL	Computer Software	12
1959	Sysco Corp.	49.61	3	3	14.3	3.6	Retail/Wholesale Food	9
2208	TJX Companies	47.79	2	2	27.9	0.5	Retail (Softlines)	63
1382	Texas Instruments (NDQ)	111.53	3	3	20.8	3.2	Semiconductor	40
1778	3M Company	143.67	3	3	18.3	4.1	Diversified Co.	69
1940	Tootsie Roll	35.29	2	3	35.3	1.0	Food Processing	39
2529	Toronto-Dominion (TSE)	56.97	2	3	8.4	5.6	Bank	52
773	Travelers Cos.	101.78	2	4	9.4	3.3	Insurance (Prop/Cas.)	5
1944	Unilever PLC ADR	53.59	3	4	20.6	3.5	Food Processing	39
346	Union Pacific	146.61	3	3	16.6	2.6	Railroad	26
815	UnitedHealth Group	282.14	2	2	17.6	1.5	Medical Services	15
937	Verizon Communic.	58.13	1	4	11.9	4.2	Telecom. Services	29
2579	Visa Inc.	164.22	3	1	26.5	0.8	Financial Svcs. (Div.)	24
915	WEC Energy Group	95.88	3	1	25.6	2.7	Electric Util. (Central)	11
2152	Walmart Inc.	129.85	3	3	25.1	1.7	Retail Store	49
415	Waste Management	98.20	1	1	21.4	2.2	Environmental	3
2226	Xcel Energy Inc. (NDQ)	64.35	3	1	22.9	2.7	Electric Utility (West)	25

Stocks Ranked 2 (Above Average) for Relative Safety

Page No.	Stock Name	Recent Price	Rank Timeliness	Rank Technical	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
1966	AB InBev ADR	44.59	4	4	18.1	2.2	Beverage	34
1740	ABB Ltd. ADR	17.50	–	–	39.8	4.5	Diversified Co.	69
1198	Adams Divers. Equity Fd	13.81	–	–	NMF	1.8	Investment Co.	–
2585	Adobe Inc. (NDQ)	344.88	1	2	50.8	NIL	Computer Software	12
1557	Aflac Inc.	36.15	4	4	7.9	3.1	Insurance (Life)	48
113	Agilent Technologies	77.37	1	2	22.8	0.9	Precision Instrument	20
902	ALLETE	54.67	3	3	15.5	4.6	Electric Util. (Central)	11
903	Alliant Energy (NDQ)	49.99	1	2	20.6	3.0	Electric Util. (Central)	11
904	Ameren Corp.	73.24	3	2	21.0	2.8	Electric Util. (Central)	11
756	Amer. Financial Group	67.16	3	4	7.6	2.7	Insurance (Prop/Cas.)	5
1785	Amer. States Water	83.19	2	2	37.0	1.5	Water Utility	16
594	Amer. Tower 'A'	248.68	3	2	59.5	1.8	Wireless Networking	41
1742	AMETEK, Inc.	77.75	2	3	29.2	0.9	Diversified Co.	69
1353	Analog Devices (NDQ)	100.91	3	3	21.2	2.5	Semiconductor	40
2586	ANSYS, Inc. (NDQ)	266.72	1	3	40.8	NIL	Computer Software	12
792	Anthem, Inc.	263.20	3	3	12.1	1.4	Medical Services	15
1171	AptarGroup	106.94	3	4	28.7	1.3	Packaging & Container	62
1902	Archer Daniels Midl'd	36.34	2	4	12.5	4.0	Food Processing	39
2019	Argo Group Int'l	35.13	4	4	29.5	3.5	Reinsurance	60
2543	Assurant Inc.	103.02	1	2	11.1	2.4	Financial Svcs. (Div.)	24
2021	Athene Holding Ltd.	24.11	4	3	3.2	NIL	Reinsurance	60
1515	AvalonBay Communities	160.51	3	3	29.2	4.0	R.E.I.T.	51
136	AVANGRID, Inc.	44.11	3	3	17.4	4.0	Electric Utility (East)	13
563	Avery Dennison	104.90	2	1	15.1	2.4	Chemical (Specialty)	77
2215	Avista Corp.	43.50	3	2	21.6	3.8	Electric Utility (West)	25
2022	AXIS Capital Hldgs.	37.74	3	3	8.6	4.3	Reinsurance	60
1028	BCE Inc.	40.99	2	4	14.6	6.3	Telecom. Utility	30
1172	Ball Corp.	68.54	3	2	28.3	0.9	Packaging & Container	62
2505	Bank of Hawaii	59.44	3	3	10.4	4.5	Bank	52
2506	Bank of Montreal (TSE)	69.22	2	4	7.2	6.3	Bank	52
2507	Bank of New York Mellon	36.41	3	5	8.8	3.4	Bank	52
204	Bio-Rad Labs. 'A'	424.95	1	2	50.8	NIL	Med Supp Non-Invasive	8
830	Bio-Techne Corp. (NDQ)	207.79	2	3	68.6	0.6	Biotechnology	21
2216	Black Hills	63.50	3	3	17.5	3.5	Electric Utility (West)	25
2544	BlackRock, Inc.	470.80	2	2	15.3	3.1	Financial Svcs. (Div.)	24
1999	Bright Horizons Family	120.00	2	3	45.1	NIL	Educational Services	33
1618	Bristol-Myers Squibb	61.68	3	3	29.1	2.9	Drug	22
431	Broadridge Fin'l	109.79	2	4	21.4	2.1	Information Services	2
1746	Brookfield Infrastruc.	38.29	–	–	NMF	5.6	Diversified Co.	69
1795	Cboe Global Markets (CBOE)	102.96	3	3	30.1	1.4	Brokers & Exchanges	37
380	C.H. Robinson (NDQ)	72.32	3	4	19.4	2.8	Industrial Services	32
1796	CME Group (NDQ)	184.62	3	3	30.5	1.8	Brokers & Exchanges	37
906	CMS Energy Corp.	59.19	3	1	22.1	2.8	Electric Util. (Central)	11
760	CNA Fin'l	31.72	2	3	7.8	4.7	Insurance (Prop/Cas.)	5
2402	CSW Industrials (NDQ)	65.56	3	1	NMF	0.8	Petroleum (Producing)	94
970	CVS Health	62.34	3	3	8.8	3.2	Pharmacy Services	45
1018	Cable One	1783.24	2	2	47.2	0.5	Cable TV	14
1517	Camden Property Trust	83.34	2	3	34.0	4.0	R.E.I.T.	51
1908	Campbell Soup	51.30	3	2	20.0	2.7	Food Processing	39
339	Can. National Railway	78.23	3	4	17.5	2.2	Railroad	26

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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
2139	Canadian Tire 'A'	(TSE)	96.58	2	3	8.5	4.7	Retail Store	49
1502	Capitol Fed. Fin'l	(NDQ)	11.77	3	3	19.0	2.9	Thrift	27
1747	Carlisle Cos.		122.63	3	1	14.5	1.6	Diversified Co.	69
151	Caterpillar Inc.		114.60	3	3	11.3	3.6	Heavy Truck & Equip	59
819	Cerner Corp.	(NDQ)	70.25	1	2	23.2	1.0	Healthcare Information	18
1748	Chemed Corp.		441.78	1	2	27.7	0.3	Diversified Co.	69
549	Chesapeake Utilities		86.32	3	2	24.0	2.0	Natural Gas Utility	58
505	Chevron Corp.		83.57	4	3	56.1	6.2	Petroleum (Integrated)	92
921	China Mobile (ADR)		39.01	3	5	9.2	5.4	Telecom. Services	29
762	Cincinnati Financial	(NDQ)	82.48	1	3	19.3	2.9	Insurance (Prop/Cas.)	5
381	Cintas Corp.	(NDQ)	193.91	2	1	21.6	1.5	Industrial Services	32
1187	Clorox Co.		192.43	3	3	30.7	2.2	Household Products	10
1020	Cogeco Communic.	(TSE)	99.63	2	2	13.6	2.3	Cable TV	14
2621	Cognizant Technology	(NDQ)	52.53	3	3	13.0	1.7	IT Services	4
1021	Comcast Corp.	(NDQ)	37.21	1	3	11.6	2.5	Cable TV	14
1972	Constellation Brands		156.62	3	3	17.0	1.9	Beverage	34
208	Cooper Cos.		304.70	3	2	27.7	NIL	Med Supp Non-Invasive	8
2125	Copart, Inc.	(NDQ)	68.63	1	1	27.5	NIL	Retail Automotive	35
433	CoStar Group	(NDQ)	603.53	1	2	57.6	NIL	Information Services	2
354	Cracker Barrel	(NDQ)	86.47	3	4	8.9	4.6	Restaurant	68
152	Cummins Inc.		146.10	3	3	11.4	3.6	Heavy Truck & Equip	59
1199	DNP Select Inc. Fund		10.59	–	–	NMF	2.5	Investment Co.	–
908	DTE Energy		100.76	3	4	15.0	4.2	Electric Util. (Central)	11
1751	Danaher Corp.		155.83	–	–	33.7	0.5	Diversified Co.	69
1032	Deutsche Telekom ADR	(PNK)	13.61	2	4	14.6	6.4	Telecom. Utility	30
2550	Discover Fin'l Svcs.		35.22	3	3	3.7	5.0	Financial Svcs. (Div.)	24
2009	Dolby Labs.		57.59	3	3	25.0	1.5	Entertainment Tech	23
138	Dominion Energy		79.11	2	2	17.7	4.8	Electric Utility (East)	13
1710	Donaldson Co.		42.03	3	4	22.7	2.1	Machinery	31
1711	Dover Corp.		85.97	3	2	14.8	2.3	Machinery	31
1602	Dow Inc.		31.53	–	–	10.1	9.0	Chemical (Basic)	65
139	Duke Energy		86.65	3	3	16.9	4.4	Electric Utility (East)	13
1603	DuPont de Nemours		39.72	–	–	11.2	3.1	Chemical (Basic)	65
986	Eaton Corp. plc		77.89	3	1	13.8	3.7	Auto Parts	85
2218	El Paso Electric		68.09	–	–	26.0	2.4	Electric Utility (West)	25
1211	Emera Inc.	(TSE)	55.50	3	2	19.5	4.4	Power	55
909	Entergy Corp.		96.45	3	2	14.1	3.9	Electric Util. (Central)	11
1523	Equity Residential		65.61	2	3	35.7	3.7	R.E.I.T.	51
763	Erie Indemnity	(NDQ)	179.24	4	5	27.6	2.2	Insurance (Prop/Cas.)	5
1789	Essential Utilities		42.24	2	1	31.8	2.3	Water Utility	16
910	Evergy, Inc.		59.12	–	–	19.5	3.5	Electric Util. (Central)	11
141	Exelon Corp.	(NDQ)	37.07	3	4	11.3	4.1	Electric Utility (East)	13
507	Exxon Mobil Corp.		41.18	4	3	11.5	8.6	Petroleum (Integrated)	92
436	FactSet Research		276.70	3	2	30.9	1.1	Information Services	2
1137	Fastenal Co.	(NDQ)	34.92	1	2	24.8	2.9	Retail Building Supply	7
308	FedEx Corp.		122.64	4	4	11.4	2.1	Air Transport	74
2554	Fidelity Nat'l Fin'l		25.47	2	2	6.6	5.2	Financial Svcs. (Div.)	24
2555	Fidelity Nat'l Info.		122.62	–	–	32.4	1.1	Financial Svcs. (Div.)	24
764	First American Fin'l		41.22	2	2	6.4	4.3	Insurance (Prop/Cas.)	5
142	FirstEnergy Corp.		44.49	3	2	38.4	3.5	Electric Utility (East)	13
2626	Fiserv Inc.	(NDQ)	97.24	2	2	22.2	NIL	IT Services	4
911	Fortis Inc.	(TSE)	53.98	1	2	19.8	3.7	Electric Util. (Central)	11
119	Fortive Corp.		58.70	3	3	28.6	0.5	Precision Instrument	20
2558	Franklin Resources		16.28	2	3	5.4	6.8	Financial Svcs. (Div.)	24
1984	FUJIFILM Hldgs. ADR	(PNK)	49.05	3	2	14.9	1.8	Foreign Electronics	46
1308	Garmin Ltd.	(NDQ)	80.05	1	2	16.2	3.0	Electrical Equipment	67
386	Genpact Limited		30.47	2	2	13.7	1.3	Industrial Services	32
1755	Graham Hldgs.		335.30	4	3	14.5	1.7	Diversified Co.	69
1309	Grainger (W.W.)		274.51	3	4	16.3	2.1	Electrical Equipment	67
765	Hanover Insurance		97.55	2	4	11.3	2.7	Insurance (Prop/Cas.)	5
2561	Hartford Fin'l Svcs.		38.64	3	3	7.1	3.4	Financial Svcs. (Div.)	24
2219	Hawaiian Elec.		40.02	3	1	19.2	3.3	Electric Utility (West)	25
1917	Hershey Co.		144.58	2	3	24.4	2.2	Food Processing	39
1918	Hormel Foods		49.92	1	3	28.5	2.0	Food Processing	39
1310	Hubbell Inc.		116.96	3	2	14.0	3.2	Electrical Equipment	67
322	Hunt (J.B.)	(NDQ)	100.89	3	4	18.9	1.1	Trucking	64
2220	IDACORP, Inc.		92.62	3	3	19.5	3.0	Electric Utility (West)	25
1715	IDEX Corp.		151.58	3	5	29.3	1.3	Machinery	31
2628	Infosys Ltd. ADR		8.51	2	4	13.5	4.1	IT Services	4
1799	Intercontinental Exch.		89.40	3	2	22.1	1.3	Brokers & Exchanges	37
2594	Intuit Inc.	(NDQ)	264.00	3	2	34.7	0.8	Computer Software	12
185	Intuitive Surgical	(NDQ)	518.33	2	2	41.0	NIL	Med Supp Invasive	19
2517	JPMorgan Chase		91.71	3	2	18.0	4.0	Bank	52
	L3Harris Technologies		194.84	–	–	22.8	1.7	Aerospace/Defense	53
1925	Lancaster Colony	(NDQ)	143.46	3	3	28.9	2.0	Food Processing	39
1011	Lauder (Estee)		167.79	1	1	28.3	NIL	Toiletries/Cosmetics	71
393	Leidos Hldgs.		98.60	2	1	18.4	1.4	Industrial Services	32
1202	Liberty All-Star		5.34	–	–	NMF	12.7	Investment Co.	–
1954	Loblaw Cos. Ltd.	(TSE)	74.72	1	2	25.6	1.7	Retail/Wholesale Food	9
2567	Loews Corp.		34.97	2	3	9.8	0.7	Financial Svcs. (Div.)	24
1140	Lowe's Cos.		95.13	2	4	15.1	2.5	Retail Building Supply	7
2519	M&T Bank Corp.		105.60	3	3	7.5	4.2	Bank	52
537	MDU Resources		21.76	2	3	12.3	3.8	Natural Gas (Div.)	93
1720	MSC Industrial Direct		57.53	3	3	12.5	5.2	Machinery	31
220	McKesson Corp.		140.49	2	2	9.5	1.2	Med Supp Non-Invasive	8
1955	Metro Inc.	(TSE)	60.00	1	1	18.8	1.5	Retail/Wholesale Food	9
126	Mettler-Toledo Int'l		707.63	2	1	30.6	NIL	Precision Instrument	20
1536	Mid-America Apartment		108.49	2	1	38.1	3.7	R.E.I.T.	51
1790	Middlesex Water	(NDQ)	58.52	3	2	28.0	1.8	Water Utility	16
1929	Mondelez Int'l	(NDQ)	53.49	3	3	20.3	2.2	Food Processing	39
960	Motorola Solutions		155.38	1	1	18.3	1.7	Telecom. Equipment	42
1131	NVR, Inc.		2846.86	3	1	12.3	NIL	Homebuilding	17
1802	Nasdaq, Inc.	(NDQ)	109.78	3	2	21.4	1.8	Brokers & Exchanges	37
2520	Nat'l Bank of Canada	(TSE)	53.84	2	3	8.2	5.5	Bank	52
550	New Jersey Resources		31.30	4	4	15.3	4.0	Natural Gas Utility	58
583	NewMarket Corp.		391.57	3	3	18.5	1.9	Chemical (Specialty)	77
551	NiSource Inc.		25.48	3	3	17.8	3.3	Natural Gas Utility	58
344	Norfolk Southern		153.70	3	3	14.2	2.4	Railroad	26
2221	NorthWestern Corp.		58.30	2	3	16.5	4.2	Electric Utility (West)	25
1631	Novo Nordisk ADR		64.11	3	2	25.5	2.0	Drug	22
913	OGE Energy		30.25	3	3	13.4	5.4	Electric Util. (Central)	11
324	Old Dominion Freight	(NDQ)	129.89	3	1	25.1	0.5	Trucking	64
2395	Omnicom Group		53.92	1	3	9.7	4.8	Advertising	36
553	ONE Gas, Inc.		83.99	3	4	22.9	2.6	Natural Gas Utility	58
914	Otter Tail Corp.	(NDQ)	43.93	3	4	19.4	3.4	Electric Util. (Central)	11
2521	PNC Financial Serv.		102.55	3	3	8.6	4.5	Bank	52
144	PPL Corp.		25.25	3	3	10.3	6.6	Electric Utility (East)	13
163	PACCAR Inc.	(NDQ)	67.20	3	4	11.9	4.2	Heavy Truck & Equip	59
786	Park National	(ASE)	73.30	3	3	11.0	5.6	Bank (Midwest)	75
1768	Parker-Hannifin		134.37	3	3	14.6	2.6	Diversified Co.	69
518	Phillips 66		58.12	4	4	7.1	6.9	Petroleum (Integrated)	92
2318	Pool Corp.	(NDQ)	191.60	1	1	48.8	1.1	Recreation	73
2224	Portland General		47.95	1	1	19.3	3.4	Electric Utility (West)	25
770	Progressive Corp.		81.94	2	2	15.6	0.5	Insurance (Prop/Cas.)	5
1539	Prologis		88.50	3	3	39.7	2.7	R.E.I.T.	51
810	Quest Diagnostics		95.03	2	2	14.2	2.4	Medical Services	15
1541	Realty Income Corp.		50.87	3	2	34.6	5.6	R.E.I.T.	51
1565	Reinsurance Group		98.23	4	4	7.1	3.2	Insurance (Life)	48
2025	RenaissanceRe Hldgs.		153.46	2	2	13.9	0.9	Reinsurance	60
410	Republic Services		78.29	1	1	21.5	2.1	Environmental	3
1313	Rockwell Automation		168.54	3	2	18.9	2.4	Electrical Equipment	67
1772	Rogers Communications	(TSE)	60.16	3	4	15.0	3.5	Diversified Co.	69
399	Rollins, Inc.		37.98	3	2	50.0	1.3	Industrial Services	32
2207	Ross Stores	(NDQ)	86.51	2	3	25.6	1.3	Retail (Softlines)	63
519	Royal Dutch Shell 'B'		32.71	4	3	6.9	11.5	Petroleum (Integrated)	92
443	S&P Global		279.17	2	2	27.2	1.0	Information Services	2
2605	SAP SE		122.56	3	4	28.0	1.4	Computer Software	12
2632	SEI Investments	(NDQ)	49.90	2	3	14.1	1.4	IT Services	4
2225	Sempra Energy		122.57	3	3	19.0	3.5	Electric Utility (West)	25
1025	Shaw Commun. 'B'	(TSE)	23.65	2	5	18.2	5.1	Cable TV	14
1142	Sherwin-Williams		495.87	2	2	22.1	1.1	Retail Building Supply	7
1774	Siemens AG (ADS)	(PNK)	43.48	3	5	15.3	4.9	Diversified Co.	69
1546	Simon Property Group		53.83	5	3	12.2	15.6	R.E.I.T.	51
1939	Smucker (J.M.)		121.62	3	4	18.7	2.9	Food Processing	39
1730	Snap-on Inc.		114.66	3	3	9.4	3.8	Machinery	31
1182	Sonoco Products		47.40	3	4	13.4	3.6	Packaging & Container	62
554	South Jersey Inds.		25.90	3	3	16.8	4.6	Natural Gas Utility	58
146	Southern Co.		55.53	3	1	17.9	4.6	Electric Utility (East)	13
556	Spire Inc.		73.58	3	3	19.4	3.4	Natural Gas Utility	58
1731	Stanley Black & Decker		110.48	3	3	13.0	2.6	Machinery	31
191	STERIS plc		157.45	2	3	26.9	0.9	Med Supp Invasive	19
2577	Sun Life Fin'l Svcs.	(TSE)	45.27	2	3	8.6	4.9	Financial Svcs. (Div.)	24
1345	TE Connectivity		66.58	3	4	12.9	2.8	Electronics	61
1381	Taiwan Semic. ADR		52.59	1	2	18.7	3.2	Semiconductor	40
195	Teleflex Inc.		344.85	2	3	43.3	0.4	Med Supp Invasive	19
935	TELUS Corporation	(TSE)	22.54	1	3	15.9	5.4	Telecom. Services	29
131	Thermo Fisher Sci.		327.16	1	2	37.6	0.3	Precision Instrument	20
444	Thomson Reuters	(TSE)	100.20	–	–	57.9	1.5	Information Services	2
1734	Toro Co.		63.24	2	1	20.7	1.6	Machinery	31
521	Total S.A. ADR		33.00	4	3	6.3	8.9	Petroleum (Integrated)	92
111	Toyota Motor ADR		121.71	3	2	8.0	3.6	Automotive	82
1206	Tri-Continental		22.76	–	–	NMF	4.3	Investment Co.	–
557	UGI Corp.		27.15	4	4	9.2	4.8	Natural Gas Utility	58
404	UniFirst Corp.		159.52	2	2	19.5	0.6	Industrial Services	32
315	United Parcel Serv.		101.20	2	4	13.0	4.0	Air Transport	74
788	U.S. Bancorp		34.25	4	4	8.4	5.0	Bank (Midwest)	75
1781	Valmont Inds.		106.53	3	5	14.8	1.7	Diversified Co.	69
196	Varian Medical Sys.		112.04	3	2	23.8	NIL	Med Supp Invasive	19
446	Verisk Analytics	(NDQ)	149.32	3	2	35.7	0.7	Information Services	2
1195	WD-40 Co.	(NDQ)	172.11	3	1	35.9	1.6	Household Products	10
1552	W.P. Carey Inc.		60.45	4	3	28.1	6.9	R.E.I.T.	51
973	Walgreens Boots	(NDQ)	42.85	3	3	7.3	4.3	Pharmacy Services	45
414	Waste Connections		86.33	2	1	35.2	0.9	Environmental	3
133	Waters Corp.		194.33	2	4	20.1	NIL	Precision Instrument	20
1144	Watsco, Inc.		147.77	3	1	22.3	4.8	Retail Building Supply	7
229	West Pharmac. Svcs.		170.37	1	2	51.6	0.4	Med Supp Non-Invasive	8
1964	Weston (George)	(TSE)	105.81	1	3	13.9	2.0	Retail/Wholesale Food	9
2583	Willis Towers Wat. plc	(NDQ)	188.89	–	–	15.4	1.4	Financial Svcs. (Div.)	24
372	Yum! Brands		82.07	2	3	21.6	2.3	Restaurant	68
198	Zimmer Biomet Hldgs.		117.00	2	3	14.1	0.8	Med Supp Invasive	19

HIGHEST DIVIDEND YIELDING 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
2401	Black Stone Minerals	5.22	4	4	NMF	23.0	Petroleum (Producing)	94
625	Enable Midstream Part.	3.09	5	4	3.2	21.4	Pipeline MLPs	84
503	CVR Energy	18.39	5	3	4.4	17.4	Petroleum (Integrated)	92
525	Brigham Minerals	9.15	–	4	17.9	16.6	Natural Gas (Div.)	93
2186	Sunoco LP	20.17	3	4	9.6	16.4	Retail (Hardlines)	76
1518	CoreCivic, Inc.	11.42	4	4	8.5	15.8	R.E.I.T.	51
1547	SITE Centers	5.06	3	3	84.3	15.8	R.E.I.T.	51
1527	GEO Group (The)	12.27	3	4	9.7	15.7	R.E.I.T.	51
2332	Entravision Communic.	1.42	–	4	6.5	14.1	Entertainment	80
615	ONEOK Inc.	28.21	5	3	7.9	13.8	Oil/Gas Distribution	87
2452	Gladstone Capital	6.16	–	3	20.5	13.6	Public/Private Equity	–
510	Husky Energy	3.68	5	3	5.0	13.6	Petroleum (Integrated)	92
2562	Invesco Ltd.	9.09	3	3	3.5	13.6	Financial Svcs. (Div.)	24
1532	Kimco Realty	8.56	3	3	10.3	13.3	R.E.I.T.	51
1202	Liberty All-Star	5.34	–	2	NMF	12.7	Investment Co.	–
1590	Natural Resource	14.13	4	4	3.5	12.7	Metals & Mining (Div.)	89
2396	OUTFRONT Media	12.20	4	4	23.9	12.5	Advertising	36
2359	Int'l Game Tech. PLC	6.70	5	3	12.0	11.9	Hotel/Gaming	81
627	Enterprise Products	15.65	4	3	7.2	11.5	Pipeline MLPs	84
519	Royal Dutch Shell 'B'	32.71	4	2	6.9	11.5	Petroleum (Integrated)	92
2538	AllianceBernstein Hldg.	20.14	3	3	8.3	11.4	Financial Svcs. (Div.)	24
502	BP PLC ADR	22.35	4	3	8.7	11.3	Petroleum (Integrated)	92
1554	Weingarten Realty	13.95	3	3	8.0	11.3	R.E.I.T.	51
581	Methanex Corp.	12.82	5	3	11.4	11.2	Chemical (Specialty)	77
1549	Ventas, Inc.	28.65	5	3	23.3	11.1	R.E.I.T.	51
1528	Gaming and Leisure	26.33	4	3	79.8	10.8	R.E.I.T.	51
630	Magellan Midstream	39.69	4	3	8.6	10.5	Pipeline MLPs	84
747	Russel Metals	14.41	3	3	10.4	10.5	Steel	83
1197	Aberdeen Asia-Pac. Fd.	3.41	–	4	NMF	10.3	Investment Co.	–
540	Ovintiv Inc.	3.74	5	4	1.3	10.2	Natural Gas (Div.)	93
391	Iron Mountain	24.67	2	3	18.5	10.1	Industrial Services	32
1903	B&G Foods	18.91	4	3	12.0	10.0	Food Processing	39
358	Dine Brands Global	30.54	5	3	4.3	10.0	Restaurant	68
331	GasLog Ltd.	4.98	–	4	8.7	10.0	Maritime	90
2516	HSBC Holdings PLC	25.52	3	3	6.1	10.0	Bank	52
1029	CenturyLink Inc.	10.14	3	3	7.6	9.9	Telecom. Utility	30
1033	Telefonica SA ADR	4.46	4	4	8.7	9.9	Telecom. Utility	30
2355	Extended Stay America	9.35	4	3	NMF	9.8	Hotel/Gaming	81
2447	Apollo Global Mgmt	37.27	–	3	47.8	9.6	Public/Private Equity	–
567	Chemours Co. (The)	10.41	5	4	30.6	9.6	Chemical (Specialty)	77
2403	Can. Natural Res.	18.09	2	3	NMF	9.4	Petroleum (Producing)	94
929	Millicom Int'l Cellular	28.16	–	3	9.4	9.4	Telecom. Services	29
104	Fiat Chrysler	7.94	–	3	2.8	9.3	Automotive	82
2563	Janus Henderson plc	15.50	2	3	6.5	9.3	Financial Svcs. (Div.)	24
512	Marathon Petroleum	24.85	4	3	4.1	9.3	Petroleum (Integrated)	92
777	Comerica Inc.	29.62	4	3	4.3	9.2	Bank (Midwest)	75
1203	MFS Multimarket	5.30	–	4	NMF	9.1	Investment Co.	–
2571	Navient Corp.	7.06	4	3	2.6	9.1	Financial Svcs. (Div.)	24
616	Pembina Pipeline	27.55	4	3	10.2	9.1	Oil/Gas Distribution	87
1602	Dow Inc.	31.53	–	2	10.1	9.0	Chemical (Basic)	65
1419	Pitney Bowes	2.23	–	4	3.7	9.0	Office Equip/Supplies	70
2372	Wyndham Destinations	22.27	–	3	5.6	9.0	Hotel/Gaming	81
520	Suncor Energy	20.88	2	3	26.8	8.9	Petroleum (Integrated)	92
521	Total S.A. ADR	33.00	4	2	6.3	8.9	Petroleum (Integrated)	92
1007	Coty Inc.	5.68	5	4	8.0	8.8	Toiletries/Cosmetics	71
1161	Domtar Corp.	20.66	4	3	12.7	8.8	Paper/Forest Products	79
580	LyondellBasell Inds.	48.41	4	3	5.1	8.7	Chemical (Specialty)	77
619	Williams Cos.	18.49	4	3	17.6	8.7	Oil/Gas Distribution	87
1991	Altria Group	39.07	3	3	9.4	8.6	Tobacco	72
507	Exxon Mobil Corp.	41.18	4	2	11.5	8.6	Petroleum (Integrated)	92
632	Phillips 66 Partners	40.75	2	3	9.3	8.6	Pipeline MLPs	84
622	Cheniere Energy Part.	30.70	2	3	15.5	8.5	Pipeline MLPs	84
1147	Ethan Allen Interiors	9.87	4	3	8.6	8.5	Furn/Home Furnishings	54
2444	Trinseo S.A.	18.76	5	3	22.6	8.5	Chemical (Diversified)	57
325	Ryder System	26.54	4	3	16.2	8.4	Trucking	64
2310	Harley-Davidson	18.53	3	3	8.4	8.2	Recreation	73
2145	Kohl's Corp.	17.06	5	3	13.2	8.2	Retail Store	49
2511	Citizens Fin'l Group	20.30	4	3	5.2	8.1	Bank	52
2451	Compass Diversified	17.87	3	3	NMF	8.1	Public/Private Equity	–
578	Kronos Worldwide	8.89	4	4	14.1	8.1	Chemical (Specialty)	77
1564	Prudential Fin'l	54.25	4	3	4.8	8.1	Insurance (Life)	48
2331	Entercom Communic.	1.00	–	3	1.8	8.0	Entertainment	80
1533	MGM Growth Properties	23.63	4	3	21.5	8.0	R.E.I.T.	51
624	EQM Midstream Part.	19.71	–	3	4.0	7.9	Pipeline MLPs	84
938	Vodafone Group ADR	13.68	3	3	52.6	7.9	Telecom. Services	29
2193	Abercrombie & Fitch	10.30	4	4	42.9	7.8	Retail (Softlines)	63
2545	Block (H&R)	13.72	3	3	6.2	7.8	Financial Svcs. (Div.)	24
1992	Brit. Am. Tobacco ADR	36.72	3	3	8.2	7.8	Tobacco	72
612	Enbridge Inc.	41.40	1	3	13.7	7.8	Oil/Gas Distribution	87
522	Valero Energy	50.31	4	3	14.4	7.8	Petroleum (Integrated)	92
352	Cheesecake Factory	18.93	5	3	6.8	7.7	Restaurant	68
2200	Designer Brands	5.20	–	3	4.0	7.7	Retail (Softlines)	63
783	Huntington Bancshs.	8.14	4	3	6.6	7.7	Bank (Midwest)	75
2429	Patterson-UTI Energy	2.07	–	5	NMF	7.7	Oilfield Svcs/Equip.	95
1555	Welltower Inc.	45.38	3	3	16.8	7.7	R.E.I.T.	51
1585	BHP Group Ltd. ADR	38.77	2	3	10.1	7.6	Metals & Mining (Div.)	89
2528	Synovus Financial	17.37	3	3	4.6	7.6	Bank	52
1550	VICI Properties	15.68	–	4	13.4	7.6	R.E.I.T.	51
780	First Horizon National	7.96	4	3	5.4	7.5	Bank (Midwest)	75
2574	Principal Fin'l Group	29.79	3	3	4.8	7.5	Financial Svcs. (Div.)	24
1566	Unum Group	15.15	3	3	2.7	7.5	Insurance (Life)	48
2532	Wells Fargo	27.68	4	3	7.6	7.5	Bank	52
1531	Host Hotels & Resorts	10.80	4	3	NMF	7.4	R.E.I.T.	51
1506	Northwest Bancshares	10.21	3	3	10.0	7.4	Thrift	27
1544	SL Green Realty	47.53	3	3	37.1	7.4	R.E.I.T.	51
2509	Can. Imperial Bank	80.83	3	1	6.7	7.3	Bank	52
1503	Flushing Financial	11.54	3	3	6.9	7.3	Thrift	27
511	Imperial Oil Ltd.	12.12	4	3	8.0	7.3	Petroleum (Integrated)	92
1592	Rio Tinto plc	46.40	3	3	7.2	7.3	Metals & Mining (Div.)	89
506	Delek US Holdings	17.12	–	3	3.3	7.2	Petroleum (Integrated)	92

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	Timeliness	Safety Rank	Industry Group	Industry Rank
120	Geospace Technologies	5.52	490%	–	4	Precision Instrument	20
923	Gogo Inc.	1.69	490%	–	5	Telecom. Services	29
2419	Diamond Offshore	0.77	485%	–	5	Oilfield Svcs/Equip.	95
2647	Groupon, Inc.	0.94	485%	–	5	Internet	50
2562	Invesco Ltd.	9.09	480%	3	3	Financial Svcs. (Div.)	24
2378	Meredith Corp.	13.02	475%	5	4	Publishing	91
365	Red Robin Gourmet	11.30	475%	5	3	Restaurant	68
1545	Service Properties	5.64	475%	3	3	R.E.I.T.	51
725	Triumph Group	6.51	475%	–	4	Aerospace/Defense	53
314	United Airlines Hldgs.	27.79	475%	3	3	Air Transport	74
304	Amer. Airlines	11.06	465%	3	3	Air Transport	74
1614	Aurora Cannabis	0.71	465%	–	4	Drug	22
611	Clean Energy Fuels	1.77	465%	–	5	Oil/Gas Distribution	87
2383	Gannett Co., Inc.	0.80	465%	–	5	Newspaper	–
635	Rattler Midstream LP	5.33	465%	–	3	Pipeline MLPs	84
1238	Tutor Perini	5.76	465%	–	4	Engineering & Const	66
504	Cenovus Energy	3.70	455%	3	4	Petroleum (Integrated)	92
506	Delek US Holdings	17.12	455%	–	3	Petroleum (Integrated)	92
1771	Realogy Holdings	3.50	455%	–	4	Diversified Co.	69
2106	G-III Apparel Group	9.10	450%	4	3	Apparel	86
2209	Tailored Brands	1.54	450%	–	5	Retail (Softlines)	63
544	Southwestern Energy	2.94	445%	4	4	Natural Gas (Div.)	93
2158	Genesco Inc.	16.13	440%	5	3	Shoe	28
1150	Interface Inc. 'A'	8.41	435%	3	3	Furn/Home Furnishings	54
2528	Synovus Financial	17.37	435%	3	3	Bank	52
2348	ViacomCBS Inc.	15.52	430%	3	3	Entertainment	80
1415	Diebold Nixdorf	3.68	415%	–	5	Office Equip/Supplies	70
2568	MGIC Investment	5.82	415%	3	3	Financial Svcs. (Div.)	24
2424	MRC Global	3.90	415%	–	4	Oilfield Svcs/Equip.	95
2343	Scripps (E.W.) 'A'	6.81	415%	4	3	Entertainment	80
827	Alkermes plc	16.61	410%	3	3	Biotechnology	21
387	Harsco Corp.	7.87	410%	5	3	Industrial Services	32
2575	SLM Corporation	6.83	410%	3	3	Financial Svcs. (Div.)	24
531	Cimarex Energy	19.81	405%	5	3	Natural Gas (Div.)	93
581	Methanex Corp.	12.82	405%	5	3	Chemical (Specialty)	77
318	ArcBest Corp.	18.05	400%	4	3	Trucking	64
2354	Eldorado Resorts	16.07	400%	–	3	Hotel/Gaming	81
1807	Greenhill & Co.	9.04	400%	3	4	Investment Banking	6
2314	Norwegian Cruise Line	11.49	400%	5	4	Recreation	73
2427	Oceaneering Int'l	3.20	400%	–	3	Oilfield Svcs/Equip.	95
329	Diana Shipping	1.82	395%	–	5	Maritime	90
546	WPX Energy	4.06	395%	2	4	Natural Gas (Div.)	93
1599	CVR Partners, LP	0.92	390%	–	5	Chemical (Basic)	65
1192	Newell Brands	12.78	390%	2	3	Household Products	10
1110	Cornerstone Building	4.12	385%	–	5	Building Materials	44
332	Golar LNG Ltd.	6.69	385%	5	5	Maritime	90
2310	Harley-Davidson	18.53	385%	3	3	Recreation	73
2429	Patterson-UTI Energy	2.07	385%	–	5	Oilfield Svcs/Equip.	95
2502	Ally Financial	15.05	380%	4	3	Bank	52
2200	Designer Brands	5.20	380%	–	3	Retail (Softlines)	63
2178	Movado Group	9.39	380%	5	3	Retail (Hardlines)	76
1767	Park-Ohio	15.06	380%	4	3	Diversified Co.	69
351	Brinker Int'l	15.28	375%	3	3	Restaurant	68
160	Manitowoc Co.	7.91	375%	4	4	Heavy Truck & Equip	59
634	Plains GP Holdings L.P.	7.36	375%	5	4	Pipeline MLPs	84
2430	ProPetro Holding	3.27	375%	–	4	Oilfield Svcs/Equip.	95
739	Carpenter Technology	19.22	370%	3	3	Steel	83
357	Denny's Corp.	9.02	370%	4	3	Restaurant	68
109	Tata Motors ADR	5.11	370%	4	4	Automotive	82
303	Allegiant Travel	71.99	365%	3	3	Air Transport	74
1583	Alliance Resource	3.43	365%	–	5	Metals & Mining (Div.)	89
768	NMI Holdings	10.71	365%	3	3	Insurance (Prop/Cas.)	5
2425	Nabors Inds.	13.50	365%	–	5	Oilfield Svcs/Equip.	95
1595	U.S. Silica Holdings	1.29	365%	–	5	Metals & Mining (Div.)	89
361	Fiesta Restaurant	6.51	360%	–	3	Restaurant	68
577	Kraton Corp.	8.71	360%	5	4	Chemical (Specialty)	77
2361	MGM Resorts Int'l	13.53	360%	4	3	Hotel/Gaming	81
631	NuStar Energy L.P.	9.26	360%	5	3	Pipeline MLPs	84
2112	PVH Corp.	40.88	360%	5	3	Apparel	86
1338	Plantronics Inc.	11.46	360%	5	4	Electronics	61
2345	Sirius XM Holdings	5.22	360%	3	4	Entertainment	80
2328	AMC Networks	24.08	355%	4	3	Entertainment	80
1753	EnPro Industries	39.49	355%	4	3	Diversified Co.	69
2341	Nexstar Media Group	61.75	355%	4	3	Entertainment	80
793	Brookdale Senior Living	3.43	350%	–	5	Medical Services	15
503	CVR Energy	18.39	350%	5	3	Petroleum (Integrated)	92
2306	Carnival Corp.	12.22	350%	5	4	Recreation	73
740	Cleveland-Cliffs Inc.	3.46	350%	5	5	Steel	83
167	Wabash National	7.19	350%	4	3	Heavy Truck & Equip	59
2547	CIT Group	19.72	345%	4	3	Financial Svcs. (Div.)	24
1827	Nutanix, Inc.	16.85	345%	4	4	E-Commerce	43
520	Suncor Energy	20.88	345%	2	3	Petroleum (Integrated)	92
1134	Taylor Morrison Home	11.18	345%	3	3	Homebuilding	17
2210	Tilly's, Inc.	4.60	345%	–	4	Retail (Softlines)	63
1414	ACCO Brands	5.58	340%	–	3	Office Equip/Supplies	70
1534	Macerich Comp. (The)	6.26	340%	5	4	R.E.I.T.	51
517	Petroleo Brasileiro ADR	6.27	340%	5	5	Petroleum (Integrated)	92
1002	Titan Int'l	1.25	340%	–	5	Auto Parts	85
814	Tivity Health	6.79	340%	–	3	Medical Services	15
352	Cheesecake Factory	18.93	335%	5	3	Restaurant	68
710	Embraer SA	6.87	335%	–	3	Aerospace/Defense	53
310	JetBlue Airways	8.63	335%	3	3	Air Transport	74
2411	Noble Energy	6.86	335%	5	3	Petroleum (Producing)	94
2445	Univar Solutions	11.49	335%	2	3	Chemical (Diversified)	57
2391	Donnelley (R.R.) & Sons	1.05	330%	–	5	Advertising	36
1584	Howmet Aerospace	11.64	330%	–	3	Metals & Mining (Div.)	89
738	ArcelorMittal	9.40	325%	4	3	Steel	83
1007	Coty Inc.	5.68	325%	5	4	Toiletries/Cosmetics	71
307	Delta Air Lines	23.64	325%	3	3	Air Transport	74
358	Dine Brands Global	30.54	325%	5	3	Restaurant	68

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
2340	Netflix, Inc.	437.49	44.80	1	3	Entertainment	80
1134	Taylor Morrison Home	11.18	34.95	3	3	Homebuilding	17
1818	Check Point Software	105.33	34.69	2	1	E-Commerce	43
2549	Credit Acceptance	294.71	34.68	3	3	Financial Svcs. (Div.)	24
1131	NVR, Inc.	2846.86	30.30	3	2	Homebuilding	17
836	Jazz Pharmac. plc	108.78	28.08	2	3	Biotechnology	21
2370	Stars Group (The)	24.94	27.12	–	3	Hotel/Gaming	81
1815	Arista Networks	211.99	24.37	4	3	E-Commerce	43
1352	Ambarella, Inc.	50.03	23.31	3	4	Semiconductor	40
1616	Bausch Health	17.24	21.35	3	5	Drug	22
825	Veeva Systems	184.40	19.43	2	3	Healthcare Information	18
2586	ANSYS, Inc.	266.72	18.89	1	2	Computer Software	12
1133	TRI Pointe Group	9.83	16.43	2	3	Homebuilding	17
821	HealthEquity, Inc.	47.96	15.73	3	3	Healthcare Information	18
2557	FleetCor Technologies	214.13	15.59	3	3	Financial Svcs. (Div.)	24
1350	Advanced Energy	51.71	14.99	3	3	Semiconductor	40
2657	VeriSign Inc.	210.90	14.13	3	3	Internet	50
2629	Manhattan Assoc.	55.35	13.97	4	3	IT Services	4
838	Myriad Genetics	15.20	13.57	5	3	Biotechnology	21
2641	Booking Holdings	1411.63	13.55	3	3	Internet	50
2190	WW International	20.08	13.40	4	4	Retail (Hardlines)	76
2329	Discovery, Inc.	21.70	13.31	2	3	Entertainment	80
1009	Helen of Troy Ltd.	137.05	12.96	2	3	Toiletries/Cosmetics	71
2580	Voya Financial	42.82	12.56	3	3	Financial Svcs. (Div.)	24
1611	Allergan plc	187.39	12.53	–	3	Drug	22
724	TransDigm Group	316.40	12.18	3	3	Aerospace/Defense	53
1375	Rambus Inc.	12.08	12.11	2	3	Semiconductor	40
1622	Endo Int'l plc	3.69	12.04	4	5	Drug	22
1978	Monster Beverage	61.38	11.72	1	3	Beverage	34
2637	Alibaba Group	212.13	11.07	1	3	Internet	50
2010	Electronic Arts	115.41	10.99	1	3	Entertainment Tech	23
806	MEDNAX, Inc.	12.40	10.68	4	3	Medical Services	15
951	CommScope Holding	9.93	10.45	4	3	Telecom. Equipment	42
2165	Avis Budget Group	13.51	10.26	3	4	Retail (Hardlines)	76
1721	Middleby Corp. (The)	48.56	10.20	3	3	Machinery	31
832	Exelixis, Inc.	23.57	10.06	3	4	Biotechnology	21
2612	VMware, Inc.	132.62	9.96	3	3	Computer Software	12
605	Ubiquiti Inc.	156.67	9.90	2	3	Wireless Networking	41
2650	Match Group	80.03	9.72	3	4	Internet	50
1316	WESCO Int'l	23.19	9.60	5	3	Electrical Equipment	67
1130	Meritage Homes	39.25	9.21	3	3	Homebuilding	17
1128	Lennar Corp.	39.98	9.18	2	3	Homebuilding	17
2585	Adobe Inc.	344.88	9.05	1	2	Computer Software	12
2588	Cadence Design Sys.	77.84	8.67	2	3	Computer Software	12
791	Amedisys, Inc.	195.63	8.55	2	3	Medical Services	15
1408	ScanSource	22.49	8.51	4	3	Computers/Peripherals	56
1314	Trimble Inc.	32.32	8.32	3	3	Electrical Equipment	67
433	CoStar Group	603.53	8.28	1	2	Information Services	2
607	Zebra Techn. 'A'	202.35	8.00	2	3	Wireless Networking	41
1135	Toll Brothers	20.28	7.96	4	3	Homebuilding	17
1127	KB Home	20.40	7.95	2	3	Homebuilding	17
818	Allscripts Healthcare	6.62	7.74	4	3	Healthcare Information	18
842	United Therapeutics	106.44	7.51	3	3	Biotechnology	21
803	ICON plc	158.42	7.37	2	3	Medical Services	15
2618	CACI Int'l	238.58	7.35	2	3	IT Services	4
954	F5 Networks	122.66	7.30	3	3	Telecom. Equipment	42
1371	NXP Semiconductors NV	86.70	7.23	3	3	Semiconductor	40
1365	MaxLinear, Inc.	14.86	7.08	5	3	Semiconductor	40
1629	Nektar Therapeutics	20.11	7.05	4	5	Drug	22
1617	Biogen	339.41	7.04	1	3	Drug	22
123	Keysight Technologies	95.31	6.99	2	3	Precision Instrument	20
966	Synaptics	59.40	6.99	3	3	Telecom. Equipment	42
222	Natus Medical	23.90	6.92	3	3	Med Supp Non-Invasive	8
1356	Cirrus Logic	68.98	6.88	2	3	Semiconductor	40
1410	Tech Data	140.00	6.87	–	3	Computers/Peripherals	56
185	Intuitive Surgical	518.33	6.85	2	2	Med Supp Invasive	19
432	CoreLogic	35.60	6.79	3	3	Information Services	2
2328	AMC Networks	24.08	6.78	4	3	Entertainment	80
216	Inogen, Inc.	49.77	6.77	4	4	Med Supp Non-Invasive	8
1643	ASGN Inc.	37.41	6.73	4	3	Human Resources	88
2609	Synopsys, Inc.	151.01	6.71	3	1	Computer Software	12
939	Vonage Holdings	8.15	6.57	3	3	Telecom. Services	29
712	HEICO Corp.	80.73	6.56	3	3	Aerospace/Defense	53
2625	Fair Isaac	307.34	6.50	3	3	IT Services	4
1628	Mylan N.V.	15.86	6.44	–	3	Drug	22
379	CBRE Group	41.96	6.37	2	3	Industrial Services	32
1112	HD Supply Holdings	28.24	6.30	–	3	Building Materials	44
173	Boston Scientific	37.25	6.29	3	3	Med Supp Invasive	19
795	Cigna Corp.	188.70	6.26	2	3	Medical Services	15
133	Waters Corp.	194.33	6.23	2	2	Precision Instrument	20
1322	Anixter Int'l	90.18	6.17	–	3	Electronics	61
1943	USANA Health Sciences	66.91	6.07	4	3	Food Processing	39
2589	Citrix Sys.	150.67	6.04	3	3	Computer Software	12
2175	Insight Enterprises	48.58	6.02	3	3	Retail (Hardlines)	76
2614	ACI Worldwide	25.79	5.98	3	3	IT Services	4
812	Syneos Health	50.17	5.98	3	4	Medical Services	15
196	Varian Medical Sys.	112.04	5.97	3	2	Med Supp Invasive	19
1227	AECOM	32.46	5.89	–	3	Engineering & Const	66
2606	SS&C Techn. Hldgs	51.19	5.88	3	3	Computer Software	12
1727	Roper Tech.	320.32	5.87	1	1	Machinery	31
129	PerkinElmer Inc.	84.52	5.81	2	3	Precision Instrument	20
1634	Perrigo Co. plc	50.86	5.72	2	3	Drug	22
2623	EPAM Systems	206.66	5.63	2	3	IT Services	4
225	Omnicell, Inc.	72.52	5.60	2	3	Med Supp Non-Invasive	8
636	Shell Midstream L.P.	11.37	5.60	4	3	Pipeline MLPs	84
2634	Tyler Technologies	328.05	5.55	1	3	IT Services	4
1215	Generac Holdings	99.37	5.53	3	3	Power	55
1362	Lattice Semiconductor	19.70	5.48	3	3	Semiconductor	40
213	Hologic, Inc.	43.24	5.40	2	3	Med Supp Non-Invasive	8
2622	DXC Technology	15.07	5.34	5	3	IT Services	4

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
837	Moderna, Inc.	MRNA	51.69	146.8%	–	4
535	EQT Corp.	EQT	15.56	102.6%	–	4
940	Zoom Video Communic.	ZM	148.99	94.2%	–	4
824	Teladoc Health	TDOC	181.46	84.7%	2	4
526	CNX Resources	CNX	12.88	84.3%	4	4
544	Southwestern Energy	SWN	2.94	70.9%	4	4
840	Regeneron Pharmac.	REGN	567.99	56.2%	3	3
1961	United Natural Foods	UNFI	11.92	50.9%	4	4
2642	Chewy, Inc.	CHWY	44.72	48.4%	–	4
1031	Consol. Communic.	CNSL	5.86	43.3%	–	4
2414	Range Resources	RRC	5.14	41.6%	5	4
210	DexCom Inc.	DXCM	323.27	39.6%	2	4
527	Cabot Oil & Gas 'A'	COG	21.42	38.0%	4	3
110	Tesla, Inc.	TSLA	746.36	36.4%	3	4
1574	Newmont Corp.	NEM	59.54	36.2%	1	3
1571	Barrick Gold	GOLD	24.92	35.8%	1	3
1832	Shopify Inc.	SHOP	629.90	35.3%	2	4
2566	Legg Mason	LM	49.61	33.0%	–	3
1573	Kinross Gold	KGC	6.17	31.8%	2	5
1988	Sea Limited ADS	SE	54.22	31.3%	3	4
841	Seattle Genetics	SGEN	142.55	31.2%	1	4
1833	Slack Technologies	WORK	29.25	31.1%	–	3
359	Domino's Pizza	DPZ	370.48	29.9%	1	3
1623	Gilead Sciences	GILD	81.26	29.7%	1	3
2340	Netflix, Inc.	NFLX	437.49	29.4%	1	3
2604	RingCentral, Inc.	RNG	253.11	29.0%	2	3
833	Incyte Corp.	INCY	101.19	28.7%	2	3
1030	Cincinnati Bell	CBB	14.76	28.1%	–	4
2589	Citrix Sys.	CTXS	150.67	27.8%	3	3
2639	Amazon.com	AMZN	2393.61	26.5%	1	3
825	Veeva Systems	VEEV	184.40	26.2%	2	3
971	PetMed Express	PETS	32.27	26.0%	3	3
1632	Opko Health	OPK	1.98	25.3%	4	5
1213	Enphase Energy	ENPH	39.01	24.8%	3	3
2011	Glu Mobile	GLUU	7.91	24.6%	3	5
1957	SpartanNash Co.	SPTN	16.43	23.3%	3	4
828	Alnylam Pharmac.	ALNY	144.87	22.8%	3	4
2171	GameStop Corp.	GME	5.61	22.2%	–	4
2599	Okta, Inc.	OKTA	152.60	21.8%	3	3
1578	Wheaton Precious Met.	WPM	34.98	21.2%	2	3
371	Wingstop Inc.	WING	109.35	21.1%	3	3

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
530	Centennial Resource Dev.	CDEV	0.29	–93.2%	–	4
543	QEP Resources	QEP	0.30	–91.8%	–	5
2434	Valaris plc	VAL	0.43	–91.7%	–	5
2425	Nabors Inds.	NBR	13.50	–90.3%	–	5
529	Callon Petroleum	CPE	0.41	–88.9%	–	4
2383	Gannett Co., Inc.	GCI	0.80	–88.4%	–	5
2419	Diamond Offshore	DO	0.77	–86.9%	–	5
2422	Helix Energy Solutions	HLX	1.40	–84.0%	–	5
2428	Oil States Int'l	OIS	2.39	–83.3%	–	5
528	California Resources	CRC	1.51	–82.2%	–	5
542	Paramount Resources	POU.TO	1.30	–81.7%	–	4
925	Intelsat S.A.	I	1.26	–81.1%	–	5
540	Ovintiv Inc.	OVV	3.74	–81.1%	5	4
618	Tellurian Inc.	TELL	1.43	–81.1%	–	5
545	Targa Resources	TRGP	7.88	–80.4%	5	4
2314	Norwegian Cruise Line	NCLH	11.49	–80.2%	5	4
2433	Transocean Ltd.	RIG	1.17	–79.6%	5	5
613	EnLink Midstream LLC	ENLC	1.19	–78.7%	5	5
2331	Entercom Communic.	ETM	1.00	–78.6%	–	3
2429	Patterson-UTI Energy	PTEN	2.07	–78.5%	–	5
2427	Oceaneering Int'l	OII	3.20	–77.8%	–	3
981	Commercial Vehicle	CVGI	1.41	–76.3%	–	5
623	DCP Midstream LP	DCP	5.68	–76.3%	–	3
2390	Clear Channel Outdoor	CCO	0.72	–76.2%	–	5
1545	Service Properties	SVC	5.64	–76.2%	3	3
1534	Macerich Comp. (The)	MAC	6.26	–76.1%	5	4
515	PBF Energy	PBF	7.16	–76.1%	3	3
2306	Carnival Corp.	CCL	12.22	–75.9%	5	4
1595	U.S. Silica Holdings	SLCA	1.29	–75.8%	–	5
356	Dave & Buster's Ent.	PLAY	11.56	–75.1%	3	3
2406	Crescent Point Energy	CPG.TO	1.28	–75.0%	5	5
1830	Sabre Corp.	SABR	5.69	–74.8%	5	4
733	NN Inc.	NNBR	2.41	–74.6%	–	5
2155	Caleres Inc.	CAL	5.65	–73.9%	–	3
588	Rayonier Advanced Mat.	RYAM	1.02	–73.8%	–	5
2400	Apache Corp.	APA	8.48	–73.3%	5	4
2354	Eldorado Resorts	ERI	16.07	–73.0%	–	3
2183	Signet Jewelers Ltd.	SIG	7.63	–72.9%	4	4
814	Tivity Health	TVTY	6.79	–72.9%	–	3
2319	Royal Caribbean	RCL	35.99	–72.2%	5	4
2197	Chico's FAS	CHS	1.18	–72.0%	–	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	Timeliness	Safety Rank	Beta	P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
2434	Valaris plc	VAL	0.43	47.01	1%	–	5	2.30	NMF	NIL	Oilfield Svcs/Equip.	95
530	Centennial Resource Dev.	CDEV	0.29	11.77	2%	–	4	1.80	4.1	NIL	Natural Gas (Div.)	93
2419	Diamond Offshore	DO	0.77	23.47	3%	–	5	1.85	NMF	NIL	Oilfield Svcs/Equip.	95
543	QEP Resources	QEP	0.30	11.85	3%	–	5	2.10	0.6	NIL	Natural Gas (Div.)	93
529	Callon Petroleum	CPE	0.41	10.00	4%	–	4	2.00	0.4	NIL	Natural Gas (Div.)	93
2433	Transocean Ltd.	RIG	1.17	19.39	6%	5	5	2.00	NMF	NIL	Oilfield Svcs/Equip.	95
524	Antero Resources	AR	1.71	23.55	7%	–	5	1.60	NMF	NIL	Natural Gas (Div.)	93
542	Paramount Resources	POU.TO	1.30	15.62	8%	–	4	2.25	NMF	NIL	Natural Gas (Div.)	93
2331	Entercom Communic.	ETM	1.00	10.20	10%	–	3	1.25	1.8	8.0	Entertainment	80
540	Ovintiv Inc.	OVV	3.74	38.22	10%	5	4	1.90	1.3	10.2	Natural Gas (Div.)	93
588	Rayonier Advanced Mat.	RYAM	1.02	10.15	10%	–	5	2.30	NMF	NIL	Chemical (Specialty)	77
2406	Crescent Point Energy	CPG.TO	1.28	11.30	11%	5	5	1.70	NMF	0.8	Petroleum (Producing)	94
623	DCP Midstream LP	DCP	5.68	46.10	12%	–	3	1.75	6.2	27.5	Pipeline MLPs	84
1558	Genworth Fin'l	GNW	3.38	28.14	12%	–	5	1.60	5.6	NIL	Insurance (Life)	48
2422	Helix Energy Solutions	HLX	1.40	11.42	12%	–	5	2.15	35.0	NIL	Oilfield Svcs/Equip.	95
2428	Oil States Int'l	OIS	2.39	20.23	12%	–	5	1.70	NMF	NIL	Oilfield Svcs/Equip.	95
1591	Peabody Energy	BTU	3.48	26.97	13%	–	4	1.15	NMF	NIL	Metals & Mining (Div.)	89
1595	U.S. Silica Holdings	SLCA	1.29	9.58	13%	–	5	2.10	NMF	6.2	Metals & Mining (Div.)	89
2429	Patterson-UTI Energy	PTEN	2.07	14.76	14%	–	5	1.80	NMF	7.7	Oilfield Svcs/Equip.	95
336	Teekay Corp.	TK	3.93	28.00	14%	–	5	2.25	11.2	NIL	Maritime	90
613	EnLink Midstream LLC	ENLC	1.19	7.90	15%	5	5	1.80	19.8	31.9	Oil/Gas Distribution	87
510	Husky Energy	HSE.TO	3.68	20.05	18%	5	3	1.25	5.0	13.6	Petroleum (Integrated)	92
2168	Conn's, Inc.	CONN	4.22	21.84	19%	–	4	1.55	2.2	NIL	Retail (Hardlines)	76
1771	Realogy Holdings	RLGY	3.50	18.29	19%	–	4	1.15	23.3	NIL	Diversified Co.	69
2164	At Home Group	HOME	1.90	9.49	20%	–	4	1.15	NMF	NIL	Retail (Hardlines)	76
983	Cooper-Standard	CPS	10.16	50.83	20%	5	3	1.30	NMF	NIL	Auto Parts	85
750	TimkenSteel Corp.	TMST	2.46	12.58	20%	–	4	2.45	NMF	NIL	Steel	83
1238	Tutor Perini	TPC	5.76	28.64	20%	–	4	1.50	NMF	NIL	Engineering & Const	66
513	Murphy Oil Corp.	MUR	7.91	37.95	21%	5	4	1.75	4.7	6.3	Petroleum (Integrated)	92
1001	Tenneco Inc.	TEN	3.69	17.61	21%	–	4	1.55	1.7	NIL	Auto Parts	85
738	ArcelorMittal	MT	9.40	43.00	22%	4	3	1.90	NMF	3.2	Steel	83
541	PDC Energy	PDCE	8.51	37.90	22%	5	4	1.60	2.6	NIL	Natural Gas (Div.)	93
504	Cenovus Energy	CVE.TO	3.70	15.63	24%	3	4	1.30	52.9	NIL	Petroleum (Integrated)	92
1216	Green Plains Inc.	GPRE	4.84	19.79	24%	–	5	1.65	NMF	NIL	Power	55
1599	CVR Partners, LP	UAN	0.92	3.70	25%	–	5	1.25	NMF	21.7	Chemical (Basic)	65
2197	Chico's FAS	CHS	1.18	4.48	26%	–	5	1.05	NMF	30.5	Retail (Softlines)	63
2146	Macy's Inc.	M	5.31	20.64	26%	5	3	1.10	4.5	NIL	Retail Store	49
1594	Teck Resources 'B'	TECKB.TO	10.58	38.93	27%	5	3	1.55	NMF	1.9	Metals & Mining (Div.)	89
751	U.S. Steel Corp.	X	6.59	24.06	27%	5	4	2.20	NMF	0.6	Steel	83
2410	Marathon Oil Corp.	MRO	4.21	15.27	28%	5	3	2.05	NMF	4.8	Petroleum (Producing)	94
108	Nissan Motor ADR	NSANY	6.70	24.05	28%	4	3	0.95	8.0	6.0	Automotive	82
515	PBF Energy	PBF	7.16	25.37	28%	3	3	1.50	2.1	NIL	Petroleum (Integrated)	92
329	Diana Shipping	DSX	1.82	6.25	29%	–	5	1.40	NMF	NIL	Maritime	90
733	NN Inc.	NNBR	2.41	8.35	29%	–	5	1.80	NMF	NIL	Metal Fabricating	78
2302	AMC Entertainment Hldgs.	AMC	3.18	10.60	30%	–	3	1.00	NMF	3.8	Recreation	73
1125	Beazer Homes USA	BZH	5.19	17.42	30%	–	5	1.60	3.1	NIL	Homebuilding	17
2166	Bed Bath & Beyond	BBBY	4.55	15.10	30%	4	4	1.20	NMF	NIL	Retail (Hardlines)	76
2427	Oceaneering Int'l	OII	3.20	10.81	30%	–	3	1.75	NMF	NIL	Oilfield Svcs/Equip.	95
545	Targa Resources	TRGP	7.88	26.10	30%	5	4	1.95	98.5	5.1	Natural Gas (Div.)	93
981	Commercial Vehicle	CVGI	1.41	4.60	31%	–	5	1.50	1.9	NIL	Auto Parts	85
710	Embraer SA	ERJ	6.87	21.95	31%	–	3	0.90	16.8	NIL	Aerospace/Defense	53
514	Occidental Petroleum	OXY	12.59	41.25	31%	5	4	1.20	15.4	3.5	Petroleum (Integrated)	92
1566	Unum Group	UNM	15.15	49.10	31%	3	3	1.30	2.7	7.5	Insurance (Life)	48
2540	Amer. Int'l Group	AIG	23.75	74.93	32%	4	3	1.05	4.6	5.4	Financial Svcs. (Div.)	24
2547	CIT Group	CIT	19.72	61.37	32%	4	3	1.30	3.5	7.1	Financial Svcs. (Div.)	24
1002	Titan Int'l	TWI	1.25	3.90	32%	–	5	2.00	NMF	1.6	Auto Parts	85
2535	AerCap Hldgs. NV	AER	22.96	70.55	33%	3	3	1.55	2.8	NIL	Financial Svcs. (Div.)	24
2306	Carnival Corp.	CCL	12.22	37.08	33%	5	4	1.10	NMF	NIL	Recreation	73
2183	Signet Jewelers Ltd.	SIG	7.63	23.07	33%	4	4	1.30	7.5	NIL	Retail (Hardlines)	76
1581	Alcoa Corp.	AA	7.45	22.16	34%	5	5	1.70	NMF	NIL	Metals & Mining (Div.)	89
1109	CEMEX ADS	CX	2.10	6.20	34%	4	4	1.65	8.4	NIL	Building Materials	44
2170	Fossil Group	FOSL	3.42	9.96	34%	–	5	1.60	NMF	NIL	Retail (Hardlines)	76
2106	G-III Apparel Group	GIII	9.10	26.88	34%	4	3	1.55	6.0	NIL	Apparel	86
2430	ProPetro Holding	PUMP	3.27	9.65	34%	–	4	1.75	4.8	NIL	Oilfield Svcs/Equip.	95
1583	Alliance Resource	ARLP	3.43	9.88	35%	–	5	1.15	5.3	NIL	Metals & Mining (Div.)	89
2155	Caleres Inc.	CAL	5.65	15.99	35%	–	3	1.15	3.4	5.0	Shoe	28
305	Atlas Air Worldwide	AAWW	24.63	69.27	36%	4	3	1.75	5.4	NIL	Air Transport	74
990	Goodyear Tire	GT	6.76	18.70	36%	5	4	1.45	7.2	NIL	Auto Parts	85
2021	Athene Holding Ltd.	ATH	24.11	65.48	37%	4	2	1.15	3.2	NIL	Reinsurance	60
2408	Diamondback Energy	FANG	30.86	83.33	37%	5	3	1.40	NMF	4.9	Petroleum (Producing)	94
2141	Dillard's, Inc.	DDS	24.66	67.11	37%	4	3	1.05	17.6	2.4	Retail Store	49
2173	Hertz Global Hldgs.	HTZ	4.65	12.46	37%	4	5	1.60	NMF	NIL	Retail (Hardlines)	76
577	Kraton Corp.	KRA	8.71	23.67	37%	5	4	1.55	4.9	NIL	Chemical (Specialty)	77
997	Modine Mfg.	MOD	3.93	10.60	37%	–	4	1.50	4.3	NIL	Auto Parts	85
2412	Parsley Energy	PE	6.64	18.18	37%	5	3	1.60	NMF	3.0	Petroleum (Producing)	94
546	WPX Energy	WPX	4.06	10.83	37%	2	4	2.15	11.6	NIL	Natural Gas (Div.)	93
2158	Genesco Inc.	GCO	16.13	42.07	38%	5	3	1.05	3.6	NIL	Shoe	28
1760	Jefferies Fin'l Group	JEF	12.60	32.85	38%	3	3	1.25	11.3	4.8	Diversified Co.	69
512	Marathon Petroleum	MPC	24.85	64.93	38%	4	3	1.55	4.1	9.3	Petroleum (Integrated)	92
2314	Norwegian Cruise Line	NCLH	11.49	30.58	38%	5	4	1.20	NMF	NIL	Recreation	73
2502	Ally Financial	ALLY	15.05	38.62	39%	4	3	1.20	3.7	5.0	Bank	52
2448	Apollo Investment	AINV	7.54	19.55	39%	3	3	0.90	15.1	23.9	Public/Private Equity	–
536	Enerplus Corp.	ERF.TO	2.58	6.63	39%	5	4	2.05	2.2	4.7	Natural Gas (Div.)	93
313	Spirit Airlines	SAVE	12.95	33.03	39%	5	3	1.15	2.5	NIL	Air Transport	74
2622	DXC Technology	DXC	15.07	37.25	40%	5	3	1.30	1.6	5.6	IT Services	4
2411	Noble Energy	NBL	6.86	17.34	40%	5	3	1.65	NMF	1.2	Petroleum (Producing)	94
633	Plains All Amer. Pipe.	PAA	7.12	17.70	40%	5	3	1.45	4.2	20.2	Pipeline MLPs	84
365	Red Robin Gourmet	RRGB	11.30	28.60	40%	5	3	1.05	17.4	NIL	Restaurant	68
2020	Assured Guaranty	AGO	29.41	71.18	41%	4	3	1.10	9.1	2.7	Reinsurance	60
332	Golar LNG Ltd.	GLNG	6.69	16.15	41%	5	5	1.75	NMF	NIL	Maritime	90
2178	Movado Group	MOV	9.39	22.87	41%	5	3	1.35	18.8	NIL	Retail (Hardlines)	76
2332	Entravision Communic.	EVC	1.42	3.42	42%	–	4	1.20	6.5	14.1	Entertainment	80
120	Geospace Technologies	GEOS	5.52	13.12	42%	–	4	1.60	NMF	NIL	Precision Instrument	20
342	Greenbrier (The) Cos.	GBX	16.33	39.30	42%	4	4	1.65	6.0	6.6	Railroad	26
2562	Invesco Ltd.	IVZ	9.09	21.73	42%	3	3	1.40	3.5	13.6	Financial Svcs. (Div.)	24
109	Tata Motors ADR	TTM	5.11	12.10	42%	4	4	1.30	5.0	NIL	Automotive	82
1961	United Natural Foods	UNFI	11.92	28.62	42%	4	4	1.45	9.0	NIL	Retail/Wholesale Food	9
1582	Allegheny Techn.	ATI	7.19	16.58	43%	5	5	1.90	7.6	NIL	Metals & Mining (Div.)	89
977	Amer. Axle	AXL	3.70	8.68	43%	–	4	1.70	2.8	NIL	Auto Parts	85
2511	Citizens Fin'l Group	CFG	20.30	47.63	43%	4	3	1.25	5.2	8.1	Bank	52

***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	Timeliness	Safety Rank	Industry Group	Industry Rank
528	California Resources	1.51	0.4	–	5	Natural Gas (Div.)	93
529	Callon Petroleum	0.41	0.4	–	4	Natural Gas (Div.)	93
543	QEP Resources	0.30	0.6	–	5	Natural Gas (Div.)	93
2177	Michaels Cos. (The)	2.18	1.2	–	4	Retail (Hardlines)	76
540	Ovintiv Inc.	3.74	1.3	5	4	Natural Gas (Div.)	93
2622	DXC Technology	15.07	1.6	5	3	IT Services	4
1001	Tenneco Inc.	3.69	1.7	–	4	Auto Parts	85
2331	Entercom Communic.	1.00	1.8	–	3	Entertainment	80
430	Alliance Data Sys.	36.49	1.9	–	3	Information Services	2
981	Commercial Vehicle	1.41	1.9	–	5	Auto Parts	85
1217	NRG Energy	31.03	2.1	3	3	Power	55
515	PBF Energy	7.16	2.1	3	3	Petroleum (Integrated)	92
304	Amer. Airlines	11.06	2.2	3	3	Air Transport	74
2168	Conn's, Inc.	4.22	2.2	–	4	Retail (Hardlines)	76
536	Enerplus Corp.	2.58	2.2	5	4	Natural Gas (Div.)	93
725	Triumph Group	6.51	2.3	–	4	Aerospace/Defense	53
314	United Airlines Hldgs.	27.79	2.3	3	3	Air Transport	74
313	Spirit Airlines	12.95	2.5	5	3	Air Transport	74
2571	Navient Corp.	7.06	2.6	4	3	Financial Svcs. (Div.)	24
541	PDC Energy	8.51	2.6	5	4	Natural Gas (Div.)	93
2568	MGIC Investment	5.82	2.7	3	3	Financial Svcs. (Div.)	24
1566	Unum Group	15.15	2.7	3	3	Insurance (Life)	48
2535	AerCap Hldgs. NV	22.96	2.8	3	3	Financial Svcs. (Div.)	24
977	Amer. Axle	3.70	2.8	–	4	Auto Parts	85
104	Fiat Chrysler	7.94	2.8	–	3	Automotive	82
309	Hawaiian Hldgs.	11.54	2.8	3	3	Air Transport	74
984	Dana Inc.	8.33	2.9	5	4	Auto Parts	85
1560	Lincoln Nat'l Corp.	29.01	3.0	3	3	Insurance (Life)	48
1125	Beazer Homes USA	5.19	3.1	–	5	Homebuilding	17
307	Delta Air Lines	23.64	3.1	3	3	Air Transport	74
2328	AMC Networks	24.08	3.2	4	3	Entertainment	80
2021	Athene Holding Ltd.	24.11	3.2	4	2	Reinsurance	60
625	Enable Midstream Part.	3.09	3.2	5	4	Pipeline MLPs	84
2552	Equitable Holdings	15.33	3.2	–	3	Financial Svcs. (Div.)	24
639	Western Midstream Part.	5.60	3.2	3	3	Pipeline MLPs	84
506	Delek US Holdings	17.12	3.3	–	3	Petroleum (Integrated)	92
1015	Sally Beauty	7.52	3.3	4	3	Toiletries/Cosmetics	71
2155	Caleres Inc.	5.65	3.4	–	3	Shoe	28
351	Brinker Int'l	15.28	3.5	3	3	Restaurant	68
2547	CIT Group	19.72	3.5	4	3	Financial Svcs. (Div.)	24
2562	Invesco Ltd.	9.09	3.5	3	3	Financial Svcs. (Div.)	24
1590	Natural Resource	14.13	3.5	4	4	Metals & Mining (Div.)	89
1178	O-I Glass	6.23	3.5	4	3	Packaging & Container	62
2578	Synchrony Financial	15.59	3.5	4	3	Financial Svcs. (Div.)	24
1134	Taylor Morrison Home	11.18	3.5	3	3	Homebuilding	17
2158	Genesco Inc.	16.13	3.6	5	3	Shoe	28
2502	Ally Financial	15.05	3.7	4	3	Bank	52
2550	Discover Fin'l Svcs.	35.22	3.7	3	2	Financial Svcs. (Div.)	24
806	MEDNAX, Inc.	12.40	3.7	4	3	Medical Services	15
768	NMI Holdings	10.71	3.7	3	3	Insurance (Prop/Cas.)	5
1419	Pitney Bowes	2.23	3.7	–	4	Office Equip/Supplies	70
2348	ViacomCBS Inc.	15.52	3.7	3	3	Entertainment	80
1616	Bausch Health	17.24	3.9	3	5	Drug	22
310	JetBlue Airways	8.63	3.9	3	3	Air Transport	74
531	Cimarex Energy	19.81	4.0	5	3	Natural Gas (Div.)	93
356	Dave & Buster's Ent.	11.56	4.0	3	3	Restaurant	68
2200	Designer Brands	5.20	4.0	–	3	Retail (Softlines)	63
624	EQM Midstream Part.	19.71	4.0	–	3	Pipeline MLPs	84
303	Allegiant Travel	71.99	4.1	3	3	Air Transport	74
530	Centennial Resource Dev.	0.29	4.1	–	4	Natural Gas (Div.)	93
512	Marathon Petroleum	24.85	4.1	4	3	Petroleum (Integrated)	92
517	Petroleo Brasileiro ADR	6.27	4.1	5	5	Petroleum (Integrated)	92
311	SkyWest	25.02	4.1	5	3	Air Transport	74
302	Alaska Air Group	29.23	4.2	3	3	Air Transport	74
633	Plains All Amer. Pipe.	7.12	4.2	5	3	Pipeline MLPs	84
635	Rattler Midstream LP	5.33	4.2	–	3	Pipeline MLPs	84
1638	Teva Pharmac. ADR	10.32	4.2	3	4	Drug	22
777	Comerica Inc.	29.62	4.3	4	3	Bank (Midwest)	75
358	Dine Brands Global	30.54	4.3	5	3	Restaurant	68
626	Energy Transfer LP	6.08	4.3	2	4	Pipeline MLPs	84
997	Modine Mfg.	3.93	4.3	–	4	Auto Parts	85
516	Par Pacific Holdings	6.51	4.3	2	3	Petroleum (Integrated)	92
503	CVR Energy	18.39	4.4	5	3	Petroleum (Integrated)	92
1316	WESCO Int'l	23.19	4.4	5	3	Electrical Equipment	67
1414	ACCO Brands	5.58	4.5	–	3	Office Equip/Supplies	70
1807	Greenhill & Co.	9.04	4.5	3	4	Investment Banking	6
2338	MSG Networks	11.07	4.5	4	3	Entertainment	80
2146	Macy's Inc.	5.31	4.5	5	3	Retail Store	49
2540	Amer. Int'l Group	23.75	4.6	4	3	Financial Svcs. (Div.)	24
782	Hancock Whitney Corp.	18.39	4.6	4	3	Bank (Midwest)	75
1418	Office Depot	1.87	4.6	4	5	Office Equip/Supplies	70
2528	Synovus Financial	17.37	4.6	3	3	Bank	52
2548	Capital One Fin'l	53.87	4.7	4	3	Financial Svcs. (Div.)	24
106	Gen'l Motors	22.38	4.7	4	3	Automotive	82
994	Linamar Corp.	32.61	4.7	4	3	Auto Parts	85
513	Murphy Oil Corp.	7.91	4.7	5	4	Petroleum (Integrated)	92
1192	Newell Brands	12.78	4.7	2	3	Household Products	10
2576	Santander Consumer USA	13.34	4.7	3	3	Financial Svcs. (Div.)	24
739	Carpenter Technology	19.22	4.8	3	3	Steel	83
2198	Children's Place	26.38	4.8	5	3	Retail (Softlines)	63
2341	Nexstar Media Group	61.75	4.8	4	3	Entertainment	80
2574	Principal Fin'l Group	29.79	4.8	3	3	Financial Svcs. (Div.)	24
2430	ProPetro Holding	3.27	4.8	–	4	Oilfield Svcs/Equip.	95
1564	Prudential Fin'l	54.25	4.8	4	3	Insurance (Life)	48
577	Kraton Corp.	8.71	4.9	5	4	Chemical (Specialty)	77
634	Plains GP Holdings L.P.	7.36	4.9	5	4	Pipeline MLPs	84
2522	Popular Inc.	34.61	4.9	3	3	Bank	52
1133	TRI Pointe Group	9.83	4.9	2	3	Homebuilding	17
2103	Capri Holdings Ltd.	12.20	5.0	3	4	Apparel	86
509	HollyFrontier Corp.	26.22	5.0	4	3	Petroleum (Integrated)	92

HIGHEST P/Es

Stocks with the highest estimated current P/E ratios

Page No.	Stock Name	Recent Price	Current P/E Ratio	Timeliness	Safety Rank	Industry Group	Industry Rank
545	Targa Resources	7.88	98.5	5	4	Natural Gas (Div.)	93
2598	Nuance Communic.	18.97	94.9	–	3	Computer Software	12
2397	Trade Desk (The)	233.00	94.7	3	3	Advertising	36
1613	AstraZeneca PLC (ADS)	50.44	91.7	3	3	Drug	22
943	Acacia Communications	68.00	90.7	–	4	Telecom. Equipment	42
2354	Eldorado Resorts	16.07	89.3	–	3	Hotel/Gaming	81
1106	Beacon Roofing	17.51	87.6	4	3	Building Materials	44
2560	Global Payments	148.21	87.2	–	3	Financial Svcs. (Div.)	24
2587	Autodesk, Inc.	177.87	85.5	1	3	Computer Software	12
1547	SITE Centers	5.06	84.3	3	3	R.E.I.T.	51
2122	Camping World Holdings	8.08	80.8	–	4	Retail Automotive	35
1528	Gaming and Leisure	26.33	79.8	4	3	R.E.I.T.	51
965	Switch, Inc.	17.24	78.4	1	4	Telecom. Equipment	42
1529	Healthcare R'lty Trust	29.32	77.2	1	3	R.E.I.T.	51
825	Veeva Systems	184.40	76.8	2	3	Healthcare Information	18
2639	Amazon.com	2393.61	76.1	1	3	Internet	50
1548	UDR, Inc.	36.37	75.8	2	3	R.E.I.T.	51
2184	SiteOne Landscape	71.71	74.7	2	3	Retail (Hardlines)	76
1829	Paylocity Holding	92.72	74.2	3	3	E-Commerce	43
2204	lululemon athletica	218.59	72.1	2	3	Retail (Softlines)	63
1801	MarketAxess Holdings	430.57	70.7	2	3	Brokers & Exchanges	37
2340	Netflix, Inc.	437.49	70.6	1	3	Entertainment	80
1351	Advanced Micro Dev.	56.97	69.5	3	4	Semiconductor	40
1981	Primo Water Corp.	9.64	68.9	2	3	Beverage	34
598	Crown Castle Int'l	162.42	68.8	3	3	Wireless Networking	41
830	Bio-Techne Corp.	207.79	68.6	2	2	Biotechnology	21
2601	PTC Inc.	66.99	67.0	3	3	Computer Software	12
1821	GoDaddy Inc.	67.16	65.8	3	3	E-Commerce	43
2353	Churchill Downs	93.46	64.0	3	3	Hotel/Gaming	81
1951	Grocery Outlet	34.94	62.4	–	3	Retail/Wholesale Food	9
705	Axon Enterprise	76.78	60.9	2	4	Aerospace/Defense	53
2180	National Vision Holdings	24.19	60.5	3	3	Retail (Hardlines)	76
174	Catalent, Inc.	58.86	60.1	3	3	Med Supp Invasive	19
594	Amer. Tower 'A'	248.68	59.5	3	2	Wireless Networking	41
2592	Fortinet Inc.	112.35	58.5	3	3	Computer Software	12
1343	Sonos, Inc.	8.70	58.0	–	3	Electronics	61
444	Thomson Reuters	100.20	57.9	–	2	Information Services	2
433	CoStar Group	603.53	57.6	1	2	Information Services	2
1586	Cameco Corp.	13.74	57.3	3	4	Metals & Mining (Div.)	89
367	Shake Shack	46.43	57.3	3	4	Restaurant	68
2634	Tyler Technologies	328.05	57.3	1	3	IT Services	4
1572	Franco-Nevada Corp.	124.09	56.9	1	3	Precious Metals	1
219	Masimo Corp.	198.25	56.5	1	3	Med Supp Non-Invasive	8
2416	Baker Hughes	12.98	56.4	–	3	Oilfield Svcs/Equip.	95
1521	Duke Realty Corp.	33.76	56.3	3	3	R.E.I.T.	51
2603	Paycom Software	222.36	56.2	3	3	Computer Software	12
505	Chevron Corp.	83.57	56.1	4	2	Petroleum (Integrated)	92
1520	Digital Realty Trust	143.72	55.3	2	3	R.E.I.T.	51
1391	IPG Photonics	117.94	54.4	4	3	Semiconductor Equip	38
1363	MACOM Tech. Solutions	24.23	53.8	3	3	Semiconductor	40
504	Cenovus Energy	3.70	52.9	3	4	Petroleum (Integrated)	92
2629	Manhattan Assoc.	55.35	52.7	4	3	IT Services	4
938	Vodafone Group ADR	13.68	52.6	3	3	Telecom. Services	29
223	Neogen Corp.	64.61	52.5	3	3	Med Supp Non-Invasive	8
176	CryoLife Inc.	20.39	52.3	3	3	Med Supp Invasive	19
2450	Carlyle Group	21.87	52.1	–	3	Public/Private Equity	–
1017	Altice USA	25.91	51.8	4	3	Cable TV	14
229	West Pharmac. Svcs.	170.37	51.6	1	2	Med Supp Non-Invasive	8
214	IDEXX Labs.	267.34	50.9	2	3	Med Supp Non-Invasive	8
2585	Adobe Inc.	344.88	50.8	1	2	Computer Software	12
204	Bio-Rad Labs. 'A'	424.95	50.8	1	2	Med Supp Non-Invasive	8
1166	Rayonier Inc.	23.23	50.5	2	3	Paper/Forest Products	79
353	Chipotle Mex. Grill	808.73	50.2	3	3	Restaurant	68
839	QIAGEN N.V.	40.68	50.2	–	3	Biotechnology	21
399	Rollins, Inc.	37.98	50.0	3	2	Industrial Services	32
1718	Lindsay Corp.	89.34	49.6	2	3	Machinery	31
2625	Fair Isaac	307.34	49.5	3	3	IT Services	4
1753	EnPro Industries	39.49	49.4	4	3	Diversified Co.	69
2318	Pool Corp.	191.60	48.8	1	2	Recreation	73
1579	Yamana Gold	4.39	48.8	3	5	Precious Metals	1
1712	Flowserve Corp.	24.82	48.7	3	3	Machinery	31
116	Cognex Corp.	47.97	48.5	3	3	Precision Instrument	20
215	Illumina Inc.	322.88	48.5	2	3	Med Supp Non-Invasive	8
2447	Apollo Global Mgmt	37.27	47.8	–	3	Public/Private Equity	–
1770	Raven Inds.	20.91	47.5	4	3	Diversified Co.	69
1569	Agnico Eagle Mines	53.88	47.3	2	3	Precious Metals	1
1018	Cable One	1783.24	47.2	2	2	Cable TV	14
1370	NVIDIA Corp.	287.05	47.2	2	3	Semiconductor	40
947	Calix, Inc.	7.97	46.9	3	4	Telecom. Equipment	42
2572	PayPal Holdings	112.17	46.9	3	3	Financial Svcs. (Div.)	24
1360	Inphi Corp.	96.88	46.8	2	3	Semiconductor	40
1628	Mylan N.V.	15.86	46.6	–	3	Drug	22
1369	Monolithic Power Sys.	184.23	46.1	2	3	Semiconductor	40
435	Exponent, Inc.	72.11	45.6	2	3	Information Services	2
440	MSCI Inc.	321.95	45.3	2	3	Information Services	2
1315	Universal Display	140.06	45.3	3	3	Electrical Equipment	67
1999	Bright Horizons Family	120.00	45.1	2	2	Educational Services	33
2656	Twitter Inc.	27.01	45.0	4	4	Internet	50
2316	Planet Fitness	56.10	44.9	3	3	Recreation	73
2649	IAC/InterActiveCorp	224.15	44.8	–	3	Internet	50
833	Incyte Corp.	101.19	44.8	2	3	Biotechnology	21
1577	Royal Gold	111.60	44.6	2	3	Precious Metals	1
2188	Tiffany & Co.	128.95	44.3	–	3	Retail (Hardlines)	76
407	Casella Waste Sys.	42.87	43.7	2	3	Environmental	3
1578	Wheaton Precious Met.	34.98	43.7	2	3	Precious Metals	1
195	Teleflex Inc.	344.85	43.3	2	2	Med Supp Invasive	19
188	NuVasive, Inc.	56.87	43.1	3	3	Med Supp Invasive	19
2193	Abercrombie & Fitch	10.30	42.9	4	4	Retail (Softlines)	63
1373	Power Integrations	94.39	42.7	3	3	Semiconductor	40
704	Astronics Corp.	8.09	42.6	5	3	Aerospace/Defense	53

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
543	QEP Resources	0.30	185%	–	5	Natural Gas (Div.)	93
529	Callon Petroleum	0.41	177%	–	4	Natural Gas (Div.)	93
530	Centennial Resource Dev.	0.29	129%	–	4	Natural Gas (Div.)	93
528	California Resources	1.51	115%	–	5	Natural Gas (Div.)	93
542	Paramount Resources	1.30	107%	–	4	Natural Gas (Div.)	93
540	Ovintiv Inc.	3.74	102%	5	4	Natural Gas (Div.)	93
2331	Entercom Communic.	1.00	99%	–	3	Entertainment	80
515	PBF Energy	7.16	91%	3	3	Petroleum (Integrated)	92
707	Bombardier Inc. 'B'	0.42	90%	–	5	Aerospace/Defense	53
925	Intelsat S.A.	1.26	89%	–	5	Telecom. Services	29
545	Targa Resources	7.88	89%	5	4	Natural Gas (Div.)	93
2177	Michaels Cos. (The)	2.18	88%	–	4	Retail (Hardlines)	76
613	EnLink Midstream LLC	1.19	85%	5	5	Oil/Gas Distribution	87
618	Tellurian Inc.	1.43	83%	–	5	Oil/Gas Distribution	87
2197	Chico's FAS	1.18	82%	–	5	Retail (Softlines)	63
623	DCP Midstream LP	5.68	79%	–	3	Pipeline MLPs	84
513	Murphy Oil Corp.	7.91	78%	5	4	Petroleum (Integrated)	92
2390	Clear Channel Outdoor	0.72	77%	–	5	Advertising	36
625	Enable Midstream Part.	3.09	77%	5	4	Pipeline MLPs	84
536	Enerplus Corp.	2.58	77%	5	4	Natural Gas (Div.)	93
588	Rayonier Advanced Mat.	1.02	77%	–	5	Chemical (Specialty)	77
639	Western Midstream Part.	5.60	77%	3	3	Pipeline MLPs	84
983	Cooper-Standard	10.16	75%	5	3	Auto Parts	85
2146	Macy's Inc.	5.31	73%	5	3	Retail Store	49
2164	At Home Group	1.90	72%	–	4	Retail (Hardlines)	76
356	Dave & Buster's Ent.	11.56	72%	3	3	Restaurant	68
430	Alliance Data Sys.	36.49	71%	–	3	Information Services	2
2622	DXC Technology	15.07	70%	5	3	IT Services	4
997	Modine Mfg.	3.93	70%	–	4	Auto Parts	85
633	Plains All Amer. Pipe.	7.12	69%	5	3	Pipeline MLPs	84
750	TimkenSteel Corp.	2.46	69%	–	4	Steel	83
541	PDC Energy	8.51	68%	5	4	Natural Gas (Div.)	93
1830	Sabre Corp.	5.69	68%	5	4	E-Commerce	43
704	Astronics Corp.	8.09	67%	5	3	Aerospace/Defense	53
516	Par Pacific Holdings	6.51	66%	2	3	Petroleum (Integrated)	92
1537	Park Hotels & Resorts	7.72	65%	3	4	R.E.I.T.	51
2406	Crescent Point Energy	1.28	64%	5	5	Petroleum (Producing)	94
514	Occidental Petroleum	12.59	64%	5	4	Petroleum (Integrated)	92
981	Commercial Vehicle	1.41	63%	–	5	Auto Parts	85
2332	Entravision Communic.	1.42	63%	–	4	Entertainment	80
2434	Valaris plc	0.43	63%	–	5	Oilfield Svcs/Equip.	95
2155	Caleres Inc.	5.65	62%	–	3	Shoe	28
331	GasLog Ltd.	4.98	62%	–	4	Maritime	90
635	Rattler Midstream LP	5.33	62%	–	3	Pipeline MLPs	84
2183	Signet Jewelers Ltd.	7.63	61%	4	4	Retail (Hardlines)	76
1001	Tenneco Inc.	3.69	61%	–	4	Auto Parts	85
977	Amer. Axle	3.70	60%	–	4	Auto Parts	85
2428	Oil States Int'l	2.39	60%	–	5	Oilfield Svcs/Equip.	95
1545	Service Properties	5.64	60%	3	3	R.E.I.T.	51
313	Spirit Airlines	12.95	60%	5	3	Air Transport	74
2422	Helix Energy Solutions	1.40	59%	–	5	Oilfield Svcs/Equip.	95
2562	Invesco Ltd.	9.09	59%	3	3	Financial Svcs. (Div.)	24
349	BJ's Restaurants	16.65	58%	5	4	Restaurant	68
806	MEDNAX, Inc.	12.40	58%	4	3	Medical Services	15
722	Spirit AeroSystems	20.87	58%	5	3	Aerospace/Defense	53
751	U.S. Steel Corp.	6.59	58%	5	4	Steel	83
1599	CVR Partners, LP	0.92	57%	–	5	Chemical (Basic)	65
304	Amer. Airlines	11.06	56%	3	3	Air Transport	74
506	Delek US Holdings	17.12	56%	–	3	Petroleum (Integrated)	92
120	Geospace Technologies	5.52	56%	–	4	Precision Instrument	20
923	Gogo Inc.	1.69	56%	–	5	Telecom. Services	29
2647	Groupon, Inc.	0.94	56%	–	5	Internet	50
631	NuStar Energy L.P.	9.26	56%	5	3	Pipeline MLPs	84
504	Cenovus Energy	3.70	55%	3	4	Petroleum (Integrated)	92
2419	Diamond Offshore	0.77	55%	–	5	Oilfield Svcs/Equip.	95
1534	Macerich Comp. (The)	6.26	55%	5	4	R.E.I.T.	51
2378	Meredith Corp.	13.02	55%	5	4	Publishing	91
365	Red Robin Gourmet	11.30	55%	5	3	Restaurant	68
725	Triumph Group	6.51	55%	–	4	Aerospace/Defense	53
314	United Airlines Hldgs.	27.79	55%	3	3	Air Transport	74
1614	Aurora Cannabis	0.71	54%	–	4	Drug	22
611	Clean Energy Fuels	1.77	54%	–	5	Oil/Gas Distribution	87
2383	Gannett Co., Inc.	0.80	54%	–	5	Newspaper	–
634	Plains GP Holdings L.P.	7.36	54%	5	4	Pipeline MLPs	84
1771	Realogy Holdings	3.50	54%	–	4	Diversified Co.	69
2528	Synovus Financial	17.37	54%	3	3	Bank	52
1238	Tutor Perini	5.76	54%	–	4	Engineering & Const	66
2348	ViacomCBS Inc.	15.52	54%	3	3	Entertainment	80
2106	G-III Apparel Group	9.10	53%	4	3	Apparel	86
2158	Genesco Inc.	16.13	53%	5	3	Shoe	28
1150	Interface Inc. 'A'	8.41	53%	3	3	Furn/Home Furnishings	54
581	Methanex Corp.	12.82	53%	5	3	Chemical (Specialty)	77
544	Southwestern Energy	2.94	53%	4	4	Natural Gas (Div.)	93
2209	Tailored Brands	1.54	53%	–	5	Retail (Softlines)	63
1583	Alliance Resource	3.43	52%	–	5	Metals & Mining (Div.)	89
2568	MGIC Investment	5.82	52%	3	3	Financial Svcs. (Div.)	24
2343	Scripps (E.W.) 'A'	6.81	52%	4	3	Entertainment	80
503	CVR Energy	18.39	51%	5	3	Petroleum (Integrated)	92
531	Cimarex Energy	19.81	51%	5	3	Natural Gas (Div.)	93
2200	Designer Brands	5.20	51%	–	3	Retail (Softlines)	63
1415	Diebold Nixdorf	3.68	51%	–	5	Office Equip/Supplies	70
2310	Harley-Davidson	18.53	51%	3	3	Recreation	73
1192	Newell Brands	12.78	51%	2	3	Household Products	10
2429	Patterson-UTI Energy	2.07	51%	–	5	Oilfield Svcs/Equip.	95
2575	SLM Corporation	6.83	51%	3	3	Financial Svcs. (Div.)	24
827	Alkermes plc	16.61	50%	3	3	Biotechnology	21
2502	Ally Financial	15.05	50%	4	3	Bank	52
318	ArcBest Corp.	18.05	50%	4	3	Trucking	64
351	Brinker Int'l	15.28	50%	3	3	Restaurant	68
332	Golar LNG Ltd.	6.69	50%	5	5	Maritime	90

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
625	Enable Midstream Part.	3.09	65%	5	4	Pipeline MLPs	84
545	Targa Resources	7.88	51%	5	4	Natural Gas (Div.)	93
1545	Service Properties	5.64	40%	3	3	R.E.I.T.	51
514	Occidental Petroleum	12.59	29%	5	4	Petroleum (Integrated)	92
2302	AMC Entertainment Hldgs.	3.18	28%	–	3	Recreation	73
624	EQM Midstream Part.	19.71	24%	–	3	Pipeline MLPs	84
2332	Entravision Communic.	1.42	21%	–	4	Entertainment	80
525	Brigham Minerals	9.15	20%	–	4	Natural Gas (Div.)	93
503	CVR Energy	18.39	20%	5	3	Petroleum (Integrated)	92
2331	Entercom Communic.	1.00	20%	–	3	Entertainment	80
1547	SITE Centers	5.06	20%	3	3	R.E.I.T.	51
513	Murphy Oil Corp.	7.91	19%	5	4	Petroleum (Integrated)	92
615	ONEOK Inc.	28.21	19%	5	3	Oil/Gas Distribution	87
627	Enterprise Products	15.65	18%	4	3	Pipeline MLPs	84
1518	CoreCivic, Inc.	11.42	17%	4	4	R.E.I.T.	51
2562	Invesco Ltd.	9.09	17%	3	3	Financial Svcs. (Div.)	24
1532	Kimco Realty	8.56	17%	3	3	R.E.I.T.	51
2538	AllianceBernstein Hldg.	20.14	16%	3	3	Financial Svcs. (Div.)	24
1527	GEO Group (The)	12.27	16%	3	4	R.E.I.T.	51
2145	Kohl's Corp.	17.06	16%	5	3	Retail Store	49
630	Magellan Midstream	39.69	16%	4	3	Pipeline MLPs	84
2186	Sunoco LP	20.17	16%	3	4	Retail (Hardlines)	76
2359	Int'l Game Tech. PLC	6.70	15%	5	3	Hotel/Gaming	81
108	Nissan Motor ADR	6.70	15%	4	3	Automotive	82
2396	OUTFRONT Media	12.20	15%	4	4	Advertising	36
632	Phillips 66 Partners	40.75	15%	2	3	Pipeline MLPs	84
1210	Covanta Holding Corp.	7.04	14%	4	3	Power	55
2452	Gladstone Capital	6.16	14%	–	3	Public/Private Equity	–
510	Husky Energy	3.68	14%	5	3	Petroleum (Integrated)	92
1590	Natural Resource	14.13	14%	4	4	Metals & Mining (Div.)	89
540	Ovintiv Inc.	3.74	14%	5	4	Natural Gas (Div.)	93
502	BP PLC ADR	22.35	13%	4	3	Petroleum (Integrated)	92
512	Marathon Petroleum	24.85	13%	4	3	Petroleum (Integrated)	92
581	Methanex Corp.	12.82	13%	5	3	Chemical (Specialty)	77
519	Royal Dutch Shell 'B'	32.71	13%	4	2	Petroleum (Integrated)	92
102	Daimler AG	30.65	12%	4	3	Automotive	82
2355	Extended Stay America	9.35	12%	4	3	Hotel/Gaming	81
1528	Gaming and Leisure	26.33	12%	4	3	R.E.I.T.	51
2516	HSBC Holdings PLC	25.52	12%	3	3	Bank	52
747	Russel Metals	14.41	12%	3	3	Steel	83
1033	Telefonica SA ADR	4.46	12%	4	4	Telecom. Utility	30
2444	Trinseo S.A.	18.76	12%	5	3	Chemical (Diversified)	57
1549	Ventas, Inc.	28.65	12%	5	3	R.E.I.T.	51
1554	Weingarten Realty	13.95	12%	3	3	R.E.I.T.	51
1991	Altria Group	39.07	11%	3	3	Tobacco	72
1903	B&G Foods	18.91	11%	4	3	Food Processing	39
2401	Black Stone Minerals	5.22	11%	4	4	Petroleum (Producing)	94
2403	Can. Natural Res.	18.09	11%	2	3	Petroleum (Producing)	94
622	Cheniere Energy Part.	30.70	11%	2	3	Pipeline MLPs	84
1007	Coty Inc.	5.68	11%	5	4	Toiletries/Cosmetics	71
506	Delek US Holdings	17.12	11%	–	3	Petroleum (Integrated)	92
358	Dine Brands Global	30.54	11%	5	3	Restaurant	68
1161	Domtar Corp.	20.66	11%	4	3	Paper/Forest Products	79
1602	Dow Inc.	31.53	11%	–	2	Chemical (Basic)	65
391	Iron Mountain	24.67	11%	2	3	Industrial Services	32
2563	Janus Henderson plc	15.50	11%	2	3	Financial Svcs. (Div.)	24
578	Kronos Worldwide	8.89	11%	4	4	Chemical (Specialty)	77
1192	Newell Brands	12.78	11%	2	3	Household Products	10
616	Pembina Pipeline	27.55	11%	4	3	Oil/Gas Distribution	87
1564	Prudential Fin'l	54.25	11%	4	3	Insurance (Life)	48
520	Suncor Energy	20.88	11%	2	3	Petroleum (Integrated)	92
521	Total S.A. ADR	33.00	11%	4	2	Petroleum (Integrated)	92
1566	Unum Group	15.15	11%	3	3	Insurance (Life)	48
938	Vodafone Group ADR	13.68	11%	3	3	Telecom. Services	29
619	Williams Cos.	18.49	11%	4	3	Oil/Gas Distribution	87
2372	Wyndham Destinations	22.27	11%	–	3	Hotel/Gaming	81
430	Alliance Data Sys.	36.49	10%	–	3	Information Services	2
1992	Brit. Am. Tobacco ADR	36.72	10%	3	3	Tobacco	72
1029	CenturyLink Inc.	10.14	10%	3	3	Telecom. Utility	30
567	Chemours Co. (The)	10.41	10%	5	4	Chemical (Specialty)	77
2511	Citizens Fin'l Group	20.30	10%	4	3	Bank	52
777	Comerica Inc.	29.62	10%	4	3	Bank (Midwest)	75
536	Enerplus Corp.	2.58	10%	5	4	Natural Gas (Div.)	93
1147	Ethan Allen Interiors	9.87	10%	4	3	Furn/Home Furnishings	54
104	Fiat Chrysler	7.94	10%	–	3	Automotive	82
331	GasLog Ltd.	4.98	10%	–	4	Maritime	90
2392	Interpublic Group	14.72	10%	3	3	Advertising	36
614	Kinder Morgan Inc.	14.69	10%	4	3	Oil/Gas Distribution	87
580	LyondellBasell Inds.	48.41	10%	4	3	Chemical (Specialty)	77
1533	MGM Growth Properties	23.63	10%	4	3	R.E.I.T.	51
1561	Manulife Fin'l	12.12	10%	2	3	Insurance (Life)	48
929	Millicom Int'l Cellular	28.16	10%	–	3	Telecom. Services	29
226	Patterson Cos.	15.52	10%	2	3	Med Supp Non-Invasive	8
745	POSCO ADR	34.88	10%	4	3	Steel	83
1592	Rio Tinto plc	46.40	10%	3	3	Metals & Mining (Div.)	89
325	Ryder System	26.54	10%	4	3	Trucking	64
2528	Synovus Financial	17.37	10%	3	3	Bank	52
522	Valero Energy	50.31	10%	4	3	Petroleum (Integrated)	92
1555	Welltower Inc.	45.38	10%	3	3	R.E.I.T.	51
2447	Apollo Global Mgmt	37.27	9%	–	3	Public/Private Equity	–
2449	Blackstone Group	48.18	9%	–	3	Public/Private Equity	–
2545	Block (H&R)	13.72	9%	3	3	Financial Svcs. (Div.)	24
2547	CIT Group	19.72	9%	4	3	Financial Svcs. (Div.)	24
1983	Canon Inc. ADR	20.65	9%	3	1	Foreign Electronics	46
352	Cheesecake Factory	18.93	9%	5	3	Restaurant	68
2406	Crescent Point Energy	1.28	9%	5	5	Petroleum (Producing)	94
612	Enbridge Inc.	41.40	9%	1	3	Oil/Gas Distribution	87
507	Exxon Mobil Corp.	41.18	9%	4	2	Petroleum (Integrated)	92
780	First Horizon National	7.96	9%	4	3	Bank (Midwest)	75
1503	Flushing Financial	11.54	9%	3	3	Thrift	27

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	143.61	882%	54%	5	3	1.15	NMF	NIL	Aerospace/Defense	53
1188	Colgate-Palmolive	CL	72.16	644%	35%	3	1	0.75	24.7	2.4	Household Products	10
1647	Insperity Inc.	NSP	40.48	541%	46%	5	3	0.95	11.7	4.0	Human Resources	88
1716	Lennox Int'l	LII	181.00	439%	52%	3	3	0.95	16.4	1.7	Machinery	31
443	S&P Global	SPGI	279.17	241%	51%	2	2	1.05	27.2	1.0	Information Services	2
2545	Block (H&R)	HRB	13.72	239%	28%	3	3	0.80	6.2	7.8	Financial Svcs. (Div.)	24
315	United Parcel Serv.	UPS	101.20	231%	34%	2	2	1.00	13.0	4.0	Air Transport	74
441	Moody's Corp.	MCO	239.47	218%	34%	2	3	1.15	27.7	0.9	Information Services	2
1916	Herbalife Nutrition	HLF	32.25	213%	34%	3	3	1.10	12.5	NIL	Food Processing	39
2130	O'Reilly Automotive	ORLY	373.66	202%	32%	2	3	0.90	22.1	NIL	Retail Automotive	35
2138	Burlington Stores	BURL	177.16	195%	28%	2	3	1.05	28.6	NIL	Retail Store	49
1139	Home Depot	HD	206.05	161%	38%	3	1	1.05	19.8	2.9	Retail Building Supply	7
214	IDEXX Labs.	IDXX	267.34	155%	50%	2	3	0.90	50.9	NIL	Med Supp Non-Invasive	8
1191	Kimberly-Clark	KMB	139.72	124%	34%	1	1	0.70	19.8	3.1	Household Products	10
716	Lockheed Martin	LMT	383.21	119%	33%	2	1	0.80	16.4	2.6	Aerospace/Defense	53
2612	VMware, Inc.	VMW	132.62	117%	28%	3	3	1.00	19.3	NIL	Computer Software	12
605	Ubiquiti Inc.	UI	156.67	96%	39%	2	3	0.95	27.4	0.8	Wireless Networking	41
1609	AbbVie Inc.	ABBV	83.99	94%	29%	1	3	1.15	8.9	5.6	Drug	22
126	Mettler-Toledo Int'l	MTD	707.63	90%	32%	2	2	1.10	30.6	NIL	Precision Instrument	20
1187	Clorox Co.	CLX	192.43	87%	33%	3	2	0.70	30.7	2.2	Household Products	10
996	Meritor, Inc.	MTOR	15.25	83%	32%	3	4	1.55	5.5	NIL	Auto Parts	85
2570	MasterCard Inc.	MA	251.73	80%	48%	1	1	1.00	28.7	0.6	Financial Svcs. (Div.)	24
372	Yum! Brands	YUM	82.07	75%	49%	2	2	0.60	21.6	2.3	Restaurant	68
2589	Citrix Sys.	CTXS	150.67	69%	38%	3	3	1.10	27.3	0.9	Computer Software	12
2629	Manhattan Assoc.	MANH	55.35	62%	62%	4	3	1.25	52.7	NIL	IT Services	4
368	Starbucks Corp.	SBUX	75.32	55%	40%	3	1	0.90	24.7	2.3	Restaurant	68
1623	Gilead Sciences	GILD	81.26	54%	31%	1	3	1.05	12.7	3.3	Drug	22
2363	Marriott Int'l	MAR	79.77	51%	98%	3	3	1.20	20.6	NIL	Hotel/Gaming	81
1313	Rockwell Automation	ROK	168.54	47%	30%	3	2	1.25	18.9	2.4	Electrical Equipment	67
1917	Hershey Co.	HSY	144.58	46%	31%	2	2	0.65	24.4	2.2	Food Processing	39
2594	Intuit Inc.	INTU	264.00	43%	50%	3	2	1.15	34.7	0.8	Computer Software	12
2185	Sleep Number Corp.	SNBR	22.77	43%	43%	4	3	1.25	12.5	NIL	Retail (Hardlines)	76
1979	National Beverage	FIZZ	49.57	41%	38%	3	3	0.70	20.2	NIL	Beverage	34
1121	Trex Co.	TREX	85.75	41%	41%	2	3	1.35	31.1	NIL	Building Materials	44
2208	TJX Companies	TJX	47.79	39%	37%	2	1	0.95	27.9	0.5	Retail (Softlines)	63
1631	Novo Nordisk ADR	NVO	64.11	38%	75%	3	2	0.90	25.5	2.0	Drug	22
1398	Apple Inc.	AAPL	276.93	35%	28%	1	1	1.05	20.7	1.2	Computers/Peripherals	56
2103	Capri Holdings Ltd.	CPRI	12.20	34%	30%	3	4	1.20	5.0	NIL	Apparel	86
436	FactSet Research	FDS	276.70	34%	30%	3	2	1.00	30.9	1.1	Information Services	2
2207	Ross Stores	ROST	86.51	34%	38%	2	2	1.00	25.6	1.3	Retail (Softlines)	63
2603	Paycom Software	PAYC	222.36	33%	28%	3	3	1.25	56.2	NIL	Computer Software	12
1943	USANA Health Sciences	USNA	66.91	31%	31%	4	3	0.85	16.5	NIL	Food Processing	39
954	F5 Networks	FFIV	122.66	30%	30%	3	3	1.10	20.4	NIL	Telecom. Equipment	42
2189	Ulta Beauty	ULTA	208.07	30%	30%	3	3	1.00	16.7	NIL	Retail (Hardlines)	76
842	United Therapeutics	UTHR	106.44	29%	28%	3	3	0.90	9.6	NIL	Biotechnology	21
1350	Advanced Energy	AEIS	51.71	28%	28%	3	3	1.35	15.8	NIL	Semiconductor	40
2204	lululemon athletica	LULU	218.59	28%	28%	2	3	1.05	72.1	NIL	Retail (Softlines)	63
2615	Accenture Plc	ACN	174.74	25%	42%	1	1	1.05	22.3	1.9	IT Services	4
2160	NIKE, Inc. 'B'	NKE	87.90	25%	28%	2	1	1.00	35.3	1.1	Shoe	28
1644	Barrett Business Serv.	BBSI	41.10	24%	32%	4	3	1.15	8.5	2.9	Human Resources	88

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
1125	Beazer Homes USA	BZH	5.19	67%	3.1	30%	–	5	1.60	NIL	Homebuilding	17
1135	Toll Brothers	TOL	20.28	69%	5.6	56%	4	3	1.10	2.2	Homebuilding	17
1133	TRI Pointe Group	TPH	9.83	73%	4.9	61%	2	3	1.25	NIL	Homebuilding	17
1134	Taylor Morrison Home	TMHC	11.18	78%	3.5	47%	3	3	1.20	NIL	Homebuilding	17
1130	Meritage Homes	MTH	39.25	83%	5.3	76%	3	3	1.20	NIL	Homebuilding	17
729	Haynes International	HAYN	19.35	85%	10.2	82%	2	3	1.45	4.5	Metal Fabricating	78
1127	KB Home	KBH	20.40	93%	6.0	77%	2	3	1.35	1.8	Homebuilding	17
1129	M.D.C. Holdings	MDC	23.65	104%	5.7	83%	3	3	1.10	5.6	Homebuilding	17
1146	Culp Inc.	CULP	6.73	131%	10.7	52%	4	3	1.00	6.2	Furn/Home Furnishings	54
2558	Franklin Resources	BEN	16.28	135%	5.4	82%	2	2	1.25	6.8	Financial Svcs. (Div.)	24
747	Russel Metals	RUS.TO	14.41	138%	10.4	93%	3	3	1.15	10.5	Steel	83
1806	Goldman Sachs	GS	180.40	142%	10.8	79%	3	1	1.25	2.8	Investment Banking	6
1132	PulteGroup, Inc.	PHM	24.31	161%	5.9	120%	2	3	1.05	2.1	Homebuilding	17
702	AAR Corp.	AIR	17.19	175%	6.6	66%	4	3	1.25	1.7	Aerospace/Defense	53
1408	ScanSource	SCSC	22.49	176%	8.3	63%	4	3	1.20	NIL	Computers/Peripherals	56
981	Commercial Vehicle	CVGI	1.41	182%	1.9	31%	–	5	1.50	NIL	Auto Parts	85
1128	Lennar Corp.	LEN	39.98	187%	6.5	79%	2	3	1.05	1.3	Homebuilding	17
2106	G-III Apparel Group	GIII	9.10	189%	6.0	34%	4	3	1.55	NIL	Apparel	86
1126	Horton D.R.	DHI	38.29	189%	7.7	141%	2	3	1.05	1.8	Homebuilding	17
1648	Kelly Services 'A'	KELYA	13.77	218%	7.0	43%	4	3	0.95	NIL	Human Resources	88
1229	Granite Construction	GVA	14.81	238%	9.0	57%	5	3	1.25	3.5	Engineering & Const	66
2200	Designer Brands	DBI	5.20	244%	4.0	54%	–	3	1.15	7.7	Retail (Softlines)	63
1810	Piper Sandler Cos.	PIPR	52.12	260%	7.1	98%	3	3	1.15	5.1	Investment Banking	6
1342	Sanmina Corp.	SANM	26.35	279%	9.4	112%	3	3	1.25	NIL	Electronics	61
982	Cooper Tire & Rubber	CTB	18.81	351%	6.3	75%	4	3	1.05	2.2	Auto Parts	85
1147	Ethan Allen Interiors	ETH	9.87	376%	8.6	72%	4	3	1.05	8.5	Furn/Home Furnishings	54
1323	Arrow Electronics	ARW	53.18	394%	7.2	89%	3	3	1.35	NIL	Electronics	61
2135	Aaron's Inc.	AAN	24.71	454%	7.4	95%	3	3	1.10	0.6	Retail Store	49
1151	Kimball Int'l	KBAL	11.14	504%	8.8	189%	4	3	1.00	3.2	Furn/Home Furnishings	54
1152	La-Z-Boy Inc.	LZB	20.08	575%	8.2	124%	2	3	0.95	2.8	Furn/Home Furnishings	54
2003	Perdoceo Education	PRDO	11.93	586%	8.6	194%	3	4	1.10	NIL	Educational Services	33
842	United Therapeutics	UTHR	106.44	639%	9.6	168%	3	3	0.90	NIL	Biotechnology	21
397	Resources Connection	RGP	10.46	723%	9.1	117%	4	3	1.15	5.4	Industrial Services	32
162	Oshkosh Corp.	OSK	65.00	1000%	8.5	170%	3	3	1.30	1.8	Heavy Truck & Equip	59
1302	Acuity Brands	AYI	82.63	1137%	8.3	171%	4	3	1.30	0.6	Electrical Equipment	67

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
559	AdvanSix Inc.	9.01	3	2	6.2	NIL	Chemical (Specialty)	77
1581	Alcoa Corp.	7.45	5	4	NMF	NIL	Metals & Mining (Div.)	89
1582	Allegheny Techn.	7.19	5	3	7.6	NIL	Metals & Mining (Div.)	89
2400	Apache Corp. ■	8.48	4	3	NMF	1.2	Petroleum (Producing)	94
1104	Apogee Enterprises	18.19	3	3	7.8	4.1	Building Materials	44
704	Astronics Corp.	8.09	3	3	42.6	NIL	Aerospace/Defense	53
349	BJ's Restaurants	16.65	4	4	8.2	NIL	Restaurant	68
706	Boeing	143.61	3	3	NMF	NIL	Aerospace/Defense	53
503	CVR Energy	18.39	3	3	4.4	17.4	Petroleum (Integrated)	92
205	Cantel Medical Corp.	28.83	3	2	17.9	0.8	Med Supp Non-Invasive	8
2306	Carnival Corp.	12.22	4	3	NMF	NIL	Recreation	73
352	Cheesecake Factory	18.93	3	3	6.8	7.7	Restaurant	68
567	Chemours Co. (The)	10.41	4	3	30.6	9.6	Chemical (Specialty)	77
2198	Children's Place	26.38	3	4	4.8	NIL	Retail (Softlines)	63
531	Cimarex Energy	19.81	3	4	4.0	4.4	Natural Gas (Div.)	93
2308	Cinemark Hldgs.	13.52	3	3	NMF	NIL	Recreation	73
740	Cleveland-Cliffs Inc.	3.46	5	2	5.4	NIL	Steel	83
2405	Continental Resources	10.72	4	4	NMF	NIL	Petroleum (Producing)	94
983	Cooper-Standard	10.16	3	3	NMF	NIL	Auto Parts	85
2418	Core Laboratories	11.96	4	5	10.1	0.3	Oilfield Svcs/Equip.	95
1007	Coty Inc.	5.68	4	3	8.0	8.8	Toiletries/Cosmetics	71
2406	Crescent Point Energy	1.28	5	3	NMF	0.8	Petroleum (Producing)	94
728	DMC Global	27.23	3	4	9.2	1.8	Metal Fabricating	78
2622	DXC Technology	15.07	3	4	1.6	5.6	IT Services	4
984	Dana Inc.	8.33	4	3	2.9	NIL	Auto Parts	85
533	Devon Energy	9.16	3	4	6.0	5.2	Natural Gas (Div.)	93
2408	Diamondback Energy	30.86	3	4	NMF	4.9	Petroleum (Producing)	94
358	Dine Brands Global	30.54	3	3	4.3	10.0	Restaurant	68
922	Dycom Inds.	26.92	3	5	23.0	NIL	Telecom. Services	29
625	Enable Midstream Part.	3.09	4	3	3.2	21.4	Pipeline MLPs	84
536	Enerplus Corp.	2.58	4	3	2.2	4.7	Natural Gas (Div.)	93
613	EnLink Midstream LLC	1.19	5	2	19.8	31.9	Oil/Gas Distribution	87
1910	Farmer Bros. Co.	8.16	3	2	NMF	NIL	Food Processing	39
1228	Fluor Corp.	8.11	4	4	7.6	4.9	Engineering & Const	66
2158	Genesco Inc.	16.13	3	3	3.6	NIL	Shoe	28
2107	Gildan Activewear	15.55	3	5	28.8	4.0	Apparel	86
180	Glaukos Corp.	34.15	4	3	NMF	NIL	Med Supp Invasive	19
332	Golar LNG Ltd.	6.69	5	3	NMF	NIL	Maritime	90
990	Goodyear Tire	6.76	4	4	7.2	NIL	Auto Parts	85
1229	Granite Construction	14.81	3	3	9.0	3.5	Engineering & Const	66
2421	Halliburton Co.	7.63	3	4	20.1	0.5	Oilfield Svcs/Equip.	95
387	Harsco Corp.	7.87	3	3	6.5	NIL	Industrial Services	32
2423	Helmerich & Payne	17.64	3	4	NMF	5.7	Oilfield Svcs/Equip.	95
2356	Hilton Grand Vacations ■	18.42	3	4	9.1	NIL	Hotel/Gaming	81
510	Husky Energy	3.68	3	3	5.0	13.6	Petroleum (Integrated)	92
1647	Insperity Inc.	40.48	3	3	11.7	4.0	Human Resources	88
2359	Int'l Game Tech. PLC	6.70	3	3	12.0	11.9	Hotel/Gaming	81
362	Jack in the Box	54.12	3	4	11.4	3.3	Restaurant	68
2145	Kohl's Corp.	17.06	3	3	13.2	8.2	Retail Store	49
577	Kraton Corp.	8.71	4	4	4.9	NIL	Chemical (Specialty)	77
1976	MGP Ingredients	34.61	3	5	16.8	1.4	Beverage	34
125	MTS Systems	17.19	4	4	7.8	NIL	Precision Instrument	20
1534	Macerich Comp. (The)	6.26	4	2	9.8	31.9	R.E.I.T.	51
2146	Macy's Inc.	5.31	3	3	4.5	NIL	Retail Store	49
2410	Marathon Oil Corp.	4.21	3	3	NMF	4.8	Petroleum (Producing)	94
1365	MaxLinear, Inc.	14.86	3	5	25.6	NIL	Semiconductor	40
2378	Meredith Corp.	13.02	4	2	5.5	NIL	Publishing	91
581	Methanex Corp.	12.82	3	3	11.4	11.2	Chemical (Specialty)	77
2178	Movado Group	9.39	3	3	18.8	NIL	Retail (Hardlines)	76
513	Murphy Oil Corp.	7.91	4	4	4.7	6.3	Petroleum (Integrated)	92
838	Myriad Genetics	15.20	3	4	32.3	NIL	Biotechnology	21
2426	National Oilwell Varco ■	11.50	3	3	NMF	1.7	Oilfield Svcs/Equip.	95
2411	Noble Energy	6.86	3	4	NMF	1.2	Petroleum (Producing)	94
2314	Norwegian Cruise Line	11.49	4	3	NMF	NIL	Recreation	73
1012	Nu Skin Enterprises	23.91	3	4	10.5	6.3	Toiletries/Cosmetics	71
631	NuStar Energy L.P. ■	9.26	3	4	6.2	25.9	Pipeline MLPs	84
514	Occidental Petroleum	12.59	4	4	15.4	3.5	Petroleum (Integrated)	92
615	ONEOK Inc. ■	28.21	3	4	7.9	13.8	Oil/Gas Distribution	87
540	Ovintiv Inc.	3.74	4	3	1.3	10.2	Natural Gas (Div.)	93
541	PDC Energy	8.51	4	4	2.6	NIL	Natural Gas (Div.)	93
2112	PVH Corp. ■	40.88	3	3	29.6	NIL	Apparel	86
2412	Parsley Energy	6.64	3	3	NMF	3.0	Petroleum (Producing)	94
517	Petroleo Brasileiro ADR	6.27	5	3	4.1	NIL	Petroleum (Integrated)	92
633	Plains All Amer. Pipe.	7.12	3	4	4.2	20.2	Pipeline MLPs	84
634	Plains GP Holdings L.P.	7.36	4	4	4.9	19.6	Pipeline MLPs	84
1338	Plantronics Inc.	11.46	4	4	14.5	NIL	Electronics	61
2182	Qurate Retail	7.61	3	5	8.7	NIL	Retail (Hardlines)	76
2414	Range Resources	5.14	4	5	NMF	NIL	Petroleum (Producing)	94
365	Red Robin Gourmet	11.30	3	3	17.4	NIL	Restaurant	68
2319	Royal Caribbean	35.99	4	3	NMF	8.7	Recreation	73
1543	Ryman Hospitality ■	27.98	3	3	NMF	NIL	R.E.I.T.	51
1830	Sabre Corp.	5.69	4	3	21.9	NIL	E-Commerce	43
1636	Sage Therapeutics	34.84	4	3	NMF	NIL	Drug	22
1546	Simon Property Group	53.83	2	3	12.2	15.6	R.E.I.T.	51
2344	Sinclair Broadcast	15.19	3	3	9.4	5.3	Entertainment	80
2321	Six Flags Entertainment	15.67	4	3	NMF	NIL	Recreation	73
311	SkyWest	25.02	3	3	4.1	NIL	Air Transport	74
722	Spirit AeroSystems	20.87	3	2	6.5	0.2	Aerospace/Defense	53
313	Spirit Airlines	12.95	3	3	2.5	NIL	Air Transport	74
545	Targa Resources	7.88	4	4	98.5	5.1	Natural Gas (Div.)	93
1594	Teck Resources 'B'	10.58	3	3	NMF	1.9	Metals & Mining (Div.)	89
2433	Transocean Ltd.	1.17	5	2	NMF	NIL	Oilfield Svcs/Equip.	95
2444	Trinseo S.A.	18.76	3	4	22.6	8.5	Chemical (Diversified)	57
2655	TripAdvisor, Inc.	18.07	4	4	14.0	NIL	Internet	50
1995	Turning Point Brands	20.05	4	4	11.7	1.0	Tobacco	72
751	U.S. Steel Corp.	6.59	4	4	NMF	0.6	Steel	83
1549	Ventas, Inc.	28.65	3	4	23.3	11.1	R.E.I.T.	51
2658	Wayfair Inc.	100.93	4	5	NMF	NIL	Internet	50
1737	Welbilt, Inc.	4.36	4	2	11.2	NIL	Machinery	31
1316	WESCO Int'l ■	23.19	3	3	4.4	NIL	Electrical Equipment	67

■ **Newly added this week.**

HIGHEST DIVIDEND YIELDING NON-UTILITY STOCKS

Based upon estimated year-ahead dividends per share

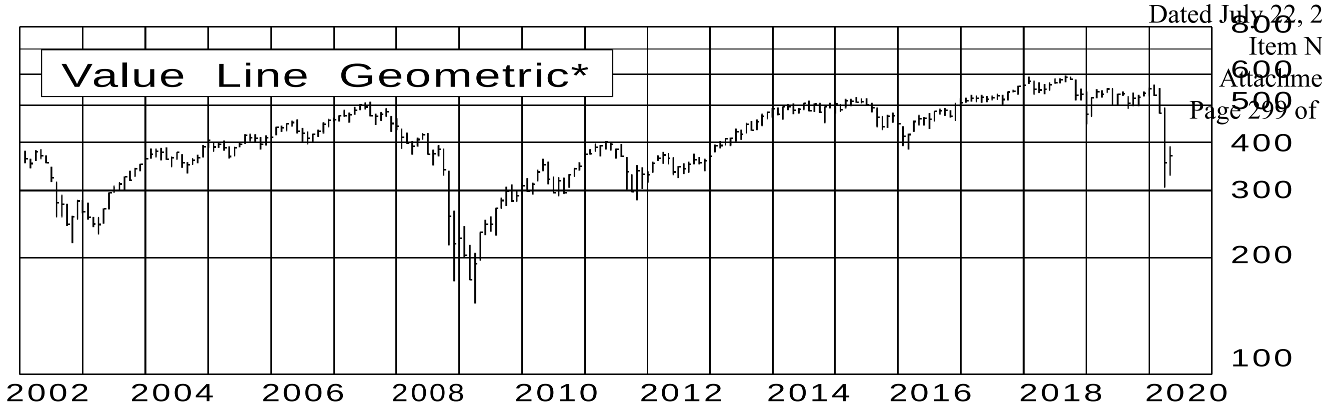
Page No.	Stock Name	Recent Price	Timeliness	Safety Rank	Current P/E Ratio	% Est'd Yield	Industry Group	Industry Rank
639	Western Midstream Part.	5.60	3	3	3.2	44.5†	Pipeline MLPs	84
613	EnLink Midstream LLC	1.19	5	5	19.8	31.9†	Oil/Gas Distribution	87
1534	Macerich Comp. (The)	6.26	5	4	9.8	31.9†	R.E.I.T.	51
2197	Chico's FAS	1.18	–	5	NMF	30.5†	Retail (Softlines)	63
609	Antero Midstream Corp.	4.16	–	4	16.0	29.6†	Oil/Gas Distribution	87
623	DCP Midstream LP	5.68	–	3	6.2	27.5†	Pipeline MLPs	84
631	NuStar Energy L.P.	9.26	5	3	6.2	25.9†	Pipeline MLPs	84
2394	National CineMedia	3.04	–	5	NMF	25.0†	Advertising	36
2448	Apollo Investment	7.54	3	3	15.1	23.9†	Public/Private Equity	–
2401	Black Stone Minerals	5.22	4	4	NMF	23.0	Petroleum (Producing)	94
628	Holly Energy Part.	12.05	3	3	6.5	22.3†	Pipeline MLPs	84
635	Rattler Midstream LP	5.33	–	3	4.2	21.8†	Pipeline MLPs	84
1599	CVR Partners, LP	0.92	–	5	NMF	21.7†	Chemical (Basic)	65
625	Enable Midstream Part.	3.09	5	4	3.2	21.4	Pipeline MLPs	84
633	Plains All Amer. Pipe.	7.12	5	3	4.2	20.2†	Pipeline MLPs	84
626	Energy Transfer LP	6.08	2	4	4.3	20.1†	Pipeline MLPs	84
634	Plains GP Holdings L.P.	7.36	5	4	4.9	19.6†	Pipeline MLPs	84
629	MPLX LP	14.15	2	3	6.3	19.4†	Pipeline MLPs	84
503	CVR Energy	18.39	5	3	4.4	17.4	Petroleum (Integrated)	92
1513	Annaly Capital Mgmt.	5.82	3	3	5.6	17.2†	R.E.I.T.	51
637	Suburban Propane	14.24	4	3	8.6	16.9†	Pipeline MLPs	84
525	Brigham Minerals	9.15	–	4	17.9	16.6	Natural Gas (Div.)	93
636	Shell Midstream L.P.	11.37	4	3	6.8	16.5†	Pipeline MLPs	84
2186	Sunoco LP	20.17	3	4	9.6	16.4	Retail (Hardlines)	76
1518	CoreCivic, Inc.	11.42	4	4	8.5	15.8	R.E.I.T.	51
1547	SITE Centers	5.06	3	3	84.3	15.8	R.E.I.T.	51
1527	GEO Group (The)	12.27	3	4	9.7	15.7	R.E.I.T.	51
1546	Simon Property Group	53.83	5	2	12.2	15.6†	R.E.I.T.	51
2332	Entravision Communic.	1.42	–	4	6.5	14.1	Entertainment	80
615	ONEOK Inc.	28.21	5	3	7.9	13.8	Oil/Gas Distribution	87
335	SFL Corp. Ltd	10.15	3	3	11.4	13.8†	Maritime	90
2452	Gladstone Capital	6.16	–	3	20.5	13.6	Public/Private Equity	–
510	Husky Energy	3.68	5	3	5.0	13.6	Petroleum (Integrated)	92
2562	Invesco Ltd.	9.09	3	3	3.5	13.6	Financial Svcs. (Div.)	24
1532	Kimco Realty	8.56	3	3	10.3	13.3	R.E.I.T.	51
1202	Liberty All-Star	5.34	–	2	NMF	12.7	Investment Co.	–
1590	Natural Resource	14.13	4	4	3.5	12.7	Metals & Mining (Div.)	89
2396	OUTFRONT Media	12.20	4	4	23.9	12.5	Advertising	36
2359	Int'l Game Tech. PLC	6.70	5	3	12.0	11.9	Hotel/Gaming	81
627	Enterprise Products	15.65	4	3	7.2	11.5	Pipeline MLPs	84
519	Royal Dutch Shell 'B'	32.71	4	2	6.9	11.5	Petroleum (Integrated)	92
2538	AllianceBernstein Hldg.	20.14	3	3	8.3	11.4	Financial Svcs. (Div.)	24
502	BP PLC ADR	22.35	4	3	8.7	11.3	Petroleum (Integrated)	92
1554	Weingarten Realty	13.95	3	3	8.0	11.3	R.E.I.T.	51
581	Methanex Corp.	12.82	5	3	11.4	11.2	Chemical (Specialty)	77
1549	Ventas, Inc.	28.65	5	3	23.3	11.1	R.E.I.T.	51
1528	Gaming and Leisure	26.33	4	3	79.8	10.8	R.E.I.T.	51
630	Magellan Midstream	39.69	4	3	8.6	10.5	Pipeline MLPs	84
747	Russel Metals	14.41	3	3	10.4	10.5	Steel	83
1197	Aberdeen Asia-Pac. Fd.	3.41	–	4	NMF	10.3	Investment Co.	–
540	Ovintiv Inc.	3.74	5	4	1.3	10.2	Natural Gas (Div.)	93
391	Iron Mountain	24.67	2	3	18.5	10.1	Industrial Services	32
1903	B&G Foods	18.91	4	3	12.0	10.0	Food Processing	39
358	Dine Brands Global	30.54	5	3	4.3	10.0	Restaurant	68
331	GasLog Ltd.	4.98	–	4	8.7	10.0	Maritime	90
2516	HSBC Holdings PLC	25.52	3	3	6.1	10.0	Bank	52
2355	Extended Stay America	9.35	4	3	NMF	9.8	Hotel/Gaming	81
2447	Apollo Global Mgmt	37.27	–	3	47.8	9.6	Public/Private Equity	–
567	Chemours Co. (The)	10.41	5	4	30.6	9.6	Chemical (Specialty)	77
2403	Can. Natural Res.	18.09	2	3	NMF	9.4	Petroleum (Producing)	94
929	Millicom Int'l Cellular	28.16	–	3	9.4	9.4	Telecom. Services	29
104	Fiat Chrysler	7.94	–	3	2.8	9.3	Automotive	82
2563	Janus Henderson plc	15.50	2	3	6.5	9.3	Financial Svcs. (Div.)	24
512	Marathon Petroleum	24.85	4	3	4.1	9.3	Petroleum (Integrated)	92
777	Comerica Inc.	29.62	4	3	4.3	9.2	Bank (Midwest)	75
1203	MFS Multimarket	5.30	–	4	NMF	9.1	Investment Co.	–
2571	Navient Corp.	7.06	4	3	2.6	9.1	Financial Svcs. (Div.)	24
616	Pembina Pipeline	27.55	4	3	10.2	9.1	Oil/Gas Distribution	87
1602	Dow Inc.	31.53	–	2	10.1	9.0	Chemical (Basic)	65
1419	Pitney Bowes	2.23	–	4	3.7	9.0	Office Equip/Supplies	70
2372	Wyndham Destinations	22.27	–	3	5.6	9.0	Hotel/Gaming	81
520	Suncor Energy	20.88	2	3	26.8	8.9	Petroleum (Integrated)	92
521	Total S.A. ADR	33.00	4	2	6.3	8.9	Petroleum (Integrated)	92
1007	Coty Inc.	5.68	5	4	8.0	8.8	Toiletries/Cosmetics	71
1161	Domtar Corp.	20.66	4	3	12.7	8.8	Paper/Forest Products	79
580	LyondellBasell Inds.	48.41	4	3	5.1	8.7	Chemical (Specialty)	77
2319	Royal Caribbean	35.99	5	4	NMF	8.7†	Recreation	73
619	Williams Cos.	18.49	4	3	17.6	8.7	Oil/Gas Distribution	87
1991	Altria Group	39.07	3	3	9.4	8.6	Tobacco	72
507	Exxon Mobil Corp.	41.18	4	2	11.5	8.6	Petroleum (Integrated)	92
632	Phillips 66 Partners	40.75	2	3	9.3	8.6	Pipeline MLPs	84
622	Cheniere Energy Part.	30.70	2	3	15.5	8.5	Pipeline MLPs	84
1147	Ethan Allen Interiors	9.87	4	3	8.6	8.5	Furn/Home Furnishings	54
2444	Trinseo S.A.	18.76	5	3	22.6	8.5	Chemical (Diversified)	57
325	Ryder System	26.54	4	3	16.2	8.4	Trucking	64
2310	Harley-Davidson	18.53	3	3	8.4	8.2	Recreation	73
2145	Kohl's Corp.	17.06	5	3	13.2	8.2	Retail Store	49
2511	Citizens Fin'l Group	20.30	4	3	5.2	8.1	Bank	52
2451	Compass Diversified	17.87	3	3	NMF	8.1	Public/Private Equity	–
578	Kronos Worldwide	8.89	4	4	14.1	8.1	Chemical (Specialty)	77
1564	Prudential Fin'l	54.25	4	3	4.8	8.1	Insurance (Life)	48
2331	Entercom Communic.	1.00	–	3	1.8	8.0	Entertainment	80
2393	Lamar Advertising	49.90	3	3	17.7	8.0†	Advertising	36
1533	MGM Growth Properties	23.63	4	3	21.5	8.0	R.E.I.T.	51
624	EQM Midstream Part.	19.71	–	3	4.0	7.9	Pipeline MLPs	84

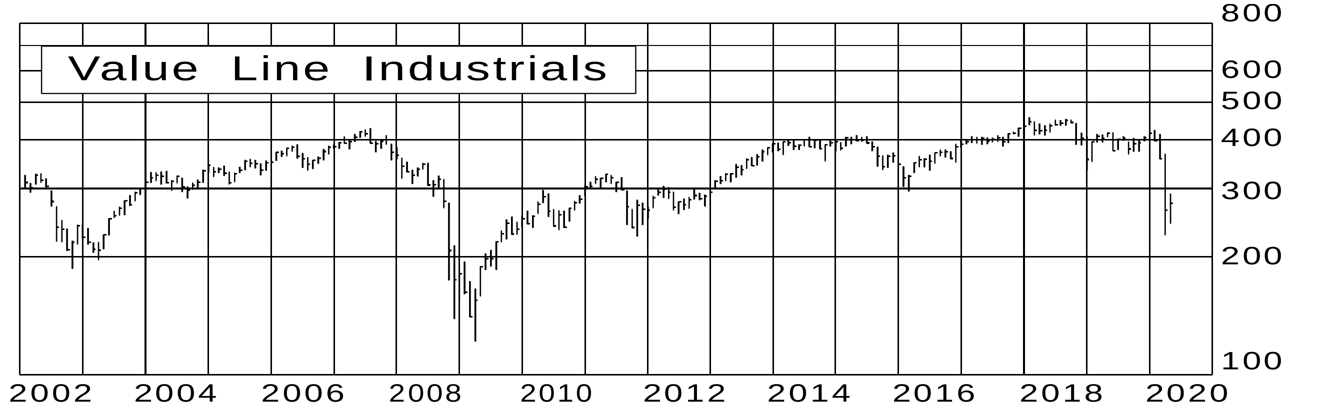
† Dividend cut possible

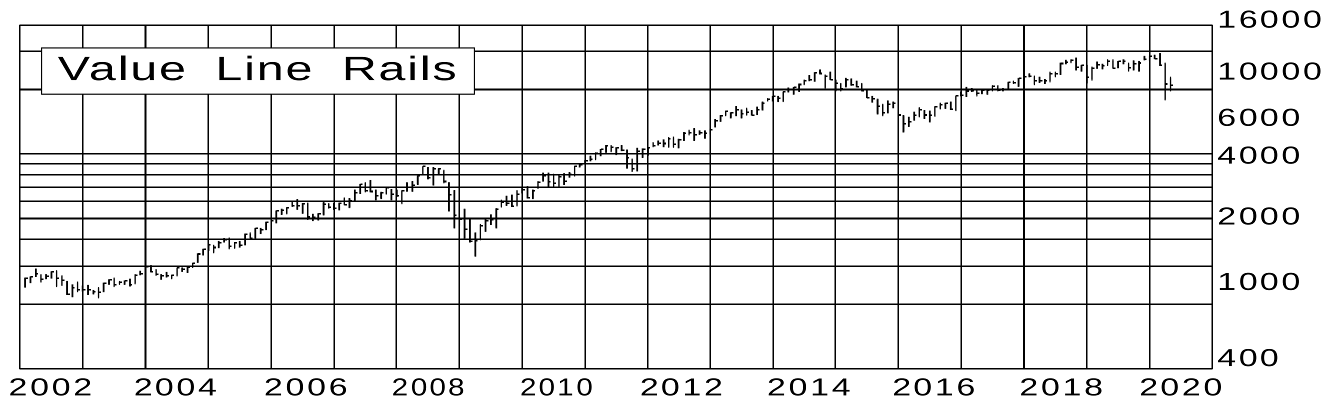
HIGHEST GROWTH STOCKS

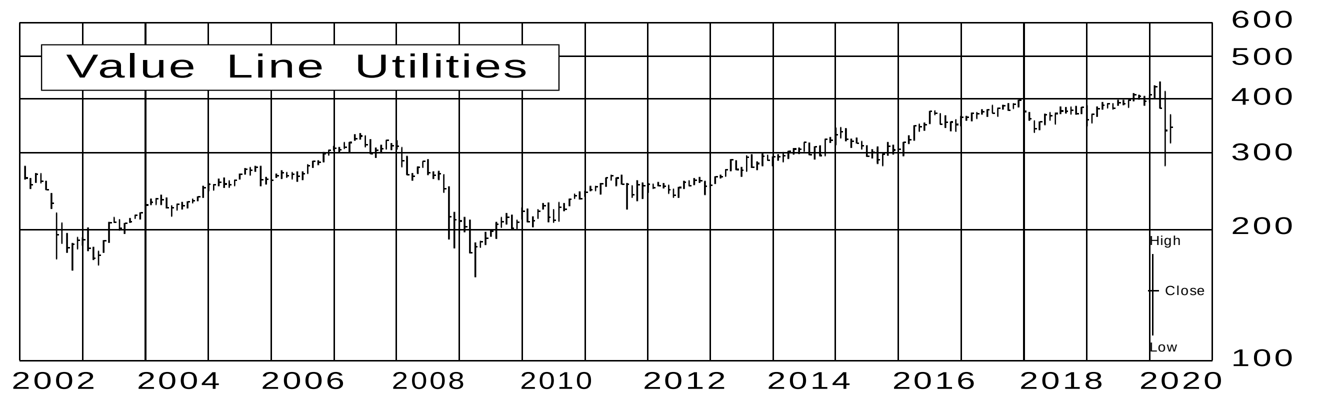
(To be included, a company's annual growth of sales, cash flow, earnings, dividends and book value must together have averaged 10% or more over the past 10 years and be expected to average at least 10% in the coming 3-5 years.)

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
2614	ACI Worldwide	ACIW	25.79	11%	13%	3	3	1.15	24.1	NIL	35- 75%	IT Services	4
2585	Adobe Inc.	ADBE	344.88	13%	20%	1	2	1.15	50.8	NIL	25- 70%	Computer Software	12
1814	Akamai Technologies	AKAM	106.24	12%	10%	1	3	1.05	34.8	NIL	15- 65%	E-Commerce	43
1703	Alamo Group	ALG	89.52	10%	11%	3	3	0.90	15.3	0.6	50-125%	Machinery	31
201	Align Techn.	ALGN	196.71	25%	20%	3	3	1.15	32.2	NIL	45-115%	Med Supp Non-Invasive	8
1946	Ali. Couche-Tard	ATDB.TO	40.15	24%	12%	3	3	0.75	15.0	0.7	60-135%	Retail/Wholesale Food	9
303	Allegiant Travel	ALGT	71.99	17%	12%	3	3	0.90	4.1	NIL	275-455%	Air Transport	74
2638	Alphabet Inc.	GOOG	1266.61	19%	17%	1	1	1.05	22.0	NIL	65-105%	Internet	50
2639	Amazon.com	AMZN	2393.61	28%	27%	1	3	1.15	76.1	NIL	40- 45%	Internet	50
2541	Ameriprise Fin'l	AMP	110.11	13%	11%	3	3	1.40	7.0	3.5	60-135%	Financial Svcs. (Div.)	24
1742	AMETEK, Inc.	AME	77.75	13%	10%	2	2	1.15	29.2	0.9	30- 75%	Diversified Co.	69
2586	ANSYS, Inc.	ANSS	266.72	12%	13%	1	2	1.05	40.8	NIL	N- N%	Computer Software	12
792	Anthem, Inc.	ANTM	263.20	12%	12%	3	2	0.95	12.1	1.4	60-120%	Medical Services	15
1398	Apple Inc.	AAPL	276.93	29%	13%	1	1	1.05	20.7	1.2	15- 60%	Computers/Peripherals	56
705	Axon Enterprise	AAXN	76.78	18%	21%	2	4	1.25	60.9	NIL	N- N%	Aerospace/Defense	53
2640	Baidu, Inc.	BIDU	104.68	43%	11%	2	3	1.35	14.1	NIL	115-220%	Internet	50
565	Balchem Corp.	BCPC	94.26	17%	11%	1	3	1.15	34.7	0.6	35- 95%	Chemical (Specialty)	77
2544	BlackRock, Inc.	BLK	470.80	13%	10%	2	2	1.25	15.3	3.1	40- 80%	Financial Svcs. (Div.)	24
2641	Booking Holdings	BKNG	1411.63	27%	12%	3	3	1.15	12.5	NIL	75-165%	Internet	50
1967	Boston Beer 'A'	SAM	413.62	16%	17%	3	3	0.75	38.9	NIL	20- 85%	Beverage	34
378	Brookfield Asset Mgmt.	BAM	33.02	11%	11%	3	3	1.15	15.4	1.5	20- 95%	Industrial Services	32
115	Bruker Corp.	BRKR	36.83	10%	13%	3	3	1.15	21.4	0.4	75-170%	Precision Instrument	20
2618	CACI Int'l	CACI	238.58	11%	10%	2	3	0.95	18.6	NIL	N- 35%	IT Services	4
205	Cantel Medical Corp.	CMD	28.83	14%	13%	5	3	0.90	17.9	0.8	230-405%	Med Supp Non-Invasive	8
1747	Carlisle Cos.	CSL	122.63	10%	10%	3	2	1.00	14.5	1.6	45- 90%	Diversified Co.	69
794	Centene Corp.	CNC	68.42	24%	11%	2	3	1.10	14.9	NIL	25- 90%	Medical Services	15
1748	Chemed Corp.	CHE	441.78	12%	11%	1	2	0.85	27.7	0.3	N- 30%	Diversified Co.	69
353	Chipotle Mex. Grill	CMG	808.73	14%	12%	3	3	0.95	50.2	NIL	N- 35%	Restaurant	68
949	Ciena Corp.	CIEN	46.35	10%	11%	2	4	1.25	18.9	NIL	20-105%	Telecom. Equipment	42
795	Cigna Corp.	CI	188.70	11%	17%	2	3	1.05	10.4	NIL	50-125%	Medical Services	15
381	Cintas Corp.	CTAS	193.91	11%	13%	2	2	0.95	21.6	1.5	30- 80%	Industrial Services	32
116	Cognex Corp.	CGNX	47.97	16%	12%	3	3	1.40	48.5	0.5	5- 45%	Precision Instrument	20
2125	Copart, Inc.	CPRT	68.63	14%	10%	1	2	0.95	27.5	NIL	10- 45%	Retail Automotive	35
433	CoStar Group	CSGP	603.53	18%	16%	1	2	1.05	57.6	NIL	35- 80%	Information Services	2
2549	Credit Acceptance	CACC	294.71	25%	13%	3	3	1.00	8.0	NIL	N- N%	Financial Svcs. (Div.)	24
2157	Deckers Outdoor	DECK	140.66	16%	11%	2	3	1.05	14.8	NIL	25- 85%	Shoe	28
2142	Dollar General	DG	179.00	15%	10%	1	3	0.80	28.6	0.8	N- 35%	Retail Store	49
178	Edwards Lifesciences	EW	224.60	17%	12%	1	3	0.95	36.5	NIL	5- 60%	Med Supp Invasive	19
435	Exponent, Inc.	EXPO	72.11	11%	10%	2	3	0.85	45.6	1.1	5- 45%	Information Services	2
954	F5 Networks	FFIV	122.66	19%	10%	3	3	1.10	20.4	NIL	85-175%	Telecom. Equipment	42
1604	FMC Corp.	FMC	84.56	10%	11%	3	3	1.35	13.4	2.1	35-100%	Chemical (Basic)	65
2556	FirstCash, Inc.	FCFS	73.17	12%	10%	2	3	0.80	16.8	1.5	5- 50%	Financial Svcs. (Div.)	24
2626	Fiserv Inc.	FISV	97.24	11%	14%	2	2	0.90	22.2	NIL	N- 30%	IT Services	4
438	Gartner Inc.	IT	104.17	16%	12%	4	3	1.05	27.9	NIL	110-220%	Information Services	2
386	Genpact Limited	G	30.47	12%	14%	2	2	0.85	13.7	1.3	80-165%	Industrial Services	32
2560	Global Payments	GPN	148.21	12%	22%	–	3	1.15	87.2	0.5	20- 85%	Financial Svcs. (Div.)	24
712	HEICO Corp.	HEI	80.73	17%	13%	3	3	0.90	29.4	0.2	60-150%	Aerospace/Defense	53
2627	Henry (Jack) & Assoc.	JKHY	166.67	10%	10%	1	1	0.85	38.4	1.0	N- N%	IT Services	4
802	Humana Inc.	HUM	367.33	11%	10%	3	3	0.95	20.0	0.7	5- 60%	Medical Services	15
2649	IAC/InterActiveCorp	IAC	224.15	10%	14%	–	3	1.00	44.8	NIL	N- 25%	Internet	50
803	ICON plc	ICLR	158.42	15%	10%	2	3	0.90	21.2	NIL	15- 65%	Medical Services	15
121	II-VI Inc.	IIVI	28.11	13%	14%	4	3	1.40	16.5	NIL	130-240%	Precision Instrument	20
215	Illumina Inc.	ILMN	322.88	21%	12%	2	3	0.95	48.5	NIL	10- 65%	Med Supp Non-Invasive	8
2628	Infosys Ltd. ADR	INFY	8.51	10%	12%	2	2	0.85	13.5	4.1	135-195%	IT Services	4
2175	Insight Enterprises	NSIT	48.58	10%	12%	3	3	1.25	10.2	NIL	75-155%	Retail (Hardlines)	76
1647	Insperity Inc.	NSP	40.48	14%	12%	5	3	0.95	11.7	4.0	110-220%	Human Resources	88
2594	Intuit Inc.	INTU	264.00	11%	14%	3	2	1.15	34.7	0.8	10- 50%	Computer Software	12
185	Intuitive Surgical	ISRG	518.33	21%	13%	2	2	1.00	41.0	NIL	30- 75%	Med Supp Invasive	19
122	KLA Corp.	KLAC	156.30	11%	12%	2	3	1.15	15.2	2.2	N- 55%	Precision Instrument	20
1393	Lam Research	LRCX	266.73	17%	10%	3	3	1.30	14.8	1.7	10- 65%	Semiconductor Equip	38
1011	Lauder (Estee)	EL	167.79	12%	10%	1	2	0.85	28.3	NIL	5- 45%	Toiletries/Cosmetics	71
2204	lululemon athletica	LULU	218.59	27%	13%	2	3	1.05	72.1	NIL	N- 45%	Retail (Softlines)	63
440	MSCI Inc.	MSCI	321.95	15%	18%	2	3	1.05	45.3	0.9	N- 20%	Information Services	2
1801	MarketAxess Holdings	MKTX	430.57	21%	15%	2	3	0.75	70.7	0.6	N- N%	Brokers & Exchanges	37
1232	MasTec	MTZ	32.18	17%	11%	4	3	1.45	6.2	NIL	165-305%	Engineering & Const	66
2570	MasterCard Inc.	MA	251.73	19%	15%	1	1	1.00	28.7	0.6	5- 25%	Financial Svcs. (Div.)	24
395	MAXIMUS Inc.	MMS	64.56	18%	10%	2	3	0.95	15.9	1.7	45-125%	Industrial Services	32
1928	Medifast, Inc.	MED	64.29	19%	13%	3	3	0.90	10.6	7.0	125-235%	Food Processing	39
2596	Microsoft Corp.	MSFT	175.06	10%	14%	1	1	1.10	30.6	1.2	N- 15%	Computer Software	12
1369	Monolithic Power Sys.	MPWR	184.23	15%	15%	2	3	1.20	46.1	1.1	N- 40%	Semiconductor	40
1978	Monster Beverage	MNST	61.38	20%	10%	1	3	0.85	29.0	NIL	30- 85%	Beverage	34
441	Moody's Corp.	MCO	239.47	14%	10%	2	3	1.15	27.7	0.9	N- 45%	Information Services	2
2340	Netflix, Inc.	NFLX	437.49	31%	18%	1	3	1.25	70.6	NIL	N- 50%	Entertainment	80
2002	New Orient. Ed. ADS	EDU	109.37	22%	14%	1	3	1.15	30.3	NIL	20- 80%	Educational Services	33
2160	NIKE, Inc. 'B'	NKE	87.90	11%	11%	2	1	1.00	35.3	1.1	25- 50%	Shoe	28
1370	NVIDIA Corp.	NVDA	287.05	16%	10%	2	3	1.40	47.2	0.2	N- N%	Semiconductor	40
324	Old Dominion Freight	ODFL	129.89	18%	11%	3	2	1.15	25.1	0.5	N- 10%	Trucking	64
225	Omnicell, Inc.	OMCL	72.52	12%	11%	2	3	1.00	25.4	NIL	40-105%	Med Supp Non-Invasive	8
1372	ON Semiconductor	ON	13.36	13%	10%	4	3	1.60	11.1	NIL	125-275%	Semiconductor	40
1828	Open Text Corp.	OTEX	38.58	16%	11%	2	3	0.95	29.0	1.9	15- 80%	E-Commerce	43
2573	Price (T. Rowe) Group	TROW	101.15	12%	10%	1	1	1.15	11.3	3.6	65-100%	Financial Svcs. (Div.)	24
770	Progressive Corp.	PGR	81.94	12%	11%	2	2	0.85	15.6	0.5	15- 60%	Insurance (Prop/Cas.)	5
1234	Quanta Services	PWR	33.64	14%	10%	3	3	1.35	9.0	0.6	110-195%	Engineering & Const	66
227	ResMed Inc.	RMD	164.28	12%	12%	2	3	0.85	39.1	0.9	N- N%	Med Supp Non-Invasive	8
399	Rollins, Inc.	ROL	37.98	11%	10%	3	2	0.90	50.0	1.3	N- 30%	Industrial Services	32
1831	salesforce.com	CRM	162.76	26%	14%	3	3	1.10	NMF	NIL	N- 45%	E-Commerce	43
2161	Skechers U.S.A.	SKX	25.02	12%	10%	2	3	1.40	16.9	NIL	120-220%	Shoe	28
1378	Skyworks Solutions	SWKS	92.53	21%	11%	3	3	1.20	14.3	1.9	45-120%	Semiconductor	40
2609	Synopsys, Inc.	SNPS	151.01	10%	11%	3	1	1.10	28.8	NIL	N- 15%	Computer Software	12
2208	TJX Companies	TJX	47.79	14%	11%	2	1	0.95	27.9	0.5	65-110%	Retail (Softlines)	63
1159	Tempur Sealy Int'l	TPX	42.59	11%	11%	3	4	1.35	11.4	NIL	90-215%	Furn/Home Furnishings	54
369	Texas Roadhouse	TXRH	43.47	12%	10%	2	3	0.85	16.6	NIL	85-190%	Restaurant	68
2654	Trip.com Ltd.	TCOM	23.66	18%	19%	3	4	1.25	23.7	NIL	110-195%	Internet	50
2634	Tyler Technologies	TYL	328.05	22%	12%	1	3	0.90	57.3	NIL	N- 35%	IT Services	4
815	UnitedHealth Group	UNH	282.14	14%	11%	2	1	1.00	17.6	1.5	30- 55%	Medical Services	15
816	Universal Health 'B'	UHS	102.69	13%	10%	3	3	0.95	9.6	0.8	90-180%	Medical Services	15
2612	VMware, Inc.	VMW	132.62	20%	11%	3	3	1.00	19.3	NIL	45-120%	Computer Software	12
347	Wabtec Corp.	WAB	48.95	14%	12%	–	3	1.25	11.0	1.0	135-260%	Railroad	26
327	XPO Logistics	XPO	58.68	28%	10%	3	4	1.75	13.1	NIL	115-260%	Trucking	64
607	Zebra Techn. 'A'	ZBRA	202.35	18%	11%	2	3	1.35	14.9	NIL	20- 80%	Wireless Networking	41


Value Line Geometric*
800
600
500
400
300
200
100
2002 2004 2006 2008 2010 2012 2014 2016 2018 2020


Value Line Industrials
800
600
500
400
300
200
100
2002 2004 2006 2008 2010 2012 2014 2016 2018 2020


Value Line Rails
16000
10000
6000
4000
2000
1000
400
2002 2004 2006 2008 2010 2012 2014 2016 2018 2020


Value Line Utilities
600
500
400
300
200
100
High
Close
Low
2002 2004 2006 2008 2010 2012 2014 2016 2018 2020

AVANGRID, INC. NYSE-AGR

RECENT PRICE 53.12 | P/E RATIO 20.9 (Trailing: 27.7 Median: NMF) | RELATIVE P/E RATIO 1.19 | DIV'D YLD 3.4% | VALUE LINE

TIMELINESS 3 Lowered 3/22/19
SAFETY 2 Raised 2/17/17
TECHNICAL 3 Raised 1/24/20
BETA .40 (1.00 = Market)

18-Month Target Price Range

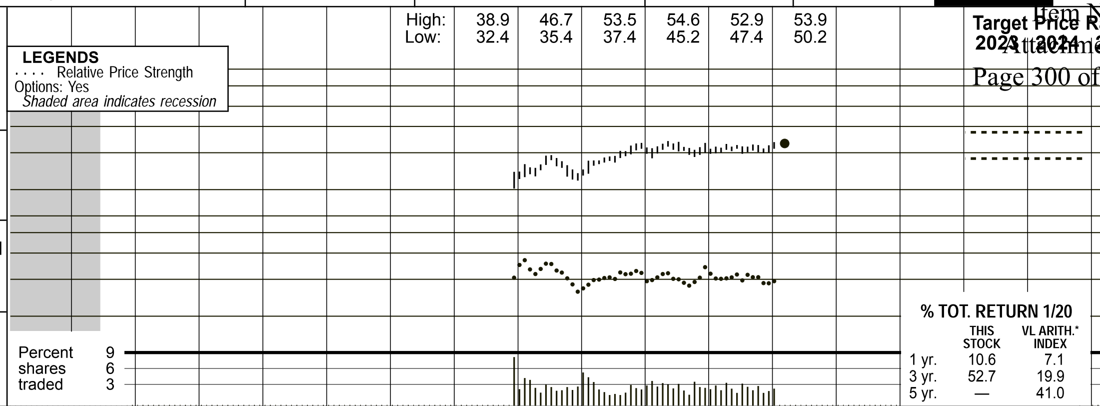
Low-High	Midpoint (% to Mid)
$44-$65	$55 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	60	(+15%)	*7%*
Low	45	(-15%)	*Nil*

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	140	114	118
to Sell	121	138	111
Hld's(000)	44712	43692	45639



% TOT. RETURN 1/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	10.6	7.1
3 yr.	52.7	19.9
5 yr.	—	41.0

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	*20.70*	*21.35*	*22.00*	Revenues per sh	*24.25*
--	--	--	--	--	3.44	4.74	4.49	4.89	*5.45*	*5.65*	*5.95*	"Cash Flow" per sh	*7.25*
--	--	--	--	--	1.05	1.98	1.67	1.92	*2.40*	*2.45*	*2.60*	Earnings per sh A	*3.00*
--	--	--	--	--	--	1.73	1.73	1.74	1.76	*1.78*	*1.88*	Div'd Decl'd per sh B ■	*2.20*
--	--	--	--	--	3.50	5.52	7.82	5.78	*7.75*	*10.05*	*10.35*	Cap'l Spending per sh	*9.75*
--	--	--	--	--	48.74	48.90	48.79	48.88	*49.50*	*50.20*	*50.90*	Book Value per sh C	*53.75*
--	--	--	--	--	308.86	308.99	309.01	309.01	*309.00*	*309.00*	*309.00*	Common Shs Outst'g D	*309.00*
--	--	--	--	--	33.5	20.5	27.3	26.1	*20.9*	*Bold figures are*		Avg Ann'l P/E Ratio	*18.0*
--	--	--	--	--	1.69	1.08	1.37	1.41	*1.15*	*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	*6400*	*6600*	*6800*	Revenues ($mill)	*7500*
--	--	--	--	424.0	267.0	611.0	516.0	595.0	*740*	*760*	*800*	Net Profit ($mill)	*1000*
--	--	--	--	39.9%	11.3%	37.4%	32.4%	22.1%	*18.5%*	*19.5%*	*19.5%*	Income Tax Rate	*19.5%*
--	--	--	--	6.8%	12.7%	7.5%	12.4%	9.4%	*8.0%*	*8.0%*	*7.0%*	AFUDC % to Net Profit	*6.0%*
--	--	--	--	16.8%	23.1%	23.0%	25.6%	26.2%	*28.5%*	*31.5%*	*34.0%*	Long-Term Debt Ratio	*40.0%*
--	--	--	--	83.2%	76.9%	77.0%	74.4%	73.8%	*71.5%*	*68.5%*	*66.0%*	Common Equity Ratio	*60.0%*
--	--	--	--	14956	19583	19619	20273	20472	*21325*	*22600*	*23850*	Total Capital ($mill)	*27800*
--	--	--	--	17099	20711	21548	22669	23459	*24900*	*27025*	*29175*	Net Plant ($mill)	*34800*
--	--	--	--	3.7%	2.1%	3.8%	3.1%	3.5%	*4.0%*	*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%*	*5.0%*	Return on Shr. Equity	*6.0%*
--	--	--	--	3.4%	1.8%	4.0%	3.4%	3.9%	*5.0%*	*5.0%*	*5.0%*	Return on Com Equity E	*6.0%*
--	--	--	--	3.4%	1.8%	1.4%	NMF	.4%	*1.5%*	*1.5%*	*1.5%*	Retained to Com Eq	*2.0%*
--	--	--	--	--	--	66%	104%	90%	*73%*	*72%*	*73%*	All Div'ds to Net Prof	*67%*

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: $16 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 '23-'25
Revenues	--	--	*3.0%*
"Cash Flow"	--	--	*6.5%*
Earnings	--	--	*8.5%*
Dividends	--	--	*3.58%*
Book Value	--	--	*1.5%*

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	*1671*	*6400*
2020	*1950*	*1450*	*1500*	*1700*	*6600*
2021	*2000*	*1500*	*1550*	*1750*	*6800*

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	*.86*	*2.40*
2020	*.78*	*.40*	*.50*	*.77*	*2.45*
2021	*.85*	*.42*	*.53*	*.80*	*2.60*

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				

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.

AVANGRID's utility in Maine received an unfavorable regulatory decision from the state commission. As we went to press, the final order for Central Maine Power had not been posted. What is known is that the utility was granted a modest rate increase, effective March 1st. The allowed return on equity was lowered from 9.45% to 9.25% and the common-equity ratio remained 50%. However, due to customers' complaints about billing errors, the regulators imposed a management efficiency penalty that reduced the allowed ROE by one percentage point for at least 18 months. This will hurt the company's annual earnings by $9.9 million.

Despite this ruling, we think earnings will advance in 2020 and 2021. AVANGRID's utilities in New York are trying to reach settlements with the state commission, staff, and intervenors. The utilities filed for totals of $188.4 million and $12.1 million for electricity and gas, respectively, based on an ROE of 9.5% and a common-equity ratio of 50% (up from 9.0% and 48% currently). The staff recommended electric increases totaling $77.4 million and gas decreases totaling $38.4 million, an 8.2% ROE, and a 48% common-equity ratio. New tariffs are expected to take effect in April. Additional projects in the renewable-energy subsidiary should also contribute to profit growth.

Two major projects are in various stages of development. Central Maine Power hopes to begin construction of a $950 million transmission line in the second quarter, with completion by year-end 2020. The utility awaits a decision in Maine. Assuming this goes through as planned, the project will contribute to earnings this year because the company will earn a return on construction work in progress. AVANGRID also has a joint venture for an offshore wind project. Note, though, that this entails construction risk.

This stock has a dividend yield that is slightly above average for a utility. However, most of the company's utilities operate in difficult regulatory climates, and dividend growth potential through 2023-2025 is subpar. There have been reports of a possible merger with PPL Corporation, but we advise against purchasing the stock hoping for a combination.

Paul E. Debbas, CFA *February 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 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 '20: 9.25%; 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 **92.54** | P/E RATIO **21.2** (Trailing: 21.8 Median: 15.0) | RELATIVE P/E RATIO **1.20** | DIV'D YLD **3.3%** | VALUE LINE

TIMELINESS	3	Lowered 3/8/19
SAFETY	1	New 7/27/90
TECHNICAL	3	Lowered 1/3/20

BETA .40 (1.00 = Market)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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	86.7	

Target Price Range 2023 | 2024 | 2025

18-Month Target Price Range

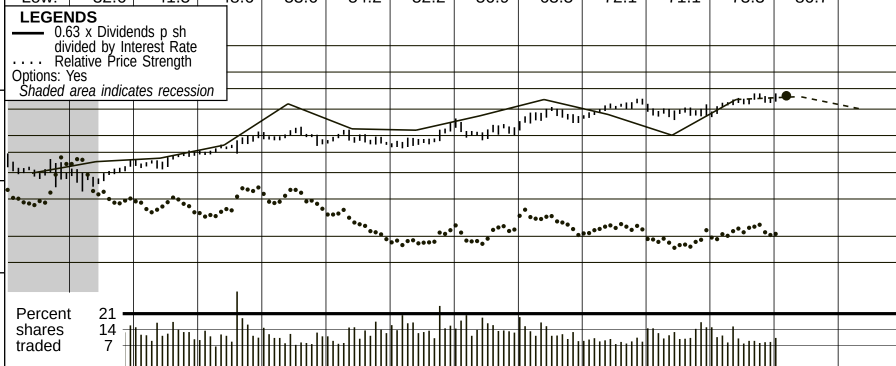
Low-High	Midpoint (% to Mid)
$70-$96	$83 (-10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	100	(+10%)	5%
Low	85	(-10%)	2%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	424	401	408
to Sell	356	347	342
Hld's(000)	193152	199915	200721



% TOT. RETURN 1/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	25.4	7.1
3 yr.	40.5	19.9
5 yr.	63.0	41.0

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	*37.70*	*38.70*	*39.75*	Revenues per sh	*43.00*
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*	*10.05*	"Cash Flow" per sh	*11.50*
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*	*4.70*	Earnings per sh A	*5.25*
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	*10.85*	*11.55*	*11.40*	Cap'l Spending per sh	*12.25*
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*	*57.20*	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	*334.00*	*341.00*	*342.00*	Common Shs Outst'g D	*345.00*
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	*21.8*	*Bold figures are*		Avg Ann'l P/E Ratio	*17.5*
.96	.80	.84	.73	.74	.83	.85	.95	.98	.83	.84	.79	.99	1.00	.92	*1.20*	*Value Line*		Relative P/E Ratio	*.95*
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%*
						13325	12938	12188	12381	12919	12554	12075	12033	12337	*12600*	*13200*	*13600*	Revenues ($mill)	*14800*
						992.0	1062.0	1141.0	1157.0	1066.0	1193.0	1189.0	1266.0	1424.0	*1295*	*1500*	*1610*	Net Profit ($mill)	*1795*
						36.0%	36.1%	34.5%	31.8%	34.0%	33.6%	35.3%	36.6%	20.1%	*22.0%*	*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	*1.0%*
						48.6%	46.5%	45.9%	46.1%	48.0%	47.9%	50.8%	48.9%	51.1%	*51.5%*	*51.0%*	*51.0%*	Long-Term Debt Ratio	*50.5%*
						50.4%	52.5%	54.1%	53.9%	52.0%	52.1%	49.2%	51.1%	48.9%	*48.5%*	*49.0%*	*49.0%*	Common Equity Ratio	*49.5%*
						21952	21794	21933	22735	24207	25058	29033	30149	34221	*37050*	*38525*	*39800*	Total Capital ($mill)	*43600*
						23863	25093	26939	28436	29827	32209	35216	37600	41749	*43800*	*46025*	*48100*	Net Plant ($mill)	*54300*
						5.9%	6.2%	6.5%	6.4%	5.6%	6.0%	5.3%	5.4%	5.3%	*4.5%*	*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%	*7.0%*	*8.0%*	*8.0%*	Return on Shr. Equity	*8.5%*
						8.9%	9.2%	9.6%	9.4%	8.5%	9.1%	8.3%	8.2%	8.5%	*7.0%*	*8.0%*	*8.0%*	Return on Com Equity E	*8.5%*
						3.2%	3.1%	3.6%	3.6%	2.6%	3.5%	3.0%	3.0%	3.5%	*2.0%*	*2.5%*	*2.5%*	Retained to Com Eq	*2.5%*
						65%	66%	62%	62%	69%	61%	64%	63%	59%	*75%*	*69%*	*67%*	All Div'ds to Net Prof	*67%*

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: $31 billion (Large Cap)

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 '23-'25
Revenues	-2.0%	-2.0%	1.5%
"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
2017	3228	2633	3211	2961	12033
2018	3364	2696	3328	2949	12337
2019	3514	2744	3365	*2977*	*12600*
2020	*3600*	*2850*	*3550*	*3200*	*13200*
2021	*3700*	*2950*	*3650*	*3300*	*13600*

Cal-endar	EARNINGS PER SHARE A 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	*.76*	*3.95*
2020	*1.40*	*.60*	*1.60*	*.80*	*4.40*
2021	*1.50*	*.65*	*1.70*	*.85*	*4.70*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ 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				

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 has received an order in its general rate case. The New York State Public Service Commission approved a settlement between Consolidated Edison Company of New York, the commission's staff, and intervenors. The agreement calls for electric and gas increases of $113 million and $84 million, respectively, in 2020 (retroactive to the start of the year), $370 million and $122 million in 2021, and $326 million and $167 million in 2022. These figures include the pass-through to customers of the benefits of the lower federal tax rate. The allowed return on equity is now 8.8% (down from the current 9.0%) and the common-equity ratio is unchanged at 48%. The utility will benefit from new regulatory mechanisms to reflect annual changes in several items, including pension expense and property taxes. There are also performance-based ratemaking measures that could add to or subtract from the utility's income.

We estimate higher earnings this year and next. Rate relief should be the primary factor. ConEd is also expanding its presence in renewable energy. Note that Pacific Gas and Electric, which is operating under Chapter 11, is still making payments to ConEd, which has a project that sells power to the utility.

The renewable-energy segment should provide an increasing proportion of corporate profits in the coming years. The company is now the second-largest owner of solar energy in the United States. The renewable-energy businesses now produce well under 10% of corporate profits, but ConEd's 20-year outlook shows this share rising to 10%-12%.

The board of directors raised the dividend this quarter. The increase was $0.10 a share (3.4%) annually. ConEd is targeting a payout ratio of 60%-70%.

The Mountain Valley Pipeline might well be completed this year. The project has been delayed by litigation. ConEd's investment is $530 million, which would give it a stake of roughly 10%.

The dividend yield of this high-quality stock is slightly above the utility average. However total return potential is unexciting for either the 18-month or 3- to 5-year period.

Paul E. Debbas, CFA *February 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. Next earnings report due mid-February.
(B) Div'ds historically paid in mid-Mar., June, Sept., and Dec. ■ Div'd reinvestment plan available. (C) Incl. intangibles. In '18: $20.38/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., '18: 8.8%. Regulatory Climate: Below Average.

Company's Financial Strength	A+
Stock's Price Stability	100
Price Growth Persistence	40
Earnings Predictability	100

DOMINION ENERGY NYSE-D

RECENT PRICE 84.56 | P/E RATIO 18.9 (Trailing: NMF; Median: 20.0) | RELATIVE P/E RATIO 1.07 | DIV'D YLD 4.4% | VALUE LINE

High:	39.8	45.1	53.6	55.6	68.0	80.9	79.9	79.0	85.3	81.7	83.9	86.7
Low:	27.1	36.1	42.1	48.9	51.9	63.1	64.5	66.3	70.9	61.5	67.4	81.3

TIMELINESS 1 Raised 12/20/19
SAFETY 2 Raised 9/11/98
TECHNICAL 3 Lowered 1/24/20
BETA .50 (1.00 = Market)

LEGENDS
— 0.71 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
2-for-1 split 11/07
Options: Yes
Shaded area indicates recession

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$74-$102	$88 (5%)

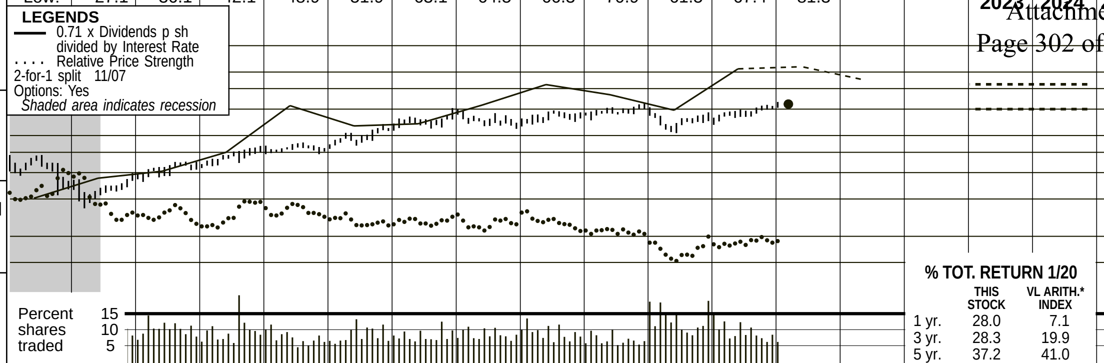
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	105	(+25%)	9%
Low	80	(-5%)	3%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	855	653	712
to Sell	365	492	460
Hld's(000)	512387	529909	544967

Target Price Range 2023 2024 2025



Percent shares traded 15 10 5

% TOT. RETURN 1/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	28.0	7.1
3 yr.	28.3	19.9
5 yr.	37.2	41.0

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
20.54	25.96	23.61	27.17	27.93	25.24	26.17	25.24	22.73	22.56	21.25	19.59	18.70	19.53	19.63	20.10	21.55	22.00	Revenues per sh	22.50
4.18	3.70	4.91	5.08	5.07	4.82	5.11	5.04	5.24	5.47	5.71	5.98	6.33	6.90	6.48	5.90	8.35	8.75	"Cash Flow" per sh	9.75
2.13	1.50	2.40	2.13	3.04	2.64	2.89	2.76	2.75	3.09	3.05	3.20	3.44	3.53	3.25	2.15	4.40	4.65	Earnings per sh A	5.50
1.30	1.34	1.38	1.46	1.58	1.75	1.83	1.97	2.11	2.25	2.40	2.59	2.80	3.04	3.34	3.67	3.76	3.86	Div'd Decl'd per sh B ■	4.15
3.88	4.83	5.81	6.89	6.09	6.40	5.89	6.41	7.20	7.06	9.13	9.35	9.69	8.54	6.25	7.30	8.35	8.30	Cap'l Spending per sh	7.75
16.79	14.96	18.50	16.31	17.28	18.66	20.66	20.09	18.34	20.02	19.74	21.24	23.26	26.59	29.53	34.55	35.45	36.45	Book Value per sh C	41.00
680.40	695.00	698.00	576.80	583.20	599.40	580.80	569.70	576.10	581.50	585.30	596.30	627.80	644.60	680.90	824.00	828.00	832.00	Common Shs Outst'g D	865.00
15.1	24.9	16.0	20.6	13.8	12.7	14.3	17.3	18.9	19.2	23.0	22.1	21.3	22.2	21.8	NMF	Bold figures are		Avg Ann'l P/E Ratio	17.0
.80	1.33	.86	1.09	.83	.85	.91	1.09	1.20	1.08	1.21	1.11	1.12	1.12	1.18	NMF	Value Line		Relative P/E Ratio	.95
4.0%	3.6%	3.6%	3.3%	3.8%	5.2%	4.4%	4.1%	4.1%	3.8%	3.4%	3.7%	3.8%	3.9%	4.7%	4.8%	estimates		Avg Ann'l Div'd Yield	4.5%

CAPITAL STRUCTURE as of 9/30/19
Total Debt $40879 mill. **Due in 5 Yrs** $16644 mill.
LT Debt $33635 mill. **LT Interest** $1335 mill.
(LT interest earned: 1.8x)

Leases, Uncapitalized Annual rentals $64 mill.

Pension Assets-12/18 $7197 mill. **Oblig** $8500 mill.
Pfd Stock $1596 mill. **Pfd Divd** $28 mill.
2 mill. shs. 1.75%, cum., convertible in 2022.
Common Stock 823,093,381 shs.
as of 10/11/19
MARKET CAP: $70 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
15197	14379	13093	13120	12436	11683	11737	12586	13366	16550	17850	18300	Revenues ($mill)	19550
1724.0	1603.0	1594.0	1806.0	1793.0	1899.0	2123.0	2244.0	2130.0	1830	3705	3930	Net Profit ($mill)	4760
38.6%	34.6%	36.2%	33.0%	28.1%	32.0%	22.8%	27.2%	17.7%	25.0%	17.0%	17.0%	Income Tax Rate	17.0%
5.9%	5.3%	5.7%	3.7%	4.5%	5.3%	7.5%	10.5%	6.3%	8.0%	4.0%	4.0%	AFUDC % to Net Profit	3.0%
56.3%	59.8%	60.9%	61.9%	65.4%	65.1%	67.4%	64.4%	60.8%	57.5%	56.0%	59.0%	Long-Term Debt Ratio	59.5%
42.8%	39.3%	38.2%	37.3%	34.6%	34.9%	32.6%	35.6%	39.2%	40.0%	41.5%	39.0%	Common Equity Ratio	40.5%
28012	29097	27676	31229	33360	36280	44836	48090	51251	70775	70550	78225	Total Capital ($mill)	87600
26713	29670	30773	32628	36270	41554	49964	53758	54560	67500	71175	74675	Net Plant ($mill)	83900
7.7%	7.0%	7.5%	7.3%	6.6%	6.5%	6.0%	5.9%	5.5%	4.0%	6.5%	6.0%	Return on Total Cap'l	7.0%
14.1%	13.7%	14.7%	15.2%	15.5%	15.0%	14.5%	13.1%	10.6%	6.0%	12.0%	12.0%	Return on Shr. Equity	13.5%
14.2%	13.9%	14.9%	15.4%	15.4%	15.0%	14.5%	13.1%	10.6%	6.5%	12.5%	13.0%	Return on Com Equity E	13.5%
5.3%	4.0%	3.5%	4.2%	3.3%	2.9%	2.7%	1.8%	NMF	NMF	2.0%	2.5%	Retained to Com Eq	3.5%
63%	71%	77%	73%	79%	81%	81%	86%	103%	NMF	86%	83%	All Div'ds to Net Prof	76%

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)	NA	NA	NA
Fixed Charge Cov. (%)	310	287	219

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '23-'25
Revenues	-3.0%	-4.0%	2.0%
"Cash Flow"	2.5%	4.5%	6.0%
Earnings	3.0%	3.5%	7.0%
Dividends	7.5%	7.5%	4.5%
Book Value	4.5%	6.5%	6.5%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	3384	2813	3179	3210	12586
2018	3466	3088	3451	3361	13366
2019	3858	3970	4269	4453	16550
2020	4550	4200	4500	4600	17850
2021	4700	4250	4650	4700	18300

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.01	.62	1.03	.87	3.53
2018	.77	.82	1.22	.44	3.25
2019	d.34	.14	1.17	1.18	2.15
2020	1.25	.90	1.15	1.10	4.40
2021	1.35	.95	1.25	1.10	4.65

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.70	.70	.70	.70	2.80
2017	.755	.755	.755	.77	3.04
2018	.835	.835	.835	.835	3.34
2019	.9175	.9175	.9175	.9175	3.67
2020	.94				

BUSINESS: Dominion Energy, Inc. (formerly Dominion Resources) is a holding company for Virginia Power, North Carolina Power, & South Carolina E&G, which serve 3.4 mill. customers in VA, SC, & NC. Serves 3.3 mill. gas customers in OH, WV, UT, SC, & NC. Other ops. incl. independent power production. Acq'd Questar 9/16; SCANA 1/19. Elec. rev. breakdown: residential, 46%; commercial, 32%; industrial, 7%; other, 15%. Generating sources: gas, 33%; nuclear, 29%; coal, 13%; other, 6%; purchased, 19%. Fuel costs: 27% of revs. '18 reported deprec. rates: 2.4%-4.6%. Has 21,300 empls. Chairman, President & CEO: Thomas F. Farrell II. Inc.: VA. Address: 120 Tredegar St., P.O. Box 26532, Richmond, VA 23261-6532. Tel.: 804-819-2000. Internet: www.dominionenergy.com.

We expect Dominion Energy's earnings to recover in 2020 and advance in 2021. In the first half of 2019, some unusual charges depressed the bottom line. These included a $1 billion refund of previously collected revenues of the utility subsidiary of SCANA, which Dominion Energy bought last year, and a $316 million aftertax charge for an early retirement program. We assume no such items this year. Besides the easy year-to-year comparison, the company's Virginia Power subsidiary benefits from regulatory mechanisms that enable the utility to recover certain capital expenditures without having to file a general rate case. Utilities in North Carolina and Utah are awaiting rate orders. South Carolina Electric & Gas plans to file a rate case this year, which should lift profits in 2021. On the nonregulated side, the Millstone plant is benefiting from a 10-year contract with the state of Connecticut, which began on October 1st. Dominion Energy's goal is to increase earnings by at least 5% annually beginning in 2021.

The company is selling a 25% stake in a liquefied natural gas facility. This will raise $2.1 billion. Dominion Energy will use the proceeds to retire debt and offset some of its common-equity needs.

Construction of a gas pipeline is being held up by litigation. The company expects a ruling by the U.S. Supreme Court in June. If the verdict is favorable, the 48%-owned project is expected to be completed by year-end 2021 at a total cost of $7.3 billion-$7.8 billion.

Dominion Energy plans a major investment in offshore wind. Subject to approval by the Virginia regulators, the company plans to spend about $8 billion, most of which will be after 2023. Note that offshore wind entails construction risk.

The board of directors raised the dividend this quarter. The increase was $0.09 a share (2.5%) annually. This is about half of the average growth rate for the electric utility industry.

This timely stock has one of the highest dividend yields of any utility issue. Total return potential over the 18-month and 3- to 5-year periods is modest, but superior to those of most electric utility stocks.

Paul E. Debbas, CFA *February 14, 2020*

(A) Diluted earnings. Excl. nonrec. gains (losses): '06, (18¢); '07, $1.67; '08, 12¢; '09, (47¢); '10, $2.18; '11, (7¢); '12, ($1.70); '14, (76¢); '17, $1.19; '18, 43¢; '19, (58¢); losses from disc. ops.: '06, 26¢; '07, 1¢; '10, 26¢; '12, 4¢; '13, 16¢. Next earnings report due early May. (B) Div'ds paid in mid-Mar., June, Sept., & Dec. ■ Div'd reinvestment plan avail. (C) Incl. intang. In '18: $14.33/sh. (D) In mill., adj. for split. (E) Rate base: Net orig. cost, adj. Rate all'd on com. eq. in '11: 10.9%; earned on avg. com. eq., '18: 11.5%. Regulat. Climate: Avg.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	55
Earnings Predictability	50

DUKE ENERGY NYSE-DUK

RECENT PRICE **96.60** | P/E RATIO **18.9** (Trailing: 20.2 / Median: 18.0) | RELATIVE P/E RATIO **1.07** | DIV'D YLD **4.0%** | VALUE LINE

High:	53.8	55.8	66.4	71.1	75.5	87.3	90.0	87.8	91.8	91.4	97.4	98.1
Low:	35.2	46.4	50.6	59.6	64.2	67.1	65.5	70.2	76.1	72.0	82.5	89.8

TIMELINESS 2 Lowered 2/7/20
SAFETY 2 New 6/1/07
TECHNICAL 4 Lowered 2/7/20
BETA .45 (1.00 = Market)

18-Month Target Price Range

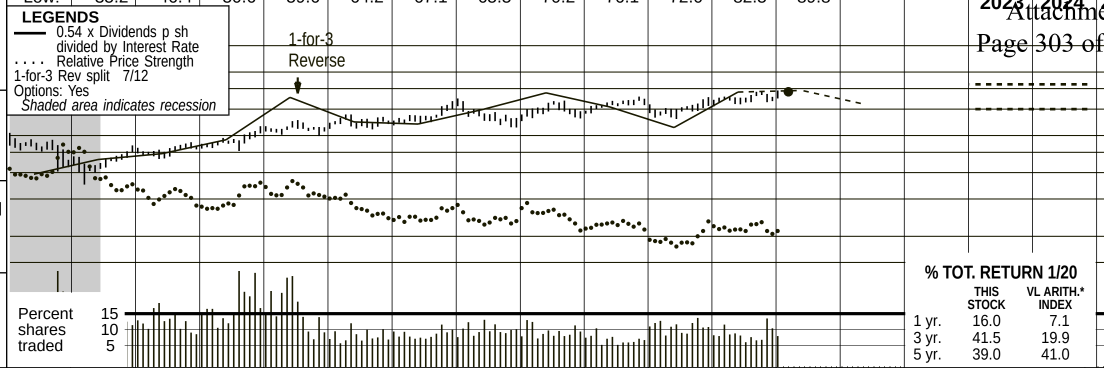
Low-High	Midpoint (% to Mid)
$82-$110	$96 (0%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	105	(+10%)	6%
Low	80	(-15%)	Nil

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	694	682	711
to Sell	572	586	582
Hld's(000)	438644	7059915	445072



% TOT. RETURN 1/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	16.0	7.1
3 yr.	41.5	19.9
5 yr.	39.0	41.0

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	**34.40**	**34.35**	**35.05**	Revenues per sh	**37.50**
--	--	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**	**12.55**	"Cash Flow" per sh	**14.25**
--	--	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**	**5.35**	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**	**3.89**	Div'd Decl'd per sh B ■	**4.10**
--	--	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**	**12.75**	Cap'l Spending per sh	**12.00**
--	--	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**	**65.70**	Book Value per sh C	**71.75**
--	--	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**	**760.00**	Common Shs Outst'g D	**775.00**
--	--	--	16.1	17.3	13.3	12.7	13.8	17.5	17.4	17.9	18.2	21.3	19.9	19.4	**17.8**	*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%**

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
14272	14529	19624	24598	23925	23459	22743	23565	24521	**25200**	**25900**	**26650**	Revenues ($mill)	**29000**
1765.0	1839.0	2136.0	2813.0	2934.0	2854.0	2560.0	2963.0	2928.0	**3735**	**3945**	**4110**	Net Profit ($mill)	**4735**
32.6%	31.3%	30.2%	32.6%	30.6%	32.2%	31.0%	30.4%	14.2%	**12.5%**	**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%	**9.0%**	**8.0%**	**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%	**54.5%**	**54.5%**	**54.5%**	Long-Term Debt Ratio	**55.0%**
55.7%	54.9%	52.9%	52.0%	52.3%	51.4%	47.4%	46.0%	46.2%	**44.5%**	**45.0%**	**44.5%**	Common Equity Ratio	**44.5%**
40457	41451	77307	79482	78088	77222	86609	90774	94940	**101375**	**107825**	**111925**	Total Capital ($mill)	**125000**
40344	42661	68558	69490	70046	75709	82520	86391	91694	**97825**	**103150**	**107375**	Net Plant ($mill)	**117300**
5.5%	5.6%	3.6%	4.6%	4.8%	4.8%	4.0%	4.3%	4.2%	**5.0%**	**5.0%**	**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%**	**8.0%**	**8.0%**	Return on Shr. Equity	**8.5%**
7.8%	8.1%	5.2%	6.8%	7.2%	7.2%	6.2%	7.1%	6.7%	**8.0%**	**8.0%**	**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%	**2.0%**	**2.0%**	**2.0%**	Retained to Com Eq	**2.5%**
73%	72%	82%	78%	76%	79%	91%	83%	84%	**74%**	**73%**	**73%**	All Div'ds to Net Prof	**68%**

CAPITAL STRUCTURE as of 9/30/19
Total Debt $60383 mill. **Due in 5 Yrs** $21163 mill.
LT Debt $54818 mill. **LT Interest** $1998 mill.
Incl. $941 mill. capitalized leases.
(LT interest earned: 2.7x)
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 729,032,868 shs.
as of 10/31/19
MARKET CAP: $70 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 '23-'25
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%

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	**6224**	**25200**
2020	**6350**	**6000**	**7200**	**6350**	**25900**
2021	**6550**	**6150**	**7400**	**6550**	**26650**

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	**.87**	**5.05**
2020	**1.30**	**1.10**	**1.85**	**.95**	**5.20**
2021	**1.35**	**1.15**	**1.90**	**.95**	**5.35**

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	.9275	.9275	3.64
2019	.9275	.9275	.945	.945	3.75
2020	.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 has reached a settlement regarding the closing of coal ash basins in North Carolina. This matter has been of concern since February of 2014, when a significant leakage of coal ash went into a river. Last April, the North Carolina Department of Environmental Quality ordered the company to excavate its nine coal ash basins in the state. The estimated cost of addressing this matter would have been $9.5 billion-$10.5 billion, but the settlement will reduce this by $1.5 billion. Of the $8.0 billion-$9.0 billion, $2.4 billion was spent through 2019, with the remainder expected over the next 15 to 20 years. Duke will file rate cases to recover the costs.

Some rate cases are already pending. In North Carolina, Duke Energy Carolina and Duke Energy Progress filed for increases of $291 million (6.0%) and $464 million (12.3%), respectively. The applications are based on a return on equity of 10.3% and a common-equity ratio of 53%. New tariffs are likely to take effect in the third period of 2020. In Indiana, the utility requested a hike of $395 million (15%), based on a 10.4% ROE and a common-equity ratio of 53%. Duke asked for $345 million this year and $50 million in 2021. In Kentucky, Duke sought $46 million (12.5%), based on a 9.8% ROE and a 48% common-equity ratio. New rates are expected to take effect in the second quarter.

We look for steady profit growth this year and next. Rate relief is the primary reason. The company's utilities also have some regulatory mechanisms that provide revenues without filing a rate case. Duke was expected to issue guidance for 2020 shortly after our report went to press.

Duke plans to issue $2.5 billion of equity by year-end 2020. This is in response to cost overruns at a 47%-owned pipeline project, which has been plagued by delays stemming from litigation. The cost is estimated at $7.3 billion-$7.8 billion, with an in-service date in 2021.

This timely stock offers one of the highest dividend yields of any electric utility equity. This is one percentage point above the utility average. However, total return potential is unappealing for either the 18-month span or the 3- to 5-year period.

Paul E. Debbas, CFA *February 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 May. (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	35
Earnings Predictability	90

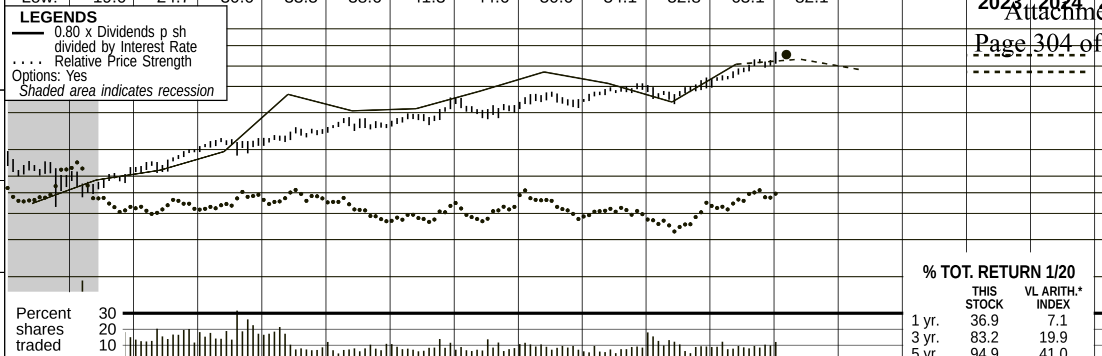
EVERSOURCE ENERGY NYSE-ES

RECENT PRICE **90.60** | P/E RATIO **25.4** (Trailing: 26.5 / Median: 18.0) | RELATIVE P/E RATIO **1.44** | DIV'D YLD **2.5%** | VALUE LINE

TIMELINESS 3 Lowered 9/13/19
SAFETY 1 Raised 5/22/15
TECHNICAL 3 Raised 2/14/20
BETA .55 (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	93.6
Low:	19.0	24.7	30.0	33.5	38.6	41.3	44.6	50.0	54.1	52.8	63.1	82.1

Target Price Range
2023 | 2024 | 2025



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$66-$91	$79 (-15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	90	(Nil)	3%
Low	75	(-15%)	-2%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	312	327	357
to Sell	288	269	268
Hld's(000)	234072	255223	265386

% TOT. RETURN 1/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	36.9	7.1
3 yr.	83.2	19.9
5 yr.	94.9	41.0

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	*26.25*	*25.80*	*26.25*	Revenues per sh	28.00
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	*7.15*	*7.35*	*7.70*	"Cash Flow" per sh	8.75
.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*	*3.65*	*3.85*	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	*9.15*	*7.70*	*7.05*	Cap'l Spending per sh	6.75
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	*37.70*	*40.40*	*42.25*	Book Value per sh C	48.50
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	*324.00*	*337.00*	*341.00*	Common Shs Outst'g D	355.00
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	*1.20*	*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 9/30/19
Total Debt $15589 mill. **Due in 5 Yrs** $5917.8 mill.
LT Debt $13980 mill. **LT Interest** $549.7 mill.
(LT interest earned: 3.5x)
Leases, Uncapitalized Annual rentals $11.5 mill.
Pension Assets-12/18 $4573.9 mill. **Oblig** $5520.0 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 323,761,393 shs. **as of 10/31/19**
MARKET CAP: $29 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	*8500*	*8700*	*8950*	Revenues ($mill)	9600
377.8	400.3	533.0	793.7	827.1	886.0	949.8	995.5	1040.5	*1110*	*1215*	*1315*	Net Profit ($mill)	1620
36.6%	29.9%	34.0%	35.0%	36.2%	37.9%	36.9%	36.8%	21.7%	*21.5%*	*21.5%*	*21.5%*	Income Tax Rate	21.5%
7.1%	8.6%	2.3%	1.4%	2.4%	2.9%	3.9%	4.7%	6.1%	*6.0%*	*6.0%*	*6.0%*	AFUDC % to Net Profit	5.0%
55.1%	53.4%	43.7%	44.3%	45.9%	45.6%	44.8%	51.2%	52.4%	*53.0%*	*52.0%*	*52.5%*	Long-Term Debt Ratio	53.5%
43.6%	45.3%	55.4%	54.8%	53.2%	53.6%	54.4%	48.2%	46.9%	*46.5%*	*47.5%*	*47.0%*	Common Equity Ratio	46.0%
8741.8	8856.0	16675	17544	18738	19313	19697	23018	24474	*26375*	*28775*	*30675*	Total Capital ($mill)	37400
9567.7	10403	16605	17576	18647	19892	21351	23617	25610	*27300*	*28800*	*30025*	Net Plant ($mill)	33300
5.8%	5.9%	4.2%	5.5%	5.3%	5.5%	5.8%	5.2%	5.2%	*5.0%*	*5.0%*	*5.5%*	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%	*9.0%*	*9.0%*	*9.0%*	Return on Shr. Equity	9.5%
9.8%	9.8%	5.7%	8.2%	8.2%	8.5%	8.8%	8.9%	9.0%	*9.0%*	*9.0%*	*9.0%*	Return on Com Equity E	9.5%
5.0%	5.0%	1.6%	3.4%	3.5%	3.4%	3.5%	3.5%	3.4%	*3.5%*	*3.5%*	*3.5%*	Retained to Com Eq	3.5%
49%	50%	72%	59%	58%	61%	60%	61%	62%	*62%*	*62%*	*62%*	All Div'ds to Net Prof	62%

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	-1.8	-2.6	+2.2
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	6.04	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. (%)	436	427	319

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '23-'25
Revenues	-4.5%	2.0%	1.5%
"Cash Flow"	2.0%	5.0%	5.5%
Earnings	8.0%	7.0%	5.5%
Dividends	9.5%	8.0%	6.0%
Book Value	6.5%	5.0%	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	2416	1884	2176	*2024*	*8500*
2020	*2450*	*1950*	*2200*	*2100*	*8700*
2021	*2550*	*2000*	*2250*	*2150*	*8950*

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	*1.03*	*.80*	*.97*	*.85*	*3.65*
2021	*1.08*	*.85*	*1.02*	*.90*	*3.85*

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				

BUSINESS: Eversource Energy (formerly Northeast Utilities) is the parent of utilities that have 3.1 mill. electric, 504,000 gas, 230,000 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: 37% of revs. '18 reported deprec. rate: 2.9%. Has 8,000 empls. Chairman, Pres. & CEO: James J. Judge. Inc.: MA. Address: 300 Cadwell Drive, Springfield, MA 01104. Tel.: 413-785-5871. Internet: www.eversource.com.

Two of Eversource's utilities have rate cases pending. Public Service of New Hampshire is seeking an electric increase of $70 million, based on a 10.4% return on equity and a 54.85% common-equity ratio. The utility has been collecting an interim hike of $28.3 million since July 1st. The staff of the New Hampshire commission recommended a $24.4 million increase, based on an 8.25% ROE and a common-equity ratio of 50%. New tariffs are expected to take effect on July 1st. In Massachusetts, NSTAR Gas filed for a $38 million hike, based on a 10.45% ROE and a 54.85% common-equity ratio. The utility is also seeking a regulatory mechanism that will provide an annual performance-based ratemaking increase. New rates should take effect on October 1st.

We estimate that steady profit growth will continue this year and next. Eversource is benefiting from rate relief at its utilities, conversions of customers to gas heat from oil heat, and effective expense management. We think the company will achieve its targeted earnings growth rate of 5%-7% this year and next. However . . .

There is a source of uncertainty to Eversource's income. After multiple complaints by electric transmission customers in New England, the Federal Energy Regulatory Commission is reviewing the allowed ROEs for transmission owners. Eversource might be forced to take a charge for the refund of previously collected revenues. We would *include* this in our earnings presentation.

The Board of Trustees raised the dividend. The increase was $0.13 a share (6.1%) annually, slightly higher than in recent years. Eversource's goal for annual dividend growth is 5%-7%.

A joint venture plans to build over 1,700 megawatts of offshore wind capacity. Eversource's partner, Orsted, has built offshore wind in Europe. The projects would come on line in 2022, 2023, and 2024, and are expected to provide Eversource with a return on investment exceeding that of its utilities. Offshore wind entails much construction risk, however.

This top-quality stock has a dividend yield that is low, by utility standards. Also, the recent quotation is above our 3- to 5-year Target Price Range.

Paul E. Debbas, CFA *February 14, 2020*

(A) Diluted EPS. Excl. nonrecurring gains (losses): '03, (32¢); '04, (7¢); '05, ($1.36); '08, (19¢); '10, 9¢; '19, (64¢). Next earnings report due mid-Feb. (B) Div'ds historically paid late Mar., June, Sept., & Dec. ■ Div'd reinvestment plan avail. (C) Incl. deferred charges. In '18: $28.59/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., '18: 9.2%. Regulatory Climate: CT, Below Average; NH, Average; MA, Above Average.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	70
Earnings Predictability	95

EXELON CORP. NDQ-EXC

RECENT PRICE **48.09** | P/E RATIO **14.7** (Trailing: 20.2 / Median: 14.0) | RELATIVE P/E RATIO **0.84** | DIV'D YLD **3.2%** | VALUE LINE

TIMELINESS	**3** Lowered 6/7/19
SAFETY	**2** Raised 5/17/19
TECHNICAL	**5** Lowered 1/31/20
BETA .65 (1.00 = Market)	

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$40-$56	$48 (0%)

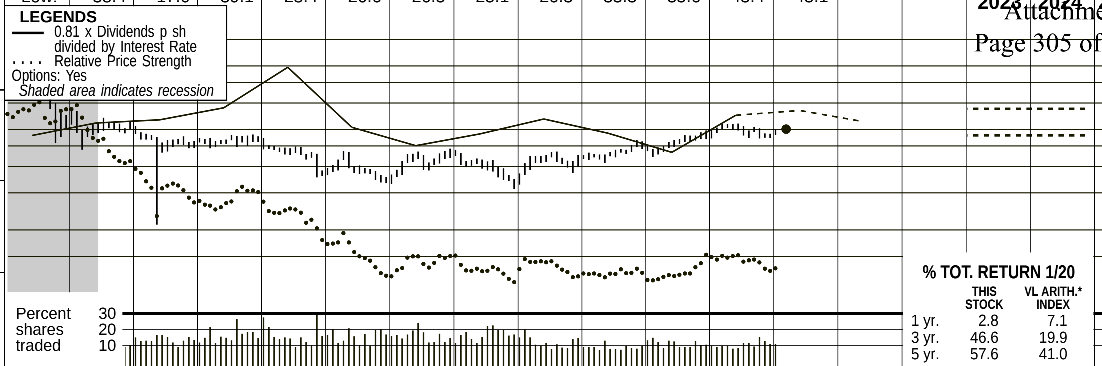
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	60	(+25%)	9%
Low	45	(-5%)	2%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	463	429	423
to Sell	436	464	451
Hld's(000)	774915	774543	767278

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	59.0	49.9	45.4	43.7	37.8	38.9	38.3	37.7	42.7	47.4	51.2	48.5
Low:	38.4	17.0	39.1	28.4	26.6	26.5	25.1	26.3	33.3	35.6	43.4	45.1



% TOT. RETURN 1/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	2.8	7.1
3 yr.	46.6	19.9
5 yr.	57.6	41.0

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
21.85	23.05	23.37	28.62	28.65	26.25	28.17	28.53	27.48	29.03	31.90	32.01	33.94	34.81	37.17	*35.50*	*37.15*	*38.80*	Revenues per sh	*44.25*
5.68	6.19	6.71	7.43	7.64	8.25	8.32	7.23	6.61	6.72	6.61	6.80	7.01	8.37	8.24	*9.00*	*9.45*	*9.90*	"Cash Flow" per sh	*11.25*
2.75	3.21	3.50	4.03	4.10	4.29	3.87	3.75	1.92	2.31	2.10	2.54	1.80	2.78	2.07	*3.00*	*3.15*	*3.25*	Earnings per sh A	*3.75*
1.26	1.60	1.64	1.82	2.05	2.10	2.10	2.10	2.10	1.46	1.24	1.24	1.26	1.31	1.38	1.45	*1.53*	*1.61*	Div'd Decl'd per sh B ■	*1.90*
2.89	3.25	3.61	4.05	4.74	4.96	5.03	6.09	6.77	6.29	7.07	8.29	9.26	7.87	7.84	*7.60*	*7.25*	*7.15*	Cap'l Spending per sh	*7.25*
14.19	13.69	14.89	15.34	16.78	19.16	20.49	21.68	25.07	26.52	26.29	28.04	27.96	30.99	31.77	*33.35*	*35.00*	*36.65*	Book Value per sh C	*42.25*
664.19	666.37	669.86	660.88	658.15	659.76	661.85	663.37	854.78	857.29	859.83	919.92	924.04	963.34	968.19	*972.00*	*976.00*	*980.00*	Common Shs Outst'g D	*992.00*
13.0	15.4	16.5	18.2	18.0	11.5	11.0	11.3	19.1	13.4	16.0	12.6	18.7	13.4	20.1	*15.8*	*Bold figures are*		Avg Ann'l P/E Ratio	*13.5*
.69	.82	.89	.97	1.08	.77	.70	.71	1.22	.75	.84	.63	.98	.67	1.09	*.85*	*Value Line*		Relative P/E Ratio	*.75*
3.5%	3.2%	2.8%	2.5%	2.8%	4.3%	4.9%	5.0%	5.7%	4.7%	3.7%	3.9%	3.7%	3.5%	3.3%	3.1%	*estimates*		Avg Ann'l Div'd Yield	*3.8%*

CAPITAL STRUCTURE as of 9/30/19
Total Debt $37713 mill. **Due in 5 Yrs** $11451 mill.
LT Debt $32446 mill. **LT Interest** $1379 mill.
Includes $390 mill. nonrecourse transition bonds.
(LT interest earned: 2.5x)
Leases, Uncapitalized Annual rentals $140 mill.

Pension Assets-12/18 $16678 mill. **Oblig** $20692 mill.

Pfd Stock None

Common Stock 972,108,865 shs.

MARKET CAP: $47 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
18644	18924	23489	24888	27429	29447	31360	33531	35985	*34500*	*36250*	*38000*	Revenues ($mill)	*44000*
2567.0	2499.0	1579.0	1999.0	1826.0	2282.0	1677.0	2636.0	2010.0	*2900*	*3070*	*3215*	Net Profit ($mill)	*3830*
39.2%	36.8%	32.4%	36.5%	27.2%	32.2%	38.5%	34.2%	5.4%	*20.5%*	*20.5%*	*20.5%*	Income Tax Rate	*20.5%*
2.1%	3.0%	5.8%	4.5%	5.5%	5.4%	12.3%	6.5%	7.0%	*6.0%*	*5.0%*	*5.0%*	AFUDC % to Net Profit	*4.0%*
46.8%	45.7%	45.8%	44.4%	46.7%	48.3%	55.5%	52.2%	52.8%	*50.0%*	*51.0%*	*49.5%*	Long-Term Debt Ratio	*49.0%*
52.9%	54.0%	53.5%	55.2%	52.8%	51.3%	44.5%	47.8%	47.2%	*50.0%*	*49.0%*	*50.5%*	Common Equity Ratio	*51.0%*
25651	26661	40057	41196	42811	50272	58053	62422	65229	*64750*	*70025*	*71225*	Total Capital ($mill)	*82300*
29941	32570	45186	47330	52087	57439	71555	74202	76707	*78750*	*80175*	*81225*	Net Plant ($mill)	*83000*
11.4%	10.6%	5.1%	5.9%	5.3%	5.5%	4.1%	5.3%	4.2%	*5.5%*	*5.5%*	*6.0%*	Return on Total Cap'l	*6.0%*
18.8%	17.3%	7.3%	8.7%	8.0%	8.8%	6.5%	8.8%	6.5%	*9.0%*	*9.0%*	*9.0%*	Return on Shr. Equity	*9.0%*
18.9%	17.3%	7.3%	8.7%	8.0%	8.8%	6.5%	8.8%	6.5%	*9.0%*	*9.0%*	*9.0%*	Return on Com Equity E	*9.0%*
8.7%	7.7%	NMF	3.2%	3.3%	4.5%	1.9%	4.7%	2.2%	*4.5%*	*4.5%*	*4.5%*	Retained to Com Eq	*4.5%*
54%	56%	109%	63%	59%	49%	70%	47%	66%	*47%*	*47%*	*47%*	All Div'ds to Net Prof	*48%*

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	+25.8	-3.0	NA
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NMF	NMF	NMF
Capacity at Peak (Mw)	NA	NA	NA
Peak Load (Mw)	NA	NA	NA
Nuclear Capacity Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+33.7	+.9	NA
Fixed Charge Cov. (%)	238	282	236

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '23-'25
Revenues	3.0%	4.5%	*3.5%*
"Cash Flow"	1.0%	3.0%	*5.0%*
Earnings	-5.5%	-3.5%	*8.0%*
Dividends	-3.5%	-7.0%	*5.5%*
Book Value	7.0%	4.5%	*5.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	8757	7623	8769	8382	33531
2018	9693	8076	9403	8813	35985
2019	9477	7689	8929	*8405*	*34500*
2020	*9950*	*8100*	*9400*	*8800*	*36250*
2021	*10450*	*8500*	*9850*	*9200*	*38000*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.83	.44	.95	.56	2.78
2018	.60	.56	.76	.16	2.07
2019	.93	.50	.79	*.78*	*3.00*
2020	*.95*	*.65*	*.90*	*.65*	*3.15*
2021	*1.00*	*.65*	*.95*	*.65*	*3.25*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.31	.318	.318	.318	1.26
2017	.328	.328	.328	.328	1.31
2018	.345	.345	.345	.345	1.38
2019	.3625	.3625	.3625	.3625	1.45
2020	.3825				

BUSINESS: Exelon Corporation is a holding company for Commonwealth Edison, PECO Energy, Baltimore Gas and Electric, Pepco, Delmarva Power, & Atlantic City Electric. Has 8.9 mill. elec., 1.3 mill. gas customers. Has nonregulated generating & energy-marketing ops. Acq'd Constellation Energy 3/12; Pepco Holdings 3/16. Elec. rev. breakdown: res'l, 54%; small comm'l & ind'l, 16%; large comm'l & ind'l, 17%; other, 13%. Generating sources: nuclear, 68%; other, 10%; purch., 22%. Fuel costs: 46% of revs. '18 depr. rates: 2.7%-7.0% elec., 2.1% gas. Has 33,400 empls. Chairman: Mayo A. Shattuck III. Pres. & CEO: Christopher M. Crane. Inc.: PA. Address: 10 S. Dearborn St., P.O. Box 805379, Chicago, IL 60680-5379. Tel.: 312-394-7398. Internet: www.exeloncorp.com.

Exelon stock was one of the poorest performers in the electric utility industry in 2019. Investors were concerned about a federal grand jury investigation about the company's lobbying practices in Illinois and its relationship with a state senator. Exelon is seeking legislation in Illinois that would provide subsidies for some nuclear facilities in the state, similar to a law enacted in 2016 that covered other nuclear facilities there. However, a bill in the Illinois legislature would repeal the 2016 law. The reason for these subsidiaries stems from unfavorable conditions in the power markets, which have hurt the profitability of nonregulated nuclear assets for the past decade. (Exelon has shut nuclear plants in New Jersey and Pennsylvania for financial reasons.) Due to these negative factors, Exelon stock posted a total return of just 4.2% in 2019, which was an excellent year for most electric utility issues.

The utility side of Exelon's business is stronger than nonutility operations. The utilities now provide the majority of corporate profits since the company made utility acquisitions in 2012 and 2016. In 2019, two of Exelon's utilities received rate relief in Maryland. Pepco has a multiyear rate case pending in the District of Columbia in which it requested rate hikes of $84 million on November 1st and $40 million and $36 million at the start of 2021 and 2022, respectively. The utility requested a return on equity of 10.3% and a common-equity ratio of 50.68%. An order is expected in the fourth quarter. Delmarva Power filed for an electric increase in Maryland of $18.5 million, based on a 10.3% ROE and a 50.53% common-equity ratio. A ruling is due by July 2nd. Note that our earnings presentation *includes* mark-to-market accounting items and unrealized gains or losses on the company's nuclear decommissioning trusts because these are ongoing.

The board of directors raised the dividend. The increase was two cents a share (5.5%). Exelon has had a goal of 5% dividend growth through 2020. Its target beyond this year has not been stated.

We advise investors to look elsewhere. The uncertainties in Illinois and ongoing difficult market conditions in the nonregulated operations remain concerning.

Paul E. Debbas, CFA *February 14, 2020*

(A) Diluted egs. Excl. nonrec. gain (losses): '05, ($1.85); '06, ($1.15); '09, (20¢); '12, (50¢); '13, (31¢); '14, 23¢; '16, (58¢); '17, $1.19. '18 EPS don't sum due to rounding. Next earnings report due early May. **(B)** Div'ds historically paid in early Mar., June, Sept., & Dec. ■ Div'd reinv. plan avail. **(C)** Incl. deferred charges. In '18: $15.40/sh. **(D)** In mill. **(E)** Rate all'd on com. eq. in IL in '15: 9.25%; in MD in '16: 9.75% elec., 9.65% gas; in NJ in '16: 9.75%; earned on avg. com. eq., '18: 6.6%. Regulatory Climate: PA, NJ Avg.; IL, MD, Below Avg.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	25
Earnings Predictability	55

NEXTERA ENERGY NYSE-NEE

RECENT PRICE **264.54** | P/E RATIO **28.6** (Trailing: 42.1, Median: 16.0) | RELATIVE P/E RATIO **1.63** | DIV'D YLD **2.1%** | VALUE LINE

TIMELINESS 2 Raised 2/14/20
SAFETY 1 Raised 2/16/18
TECHNICAL 5 Lowered 2/7/20
BETA .50 (1.00 = Market)

High:	60.6	56.3	61.2	72.2	89.8	110.8	112.6	132.0	159.4	184.2	245.0	270.7
Low:	41.5	45.3	49.0	58.6	69.8	84.0	93.7	102.2	117.3	145.1	168.7	238.0

Target Price Range 2023 | 2024 | 2025

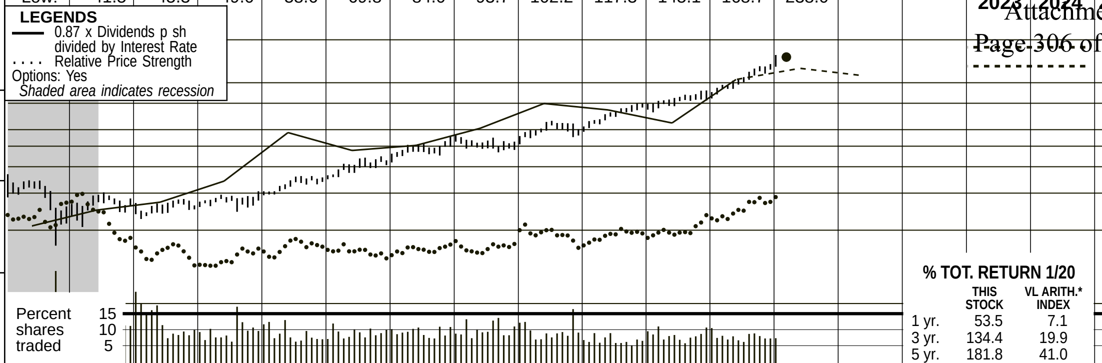
18-Month Target Price Range
Low-High: $210-$288 — Midpoint (% to Mid): $249 (-5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	295	(+10%)	5%
Low	240	(-10%)	Nil

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	752	738	790
to Sell	625	624	616
Hld's(000)	363843	370488	382169



% TOT. RETURN 1/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	53.5	7.1
3 yr.	134.4	19.9
5 yr.	181.8	41.0

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
28.27	30.00	38.75	37.47	40.13	37.82	36.39	36.88	33.62	34.80	38.42	37.93	34.52	36.51	34.99	**39.25**	**41.90**	**44.50**	Revenues per sh	**52.25**
5.60	6.18	6.77	6.85	8.03	8.75	9.62	9.29	8.69	10.54	12.10	12.92	12.97	12.11	15.37	**16.85**	**18.70**	**19.95**	"Cash Flow" per sh	**24.00**
2.46	2.32	3.23	3.27	4.07	3.97	4.74	4.82	4.56	4.83	5.60	6.06	5.78	6.50	6.67	7.76	**9.00**	**9.80**	Earnings per sh A	**12.50**
1.30	1.42	1.50	1.64	1.78	1.89	2.00	2.20	2.40	2.64	2.90	3.08	3.48	3.93	4.44	5.00	**5.65**	**6.20**	Div'd Decl'd per sh B ■ †	**8.00**
3.75	4.09	9.22	12.32	12.80	14.52	13.89	15.93	22.31	15.36	15.84	18.17	20.59	22.80	27.21	**25.05**	**25.55**	**26.05**	Cap'l Spending per sh	**27.25**
20.25	21.52	24.49	26.35	28.57	31.35	34.36	35.92	37.90	41.47	44.96	48.97	52.01	59.89	71.43	**75.65**	**79.10**	**82.80**	Book Value per sh C	**97.50**
372.24	394.85	405.40	407.35	408.92	413.62	420.86	416.00	424.00	435.00	443.00	461.00	468.00	471.00	478.00	**489.00**	**489.00**	**489.00**	Common Shs Outst'g D	**495.00**
13.6	17.9	13.7	18.9	14.5	13.4	10.8	11.5	14.4	16.6	17.3	16.9	20.7	21.6	24.8	26.8	*Bold figures are*		Avg Ann'l P/E Ratio	**21.5**
.72	.95	.74	1.00	.87	.89	.69	.72	.92	.93	.91	.85	1.09	1.09	1.34	1.46	*Value Line*		Relative P/E Ratio	**1.20**
3.9%	3.4%	3.4%	2.7%	3.0%	3.5%	3.9%	4.0%	3.6%	3.3%	3.0%	3.0%	2.9%	2.8%	2.7%	2.4%	*estimates*		Avg Ann'l Div'd Yield	**3.0%**

CAPITAL STRUCTURE as of 9/30/19
Total Debt $41787 mill. **Due in 5 Yrs** $18336 mill.
LT Debt $36144 mill. **LT Interest** $1446 mill.

(LT interest earned: 2.8x)

Pension Assets-12/18 $3806 mill. **Oblig** $2522 mill.

Pfd Stock None

Common Stock 488,775,903 shs.

MARKET CAP: $129 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
15317	15341	14256	15136	17021	17486	16155	17195	16727	19204	**20500**	**21750**	Revenues ($mill)	**25900**
1957.0	2021.0	1911.0	2062.0	2465.0	2752.0	2693.0	3074.0	3200.0	3769	**4435**	**4845**	Net Profit ($mill)	**6230**
21.4%	22.4%	26.6%	26.9%	32.3%	30.8%	29.3%	24.4%	28.6%	11.7%	**9.0%**	**9.0%**	Income Tax Rate	**9.0%**
4.4%	4.4%	10.8%	7.0%	6.7%	6.9%	8.2%	6.7%	6.6%	**5.0%**	**4.0%**	**4.0%**	AFUDC % to Net Profit	**3.0%**
55.5%	58.2%	59.1%	57.1%	55.0%	54.2%	53.3%	52.7%	44.0%	**50.5%**	**50.5%**	**50.5%**	Long-Term Debt Ratio	**50.0%**
44.5%	41.8%	40.9%	42.9%	45.0%	45.8%	46.7%	47.3%	56.0%	**49.5%**	**49.5%**	**49.5%**	Common Equity Ratio	**50.0%**
32474	35753	39245	42009	44283	49255	52159	59671	60926	**74550**	**77825**	**81525**	Total Capital ($mill)	**96800**
39075	42490	49413	52720	55705	61386	66912	72416	70334	82010	**89800**	**97625**	Net Plant ($mill)	**121200**
7.4%	7.0%	6.2%	6.2%	7.0%	6.8%	6.3%	6.3%	6.3%	**6.0%**	**6.5%**	**7.0%**	Return on Total Cap'l	**7.5%**
13.5%	13.5%	11.9%	11.4%	12.4%	12.2%	11.1%	10.9%	9.4%	**10.0%**	**11.5%**	**12.0%**	Return on Shr. Equity	**13.0%**
13.5%	13.5%	11.9%	11.4%	12.4%	12.2%	11.1%	10.9%	9.4%	**10.0%**	**11.5%**	**12.0%**	Return on Com Equity E	**13.0%**
7.8%	7.4%	5.6%	5.2%	6.0%	6.1%	4.4%	4.4%	3.2%	**3.5%**	**4.5%**	**4.5%**	Retained to Com Eq	**4.5%**
42%	46%	53%	54%	51%	50%	60%	60%	66%	64%	**62%**	**63%**	All Div'ds to Net Prof	**64%**

ELECTRIC OPERATING STATISTICS

	2016	2017	2018
% Change Retail Sales (KWH)	-.8	-.9	+1.4
Avg. Indust. Use (MWH)	255	NA	NA
Avg. Indust. Revs. per KWH (¢)	6.11	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)	+1.3	NA	NA
Fixed Charge Cov. (%)	339	278	266

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '23-'25
Revenues	-1.0%	- -	*5.5%*
"Cash Flow"	6.5%	7.0%	*8.5%*
Earnings	6.0%	6.0%	*10.0%*
Dividends	9.0%	10.5%	*10.5%*
Book Value	8.5%	9.5%	*7.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	3972	4404	4808	4011	17195
2018	3857	4063	4416	4391	16727
2019	4075	4970	5572	4587	19204
2020	**4400**	**5200**	**6000**	**4900**	**20500**
2021	**4650**	**5500**	**6400**	**5200**	**21750**

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.90	1.68	1.79	1.13	6.50
2018	2.06	1.64	2.10	.88	6.67
2019	1.41	2.56	1.81	1.99	7.76
2020	**2.35**	**2.45**	**2.45**	**1.75**	**9.00**
2021	**2.60**	**2.70**	**2.65**	**1.85**	**9.80**

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.87	.87	.87	.87	3.48
2017	.9825	.9825	.9825	.9825	3.93
2018	1.11	1.11	1.11	1.11	4.44
2019	1.25	1.25	1.25	1.25	5.00
2020					

BUSINESS: NextEra Energy, Inc. (formerly FPL Group, Inc.) is a holding company for Florida Power & Light Company (FPL) and Gulf Power, which provide electricity to 5.5 million customers in eastern, southern, & northwestern Florida. NextEra Energy Resources is a nonregulated power generator with nuclear, gas, & renewable ownership. Has 79.9% stake in NextEra Energy Partners. Rev. breakdown: residential, 55%; commercial, 35%; industrial & other, 10%. Generating sources: gas, 73%; nuclear, 22%; other, 3%; purch., 2%. Fuel costs: 22% of revs. '18 reported depr. rate (util.): 3.8%. Has 14,200 employees. Chairman, Pres. and CEO: James L. Robo. Inc.: FL. Address: 700 Universe Blvd., Juno Beach, FL 33408. Tel.: 561-694-4000. Internet: www.nexteraenergy.com.

NextEra Energy is likely to post strong earnings growth in 2020 and 2021. Last year, profits were hurt by mark-to-market losses, which were only partially offset by unrealized gains on the nuclear decomissoning trusts for the company's nonregulated nuclear assets. So, the year-to-year comparison will be easy. Beyond this, utilities in Florida operate under a regulatory plan that enables them to increase their earning power as regulatory capital employed increases, and both Florida Power & Light and Gulf Power are earning healthy returns on equity. The economy in the Sunshine State is strong, too. NextEra Energy Resources, the nonutility subsidiary, is adding renewable-energy projects and has a growing backlog. What's more . . .

Acquisitions made in late 2018 and early 2019 are likely to contribute to profits this year and next. The company bought Gulf Power, a gas utility in Florida, and two nonregulated gas-fired assets. Their contribution is expected to amount to $0.15 a share in 2020 and $0.20 a share in 2021. All told, we estimate that earnings will reach NextEra's targeted range of $8.70-$9.20 a share this year, and advance 9% next year.

NextEra hopes to complete a gas pipeline this year. The 31%-owned project has had delays and cost overruns due to litigation. The pipeline is 90% complete. The expected cost remains $5.4 billion.

We expect a hefty dividend increase this quarter. We estimate that the board will raise the annual payout $0.65 a share (13%). NextEra has a goal of 12%-14% yearly dividend growth through 2020. Perhaps the company will announce an extenstion of its dividend target when it makes its next dividend announcement.

This timely stock was one of the top-performing electric utility issues in 2019. The stock posted a total return of 42.6%. Following this impressive showing, the equity's valuation has risen to the point where its dividend yield is not significantly different from the median of all dividend-paying stocks under our coverage. Also, the recent quotation is near the upper end of our 2023-2025 Target Price Range. Total return potential is unexciting for the 18-month or 3- to 5-year period.

Paul E. Debbas, CFA *February 14, 2020*

(A) Diluted EPS. Excl. nonrecur. gains (losses): '11, (24¢); '13, (80¢); '16, 47¢; '17, 91¢; '18, $7.19; gain on disc. ops.: '13, 44¢. '18 & '19 EPS don't sum due to rounding. Next earnings report due late April. (B) Div'ds historically paid in mid-Mar., mid-June, mid-Sept., & mid-Dec. ■ Div'd reinvestment plan available. † Shareholder investment plan avail. (C) Incl. deferred charges. In '18: $9.57/sh. (D) In mill., adj. for stock split. (E) Rate allowed on com. eq. in '17 (FPL): 9.6%-11.6%; earned on avg. com. eq., '18: 10.9%. Regulatory Climate: Average.

Company's Financial Strength	A+
Stock's Price Stability	100
Price Growth Persistence	95
Earnings Predictability	70

PPL CORPORATION NYSE-PPL

RECENT PRICE **36.06** | P/E RATIO **14.7** (Trailing: 14.7, Median: 13.0) | RELATIVE P/E RATIO **0.84** | DIV'D YLD **4.6%** | **VALUE LINE**

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	35.1

TIMELINESS 1 Raised 1/17/20
SAFETY 2 Raised 8/21/15
TECHNICAL 3 Lowered 1/31/20
BETA .65 (1.00 = Market)

18-Month Target Price Range

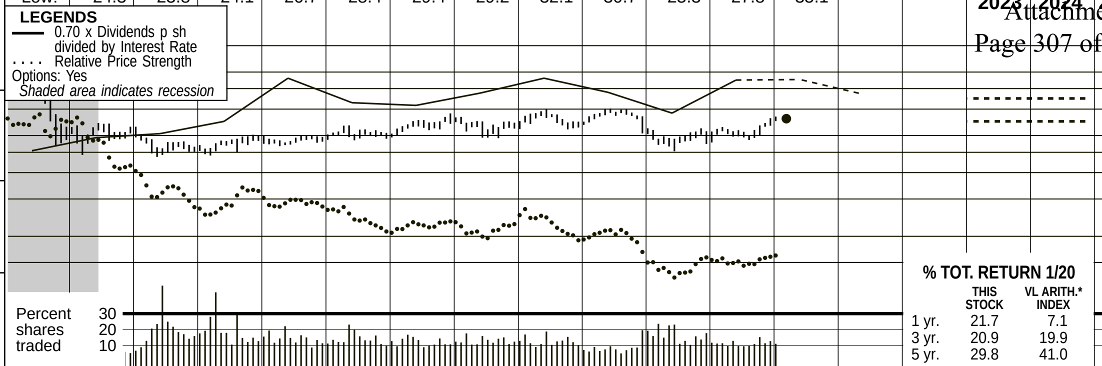
Low-High	Midpoint (% to Mid)
$26-$40	$33 (-10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	45	(+25%)	10%
Low	35	(-5%)	4%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	431	374	390
to Sell	309	358	335
Hld's(000)	526798	522107	514363



Target Price Range
2023 | 2024 | 2025

% TOT. RETURN 1/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	21.7	7.1
3 yr.	20.9	19.9
5 yr.	29.8	41.0

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	*10.00*	*10.30*	*10.60*	Revenues per sh	*11.50*
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*	*4.50*	"Cash Flow" per sh	*5.25*
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*	*2.65*	Earnings per sh A	*3.00*
.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*	*1.68*	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	*4.30*	*4.05*	*3.70*	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	*17.40*	*18.35*	*19.45*	Book Value per sh C	*23.00*
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*	*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	*13.1*	*Bold figures are*		Avg Ann'l P/E Ratio	*13.5*
.66	.80	.76	.92	1.06	1.71	.76	.66	.69	.72	.74	.70	.67	.89	.61	*.70*	*Value Line*		Relative P/E Ratio	*.75*
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 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: $26 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	*7700*	*7950*	*8200*	Revenues ($mill)	*9000*
1009.0	1456.0	1536.0	1541.0	1583.0	1603.0	1902.0	1449.0	1827.0	*1810*	*1980*	*2070*	Net Profit ($mill)	*2400*
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%	*2.0%*	*2.0%*	*1.0%*	AFUDC % to Net Profit	*1.0%*
59.0%	61.9%	64.1%	62.3%	58.0%	65.2%	64.3%	64.8%	63.3%	*59.0%*	*57.5%*	*57.0%*	Long-Term Debt Ratio	*54.5%*
39.8%	37.2%	35.9%	37.7%	42.0%	34.8%	35.7%	35.2%	36.7%	*41.0%*	*42.5%*	*43.0%*	Common Equity Ratio	*45.5%*
20621	29071	29205	33058	32484	28482	27707	30608	31726	*32750*	*33475*	*34875*	Total Capital ($mill)	*39600*
20858	27266	30032	33087	34597	30382	30074	33092	34458	*36525*	*38325*	*39775*	Net Plant ($mill)	*42700*
6.1%	6.5%	7.0%	6.2%	6.5%	7.1%	8.4%	6.2%	7.2%	*7.0%*	*7.5%*	*7.5%*	Return on Total Cap'l	*7.5%*
11.9%	13.1%	14.7%	12.4%	11.6%	16.2%	19.2%	13.5%	15.7%	*13.5%*	*14.0%*	*13.5%*	Return on Shr. Equity	*13.5%*
12.0%	13.3%	14.6%	12.4%	11.6%	16.2%	19.2%	13.5%	15.7%	*13.5%*	*14.0%*	*13.5%*	Return on Com Equity E	*13.5%*
5.2%	6.4%	6.7%	5.3%	4.5%	6.0%	8.8%	3.5%	6.0%	*4.5%*	*5.0%*	*5.0%*	Retained to Com Eq	*5.5%*
58%	52%	54%	57%	61%	63%	54%	74%	62%	*68%*	*65%*	*63%*	All Div'ds to Net Prof	*58%*

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 '23-'25
Revenues	-5.5%	-12.0%	*1.0%*
"Cash Flow"	-1.5%	-3.0%	*4.0%*
Earnings	- -	-.5%	*2.5%*
Dividends	2.5%	2.0%	*2.0%*
Book Value	1.0%	-4.0%	*6.0%*

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	*1885*	*7700*
2020	*2200*	*1850*	*2000*	*1900*	*7950*
2021	*2300*	*1900*	*2050*	*1950*	*8200*

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	*.51*	*2.40*
2020	*.70*	*.60*	*.65*	*.60*	*2.55*
2021	*.70*	*.65*	*.70*	*.60*	*2.65*

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				

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 12,500 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.

The dividend yield of PPL Corporation stock is about one and a half percentage points above the average for electric utility issues. This makes PPL the top-yielding utility equity under our coverage, a status it has held for many months. So, why is the yield high for a utility? Investors are worried about the regulatory situation in the United Kingdom, where PPL owns utilities. There is some concern that a new regulatory scheme, which will take effect in April of 2023, will be unfavorable for the company. Dividend growth potential is low, as well. Nevertheless, there are reasons for optimism, so . . .

The discount between PPL stock and others in this industry has narrowed. In 2019, the equity posted a 33.2% total return, above the median of 25.1% compiled by the Edison Electric Institute (a group representing investor-owned electric utilities). The worst-case scenario in the U.K.—a change in control of the government that might have resulted in nationalization of utilities—did not occur. Also, management states that some uncertainties with upcoming changes in regulation in the U.K. "have been clarified in a positive direction." Finally, we note that PPL has hedged most of its exposure to the British pound this year.

We estimate earnings growth in the mid-single-digit vicinity in 2020 and 2021. This year, PPL will benefit from a full year of rate increases that took effect in 2019. The company also benefits from some regulatory mechanisms that provide additional revenues annually, even without a general rate case. Our share-earnings estimates are within PPL's targeted ranges of $2.54-$2.58 in 2020 and $2.50-$2.80 in 2021.

We think the board of directors will raise the dividend, effective with the April payment. We estimate a hike of just one cent a share annually. At least this would be enough for PPL to extend its streak of dividend growth since 2012.

Timely PPL stock has interest for income-oriented investors. It is less appealing for the 18-month or 3- to 5-year period. Last fall, the company was reportedly engaged in merger talks with AVANGRID, but nothing has come out of this.

Paul E. Debbas, CFA *February 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 May. (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

P.S. ENTERPRISE GP. NYSE-PEG

RECENT PRICE 59.07 | P/E RATIO 17.6 (Trailing: 17.3, Median: 13.0) | RELATIVE P/E RATIO 1.00 | DIV'D YLD 3.3% | VALUE LINE

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	57.4

TIMELINESS 3 Lowered 12/13/19
SAFETY 1 Raised 11/23/12
TECHNICAL 3 Lowered 2/7/20
BETA .60 (1.00 = Market)

18-Month Target Price Range

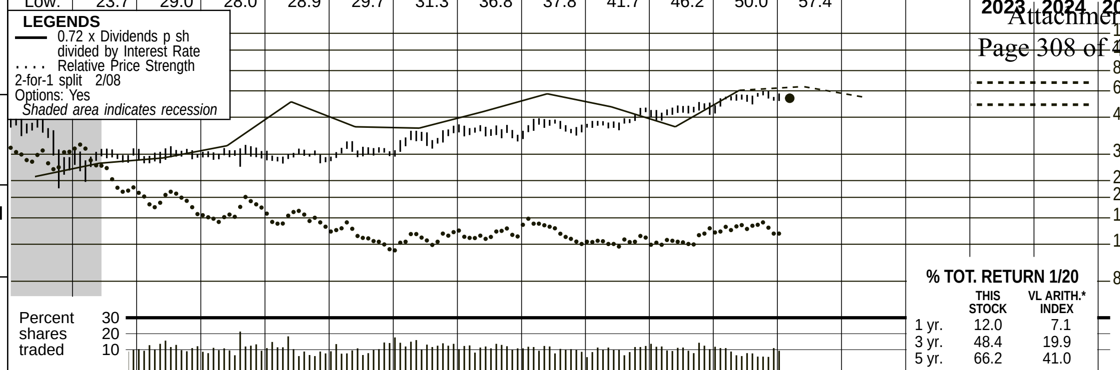
Low-High	Midpoint (% to Mid)
$53-$72	$63 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(+20%)	8%
Low	55	(-5%)	2%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	354	364	336
to Sell	366	352	365
Hld's(000)	348291	353688	353397



% TOT. RETURN 1/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	12.0	7.1
3 yr.	48.4	19.9
5 yr.	66.2	41.0

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	*19.75*	*20.55*	*21.35*	Revenues per sh	*24.00*
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	*6.60*	*6.50*	*6.95*	"Cash Flow" per sh	*8.25*
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*	*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*	*2.06*	Div'd Decl'd per sh B ■†	*2.40*
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*	*6.50*	*6.15*	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	*29.65*	*31.10*	*32.65*	Book Value per sh C	*38.00*
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	*506.00*	*506.00*	*506.00*	Common Shs Outst'g D	*506.00*
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	*15.9*	*Bold figures are*		Avg Ann'l P/E Ratio	*15.0*
.76	.88	.96	.88	.82	.67	.66	.65	.81	.76	.66	.62	.80	.82	1.01	*.85*	*Value Line*		Relative P/E Ratio	*.85*
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%	*estimates*		Avg Ann'l Div'd Yield	*3.8%*

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: $30 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	*10000*	*10400*	*10800*	Revenues ($mill)	*12150*
1557.0	1577.0	1239.0	1243.0	1518.0	1679.0	1436.0	1431.0	1399.0	*1880*	*1725*	*1835*	Net Profit ($mill)	*2150*
40.5%	40.4%	36.2%	39.5%	38.2%	37.4%	31.7%	37.3%	22.3%	*18.5%*	*18.5%*	*18.5%*	Income Tax Rate	*18.5%*
5.5%	2.7%	4.8%	4.6%	4.5%	5.5%	8.4%	10.6%	9.8%	*7.0%*	*8.0%*	*7.0%*	AFUDC % to Net Profit	*8.0%*
44.8%	42.1%	38.3%	40.4%	40.4%	40.3%	45.3%	46.6%	47.8%	*48.5%*	*49.0%*	*49.5%*	Long-Term Debt Ratio	*51.0%*
55.2%	57.9%	61.7%	59.6%	59.6%	59.7%	54.7%	53.4%	52.2%	*51.5%*	*51.0%*	*50.5%*	Common Equity Ratio	*49.0%*
17452	17731	17467	19470	20446	21900	24025	25915	27545	*29050*	*30800*	*32675*	Total Capital ($mill)	*39300*
16390	17849	19736	21645	23589	26539	29286	31797	34363	*36050*	*37825*	*39300*	Net Plant ($mill)	*42300*
10.4%	10.2%	8.1%	7.5%	8.4%	8.6%	6.8%	6.4%	6.0%	*7.5%*	*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%	*12.5%*	*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%	*12.5%*	*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%	*6.0%*	*4.5%*	*5.0%*	Retained to Com Eq	*5.0%*
45%	44%	58%	59%	49%	47%	58%	61%	65%	*51%*	*57%*	*57%*	All Div'ds to Net Prof	*56%*

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 '23-'25
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
2017	2647	2155	2263	2096	9161.0
2018	2818	2016	2394	2468	9696.0
2019	2980	2374	2302	*2344*	*10000*
2020	*3150*	*2300*	*2500*	*2450*	*10400*
2021	*3250*	*2400*	*2600*	*2550*	*10800*

Cal-endar	EARNINGS PER SHARE A 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	.92	.79	*.61*	*3.70*
2020	*1.10*	*.70*	*.95*	*.65*	*3.40*
2021	*1.20*	*.75*	*1.00*	*.65*	*3.60*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ † 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					

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.

Although we estimate an earnings decline for Public Service Enterprise Group in 2020, this is not a cause for concern. In the first three quarters of 2019, mark-to-market accounting items and unrealized gains on nuclear decommissioning trusts boosted pretax income by $359 million. This makes the year-to-year comparisons difficult, especially in the first six months. Still, the company's regulated utility, Public Service Electric and Gas, is increasing its earning power every year. Through 2023, PSE&G plans to spend $1.9 billion to modernize its gas system and $842 million to make its electric and gas systems better able to deal with the effects of severe storms. Most of this spending will be recovered contemporaneously, instead of through a general rate case. This year the New Jersey regulators will review proposed programs for energy efficiency that are estimated at $3.5 billion over a six-year span.

We expect earnings to advance in 2021. Growth in the rate base for PSE&G (estimated at 7.5%-8.5% annually through 2023) should continue to drive higher profits at the regulated business. We think this will outweigh profit pressures at the main nonutility subsidiary, PSEG Power, which is coping with difficult conditions for nonregulated power producers.

Finances are among the best in the industry. The fixed-charge coverage is high. The common-equity ratio and earned returns on equity are healthy. PSEG has not issued equity for many years, and we project it will have no need to do so over the 3- to 5-year period. All told, the company has a Financial Strength rating of A++, our highest.

We believe the board of directors will raise the dividend later in February. For each of the past four years, the increase was two cents a share quarterly, and we look for an identical increase in 2020. Such a move would provide 4.3% dividend growth.

The dividend yield of this stock is just slightly above the utility mean. This might well be acceptable for conservative income-oriented investors, given the equity's top-notch Safety rank. However, total return potential doesn't stand out for either the 18-month or 2023-2025 period.

Paul E. Debbas, CFA *February 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 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 69.54 | P/E RATIO 22.4 (Trailing: 23.5 Median: 16.0) | RELATIVE P/E RATIO 1.27 | DIV'D YLD 3.7% | VALUE LINE

TIMELINESS 3 Raised 3/2/18
SAFETY 2 Lowered 2/21/14
TECHNICAL 4 Lowered 2/7/20
BETA .50 (1.00 = Market)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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	62.2

Target Price Range 2023 | 2024 | 2025

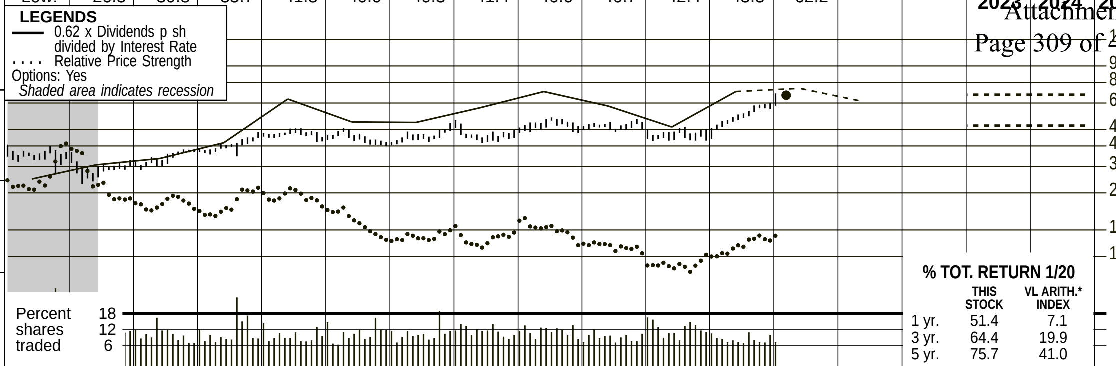
18-Month Target Price Range
Low-High Midpoint (% to Mid)
$49-$77 $63 (-10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(Nil)	4%
Low	50	(-30%)	-3%

Institutional Decisions

	1Q2019	2Q2019	3Q2019
to Buy	618	592	592
to Sell	494	507	531
Hld's(000)	590052	612834	623889



% TOT. RETURN 1/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	51.4	7.1
3 yr.	64.4	19.9
5 yr.	75.7	41.0

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	**20.55**	**21.20**	**22.00**	Revenues per sh	**24.75**
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**	**6.80**	"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	**3.10**	**3.20**	**3.35**	Earnings per sh A	**4.00**
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	**7.15**	**6.50**	**6.00**	Cap'l Spending per sh	**5.25**
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**	**27.60**	Book Value per sh C	**31.50**
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	**1050.0**	**1050.0**	**1050.0**	Common Shs Outst'g D	**1080.0**
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	**18.0**	*Bold figures are*	*Value Line estimates*	Avg Ann'l P/E Ratio	**15.0**
.78	.85	.87	.85	.97	.90	.95	.99	1.08	.91	.84	.80	.93	.78	.82	**1.00**			Relative P/E Ratio	**.85**
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%			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: $73 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	**21600**	**22250**	**23100**	Revenues ($mill)	**26750**
2040.0	2268.0	2415.0	2439.0	2567.0	2647.0	2757.0	3269.0	3096.0	**3280**	**3410**	**3565**	Net Profit ($mill)	**4400**
33.5%	35.0%	35.6%	34.8%	33.8%	33.4%	28.5%	25.2%	21.3%	**20.0%**	**20.0%**	**20.0%**	Income Tax Rate	**20.0%**
13.7%	10.2%	9.4%	11.6%	13.9%	13.2%	11.9%	7.6%	6.8%	**6.0%**	**6.0%**	**5.0%**	AFUDC % to Net Profit	**4.0%**
51.2%	50.0%	49.9%	51.5%	49.5%	52.8%	61.5%	64.5%	62.0%	**60.5%**	**60.5%**	**61.0%**	Long-Term Debt Ratio	**58.5%**
45.7%	47.1%	47.3%	45.8%	47.3%	44.0%	35.7%	35.0%	37.6%	**39.0%**	**39.0%**	**39.0%**	Common Equity Ratio	**41.5%**
35438	37307	38653	41483	42142	46788	69359	68953	65750	**70300**	**72300**	**74600**	Total Capital ($mill)	**82100**
42002	45010	48390	51208	54868	61114	78446	79872	80797	**84950**	**88250**	**90925**	Net Plant ($mill)	**96200**
7.0%	7.2%	7.3%	6.8%	7.1%	6.6%	4.9%	5.9%	5.9%	**6.0%**	**6.0%**	**6.0%**	Return on Total Cap'l	**6.5%**
11.8%	12.2%	12.5%	12.1%	12.1%	12.0%	10.3%	13.3%	12.4%	**12.0%**	**12.0%**	**12.0%**	Return on Shr. Equity	**13.0%**
12.2%	12.5%	12.8%	12.5%	12.5%	12.6%	11.0%	13.4%	12.5%	**12.0%**	**12.0%**	**12.0%**	Return on Com Equity E	**13.0%**
3.0%	3.4%	3.6%	3.2%	3.2%	3.1%	2.5%	3.9%	2.6%	**2.5%**	**2.5%**	**2.5%**	Retained to Com Eq	**3.5%**
77%	73%	73%	75%	75%	76%	78%	72%	79%	**79%**	**79%**	**78%**	All Div'ds to Net Prof	**71%**

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 '23-'25
Revenues	.5%	2.5%	*2.0%*
"Cash Flow"	4.0%	4.0%	*3.0%*
Earnings	3.0%	2.5%	*4.0%*
Dividends	3.5%	3.5%	*3.0%*
Book Value	4.0%	3.0%	*4.0%*

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	***5095***	***21600***
2020	***5700***	***5300***	***6050***	***5200***	***22250***
2021	***5900***	***5500***	***6300***	***5400***	***23100***

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	.74	.80	1.25	***.31***	***3.10***
2020	***.85***	***.75***	***1.20***	***.40***	***3.20***
2021	***.90***	***.80***	***1.25***	***.40***	***3.35***

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					

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 stock was the top-performing equity in the electric utility industry in 2019. The stock posted a total return of 51.3%, more than double the industry median in what was an excellent year for most utility issues. Many investors were attracted to the equity's dividend yield, which remains high even by utility standards. Throughout the year, the company's largest subsidiary, Georgia Power, made progress in the construction of Units 3 and 4 at the Vogtle nuclear station. After delays and cost overruns in previous years, through the first nine months of 2019 the company took no charges associated with the project. Finally . . .

In late 2019, Georgia Power received a constructive rate order. The utility was granted tariff increases of $342 million in 2020, $181 million in 2021, and $386 million in 2022. The allowed return on equity is 10.5%, and the common-equity ratio was raised from 55% to 56%. Separately, Atlanta Gas Light was granted a rate hike of $65.3 million, based on a 10.25% ROE and a 56% common-equity ratio. New tariffs took effect at the start of 2020.

Rate relief should help boost earnings this year and next. In addition to the aforementioned rate increases, in 2020 Nicor Gas will benefit from a full year's effect of the $168 million hike it was granted in Illinois on October 8th.

The company will provide an update on the nuclear construction project when it reports fourth-quarter results. This is scheduled for February 20th. The current construction schedule calls for Units 3 and 4 to be completed in November of 2021 and 2022, respectively. As of the end of September, the cost to complete the units was estimated at $2.9 billion.

We expect a dividend increase in the second quarter. In recent years, Southern Company has been raising the annual payout by $0.08 a share. This would provide an increase of 3.2%.

This stock, which is up 9% this year, has appeal for income-oriented investors. The yield is about a percentage point above the utility mean. However, total return potential is unimpressive for the 18-month or 3- to 5-year period. The possibility of negative developments regarding nuclear construction cannot be ruled out.

Paul E. Debbas, CFA *February 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. Next earnings report due mid-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

KPSC Case No. 2020-00174
Commission Staff's Third S... Requests
...22, 2020
Item No. 1
Attachment 6
Page 310 of 427

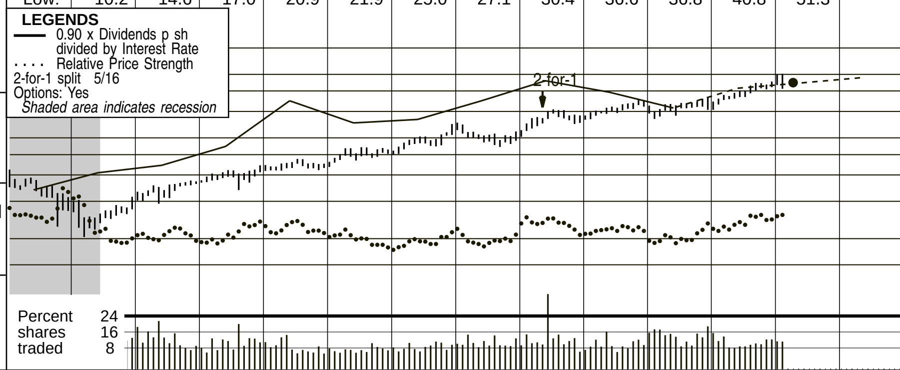
ALLIANT ENERGY NDQ-LNT

RECENT PRICE **54.77** | P/E RATIO **22.5** (Trailing: 23.5 Median: 17.0) | RELATIVE P/E RATIO **1.41** | DIV'D YLD **2.8%** | VALUE LINE

TIMELINESS 1 Raised 1/3/20
SAFETY 2 Raised 9/28/07
TECHNICAL 3 Raised 3/6/20
BETA .55 (1.00 = Market)

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	51.3

Target Price Range 2023 2024 2025



18-Month Target Price Range
Low-High $47-$65 **Midpoint (% to Mid)** $56 (0%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(Nil)	3%
Low	40	(-25%)	-4%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	242	248	272
to Sell	220	233	209
Hld's(000)	185336	185069	188011

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	16.1	-6.8
3 yr.	43.6	6.6
5 yr.	91.0	20.3

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	*15.05*	*15.40*	Revenues per sh	*16.15*
2.60	2.75	2.95	3.34	3.44	3.45	3.45	3.10	4.32	4.59	*4.70*	*4.90*	"Cash Flow" per sh	*5.30*
1.38	1.38	1.53	1.65	1.74	1.69	1.65	1.99	2.19	2.33	*2.40*	*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	*5.75*	*5.95*	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	*22.95*	*24.60*	Book Value per sh C	*28.80*
221.79	222.04	221.97	221.89	221.87	226.92	227.67	231.35	236.06	245.02	*248.00*	*250.00*	Common Shs Outst'g D	*260.00*
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	*3730*	*3850*	Revenues ($mill)	*4205*
303.9	304.4	337.8	382.1	385.5	380.7	373.8	455.9	512.1	557.2	*590*	*630*	Net Profit ($mill)	*770*
30.1%	19.0%	21.5%	12.4%	10.1%	15.3%	13.4%	12.5%	8.4%	10.8%	*11.0%*	*11.0%*	Income Tax Rate	*11.0%*
- -	- -	- -	- -	- -	6.5%	7.0%	7.6%	7.8%	7.5%	*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	10000	*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%	*63%*	*64%*	All Div'ds to Net Prof	*67%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $6527.6 mill. **Due in 5 Yrs** $1000.0 mill.
LT Debt $5533.0 mill. **LT Interest** $230.0 mill.
(LT interest earned: 3.2x)

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 245,022,800 shs.

MARKET CAP: $13.4 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 '16-'18 to '23-'25
Revenues	-0.5%	-0.5%	*2.0%*
"Cash Flow"	4.5%	3.5%	*6.0%*
Earnings	5.0%	5.0%	*6.5%*
Dividends	7.0%	7.0%	*5.5%*
Book Value	4.0%	5.0%	*7.5%*

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	*1000*	*840*	*1000*	*890*	*3730*
2021	*1040*	*860*	*1040*	*910*	*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	*.57*	*.46*	*.94*	*.43*	*2.40*
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				

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.

Alliant Energy's largest utility subsidiary has received an order in its general rate case. The Iowa Utilities Board approved a settlement regarding a request from Interstate Power and Light to increase retail customer electric base rates. The agreement calls for a permanent annual revenue increase of $127 million, a return on common equity of 9.5%, and a common-equity ratio of 51%. Alliant initially requested $203.6 million in rate relief as a means to fund infrastructure upgrades and increased investments in renewable energy. It then reached a temporary settlement with the Iowa Utilities Board for $127 million, until this latest ruling made that order permanent.

Earnings are set to rise this year and next. Rate relief should be the primary factor. For 2020, Alliant expects share net to be between $2.34 and $2.48. The utility also reaffirmed its long-term annual earnings growth guidance of 5%-7%.

The West Riverside Energy Center is about to come online. The 730-megawatt natural gas generating facility is over 98% complete and expected to be in service in the coming weeks. The plant will help replace power from the retirement of older, less efficient coal-fired and peaking units.

Alliant continues to invest heavily in wind and solar energy. It recently completed the 200 mw Whispering Willow project in Iowa, bringing the total amount of wind power added to its grid in the last year to 700 mw. The utility also reiterated its goal of having over 3,000 mw of renewable energy generation by the end of 2020.

Finances are solid. The common equity ratio is healthy at just under 49%. The utility plans to issue up to $250 million of stock and $300 million of debt this year, on par with past issuances. The company merits a Financial Strength rating of A, along with an Above-Average Safety rank (2) and strong scores for Price Stability (100) and Earnings Predictability (90).

This stock is now ranked 1 (Highest) for year-ahead price performance, having risen a notch on our Timeliness scale since December. Still, the dividend yield is below average for a utility, and the stock is trading near the high end of our 3- to 5-year Target Price Range.

Daniel Henigson, CFA *March 13, 2020*

(A) Diluted EPS. Excl. nonrecur. gains (losses): '10, (8¢); '11, (1¢); '12, (8¢). Next earnings rpt. due early May. **(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	100
Price Growth Persistence	80
Earnings Predictability	90

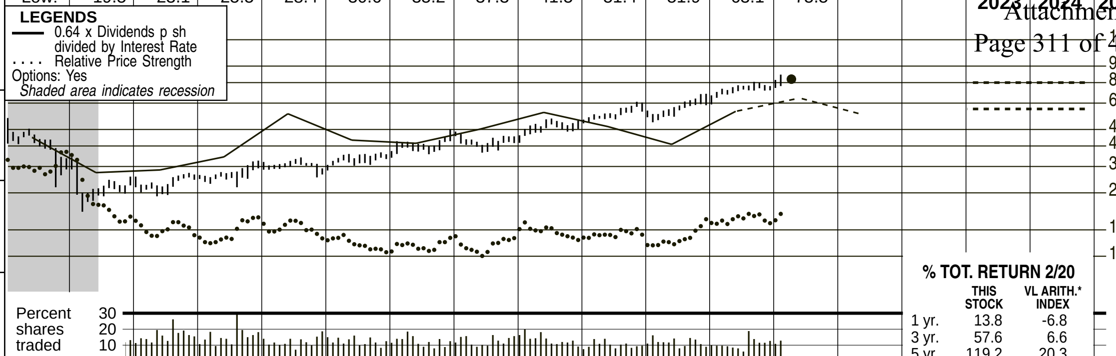
AMEREN NYSE-AEE

RECENT PRICE **83.16** | P/E RATIO **23.9** (Trailing: 24.8 / Median: 17.0) | RELATIVE P/E RATIO **1.49** | DIV'D YLD **2.4%** | VALUE LINE

TIMELINESS 3 Lowered 3/29/19
SAFETY 2 Raised 6/20/14
TECHNICAL 4 Raised 3/13/20
BETA .50 (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	87.3
Low:	19.5	23.1	25.5	28.4	30.6	35.2	37.3	41.5	51.4	51.9	63.1	75.5

LEGENDS
— 0.64 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range 2023 | 2024 | 2025

18-Month Target Price Range
Low-High $67-$94 | Midpoint (% to Mid) $81 (-5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	80	(-5%)	2%
Low	60	(-30%)	-4%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	261	257	266
to Sell	255	257	265
Hld's(000)	175894	186859	186367

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	13.8	-6.8
3 yr.	57.6	6.6
5 yr.	119.2	20.3

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	24.60	25.20	Revenues per sh	27.00
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	8.15	8.65	"Cash Flow" per sh	10.25
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	3.75	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	11.55	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	35.80	37.55	Book Value per sh C	44.00
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	260.00	Common Shs Outst'g D	275.00
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*	*Value Line*	Avg Ann'l P/E Ratio	15.5
.86	.89	1.05	.92	.85	.62	.62	.75	.85	.93	.88	.88	.96	1.04	.99	1.21	*estimates*		Relative P/E Ratio	.85
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%			Avg Ann'l Div'd Yield	3.5%

CAPITAL STRUCTURE as of 12/31/19
Total Debt $9797 mill. **Due in 5 Yrs** $2485 mill.
LT Debt $8915 mill. **LT Interest** $415 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 246,231,712 shs. **as of 1/31/20**
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	6250	6550	Revenues ($mill)	7450
669.0	602.0	589.0	518.0	593.0	585.0	659.0	683.0	821.0	834.0	890	975	Net Profit ($mill)	1240
36.8%	37.3%	36.9%	37.5%	38.9%	38.3%	36.7%	38.2%	22.4%	17.9%	18.0%	18.0%	Income Tax Rate	18.0%
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%	50.5%	49.5%	Long-Term Debt Ratio	48.0%
50.9%	53.7%	49.4%	53.7%	51.7%	49.7%	51.3%	49.8%	48.8%	47.1%	48.5%	50.0%	Common Equity Ratio	51.5%
15185	14738	13384	12190	12975	13968	13840	14420	15632	17116	18650	19625	Total Capital ($mill)	23400
17853	18127	16096	16205	17424	18799	20113	21466	22810	24376	27225	28925	Net Plant ($mill)	33500
6.0%	5.6%	6.0%	5.6%	5.8%	5.3%	6.0%	6.0%	6.4%	6.0%	6.0%	6.0%	Return on Total Cap'l	6.5%
8.5%	7.5%	8.7%	7.7%	8.7%	8.3%	9.1%	9.3%	10.6%	10.2%	9.5%	10.0%	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%	4.5%	Retained to Com Eq	4.5%
56%	63%	66%	76%	67%	70%	64%	64%	56%	57%	57%	56%	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%	1.5%
"Cash Flow"	1.5%	5.5%	5.5%
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	1600	1500	1750	1400	6250
2021	1700	1550	1800	1500	6550

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	.75	.80	1.55	.40	3.50
2021	.80	.85	1.65	.45	3.75

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	.458	1.78
2018	.457	.458	.458	.475	1.85
2019	.475	.475	.475	.495	1.92
2020	.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.

Ameren has filed a gas rate case in Illinois. The utility is seeking an increase of $102 million (including $46 million currently being recovered through riders on customers' bills), based on a return on equity of 10.5% and a common-equity ratio of 54.1%. These are higher than the currently allowed 9.87% and 50%, respectively. An order is due by January, with new tariffs taking effect in February.

The utility has reached a partial settlement of its electric rate case in Missouri. The utility filed for a $1 million rate decrease (which includes the pass-through to customers of $100 million of lower fuel and purchased-power costs), based on an ROE of 9.95% and a common-equity ratio of 51.9%. Details of the non-unanimous settlement with the state commission's staff and intervenor groups are confidential, but some matters remain unresolved, including the sharing mechanism for fuel and purchased power costs. Currently, 95% of these are passed through to customers, but the Office of Consumer Counsel wants to reduce this to 85%. A ruling might well come in time for new tariffs to take effect on April 1st.

We look for a modest earnings increase in 2020, followed by greater growth in 2021. Rate relief in Missouri should help, along with a change in accounting for the cost of refueling outages for the Callaway nuclear unit. Starting this year, Ameren will book these expenses annually, instead of when incurred. On the other hand, an expected decline in the energy performance incentive income will affect earnings by $0.09 a share. Our 2020 profit estimate is within the company's targeted range of $3.40-$3.60 a share. We estimate a 7% increase in 2021, helped by rate relief in Illinois. Ameren's goal for annual earnings growth is 6%-8%.

Ameren is adding a wind project. This will provide 700 megawatts of capacity at a cost of $1.2 billion. The company will execute a forward equity sale ($540 million-$550 million) in late 2020 in conjunction with completion of the project.

This stock has a high valuation. The dividend yield is only about equal to the median of all dividend-paying stocks under our coverage. And the recent quotation is above our 2023-2025 Target Price Range.

Paul E. Debbas, CFA *March 13, 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 May. (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 '17: 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	100
Price Growth Persistence	80
Earnings Predictability	85

AMERICAN ELEC. PWR. NYSE-AEP

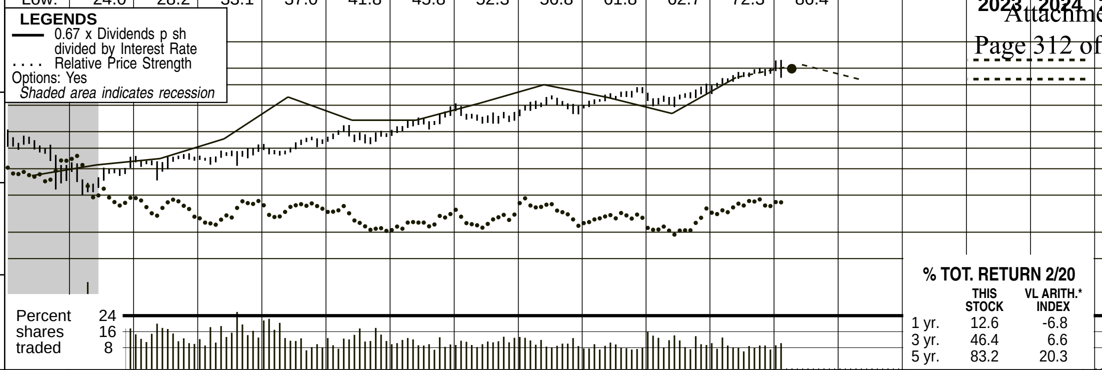
RECENT PRICE **95.45** | P/E RATIO **23.2** (Trailing: 23.4, Median: 15.0) | RELATIVE P/E RATIO **1.45** | DIV'D YLD **3.0%** | VALUE LINE

TIMELINESS 3 Lowered 9/6/19
SAFETY 1 Raised 3/17/17
TECHNICAL 2 Raised 3/13/20
BETA .50 (1.00 = Market)

High:	36.5	37.9	41.7	45.4	51.6	63.2	65.4	71.3	78.1	81.1	96.2	105.0
Low:	24.0	28.2	33.1	37.0	41.8	45.8	52.3	56.8	61.8	62.7	72.3	86.4

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 0.67 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)
$80-$112	$96 (0%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	105	(+10%)	6%
Low	85	(-10%)	1%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	465	482	549
to Sell	463	454	459
Hld's(000)	367922	368289	370323

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	12.6	-6.8
3 yr.	46.4	6.6
5 yr.	83.2	20.3

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
35.51	30.76	31.82	33.41	35.56	28.22	30.01	31.27	30.77	31.48	34.78	33.51	33.31	31.35	32.84	31.49	**32.30**	**33.25**	Revenues per sh	**34.00**
5.89	5.96	6.67	6.80	6.84	6.32	6.29	6.83	6.92	7.02	7.57	7.98	8.47	7.95	8.77	9.35	**9.85**	**10.35**	"Cash Flow" per sh	**11.50**
2.61	2.64	2.86	2.86	2.99	2.97	2.60	3.13	2.98	3.18	3.34	3.59	4.23	3.62	3.90	4.08	**4.35**	**4.60**	Earnings per sh A	**5.25**
1.40	1.42	1.50	1.58	1.64	1.64	1.71	1.85	1.88	1.95	2.03	2.15	2.27	2.39	2.53	2.71	**2.84**	**3.00**	Div'd Decl'd per sh B ■	**3.55**
4.28	6.11	8.89	8.88	9.83	6.19	5.07	5.74	6.45	7.75	8.68	9.37	9.98	11.79	12.89	12.43	**13.25**	**13.00**	Cap'l Spending per sh	**12.50**
21.32	23.08	23.73	25.17	26.33	27.49	28.33	30.33	31.37	32.98	34.37	36.44	35.38	37.17	38.58	39.73	**41.35**	**43.05**	Book Value per sh C	**50.00**
395.86	393.72	396.67	400.43	406.07	478.05	480.81	483.42	485.67	487.78	489.40	491.05	491.71	492.01	493.25	494.17	**495.00**	**496.00**	Common Shs Outst'g D	**530.00**
12.4	13.7	12.9	16.3	13.1	10.0	13.4	11.9	13.8	14.5	15.9	15.8	15.2	19.3	18.0	21.4	*Bold figures are*		Avg Ann'l P/E Ratio	**18.0**
.66	.73	.70	.87	.79	.67	.85	.75	.88	.81	.84	.80	.80	.97	.97	1.17	*Value Line*		Relative P/E Ratio	**1.00**
4.3%	3.9%	4.1%	3.4%	4.2%	5.5%	4.9%	5.0%	4.6%	4.2%	3.8%	3.8%	3.5%	3.4%	3.6%	3.1%	*estimates*		Avg Ann'l Div'd Yield	**3.8%**

CAPITAL STRUCTURE as of 12/31/19
Total Debt $29564 mill. **Due in 5 Yrs** $10921 mill.
LT Debt $25127 mill. **LT Interest** $1080 mill.
Incl. $918 mill. securitized bonds. Incl. $307 mill. capitalized leases.
(LT interest earned: 2.7x)
Leases, Uncapitalized Annual rentals $269.9 mill.
Pension Assets-12/19 $5015.4 mill. **Oblig** $5236.8 mill.
Pfd Stock None

Common Stock 494,169,471 shs.

MARKET CAP: $47 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
14427	15116	14945	15357	17020	16453	16380	15425	16196	15561	**16000**	**16500**	Revenues ($mill)	**18000**
1248.0	1513.0	1443.0	1549.0	1634.0	1763.4	2073.6	1783.2	1923.8	2019.0	**2145**	**2275**	Net Profit ($mill)	**2740**
34.8%	31.7%	33.9%	36.2%	37.8%	35.1%	26.8%	33.7%	5.8%	.7%	**2.0%**	**2.0%**	Income Tax Rate	**2.0%**
10.4%	10.6%	11.2%	7.3%	9.0%	11.0%	8.0%	8.0%	10.7%	12.7%	**12.0%**	**11.0%**	AFUDC % to Net Profit	**9.0%**
53.1%	50.7%	50.6%	51.1%	49.0%	49.8%	50.0%	51.5%	53.2%	56.1%	**56.5%**	**55.5%**	Long-Term Debt Ratio	**53.5%**
46.7%	49.3%	49.4%	48.9%	51.0%	50.2%	50.0%	48.5%	46.8%	43.9%	**43.5%**	**44.5%**	Common Equity Ratio	**46.5%**
29184	29747	30823	32913	33001	35633	34775	37707	40677	44759	**46875**	**47825**	Total Capital ($mill)	**56700**
35674	36971	38763	40997	44117	46133	45639	50262	55099	60138	**63975**	**67550**	Net Plant ($mill)	**77900**
5.7%	6.6%	6.1%	6.0%	6.3%	6.1%	7.2%	5.9%	5.9%	5.6%	**5.5%**	**6.0%**	Return on Total Cap'l	**6.0%**
9.1%	10.3%	9.5%	9.6%	9.7%	9.9%	11.9%	9.8%	10.1%	10.3%	**10.5%**	**10.5%**	Return on Shr. Equity	**10.5%**
9.1%	10.3%	9.5%	9.6%	9.7%	9.9%	11.9%	9.8%	10.1%	10.3%	**10.5%**	**10.5%**	Return on Com Equity E	**10.5%**
3.1%	4.2%	3.5%	3.7%	3.8%	3.9%	5.5%	3.2%	3.5%	3.4%	**3.5%**	**3.5%**	Retained to Com Eq	**3.5%**
66%	60%	63%	62%	61%	60%	54%	67%	65%	67%	**68%**	**67%**	All Div'ds to Net Prof	**70%**

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-1.6	+3.0	-2.2
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	+.3
Fixed Charge Cov. (%)	354	254	234

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	- -	-.5%	1.0%
"Cash Flow"	2.5%	4.0%	5.0%
Earnings	3.0%	4.0%	5.0%
Dividends	4.5%	5.5%	5.5%
Book Value	4.0%	3.0%	4.5%

QUARTERLY REVENUES ($ mill.)

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	3933	3576	4104	3810	15424
2018	4048	4013	4333	3801	16195
2019	4056	3573	4315	3616	15561
2020	*4200*	*3700*	*4400*	*3700*	*16000*
2021	*4350*	*3800*	*4550*	*3800*	*16500*

EARNINGS PER SHARE A

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.94	.76	1.11	.81	3.62
2018	.92	1.07	1.17	.74	3.90
2019	1.16	.93	1.48	.51	4.08
2020	*1.10*	*1.00*	*1.50*	*.75*	*4.35*
2021	*1.15*	*1.05*	*1.60*	*.80*	*4.60*

QUARTERLY DIVIDENDS PAID B ■

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.56	.56	.56	.59	2.27
2017	.59	.59	.59	.62	2.39
2018	.62	.62	.62	.67	2.53
2019	.67	.67	.67	.70	2.71
2020	.70				

BUSINESS: American Electric Power Company Inc. (AEP), through 10 operating utilities, serves 5.5 million customers in Arkansas, Kentucky, Indiana, Louisiana, Michigan, Ohio, Oklahoma, Tennessee, Texas, Virginia, & West Virginia. Has a transmission subsidiary. Electric revenue breakdown: residential, 42%; commercial, 24%; industrial, 19%; wholesale, 11%; other, 4%. Sold Houston Pipeline '05; commercial barge operation in '15. Generating sources not available. Fuel costs: 33% of revenues. '19 reported depreciation rates (utility): 1.8%-9.5%. Has 17,400 employees. Chairman, President & CEO: Nicholas K. Akins. Incorporated: New York. Address: 1 Riverside Plaza, Columbus, Ohio 43215-2373. Telephone: 614-716-1000. Internet: www.aep.com.

American Electric Power has made progress in its proposed wind project. Two subsidiaries, Public Service of Oklahoma and SWEPCO, want to spend $2 billion to build 1,485 megawatts of capacity to serve Oklahoma, Texas, Arkansas, and Louisiana. This consists of three wind farms, one of which would be completed in late 2020 and the other two in late 2021. The Oklahoma commission has given its approval, and SWEPCO has reached a settlement in Arkansas, that (if approved by the commission) will enable the company to add 846 mw at a cost of $1.1 billion. A ruling in Texas is due by July, and a decision in Louisiana is pending. If the entire project is built, this will add about $100 million to net profit in 2022, the first full year of operation. However, our estimates and projections do not include any contribution from the proposed project.

As usual, the company is active in the regulatory arena. In Arkansas, SWEPCO received an $18 million rate increase in January, based on a 9.45% return on equity. A settlement for AEP Texas was verbally approved, calling for a $40 million revenue decrease (after passing through to customers $108 million of lower federal taxes). Indiana & Michigan received a $30 million increase at the start of February, based on a 9.86% ROE. The utility is seeking a $94 million hike (net of an increase in depreciation) in Indiana, based on a 10.5% ROE. New tariffs should take effect this month. Rate applications are upcoming in Louisiana, Virginia, Ohio (where AEP expects to request a "fairly low" increase), and (probably) Kentucky.

We estimate respectable profit growth this year and next. The key factors are rate relief and capital spending for AEP's transmission system. Our 2020 estimate is within the company's targeted range of $4.25-$4.45 a share. Our 2021 estimate would produce earnings growth of 6%, which is within management's goal of 5%-7% annually.

This top-quality stock has a dividend yield that does not stand out among utilities. Moreover, total return potential is unspectacular for the 18-month span and the 3- to 5-year period. Like most utility equities, the recent quotation is well within our 2023-2025 Target Price Range.

Paul E. Debbas, CFA *March 13, 2020*

(A) Diluted EPS. Excl. nonrec. gains (losses): '04, 24¢; '05, (62¢); '06, (20¢); '07, (20¢); '08, 40¢; '10, (7¢); '11, 89¢; '12, (38¢); '13, (14¢); '16, ($2.99); '17, 26¢; '19, (20¢); disc. ops.: '04, 15¢; '05, 7¢; '06, 2¢; '08, 3¢; '15, 58¢; '16, (1¢). Next earnings report due late April. **(B)** Div'ds paid early Mar., June, Sept., & Dec. ■ Div'd reinvestment plan avail. **(C)** Incl. intang. In '19: $13.39/sh. **(D)** In mill. **(E)** Rate base: various. Rates allowed on com. eq.: 9.3%-10.9%; earned on avg. com. eq., '19: 10.4%. Regulatory Climate: Average.

Company's Financial Strength	A+
Stock's Price Stability	100
Price Growth Persistence	75
Earnings Predictability	85

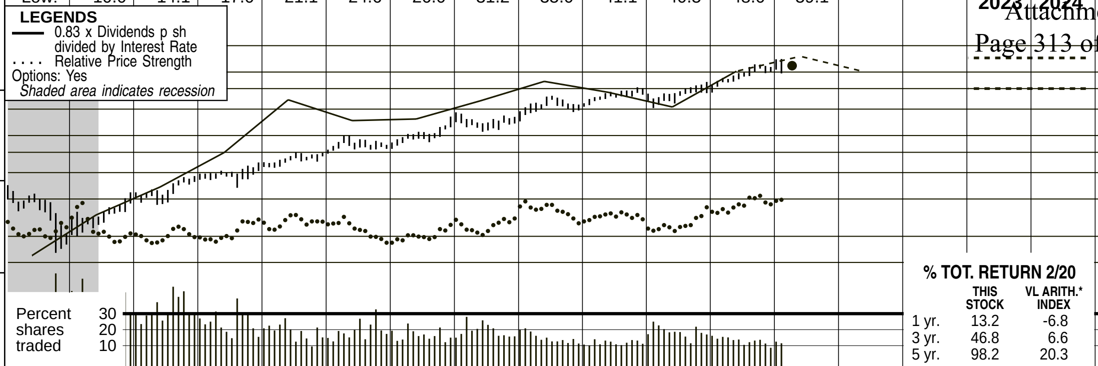
CMS ENERGY CORP. NYSE-CMS

RECENT PRICE 64.32 | P/E RATIO 24.0 (Trailing: 26.9 / Median: 18.0) | RELATIVE P/E RATIO 1.50 | DIV'D YLD 2.6% | VALUE LINE

TIMELINESS 3 Lowered 1/11/19
SAFETY 2 Raised 3/21/14
TECHNICAL 3 Raised 2/21/20
BETA .50 (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	59.1

Target Price Range 2023 2024 2025



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$53-$73	$63 (0%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(+10%)	5%
Low	50	(-20%)	-2%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	251	253	295
to Sell	256	269	247
Hld's(000)	264000	263460	264207

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	13.2	-6.8
3 yr.	46.8	6.6
5 yr.	98.2	20.3

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	24.55	25.00	Revenues per sh	26.75
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	6.65	"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	2.80	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	7.65	9.30	Cap'l Spending per sh	8.00
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	Value Line	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	1.10	1.33	estimates		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%	2.6%			Avg Ann'l Div'd Yield	3.6%

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	7050	7250	Revenues ($mill)	8000
356.0	384.0	413.0	454.0	479.0	525.0	553.0	610.0	659.0	682.0	750	825	Net Profit ($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%	69.0%	68.5%	Long-Term Debt Ratio	67.0%
29.5%	32.6%	31.6%	32.2%	31.0%	31.4%	32.6%	32.4%	30.7%	29.4%	31.0%	31.5%	Common Equity Ratio	33.0%
9473.0	9279.0	10101	10730	11846	12534	13040	13692	15476	17082	18000	19175	Total Capital ($mill)	23200
10069	10633	11551	12246	13412	14705	15715	16761	18126	18926	20075	21675	Net Plant ($mill)	25200
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%	5.5%	Retained to Com Eq	5.5%
46%	55%	61%	60%	62%	61%	63%	62%	62%	64%	62%	61%	All Div'ds to Net Prof	61%

CAPITAL STRUCTURE as of 12/31/19
Total Debt $13247 mill. **Due in 5 Yrs** $4639 mill.
LT Debt $12027 mill. **LT Interest** $523 mill.
Incl. $76 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 283,882,207 shs.
as of 1/10/20
MARKET CAP: $18 billion (Large Cap)

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%	2.0%
"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	2100	1600	1600	1850	7050
2021	2150	1650	1650	1900	7250

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	.50	.75	.50	2.60
2021	.90	.55	.80	.55	2.80

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				

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 has filed a gas rate case, and an electric rate application is upcoming. Consumers Energy is seeking a tariff increase of $245 million, based on a 10.5% return on equity. The utility is also asking for a regulatory mechanism to decouple revenues and volume. A ruling is due by October 16th. The expected timing of the electric case should enable an order to come in December. Frequent rate filings are necessary because Consumers Energy has a large system with a lot of old equipment. It helps that Michigan has a good regulatory climate, which we rank as Above Average.

Our earnings presentation requires an explanation. CMS Energy's fourth-quarter profits included $0.10 a share of costs associated with a litigation settlement and an employee-retention program for the upcoming retirement of the Karn coal-fired plant. The utility estimates it will spend a total of $35 million for the Karn retention program through 2023 ($6 million in 2019, $15 million this year). Because we *include* these expenses in our earnings presentation, our 2020 estimate of $2.60 a share is slightly below CMS Energy's typically narrow guidance of $2.64-$2.68, which excludes the Karn costs. Our 2021 estimate of $2.80 a share would produce profit growth of 8%. This is the upper end of management's goal of 6%-8% annual increases. Rate relief is the main reason for the company's earnings growth. Management is controlling costs effectively, too, and has the flexibility to increase or reduce operating and maintenance expenses in response to weather patterns that are better or worse than normal.

The board of directors raised the dividend this quarter. The increase was $0.10 a share annually (6.5%). CMS Energy's goal for yearly dividend growth is 6%-8%, matching that for earnings growth.

CMS Energy stock has a high valuation. Like most utility issues, the recent quotation is well within our 2023-2025 Target Price Range. The dividend yield isn't significantly higher than the median for all dividend-paying equities under our coverage. Total return potential is negligible for the 18-month span and 3- to 5-year period.

Paul E. Debbas, CFA *March 13, 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 late Apr. (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%. Regulat. Climate: 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 113.02 | P/E RATIO 16.9 (Trailing: 17.9 / Median: 17.0) | RELATIVE P/E RATIO 1.06 | DIV'D YLD 3.7% | VALUE LINE

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	110.2

TIMELINESS 3 Lowered 6/14/19
SAFETY 2 Raised 12/21/12
TECHNICAL 3 Raised 2/28/20
BETA .50 (1.00 = Market)

18-Month Target Price Range

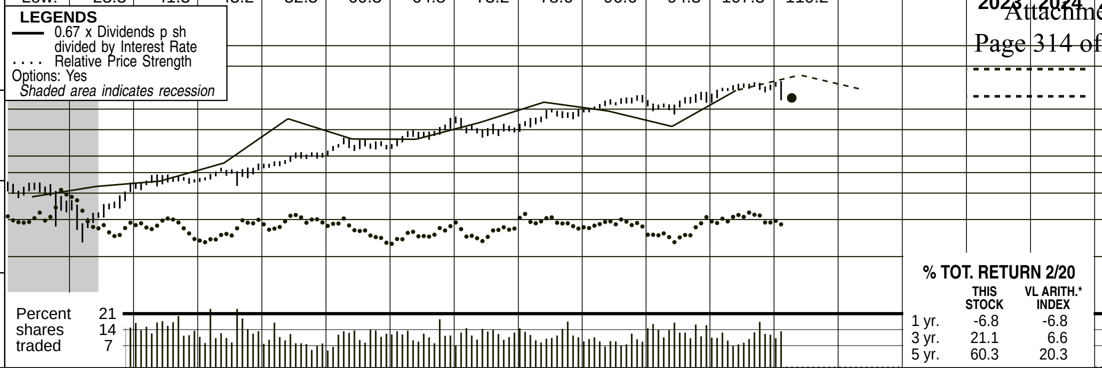
Low-High	Midpoint (% to Mid)
$121-$163	$142 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	155	(+35%)	11%
Low	115	(Nil)	5%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	282	303	355
to Sell	271	264	245
Hld's(000)	130894	133730	140654



Target Price Range 2023 2024 2025

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-6.8	-6.8
3 yr.	21.1	6.6
5 yr.	60.3	20.3

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	*69.60*	*71.95*	Revenues per sh	*77.25*
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	*13.75*	*14.55*	"Cash Flow" per sh	*17.00*
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	*6.50*	*6.90*	Earnings per sh A	*8.25*
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	*20.60*	*18.35*	Cap'l Spending per sh	*12.50*
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	*63.55*	*66.65*	Book Value per sh C	*78.00*
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	*194.00*	*196.00*	Common Shs Outst'g D	*206.00*
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	1.09	*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	*3.8%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $17450 mill. **Due in 5 Yrs** $7301 mill.
LT Debt $15935 mill. **LT Interest** $653 mill.

(LT interest earned: 3.2x)

Leases, Uncapitalized Annual rentals $38 mill.

Pension Assets-12/19 $4993 mill. **Oblig** $5810 mill.

Pfd Stock None
Common Stock 192,234,700 shs.

MARKET CAP: $22 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	*13500*	*14100*	Revenues ($mill)	*15900*
630.0	624.0	666.0	661.0	905.0	796.0	868.0	1029.0	1120.0	1169.0	*1255*	*1345*	Net Profit ($mill)	*1700*
32.7%	35.9%	29.8%	27.5%	28.5%	25.6%	24.5%	21.8%	8.1%	11.5%	*12.0%*	*12.0%*	Income Tax Rate	*12.0%*
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%	*59.5%*	*59.5%*	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%	*40.5%*	*40.5%*	Common Equity Ratio	*41.5%*
13811	14196	14387	15135	16670	17607	20280	21697	22371	27607	*30500*	*32225*	Total Capital ($mill)	*38500*
12992	13746	14684	15800	16820	18034	19730	20721	21650	25317	*27900*	*30000*	Net Plant ($mill)	*33100*
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%	*10.0%*	*10.5%*	Return on Shr. Equity	*10.5%*
9.4%	8.9%	9.0%	8.3%	10.9%	9.1%	9.6%	10.8%	10.9%	10.0%	*10.0%*	*10.5%*	Return on Com Equity E	*10.5%*
4.0%	3.4%	3.5%	2.7%	5.2%	3.4%	3.7%	4.6%	4.9%	4.1%	*3.5%*	*3.5%*	Retained to Com Eq	*4.0%*
57%	62%	61%	67%	52%	63%	61%	58%	55%	59%	*63%*	*64%*	All Div'ds to Net Prof	*63%*

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%	*1.5%*
"Cash Flow"	3.5%	3.5%	*5.5%*
Earnings	8.0%	7.5%	*5.0%*
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	*3650*	*3050*	*3250*	*3550*	*13500*
2021	*3800*	*3200*	*3400*	*3700*	*14100*

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	*2.25*	*1.10*	*1.95*	*1.20*	*6.50*
2021	*2.40*	*1.20*	*2.00*	*1.30*	*6.90*

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				

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 completed a sizable asset acquisition in early December. The company paid $2.36 billion for gas pipeline, gathering, and processing assets in the Haynesville Basin in Louisiana. DTE Energy will pay an additional $378 million (estimated) upon completion of a gathering pipeline in the second half of 2020. DTE Energy expects additional capital spending of $600 million associated with the purchase. The company financed the acquisition with long-term debt, common stock, and equity units that are mandatorily convertible to common stock in 2022. The deal is expected to contribute $0.15 to share net this year, rising to $0.45 over a five-year period.

DTE Electric and DTE Gas are awaiting rate orders. DTE Electric is seeking an increase of $351 million, based on 10.5% return on equity and a 50% common-equity ratio. The staff of the Michigan commission recommended a hike of $195 million, based on a 9.8% ROE (slightly below the currently allowed 10.0%) and a 50% equity ratio. DTE Gas filed for an increase of $204 million, based on a 10.5% ROE and a 52% common-equity ratio. A staff recommendation on the gas case is not out yet. Orders on the electric and gas cases are expected in May and September, respectively.

We estimate solid earnings growth this year and next. Rate relief should help, along with the income from the midstream gas acquisition. The Power & Industrial Projects segment is acquiring or developing industrial-services and renewable natural gas projects. Our 2020 estimate is within DTE Energy's targeted range of $6.47-$6.75 a share.

DTE Electric is building a gas-fired generating plant. This will add 1,100 megawatts of capacity at an estimated cost of $952 million. The facility is expected to begin commercial operation in the spring of 2022.

This stock has underperformed most utility issues so far in 2020. The reason for this is not apparent. The dividend yield is above the utility average. Total return potential is appealing for the next 18 months, but not as attractive for the 2023-2025 pull, despite good dividend growth prospects over that time frame.

Paul E. Debbas, CFA *March 13, 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 Apr. (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 '19: 10%; elec.; in '16: 10.1% gas; earn. on avg. com. eq., '19: 10.8%. Regulat. Climate: Above Avg.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	75
Earnings Predictability	85

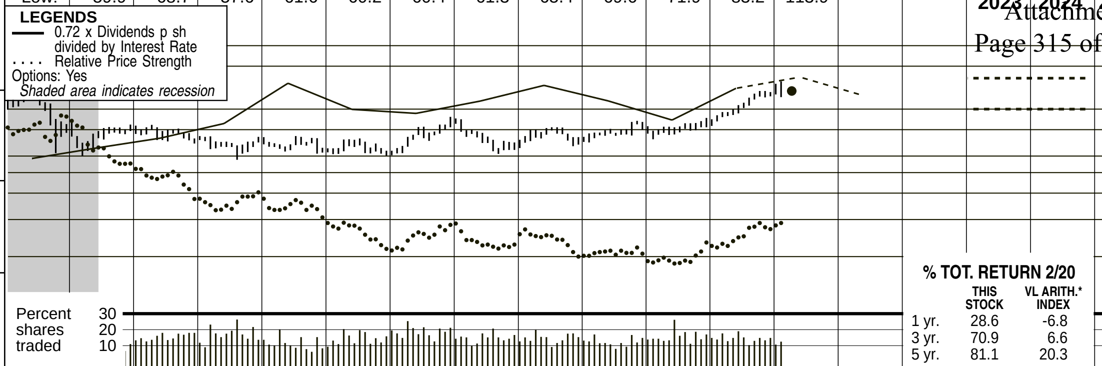
ENTERGY CORP. NYSE-ETR

RECENT PRICE 121.89 | P/E RATIO 17.8 (Trailing: 19.3 Median: 13.0) | RELATIVE P/E RATIO 1.11 | DIV'D YLD 3.1% | VALUE LINE

TIMELINESS 3 Raised 10/26/18
SAFETY 2 Raised 12/13/19
TECHNICAL 3 Raised 3/13/20
BETA .60 (1.00 = Market)

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	113.9

Target Price Range
2023 | 2024 | 2025



18-Month Target Price Range
Low-High **Midpoint (% to Mid)**
$92-$147 $120 (0%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	140	(+15%)	*7%*
Low	100	(-20%)	*-1%*

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	260	298	348
to Sell	281	248	242
Hld's(000)	175686	175725	176392

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	28.6	-6.8
3 yr.	70.9	6.6
5 yr.	81.1	20.3

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	***54.50***	***52.95***	Revenues per sh	***52.25***
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	***16.90***	***17.55***	"Cash Flow" per sh	***20.00***
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	***5.45***	***5.85***	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	***20.75***	***19.15***	Cap'l Spending per sh	***18.75***
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	***53.20***	***55.65***	Book Value per sh C	***63.00***
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	***200.00***	***204.00***	Common Shs Outst'g D	***212.00***
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	***17.0***
.80	.87	.77	1.02	1.00	.80	.74	.57	.71	.74	.68	.63	.57	.75	.75	.90	*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	***3.8%***

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
11488	11229	10302	11391	12495	11513	10846	11074	11009	10879	***10900***	***10800***	Revenues ($mill)	***11100***
1270.3	1367.4	1091.9	904.5	1060.0	1061.2	1249.8	950.7	1092.1	1258.2	***1110***	***1205***	Net Profit ($mill)	***1515***
32.7%	17.3%	13.0%	26.7%	37.8%	2.2%	11.3%	1.8%	1.8%	NMF	***22.0%***	***22.0%***	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%***	***16.0%***	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%	***61.5%***	***61.5%***	Long-Term Debt Ratio	***58.0%***
42.1%	46.4%	42.9%	43.6%	43.8%	40.8%	35.5%	35.5%	35.9%	37.1%	***37.5%***	***37.5%***	Common Equity Ratio	***41.0%***
20166	19324	21432	22109	22842	22714	22777	22528	24602	27557	***28425***	***30250***	Total Capital ($mill)	***32600***
23848	25609	27299	27882	28723	27824	27921	29664	31974	35183	***37100***	***38675***	Net Plant ($mill)	***42400***
7.7%	8.5%	6.4%	5.4%	6.0%	6.0%	6.9%	5.7%	5.8%	5.9%	***5.5%***	***5.5%***	Return on Total Cap'l	***6.0%***
14.4%	14.8%	11.5%	9.1%	10.3%	11.1%	15.1%	11.6%	12.0%	12.0%	***10.0%***	***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%	***10.5%***	***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%	***3.0%***	***3.5%***	Retained to Com Eq	***4.0%***
49%	45%	56%	68%	58%	58%	50%	68%	61%	58%	***69%***	***66%***	All Div'ds to Net Prof	***65%***

CAPITAL STRUCTURE as of 12/31/19
Total Debt $19820 mill. **Due in 5 Yrs** $8244.3 mill.
LT Debt $17079 mill. **LT Interest** $762.2 mill.
Incl. $298.0 mill. of securitization bonds.
(LT interest earned: 2.2x)
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 199,726,738 shs. **as of 1/31/20**
MARKET CAP: $24 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+.2	+4.1	-1.4
Avg. Indust. Use (MWH)	1034	946	NA
Avg. Indust. Revs. per KWH(¢)	5.41	5.16	5.24
Capacity at Peak (Mw)	24279	23121	NA
Peak Load, Summer (Mw)	21671	21587	21598
Annual Load Factor (%)	62	65	NA
% Change Customers (yr-end)	+.6	+.6	NA
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%	*-1.5%*
"Cash Flow"	3.0%	- -	*3.0%*
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	***2700***	***2650***	***3100***	***2450***	***10900***
2021	***2700***	***2650***	***3050***	***2400***	***10800***

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	***1.00***	***1.45***	***2.45***	***.55***	***5.45***
2021	***1.10***	***1.55***	***2.60***	***.60***	***5.85***

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				

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 six nuclear units (three 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.

Investors should not be surprised if Entergy's earnings decline this year. The fourth-quarter comparison will be tough because the company recorded some tax benefits in 2019. (We *include* these because Entergy has booked similar benefits in the past, such as in the September period of 2018.) We are including the results of the company's nonutility operations, even though Entergy excludes them from its guidance and from its definition of operating earnings because the company is closing its nonregulated nuclear units over the next three years. On the positive side, the utilities are benefiting from growth in their service areas and rate relief, much of which comes via formula rate plans or (in Texas) transmission and distribution cost-recovery mechanisms. Our 2020 earnings estimate is at the low end of Entergy's targeted range of $5.45-$5.75 a share.

We look for earnings to advance next year. Continued growth at the utilities should be the key factor. Our estimate is within management's targeted range of $5.80-$6.10 a share.

The utilities plan capital spending of $11.7 billion over the next three years. Some 90% of these expenditures will be recovered through formula rate plans or riders (surcharges) on customers' bills. In recent years, Entergy has built (or bought) some gas-fired generating units, and four more plants are under construction. These will add nearly 2,500 megawatts of capacity in 2020 and 2021 at an expected cost of about $2.3 billion. Entergy is adding renewable-energy capacity, as well. On the distribution side, the company is one-third of the way through its plan to install three million advanced meters.

Entergy New Orleans is appealing a rate order to the District Court. The utility's electric and gas rates were cut by a total of $45 million.

Entergy stock was the second-best performing electric-utility issue in 2019. It posted a total return of 44.0%. The quotation has risen slightly in 2020, in contrast to many utility equities. However, now that the valuation has risen, the dividend yield does not stand out among utilities. Total return potential is unappealing, either for the 18-month or 3- to 5-year period.

Paul E. Debbas, CFA *March 13, 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 early May. (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	95
Price Growth Persistence	20
Earnings Predictability	60

EVERGY, INC. NYSE-EVRG

RECENT PRICE 68.85 | P/E RATIO 22.7 (Trailing: 24.6 / Median: NMF) | RELATIVE P/E RATIO 1.42 | DIV'D YLD 3.0% | VALUE LINE

TIMELINESS	–	
SAFETY	2	New 9/14/18
TECHNICAL	–	
BETA NMF (1.00 = Market)		

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$63-$92	$78 (15%)

2023-25 PROJECTIONS

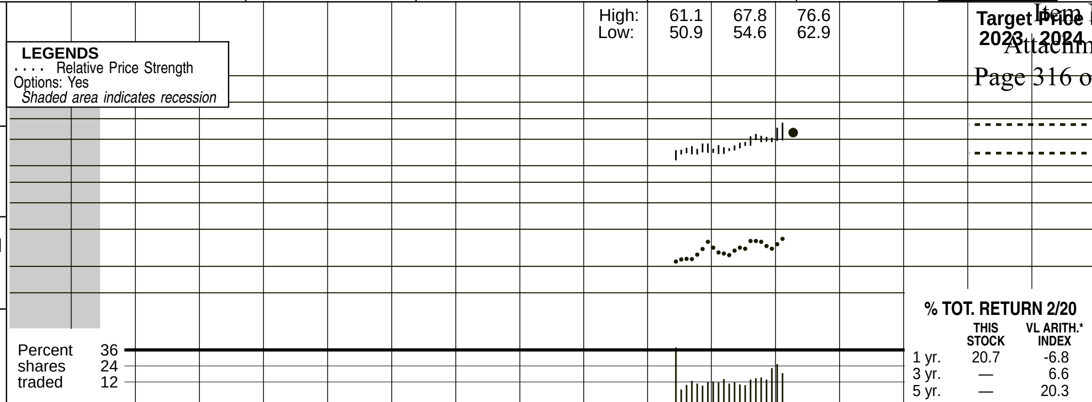
	Price	Gain	Ann'l Total Return
High	75	(+10%)	5%
Low	55	(-20%)	-2%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	241	280	263
to Sell	263	237	278
Hld's(000)	200470	198386	191230

	2018	2019	2020
High:	61.1	67.8	76.6
Low:	50.9	54.6	62.9

Target Price Range 2023 | 2024 | 2025



% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	20.7	-6.8
3 yr.	—	6.6
5 yr.	—	20.3

Evergy, Inc. was formed through the merger of Great Plains Energy and Westar Energy in June of 2018. Great Plains Energy holders received .5981 of a share of Evergy for each of their shares, and Westar Energy holders received one share of Evergy for each of their shares. The merger was completed on June 4, 2018. Shares of Evergy began trading on the New York Stock Exchange one day later.

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
- -	- -	- -	- -	- -	- -	- -	- -	16.75	22.71	*23.55*	*24.25*	Revenues per sh	*26.50*
- -	- -	- -	- -	- -	- -	- -	- -	4.89	7.18	*7.60*	*8.05*	"Cash Flow" per sh	*9.50*
- -	- -	- -	- -	- -	- -	- -	- -	2.50	2.79	*3.10*	*3.25*	Earnings per sh A	*3.75*
- -	- -	- -	- -	- -	- -	- -	- -	1.74	1.93	*2.05*	*2.17*	Div'd Decl'd per sh B ■	*2.55*
- -	- -	- -	- -	- -	- -	- -	- -	4.19	5.34	*7.15*	*7.00*	Cap'l Spending per sh	*6.00*
- -	- -	- -	- -	- -	- -	- -	- -	39.28	37.82	*38.80*	*39.90*	Book Value per sh C	*43.25*
- -	- -	- -	- -	- -	- -	- -	- -	255.33	226.64	*227.00*	*227.00*	Common Shs Outst'g D	*227.00*
- -	- -	- -	- -	- -	- -	- -	- -	22.7	21.8	*Bold figures are*		Avg Ann'l P/E Ratio	*18.0*
- -	- -	- -	- -	- -	- -	- -	- -	1.23	1.19	*Value Line*		Relative P/E Ratio	*1.00*
- -	- -	- -	- -	- -	- -	- -	- -	3.1%	3.2%	*estimates*		Avg Ann'l Div'd Yield	*3.8%*
- -	- -	- -	- -	- -	- -	- -	- -	4275.9	5147.8	*5350*	*5500*	Revenues ($mill)	*6000*
- -	- -	- -	- -	- -	- -	- -	- -	535.8	669.9	*720*	*755*	Net Profit ($mill)	*845*
- -	- -	- -	- -	- -	- -	- -	- -	9.8%	12.6%	*13.0%*	*13.0%*	Income Tax Rate	*13.0%*
- -	- -	- -	- -	- -	- -	- -	- -	2.5%	2.5%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*2.0%*
- -	- -	- -	- -	- -	- -	- -	- -	40.0%	50.6%	*50.0%*	*51.0%*	Long-Term Debt Ratio	*52.0%*
- -	- -	- -	- -	- -	- -	- -	- -	60.0%	49.4%	*50.0%*	*49.0%*	Common Equity Ratio	*48.0%*
- -	- -	- -	- -	- -	- -	- -	- -	16716	17337	*17625*	*18475*	Total Capital ($mill)	*20300*
- -	- -	- -	- -	- -	- -	- -	- -	18952	19346	*19950*	*20450*	Net Plant ($mill)	*21100*
- -	- -	- -	- -	- -	- -	- -	- -	4.0%	4.8%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.5%*
- -	- -	- -	- -	- -	- -	- -	- -	5.3%	7.8%	*8.0%*	*8.5%*	Return on Shr. Equity	*8.5%*
- -	- -	- -	- -	- -	- -	- -	- -	5.3%	7.8%	*8.0%*	*8.5%*	Return on Com Equity E	*8.5%*
- -	- -	- -	- -	- -	- -	- -	- -	.6%	2.4%	*2.5%*	*2.5%*	Retained to Com Eq	*2.5%*
- -	- -	- -	- -	- -	- -	- -	- -	89%	69%	*67%*	*65%*	All Div'ds to Net Prof	*68%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $9949.8 mill. **Due in 5 Yrs** $3431.3 mill.
LT Debt $8765.5 mill. **LT Interest** $368.2 mill.
Incl. $47.9 mill. capitalized leases.
(LT interest earned: 3.3x)

Leases, Uncapitalized Annual rentals $20.5 mill.

Pension Assets-12/19 $1732.8 mill. **Oblig** $2718.2 mill.
Pfd Stock None

Common Stock 226,659,013 shs.
as of 2/24/20
MARKET CAP: $16 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	7.11	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)	NA	NA	NA
Fixed Charge Cov. (%)	NA	322	305

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd 2019 to '23-'25
Revenues	- -	- -	NMF
"Cash Flow"	- -	- -	NMF
Earnings	- -	- -	NMF
Dividends	- -	- -	NMF
Book Value	- -	- -	NMF

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	- -	- -	- -	- -	- -
2018	600.2	893.4	1582.5	1199.8	4275.9
2019	1216.9	1221.7	1577.6	1131.6	5147.8
2020	*1250*	*1300*	*1600*	*1200*	*5350*
2021	*1300*	*1300*	*1650*	*1250*	*5500*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	- -	- -	- -	- -	- -
2018	.42	.56	1.32	.07	2.50
2019	.39	.57	1.56	.28	2.79
2020	*.45*	*.65*	*1.65*	*.35*	*3.10*
2021	*.45*	*.70*	*1.75*	*.35*	*3.25*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	- -	- -	- -	- -	- -
2017	- -	- -	- -	- -	- -
2018	.40	.40	.46	.475	1.74
2019	.475	.475	.475	.505	1.93
2020	.505				

BUSINESS: Evergy, Inc. was formed through the merger of Great Plains Energy and Westar Energy in June of 2018. Through its subsidiaries (now doing business under the Evergy name), provides electric service to 1.6 million customers in Kansas and Missouri, including the greater Kansas City area. Electric revenue breakdown: residential, 37%; commercial, 35%; industrial, 12%; wholesale, 7%; other, 9%. Generating sources: coal, 54%; nuclear, 17%; purchased, 29%. Fuel costs: 25% of revenues. '19 reported deprec. rate: 3%. Has 4,600 employees. Chairman: Mark A. Ruelle. President & Chief Executive Officer: Terry Bassham. Incorporated: Missouri. Address: 1200 Main Street, Kansas City, Missouri 64105. Tel.: 816-556-2200. Internet: www.evergyinc.com.

Evergy has reached an agreement with Elliott Management, an activist investor group. On January 21st, Elliott announced that it had a significant stake in the company (equivalent to 11.3 million shares), and stated that it felt the company was undervalued. Elliott wanted Evergy to stop its stock-buyback program, reduce expenses, and invest more in renewable energy. Evergy agreed to appoint two new directors to the board (with four current directors retiring in May) and created a four-man Strategic Review & Operations Committee, including the two new board members, which will make a recommendation to the board during the first half of 2020. Whether this means the company will be put up for sale is unknown.
Evergy has already made some changes. The company terminated its stock-repurchase program after having bought back some 45 million of the intended 60 million shares. Instead, Evergy raised its five-year capital-spending program by $1.5 billion. Thus, management projects long-term rate-base growth of 3%-4% annually, versus 2%-3% previously. However, even 3%-4% is low for a utility.
The company is lowering operating and maintenance expenses. Evergy achieved $150 million of merger-related cost cuts last year, well above its target of $110 million. It expects further reductions in 2020, and will not incur some severance and rebranding costs it booked last year.
We reduced our 2020 earnings estimate by $0.10 a share, to $3.10. This is largely due to the fact that the average share count will be higher than we expected three months ago. However, even our lowered estimate would produce a healthy increase over the 2019 tally. Note that the company is not providing earnings guidance while the strategic review is pending.
We expect a modest increase in profits in 2021. Continued cost reductions and a bit of volume growth ought to help.
The stock price is up slightly since before Elliott's announcement. The stock, unranked for Timeliness due to its short trading history, has some speculative appeal, but doesn't stand out among utilities for its dividend yield. It offers good total return potential for the 18-month span, but not for the 3- to 5-year period.
Paul E. Debbas, CFA *March 13, 2020*

(A) Diluted EPS. '19 earnings don't sum to full-year total due to rounding. Next earnings report due early May. (B) Dividends paid in mid-March, June, September, and December. ■ Dividend reinvestment plan available. (C) Incl. intangibles. In '19: $4077.1 mill., $17.99/sh. (D) In millions. (E) Rate base: Original cost depreciated. Rate allowed on common equity in Missouri in '18: none specified; in Kansas in '18: 9.3%. Earned on average common equity, '19: 7.2%. Regulatory Climate: Average.

Company's Financial Strength	B++
Stock's Price Stability	NMF
Price Growth Persistence	NMF
Earnings Predictability	NMF

FORTIS INC. TSE-FTS.TO [A]

RECENT PRICE 56.53 | P/E RATIO 20.8 (Trailing: 21.3 Median: 19.0) | RELATIVE P/E RATIO 1.30 | DIV'D YLD 3.5% | VALUE LINE

High:	29.2	34.5	35.4	40.7	35.1	40.5	42.1	45.1	48.7	47.4	56.9	59.3	
Low:	21.5	21.6	28.2	30.5	29.6	29.8	34.5	36.0	40.6	39.4	44.0	53.2	

TIMELINESS 2 Raised 2/28/20
SAFETY 2 Raised 7/17/15
TECHNICAL 3 Raised 2/14/20
BETA .60 (1.00 = Market)

18-Month Target Price Range

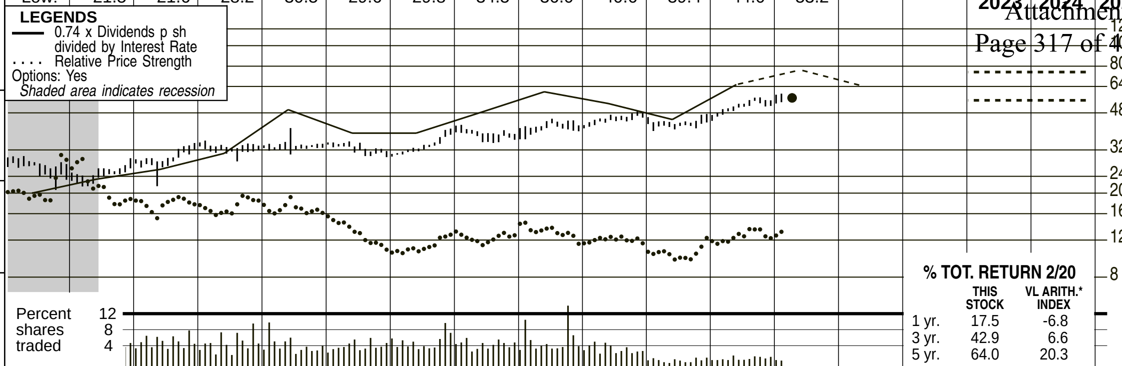
Low-High	Midpoint (% to Mid)
$53-$74	$64 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	75	(+35%)	*10%*
Low	55	(-5%)	*3%*

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	119	134	133
to Sell	119	108	118
Hld's(000)	224675	228513	245710



% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	17.5	-6.8
3 yr.	42.9	6.6
5 yr.	64.0	20.3

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
11.99	13.86	14.14	17.48	23.07	21.24	21.01	19.84	19.07	18.99	19.57	23.89	17.03	19.71	19.58	18.96	*19.30*	*19.60*	Revenues per sh	*21.25*
2.23	2.73	3.05	2.96	3.51	3.66	3.99	3.90	4.10	4.10	3.62	5.21	3.91	5.43	5.40	5.44	*5.60*	*5.80*	"Cash Flow" per sh	*6.50*
1.01	1.19	1.36	1.29	1.52	1.51	1.62	1.74	1.65	1.63	1.38	2.11	1.89	2.66	2.52	2.68	*2.55*	*2.60*	Earnings per sh [B]	*3.00*
.54	.59	.67	.82	1.00	1.04	1.12	1.17	1.21	1.25	1.30	1.43	1.55	1.65	1.75	1.86	*1.97*	*2.08*	Div'd Decl'd per sh [C] ■	*2.50*
2.92	4.93	4.80	5.16	5.34	5.79	5.89	5.91	5.68	5.32	6.00	7.97	5.13	7.18	7.51	8.03	*9.35*	*8.10*	Cap'l Spending per sh	*6.75*
10.47	11.76	12.26	16.72	18.00	18.57	18.95	20.53	20.84	22.39	24.90	28.63	32.32	31.77	34.80	36.49	*37.90*	*39.30*	Book Value per sh [D]	*43.75*
95.53	103.20	104.09	155.52	169.19	171.26	174.39	188.83	191.57	213.17	276.00	281.56	401.49	421.10	428.50	463.30	*466.00*	*469.00*	Common Shs Outst'g [E]	*478.00*
15.3	17.2	17.7	21.1	17.5	16.4	18.2	18.8	20.1	20.0	24.3	18.0	21.6	16.8	17.1	19.2	*Bold figures are*		Avg Ann'l P/E Ratio	*22.0*
.81	.92	.96	1.12	1.05	1.09	1.16	1.18	1.28	1.12	1.28	.91	1.13	.84	.92	1.05	*Value Line*		Relative P/E Ratio	*1.20*
3.5%	2.9%	2.8%	3.0%	3.8%	4.2%	3.8%	3.6%	3.6%	3.8%	3.9%	3.8%	3.8%	3.7%	4.1%	3.6%	*estimates*		Avg Ann'l Div'd Yield	*3.8%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $23140 mill. **Due in 5 Yrs** $5997 mill.
LT Debt $21914 mill. **LT Interest** $898 mill.
Incl. $413 mill. capitalized leases.
(LT interest earned: 2.4x)
Leases, Uncapitalized Annual rentals $10 mill.

Pension Assets-12/19 $3208 mill. **Oblig** $3632 mill.
Pfd Stock $1623 mill. **Pfd Div'd** $67 mill.

Common Stock 463,500,000 shs.
as of 2/12/20
MARKET CAP: $26 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
3664.0	3747.0	3654.0	4047.0	5401.0	6727.0	6838.0	8301.0	8390.0	8783.0	*9000*	*9200*	Revenues ($mill)	*10200*
313.0	347.0	362.0	390.0	374.0	672.0	660.0	1174.0	1136.0	1238.0	*1390*	*1420*	Net Profit ($mill)	*1620*
17.2%	18.3%	14.1%	7.4%	14.6%	21.3%	16.9%	25.8%	13.4%	12.5%	*12.0%*	*12.0%*	Income Tax Rate	*12.0%*
4.2%	5.5%	5.0%	5.9%	7.2%	7.4%	10.0%	9.5%	8.4%	9.2%	*8.0%*	*8.0%*	AFUDC % to Net Profit	*8.0%*
60.5%	57.5%	55.1%	53.5%	54.8%	53.3%	59.3%	58.4%	58.8%	54.2%	*53.5%*	*53.0%*	Long-Term Debt Ratio	*52.0%*
33.5%	36.9%	35.1%	37.0%	35.7%	38.1%	36.2%	37.1%	37.2%	41.8%	*43.0%*	*43.5%*	Common Equity Ratio	*44.5%*
9868.0	10513	11358	12892	19235	21151	35874	36108	40082	40445	*41325*	*42625*	Total Capital ($mill)	*46800*
8762.0	9281.0	10249	12267	17816	19595	29337	29668	32654	33988	*36925*	*39225*	Net Plant ($mill)	*44900*
5.0%	5.0%	4.8%	4.6%	3.4%	4.5%	2.8%	4.5%	4.1%	4.4%	*4.5%*	*4.5%*	Return on Total Cap'l	*4.5%*
8.0%	7.8%	7.1%	6.5%	4.3%	6.8%	4.5%	7.8%	6.9%	6.7%	*7.0%*	*7.0%*	Return on Shr. Equity	*7.0%*
8.6%	8.2%	7.9%	7.0%	4.5%	7.4%	4.5%	8.3%	7.2%	6.9%	*7.0%*	*6.5%*	Return on Com Equity [F]	*7.0%*
2.8%	4.3%	3.7%	3.2%	1.7%	4.5%	2.1%	5.2%	4.1%	4.0%	*3.5%*	*3.0%*	Retained to Com Eq	*3.0%*
71%	52%	60%	61%	68%	46%	59%	41%	46%	45%	*47%*	*49%*	All Div'ds to Net Prof	*52%*

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)	NA	NA	NA
Fixed Charge Cov. (%)	231	208	204

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-.5%	- -	*1.5%*
"Cash Flow"	5.0%	6.5%	*3.0%*
Earnings	6.0%	11.0%	*2.5%*
Dividends	6.5%	7.0%	*6.0%*
Book Value	7.0%	8.5%	*4.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	2274	2015	1901	2111	8301.0
2018	2197	1947	2040	2206	8390.0
2019	2436	1970	2051	2326	8783.0
2020	*2500*	*2050*	*2150*	*2300*	*9000*
2021	*2550*	*2100*	*2200*	*2350*	*9200*

Cal-endar	EARNINGS PER SHARE [B] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.72	.62	.66	.66	2.66
2018	.69	.57	.65	.61	2.52
2019	.72	.54	.63	.77	2.68
2020	*.70*	*.60*	*.65*	*.60*	*2.55*
2021	*.72*	*.61*	*.66*	*.61*	*2.60*

Cal-endar	QUARTERLY DIVIDENDS PAID [C] ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.375	.375	.375	.40	1.53
2017	.40	.40	.40	.425	1.63
2018	.425	.425	.425	.45	1.73
2019	.45	.45	.45	.4775	1.83
2020	.4775				

BUSINESS: Fortis Inc.'s main focus is electricity, hydroelectric, and gas utility operations (both regulated and nonregulated) in the United States, Canada, and the Caribbean. Has 2 mill. electric, 1.3 mill. gas customers. Owns UNS Energy (Arizona), Central Hudson (New York), FortisBC Energy (British Columbia), FortisAlberta (Central Alberta), and Eastern Canada (Newfoundland). Sold commercial real estate and hotel property assets in 2015. Acquired ITC Holdings 10/16. Fuel costs: 29% of revenues. '19 reported deprec. rate: 2.6%. Has 9,000 employees. Chairman: Douglas J. Haughey. President & CEO: Barry V. Perry. Inc.: Canada. Address: Fortis Place, Suite 1100, 5 Springdale St., PO Box 8837, St. John's, NL, Canada, A1B 3T2. Tel.: 709-737-2800. Internet: www.fortisinc.com.

A difficult year-to-year comparison will probably lead to an earnings decline for Fortis in 2020. Last November, the Federal Energy Regulatory Commission (FERC) issued an order that cut the allowed return on equity of the ITC transmission subsidiary from 11.07% to 10.63%. (ITC and the other transmission owners in the upper Midwest asked FERC for a rehearing, which was granted.) The ruling hurt Fortis' annual earning power by $0.04 a share. However, in anticipation of a refund of previously collected revenues, ITC took a reserve—too large, as it turned out. The reversal of a portion of this reserve boosted net profit by C$83 million ($0.19 a share) in the fourth quarter, which is *included* in our earnings presentation. Additionally, average shares outstanding will be materially higher this year because Fortis issued C$1.2 billion of common stock in the fourth quarter of 2019 in order to finance its capital budget and strengthen its balance sheet.

We expect a partial earnings recovery in 2021. Despite the reduction in the allowed ROE, ITC still benefits from a forward-looking regulatory mechanism that enables it to earn a return on its capital spending and recover increases in most kinds of expenses. Fortis' Canadian utilities will benefit from rate-base growth. All told, we look for a 2% profit increase, to $2.60 a share.

Tucson Electric Power revised its rate request. Originally, the utility asked the Arizona commission for an increase of $115 million (7%), based on a 10.35% ROE and a 53% common-equity ratio. The commission's staff recommended a hike of $61 million (4%), based on a 9.28% ROE and the same equity ratio. Subsequently, the company lowered its request to $99 million (6%), based on a 10% ROE and a 53% common-equity ratio. These figures are above the currently allowed 9.75% and 50%, respectively. An order is expected around midyear. Separately, Fortis' utilities in British Columbia are expecting orders on their multiyear rate plan in mid-2020, as well.

The dividend yield of this timely stock is slightly above the utility average. Total return potential is better for the 18-month span than for the 2023-2025 period.

Paul E. Debbas, CFA *March 13, 2020*

(A) Also trades on NYSE under the symbol FTS. All data in Canadian $. (B) Diluted earnings. Excl. nonrecur. gains (loss): '07, 3¢; '14, 2¢; '15, 48¢; '17, (35¢); '18, 7¢. '19, $1.12. '19 EPS don't sum due to chng. in shs. Next egs. report due early May. (C) Div'ds histor. paid in early Mar., June, Sept., and Dec. ■ Div'd reinv. plan avail. (D) Incl. intang. In '19: $35.01/sh. (E) In mill. (F) Rate base: varies. Rates all'd on com. eq.: 8.3%-10.32%; earned on avg. com. eq., '19: 7.6%. Regul. Climate: FERC, Above Average; AZ, Average; NY, Below Average.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	35
Earnings Predictability	70

OGE ENERGY CORP. NYSE-OGE

RECENT PRICE 38.66 | P/E RATIO 17.1 (Trailing: 17.2 Median: 17.0) | RELATIVE P/E RATIO 1.07 | DIV'D YLD 4.2% | VALUE LINE

TIMELINESS 3 Lowered 3/6/20
SAFETY 2 Lowered 12/18/15
TECHNICAL 3 Raised 2/28/20
BETA .70 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$42-$54	$48 (25%)

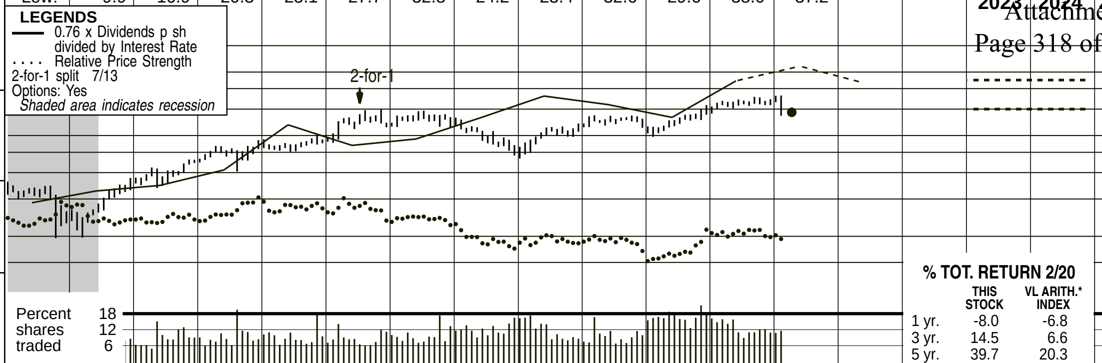
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+40%)	12%
Low	40	(+5%)	5%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	184	177	205
to Sell	225	209	185
Hld's(000)	134414	132772	133273

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	18.9	23.1	28.6	30.1	40.0	39.3	36.5	34.2	37.4	41.8	45.8	46.4
Low:	9.9	16.9	20.3	25.1	27.7	32.8	24.2	23.4	32.6	29.6	38.0	37.2



% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-8.0	-6.8
3 yr.	14.5	6.6
5 yr.	39.7	20.3

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
27.37	32.83	21.96	20.68	21.77	14.79	19.04	19.96	18.58	14.45	12.30	11.00	11.31	11.32	11.37	11.15	*12.00*	*12.75*	Revenues per sh	*15.00*
1.87	1.94	2.23	2.39	2.40	2.69	3.01	3.31	3.69	3.46	3.40	3.23	3.31	3.34	3.74	4.02	*4.15*	*4.35*	"Cash Flow" per sh	*5.00*
.89	.92	1.23	1.32	1.25	1.33	1.50	1.73	1.79	1.94	1.98	1.69	1.69	1.92	2.12	2.24	*2.25*	*2.35*	Earnings per sh A	*2.75*
.67	.67	.67	.68	.70	.71	.73	.76	.80	.85	.95	1.05	1.16	1.27	1.40	1.51	*1.60*	*1.68*	Div'd Decl'd per sh B ■	*1.95*
1.51	1.65	2.67	3.04	4.01	4.37	4.36	6.48	5.85	4.99	2.86	2.74	3.31	4.13	2.87	3.18	*2.90*	*3.65*	Cap'l Spending per sh	*3.75*
7.14	7.59	8.79	9.16	10.14	10.52	11.73	13.06	14.00	15.30	16.27	16.66	17.24	19.28	20.06	20.69	*21.35*	*22.05*	Book Value per sh C	*24.25*
180.00	181.20	182.40	183.60	187.00	194.00	195.20	196.20	197.60	198.50	199.40	199.70	199.70	199.70	199.70	200.10	*200.00*	*200.00*	Common Shs Outst'g D	*200.00*
14.1	14.9	13.7	13.8	12.4	10.8	13.3	14.4	15.2	17.7	18.3	17.7	17.7	18.3	16.5	19.0	*Bold figures are*		Avg Ann'l P/E Ratio	*17.0*
.74	.79	.74	.73	.75	.72	.85	.90	.97	.99	.96	.89	.93	.92	.89	1.04	*Value Line*		Relative P/E Ratio	*.95*
5.3%	4.9%	4.0%	3.8%	4.5%	5.0%	3.7%	3.1%	2.9%	2.5%	2.6%	3.5%	3.9%	3.6%	4.0%	3.5%	*estimates*		Avg Ann'l Div'd Yield	*4.0%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $3307.2 mill. **Due in 5 Yrs** $112.0 mill.
LT Debt $3195.2 mill. **LT Interest** $144.7 mill.
(LT interest earned: 4.5x)

Leases, Uncapitalized Annual rentals $6.2 mill.

Pension Assets-12/19 $530.3 mill. **Oblig** $616.9 mill.

Pfd Stock None

Common Stock 200,177,358 shs.
as of 1/31/20
MARKET CAP: $7.7 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
3716.9	3915.9	3671.2	2867.7	2453.1	2196.9	2259.2	2261.1	2270.3	2231.6	*2400*	*2550*	Revenues ($mill)	*3000*
295.3	342.9	355.0	387.6	395.8	337.6	338.2	384.3	425.5	449.6	*450*	*475*	Net Profit ($mill)	*545*
34.9%	30.7%	26.0%	24.9%	30.4%	29.2%	30.5%	32.5%	14.5%	7.4%	*6.5%*	*6.5%*	Income Tax Rate	*6.5%*
5.7%	9.0%	2.7%	2.6%	1.7%	3.7%	6.4%	15.0%	8.3%	1.6%	*1.0%*	*2.0%*	AFUDC % to Net Profit	*1.0%*
50.8%	51.6%	50.7%	43.1%	45.9%	44.3%	41.1%	41.7%	42.0%	43.6%	*44.5%*	*45.0%*	Long-Term Debt Ratio	*45.5%*
49.2%	48.4%	49.3%	56.9%	54.1%	55.7%	58.9%	58.3%	58.0%	56.4%	*55.5%*	*55.0%*	Common Equity Ratio	*54.5%*
4652.5	5300.4	5615.8	5337.2	5999.7	5971.6	5849.6	6600.7	6902.0	7334.7	*7665*	*8055*	Total Capital ($mill)	*8975*
6464.4	7474.0	8344.8	6672.8	6979.9	7322.4	7696.2	8339.9	8643.8	9044.6	*9245*	*9575*	Net Plant ($mill)	*10475*
7.8%	7.8%	7.7%	8.6%	7.8%	6.9%	7.0%	7.0%	7.3%	7.1%	*7.0%*	*7.0%*	Return on Total Cap'l	*7.0%*
12.9%	13.4%	12.8%	12.8%	12.2%	10.2%	9.8%	10.0%	10.6%	10.9%	*10.5%*	*11.0%*	Return on Shr. Equity	*11.0%*
12.9%	13.4%	12.8%	12.8%	12.2%	10.2%	9.8%	10.0%	10.6%	10.9%	*10.5%*	*11.0%*	Return on Com Equity E	*11.0%*
6.7%	7.7%	7.2%	7.3%	6.5%	4.0%	3.3%	3.5%	3.8%	3.6%	*3.0%*	*3.0%*	Retained to Com Eq	*3.0%*
48%	43%	44%	43%	47%	61%	67%	64%	64%	67%	*71%*	*70%*	All Div'ds to Net Prof	*72%*

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-2.2	+6.8	+1.1
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	5.30	4.86	4.69
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	6456	6863	6817
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.0	+.9	+1.0
Fixed Charge Cov. (%)	315	292	335

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-5.0%	-5.5%	*5.0%*
"Cash Flow"	4.0%	1.0%	*5.0%*
Earnings	5.0%	2.0%	*4.5%*
Dividends	7.0%	10.0%	*6.0%*
Book Value	7.0%	5.5%	*3.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	456.0	586.4	716.8	501.9	2261.1
2018	492.7	567.0	698.8	511.8	2270.3
2019	490.0	513.7	755.4	472.5	2231.6
2020	*525*	*550*	*800*	*525*	*2400*
2021	*550*	*600*	*850*	*550*	*2550*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.18	.52	.92	.30	1.92
2018	.27	.55	1.02	.27	2.12
2019	.24	.50	1.25	.26	2.24
2020	*.25*	*.60*	*1.15*	*.25*	*2.25*
2021	*.25*	*.65*	*1.20*	*.25*	*2.35*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.275	.275	.275	.3025	1.13
2017	.3025	.3025	.3025	.3325	1.24
2018	.3325	.3325	.3325	.365	1.36
2019	.365	.365	.365	.3875	1.48
2020	.3875				

BUSINESS: OGE Energy Corp. is a holding company for Oklahoma Gas and Electric Company (OG&E), which supplies electricity to 858,000 customers in Oklahoma (84% of electric revenues) and western Arkansas (8%); wholesale is (8%). Owns 25.5% of Enable Midstream Partners. Electric revenue breakdown: residential, 40%; commercial, 23%; industrial, 10%; oilfield, 9%; other, 18%. Generating sources: gas, 35%; coal, 15%; wind, 5%; purchased, 45%. Fuel costs: 35% of revenues. '19 reported depreciation rate (utility): 2.7%. Has 2,400 employees. Chairman, President and Chief Executive Officer: Sean Trauschke. Incorporated: Oklahoma. Address: 321 North Harvey, P.O. Box 321, Oklahoma City, Oklahoma 73101-0321. Telephone: 405-553-3000. Internet: www.oge.com.

We estimate that OGE Energy's earnings will be flattish in 2020. The company's utility subsidiary, Oklahoma Gas and Electric, will benefit from a full year of a rate order in Oklahoma that took effect in mid-2019 and a partial year of an increase that is expected in Arkansas (see below). On the other hand, the third-quarter comparison will be tough because the summer was hotter than normal last year. And the equity earnings from OGE Energy's 25.5% interest in Enable Midstream Partners, a natural gas master limited partnership, will likely decline, affected by the effects of low commodity prices on production. Our 2020 share-net estimate is at the midpoint of OGE Energy's targeted range of $2.19-$2.31. Note that our 2019 earnings presentation *excludes* a charge of $0.08 a share for a goodwill writedown at Enable.

OGE is upgrading its electric grid. The utility has filed a request with the Oklahoma Corporation Commission to recover $810.2 million of these investments through 2024. OG&E would recover these expenditures through a rider (surcharge) in customers' bills.

The utility has reached a settlement of its regulatory filing in Arkansas. OG&E had filed for a $5.9 million rate increase under the state's formula rate plan. The settlement (with the commission's staff, the state attorney general, and intervenor groups) calls for a hike of $5.2 million, effective April 1st, and states that OG&E's grid modernization plan is prudent. A ruling is expected soon.

We look for profit growth in 2021 in line with management's annual goal of 4%-6%. The grid-modernization plan in Oklahoma, if approved, will benefit annual earning power. Modest kilowatt-hour sales growth should help, too.

OGE Energy's stake in Enable has positive and negative aspects. The weakness in Enable's share price is affecting the valuation of OGE Energy stock, which has lagged most utility issues in 2020. Still, the company benefits from the $147 million of annual distributions it obtains from Enable.

This stock offers an attractive dividend yield. Total return potential is more appealing for the 18-month span than for the 3- to 5-year period.

Paul E. Debbas, CFA *March 13, 2020*

(A) Diluted EPS. Excl. nonrecurring gain (losses): '04, (3¢); '15, (33¢); '17, $1.18; '19, (8¢); gains on discontinued ops.: '05, 25¢; '06, 20¢. '18 & '19 EPS don't sum due to rounding. Next earnings report due early May. (B) Div'ds historically paid in late Jan., Apr., July, & Oct. ■ Div'd reinvestment plan avail. (C) Incl. deferred charges. In '19: $1.53/sh. (D) In mill., adj. for split. (E) Rate base: Net original cost. Rate allowed on com. eq. in OK in '19: 9.5%; in AR in '18: 9.5%; earned on avg. com. eq., '19: 11.0%. Regulatory Climate: Average.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	40
Earnings Predictability	80

WEC ENERGY GROUP NYSE-WEC

RECENT PRICE 97.58 | P/E RATIO 26.0 (Trailing: 27.3; Median: 18.0) | RELATIVE P/E RATIO 1.63 | DIV'D YLD 2.6% | VALUE LINE

TIMELINESS 3 Lowered 8/16/19

SAFETY 1 Raised 3/23/12

TECHNICAL 3 Raised 3/13/20

BETA .45 (1.00 = Market)

18-Month Target Price Range

Low-High: $74-$112 | Midpoint (% to Mid): $93 (-5%)

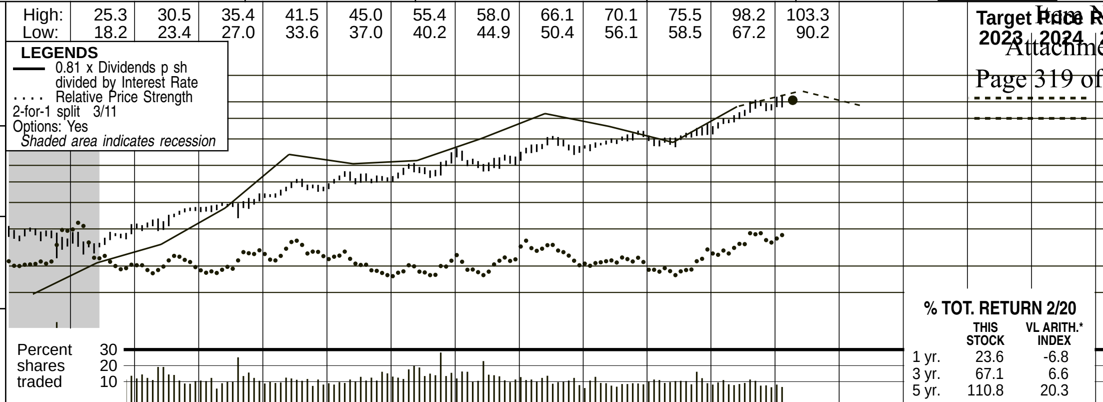
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	100	(Nil)	4%
Low	80	(-20%)	-1%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	352	392	403
to Sell	332	359	361
Hld's(000)	243164	246256	246035

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
High:	25.3	30.5	35.4	41.5	45.0	55.4	58.0	66.1	70.1	75.5	98.2	103.3						
Low:	18.2	23.4	27.0	33.6	37.0	40.2	44.9	50.4	56.1	58.5	67.2	90.2						



Target Price Range 2023 | 2024 | 2025

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	23.6	-6.8
3 yr.	67.1	6.6
5 yr.	110.8	20.3

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	*25.35*	*26.45*	Revenues per sh	*30.00*
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	*6.95*	*7.45*	"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*	*4.00*	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	*10.00*	*9.30*	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*	*34.30*	Book Value per sh C	*38.25*
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	*19.0*
.92	.77	.86	.88	.89	.89	.89	.89	1.01	.93	.93	1.07	1.04	1.01	1.06	1.28	*Value Line*		Relative P/E Ratio	*1.05*
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	*3.5%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $12735 mill. **Due in 5 Yrs** $3878.5 mill.
LT Debt $11211 mill. **LT Interest** $526.9 mill.
Incl. $12.1 mill. capitalized leases.
(LT interest earned: 3.5x)
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 315,435,595 shs.

MARKET CAP: $31 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
4202.5	4486.4	4246.4	4519.0	4997.1	5926.1	7472.3	7648.5	7679.5	7523.1	*8000*	*8350*	Revenues ($mill)	*9500*
455.6	514.0	547.5	578.6	589.5	640.3	940.2	998.2	1060.5	1134.2	*1190*	*1265*	Net Profit ($mill)	*1500*
35.4%	33.9%	35.9%	36.9%	38.0%	40.4%	37.6%	37.2%	13.8%	9.9%	*11.0%*	*11.0%*	Income Tax Rate	*11.0%*
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 ($mill)	*25000*
9601.5	10160	10572	10907	11258	19190	19916	21347	22001	23620	*25775*	*27625*	Net Plant ($mill)	*31600*
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%	*4.0%*	*4.0%*	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%*

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%	*3.5%*
"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	*2450*	*1750*	*1650*	*2150*	*8000*
2021	*2550*	*1850*	*1750*	*2200*	*8350*

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	*1.33*	*.80*	*.85*	*.77*	*3.75*
2021	*1.40*	*.85*	*.90*	*.85*	*4.00*

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				

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 expect a continuation of WEC Energy's steady earnings growth in 2020 and 2021. This year, the company's utilities in Wisconsin are benefiting from rate relief. The service area's economy is solid. In Chicago, Peoples Gas spends $280 million-$300 million a year to replace old pipes. The utility recovers this spending through a rider (surcharge) on customers' bills. An additional source of profit growth is income from nonutility wind projects (see below). We have raised our 2020 share-earnings estimate by $0.05, to $3.75. This is the upper end of the company's targeted (and narrow) range of $3.71-$3.75. Our 2021 estimate would produce an earnings increase of 7%, which is within WEC Energy's annual goal of 5%-7%.

A nonutility subsidiary is investing in wind projects. WEC Energy took 80% stakes in a 97-megawatt windfarm (a $145 million investment), which closed in late December, and a 200-mw wind energy center (a $276 million investment), which closed in early January. The company paid $338 million for an 80% stake in a 300-mw project and has agreed to pay $345 million for an 80% stake in a 250-mw windfarm. The two projects are expected to attain commercial operation by yearend. These investments earn a higher return on equity for WEC Energy than does the company's regulated utility operations.

One of WEC Energy's electric companies is asking the Wisconsin commission for approval to build two liquefied natural gas facilities. This would be a $370 million investment. If approved, construction is expected to begin in the summer of 2021, with completion in late 2023.

The board of directors raised the dividend in the first quarter. The increase was $0.17 a share (7.2%) annually. WEC Energy's target for the payout ratio is 65%-70%.

This top-quality stock is expensively priced. WEC Energy posted a total return of 36.8% in 2019, and the stock price is up 6% so far this year. The recent quotation is near the upper end of our 2023-2025 Target Price Range. The dividend yield is below average for a utility. Total return potential over the 18-month period is negative.

Paul E. Debbas, CFA *March 13, 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 May. (B) Div'ds paid in early Mar., June, Sept. & Dec. ■ Div'd reinv- est. 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	95
Price Growth Persistence	75
Earnings Predictability	90

BLACK HILLS CORP. NYSE-BKH

RECENT PRICE **67.69** | P/E RATIO **18.6** (Trailing: 19.1, Median: 19.0) | RELATIVE P/E RATIO **1.27** | DIV'D YLD **3.3%** | VALUE LINE

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

TIMELINESS 3 Lowered 9/20/19
SAFETY 2 Raised 5/1/15
TECHNICAL 3 Raised 3/13/20
BETA .65 (1.00 = Market)

18-Month Target Price Range

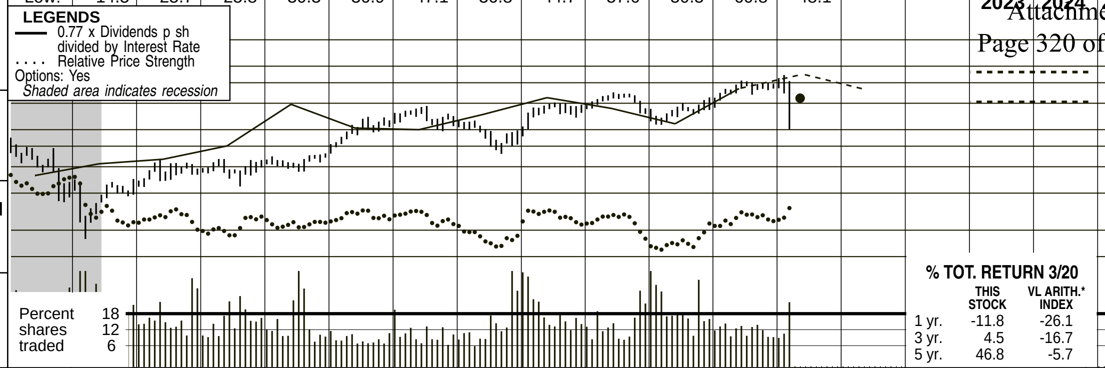
Low-High	Midpoint (% to Mid)
$62-$95	$79 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	90	(+35%)	10%
Low	65	(-5%)	3%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	148	145	144
to Sell	128	133	137
Hld's(000)	54551	53817	53772



% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-11.8	-26.1
3 yr.	4.5	-16.7
5 yr.	46.8	-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
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	*27.90*	*28.15*	Revenues per sh	*30.50*
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	*8.50*
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*	*3.80*	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*	*42.50*	Book Value per sh C	*47.00*
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	1.15	*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%*

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	*1750*	*1800*	Revenues ($mill)	*1950*
64.6	40.4	86.9	115.8	128.8	128.3	140.3	186.5	192.5	214.5	*220*	*240*	Net Profit ($mill)	*270*
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	*51.5%*
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	*48.5%*
2286.3	2489.7	2171.4	2704.7	2643.6	3332.7	4825.8	4818.4	5132.4	5502.2	*5690*	*5860*	Total Capital ($mill)	*6225*
2495.4	2789.6	2742.7	2990.3	3239.4	3259.1	4469.0	4541.4	4854.9	5503.2	*5945*	*6260*	Net Plant ($mill)	*6900*
4.4%	3.3%	5.5%	5.5%	6.1%	4.9%	4.0%	5.2%	5.0%	4.9%	*5.0%*	*5.5%*	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%*	*9.0%*	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%*	*9.0%*	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%*	*61%*	All Div'ds to Net Prof	*65%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $3495.3 mill. **Due in 5 Yrs** $891.5 mill.
LT Debt $3140.1 mill. **LT Interest** $131.9 mill.
(LT interest earned: 3.2x)
Leases, Uncapitalized Annual rentals $1.0 mill.

Pension Assets-12/19 $434.3 mill. **Oblig** $485.4 mill.

Pfd Stock None

Common Stock 62,750,615 shs. **as of 3/2/20**

MARKET CAP: $4.2 billion (Mid Cap)

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%	*3.5%*
Earnings	7.0%	7.0%	*3.5%*
Dividends	3.5%	5.0%	*6.0%*
Book Value	3.0%	4.0%	*5.0%*

QUARTERLY REVENUES ($ mill.)

Cal-endar	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	*600*	*345*	*330*	*475*	*1750*
2021	*615*	*355*	*340*	*490*	*1800*

EARNINGS PER SHARE A

Cal-endar	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	*1.65*	*.40*	*.45*	*1.05*	*3.55*
2021	*1.75*	*.45*	*.50*	*1.10*	*3.80*

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	.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.

Black Hills is awaiting a rate order in Colorado. The company filed for a gas rate increase of $2.5 million, based on a return on equity of 10.3% and a common-equity ratio of 50.1%. Black Hills also wants to consolidate its disparate rates in the state into one tariff. However, an administrative law judge recommended a $2 million rate *decrease*, based on an ROE of 9.5%. A ruling from the Colorado regulators might well come in the next few weeks. We don't know what the commission will do, but we note that Black Hills' most recent electric rate order in Colorado, in January of 2017, was unfavorable for the utility.

At least one other gas rate application is upcoming. Black Hills plans to file a case in Nebraska in mid-2020, but this might be delayed until later this year due to the disruption caused by the coronavirus situation. A petition in Arkansas might come in late 2020 or early 2021.

We have trimmed our 2020 share-earnings estimate by $0.10, to $3.55. This is the low end of Black Hills' targeted range of $3.55-$3.75. As of late March, Black Hills was not expecting a significant effect on utility volume in the first quarter, but we think the weakening economy will eventually reduce commercial electric volume.

We look for a solid profit increase next year. The economy should be in better shape. Also, even if Black Hills gets little or no benefit from upcoming regulatory activity, we note that the company still obtains revenues annually from various cost-recovery mechanisms.

Black Hills sold some stock in February. Its timing was good, as the issuance occurred before the market plummeted. The company sold 1.2 million shares for $100 million, and used the proceeds to pay off commercial paper borrowings.

The company is building a wind project. This will add 52.5 megawatts of capacity at a cost of $79 million. This should be completed by yearend.

This stock has a high valuation for a utility. The dividend yield is a cut below the industry average. Total return potential doesn't stand out for the group, either for the 18-month span or the 3- to 5-year period.

Paul E. Debbas, CFA *April 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 May. **(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	85
Price Growth Persistence	65
Earnings Predictability	70

SEMPRA ENERGY NYSE-SRE

RECENT PRICE 126.98 | P/E RATIO 19.7 (Trailing: 21.3 Median: 20.0) | RELATIVE P/E RATIO 1.35 | DIV'D YLD 3.4% | VALUE LINE

TIMELINESS 3 Lowered 6/21/19
SAFETY 2 Raised 7/29/16
TECHNICAL 2 Raised 3/13/20
BETA .65 (1.00 = Market)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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	

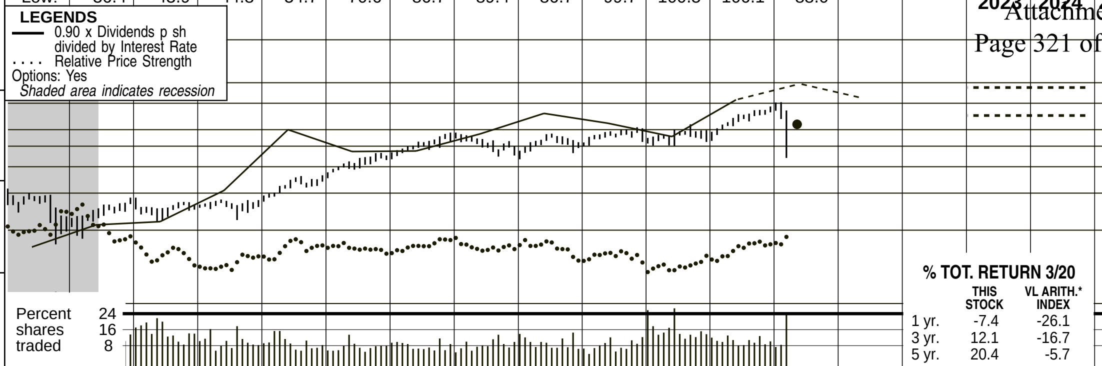
18-Month Target Price Range
Low-High **Midpoint (% to Mid)**
$120-$174 $147 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	190	(+50%)	13%
Low	140	(+10%)	6%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	338	368	424
to Sell	316	293	276
Hld's(000)	257637	253080	248880



% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-7.4	-26.1
3 yr.	12.1	-16.7
5 yr.	20.4	-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
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	***12.30***	***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	***6.85***	***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	***72.05***	***76.65***	**Book Value per sh C**	***88.25***
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%***

CAPITAL STRUCTURE as of 12/31/19
Total Debt $25816 mill. **Due in 5 Yrs** $10486 mill.
LT Debt $20785 mill. **LT Interest** $831 mill.
Incl. $1275 mill. capitalized leases.
(LT interest earned: 3.5x)
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 292,383,645 shs. **as of 3/2/20**
MARKET CAP: $37 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
9003.0	10036	9647.0	10557	11035	10231	10183	11207	11687	10829	***11400***	***12000***	**Revenues ($mill)**	***14000***
1008.0	1088.0	1079.0	1060.0	1162.0	1314.0	1065.0	1169.0	1607.0	1825.0	***2300***	***2580***	**Net Profit ($mill)**	***3400***
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	***46075***	***48550***	**Total Capital ($mill)**	***58300***
19876	23572	25191	25460	25902	28039	32931	36503	36796	36452	***40200***	***43625***	**Net Plant ($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%	***9.0%***	***10.0%***	**Return on Shr. Equity**	***11.0%***
11.1%	11.0%	10.4%	9.6%	10.3%	11.1%	8.2%	9.2%	10.0%	9.5%	***9.5%***	***10.0%***	**Return on Com Equity E**	***11.0%***
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%	***64%***	***58%***	**All Div'ds to Net Prof**	***59%***

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%	*8.0%*

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	***3050***	***2350***	***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	***2.00***	***1.50***	***1.60***	***1.75***	***6.85***
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			

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 expects to complete the sales of its South American utilities soon. These are the company's last transactions in a series of moves it made to make its strategic and geographic focus narrower. The sales will raise some $4.7 billion in cash, which will be earmarked for debt reduction. Sempra will record a gain on the sale (estimated at $1.81 billion-$1.96 billion after taxes). We will *exclude* this from our earnings presentation as income from discontinued operations. We will also exclude the income provided by these businesses (which Sempra estimates at $70 million-$85 million after taxes), even though the company includes this in its 2020 earnings guidance of $6.70-$7.50 a share.

Earnings are likely to advance significantly in 2020. San Diego Gas & Electric and Southern California Gas received rate increases of $134 million and $220 million, respectively, at the start of the year. Oncor, the 80%-owned utility in Texas, benefits from regulatory mechanisms that provide additional revenues annually. Sempra's subsidiary in Mexico is increasing its contribution. Even if the utilities see lower volume as the economy worsens, this should not affect the company's results because its utilities operate under a regulatory mechanism that decouples sales and revenues.

We expect another material profit increase in 2021. SDG&E and SoCalGas will benefit from rate increases of $102 million and $150 million, respectively. But the key factor will be the first full year of operation for a liquefied natural gas facility. This is expected to provide net profit of $400 million-$450 million annually. Sempra's contracts are long-term, take-or-pay with creditworthy counterparties. It takes no commodity or volumetric risk.

The board of directors raised the annual dividend $0.31 a share (8.0%). We project similar growth over the 3- to 5-year period. However, Sempra hasn't stated its dividend goals for beyond this year.

Sempra stock has an average yield for a utility. The share price has fallen 16%, more than most utilities, this year. It offers about average 18-month and 2023-2025 total return potential compared with other utility equities.

Paul E. Debbas, CFA *April 24, 2020*

(A) Diluted EPS. Excl. nonrec. gains (losses): '06, $1.21; '07, (10¢); '19, 95¢; '20, *$6.65*. Next earnings report due early May. '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.: **(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	95
Price Growth Persistence	75
Earnings Predictability	70

XCEL ENERGY NDQ-XEL

RECENT PRICE 63.66 | P/E RATIO 22.7 (Trailing: 24.1 / Median: 16.0) | RELATIVE P/E RATIO 1.55 | DIV'D YLD 2.7% | VALUE LINE

TIMELINESS 3 Lowered 9/20/19
SAFETY 1 Raised 5/1/15
TECHNICAL 1 Raised 4/24/20
BETA .45 (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

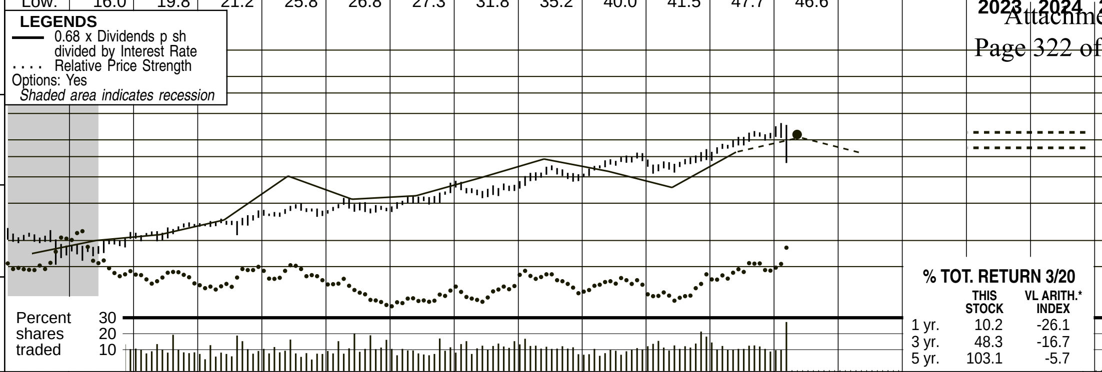
Target Price Range
2023 | 2024 | 2025

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$54-$79	$67 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	65	(Nil)	4%
Low	55	(-15%)	Nil



Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	352	347	395
to Sell	308	333	320
Hld's(000)	404643	407757	409339

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	10.2	-26.1
3 yr.	48.3	-16.7
5 yr.	103.1	-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
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	*22.25*	*23.05*	Revenues per sh	*25.50*
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*	*7.00*	"Cash Flow" per sh	*8.75*
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	*32.75*
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%*
						10311	10655	10128	10915	11686	11024	11107	11404	11537	11529	*12000*	*12500*	Revenues ($mill)	*14000*
						727.0	841.4	905.2	948.2	1021.3	1063.6	1123.4	1171.0	1261.0	1372.0	*1440*	*1565*	Net Profit ($mill)	*1955*
						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%	*9.0%*	*8.0%*	AFUDC % to Net Profit	*7.0%*
						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	*57.0%*
						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	*43.0%*
						17452	17331	19018	20477	21714	23092	25216	25975	28025	30646	*34050*	*35825*	Total Capital ($mill)	*41800*
						20663	22353	23809	26122	28757	31206	32842	34329	36944	39483	*41025*	*42600*	Net Plant ($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	*6.0%*
						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	*11.0%*
						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	*11.0%*
						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	*4.5%*
						59%	56%	54%	54%	55%	57%	61%	62%	58%	58%	*64%*	*63%*	All Div'ds to Net Prof	*60%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $18704 mill. **Due in 5 Yrs** $3820 mill.
LT Debt $17407 mill. **LT Interest** $731 mill.
Incl. $77 mill. capitalized leases.
(LT interest earned: 3.0x)

Leases, Uncapitalized Annual rentals $262 mill.
Pension Assets-12/19 $3184 mill. **Oblig** $3701 mill.

Pfd Stock None

Common Stock 524,669,024 shs.
as of 2/13/20
MARKET CAP: $33 billion (Large Cap)

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

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-.5%	.5%	*2.5%*
"Cash Flow"	5.5%	7.5%	*7.0%*
Earnings	5.5%	5.0%	*6.0%*
Dividends	5.0%	6.5%	*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
2017	2946	2645	3017	2796	11404
2018	2951	2658	3048	2880	11537
2019	3141	2577	3013	2798	11529
2020	*3250*	*2700*	*3150*	*2900*	*12000*
2021	*3350*	*2850*	*3300*	*3000*	*12500*

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	*.63*	*.52*	*1.10*	*.50*	*2.75*
2021	*.67*	*.55*	*1.15*	*.53*	*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			

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.

Xcel Energy's utility in Colorado received an electric rate order. In February, the state commission granted Public Service of Colorado a rate hike of $35 million, based on a return on equity of 9.3% and a common-equity ratio of 55.6%. New tariffs took effect in February. The utility had sought an increase of $108 million, and asked the regulators for reconsideration.

P.S. of Colorado filed a gas rate application. The company requested an increase of $127 million, based on an ROE of 9.95% and a common-equity ratio of 55.8%. New rates are expected to take effect in the fourth quarter.

Southwestern Public Service reached a settlement of its rate case in New Mexico and is trying to do so in Texas, as well. The agreement in New Mexico, if approved by the state commission, will raise rates by $31 million, based on an ROE of 9.45% and a common-equity ratio of 54.8%. A ruling is expected in the second or third quarter. In Texas, the utility requested a hike of $136.5 million, based on an ROE of 10.35% and a common-equity ratio of 54.7%. New tariffs are expected to take effect in the third quarter. SPS plans to file rate cases in each state in early 2021 in order to recover the costs of wind projects that are scheduled for completion in late 2020.

Rate relief should help boost earnings in 2020 and 2021. We are sticking with our 2020 share-net estimate of $2.75, which is near the low end of Xcel's guidance of $2.73-$2.83. Any decline in kilowatt-hour sales will affect 55% of the company's electric business, as this portion lacks regulatory mechanisms that decouple revenues and volume.

Xcel has agreed to sell a nonutility gas-fired plant. The buyer has agreed to pay $680 million for the facility. Xcel will use the proceeds for debt reduction. The asset sale is expected to be completed in the third quarter and will have little effect on the company's earnings.

This stock is priced expensively. Unlike most utility issues, the price is virtually unchanged in 2020. The dividend yield is below average, and total return potential does not stand out for the 18-month or 2023-2025 period.

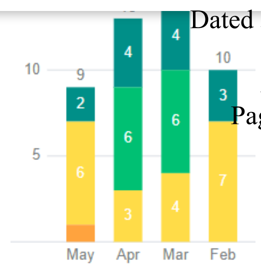
Paul E. Debbas, CFA *April 24, 2020*

(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 early May. (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	100
Price Growth Persistence	60
Earnings Predictability	100

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	1	2	1	2

Growth Estimates	AEE	Industry	Sector	S&P 500
Current Qtr.	-9.00%	N/A	N/A	-0.31
Next Qtr.	13.90%	N/A	N/A	-0.13
Current Year	2.70%	N/A	N/A	-0.17
Next Year	9.60%	N/A	N/A	0.25
Next 5 Years (per annum)	6.50%	N/A	N/A	0.04
Past 5 Years (per annum)	8.24%	N/A	N/A	N/A



Recommendation Rating ›

2

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (10) ›

Average 84.70

Low 76.00 High 92.00

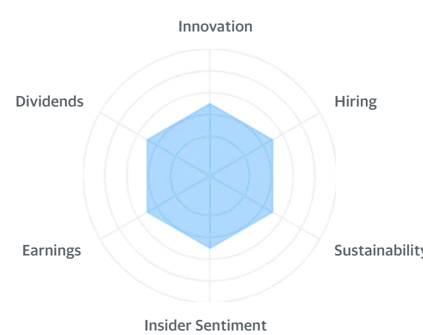
Current 71.45

Upgrades & Downgrades ›

↑ Upgrade	Evercore ISI Group: In-Line to Outperform	4/20/2020
↓ Downgrade	Morgan Stanley: Overweight to Equal-Weight	4/14/2020
Maintains	Barclays: to Equal-Weight	3/26/2020
Maintains	Morgan Stanley: to Overweight	3/12/2020
Initiated	BMO Capital: to Outperform	2/20/2020
Maintains	Wells Fargo: to Overweight	2/14/2020

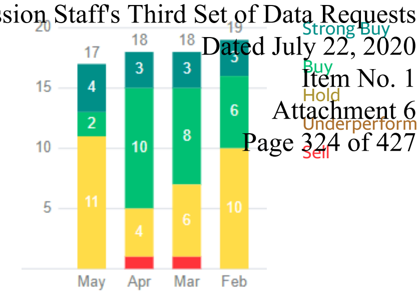
AEE vs Sector More details

AEE Sector



EPS Revisions	Current Qtr. (Mar 2020)	Next Qtr. (Jun 2020)	Current Year (2020)	Next Year (2021)
Up Last 30 Days	N/A	4	1	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	2	5	1

Growth Estimates	AEP	Industry	Sector	S&P 500
Current Qtr.	-6.70%	N/A	N/A	-0.31
Next Qtr.	-1.00%	N/A	N/A	-0.13
Current Year	1.40%	N/A	N/A	-0.17
Next Year	7.90%	N/A	N/A	0.25
Next 5 Years (per annum)	6.00%	N/A	N/A	0.04
Past 5 Years (per annum)	6.58%	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 (16) ›

Average 96.31

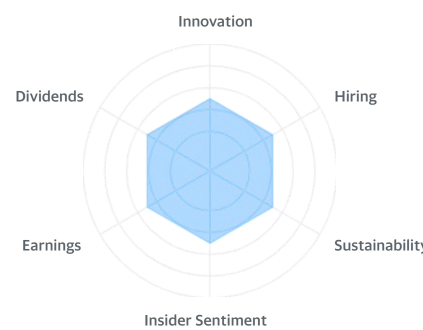
Low 76.00 Current 81.39 High 115.00

Upgrades & Downgrades ›

↑ Upgrade	Evercore ISI Group: In-Line to Outperform	4/20/2020
Maintains	Morgan Stanley: to Overweight	4/15/2020
Maintains	Barclays: to Overweight	3/26/2020
Maintains	UBS: to Buy	3/16/2020
↑ Upgrade	KeyBanc: Sector Weight to Overweight	3/13/2020
Maintains	Morgan Stanley: to Overweight	3/12/2020

AEP vs Sector More details

AEP Sector



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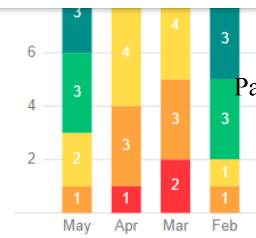
Up Last 30 Days	N/A	1	1	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	2	1	2	2

Growth Estimates	AGR	Industry	Sector	S&P 500
Current Qtr.	15.20%	N/A	N/A	-0.31
Next Qtr.	2.50%	N/A	N/A	-0.13
Current Year	1.40%	N/A	N/A	-0.17
Next Year	9.50%	N/A	N/A	0.25
Next 5 Years (per annum)	6.30%	N/A	N/A	0.04
Past 5 Years (per annum)	1.74%	N/A	N/A	N/A



Recommendation Rating ›

3.5

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (6) ›

Average 45.67

Low 42.00 High 47.00

Current 41.44

Upgrades & Downgrades ›

↑ Upgrade	B of A Securities: Underperform to Neutral	4/30/2020
↓ Downgrade	Goldman Sachs: Neutral to Sell	1/16/2020
Maintains	JP Morgan: to Underweight	10/14/2019
↓ Downgrade	Citigroup: Buy to Neutral	8/13/2019
Initiated	KeyBanc: to Sector Weight	6/5/2019
↓ Downgrade	Bank of America: Neutral to Underperform	4/25/2019

AGR vs Sector More details

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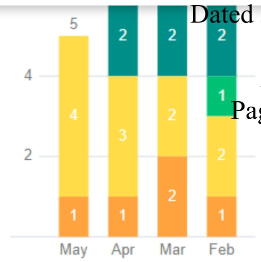
Up Last 30 Days	N/A	1	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	1

Growth Estimates	ALE	Industry	Sector	S&P 500
Current Qtr.	-16.80%	N/A	N/A	-0.31
Next Qtr.	10.60%	N/A	N/A	-0.13
Current Year	-1.40%	N/A	N/A	-0.17
Next Year	8.80%	N/A	N/A	0.25
Next 5 Years (per annum)	7.00%	N/A	N/A	0.04
Past 5 Years (per annum)	1.25%	N/A	N/A	N/A



Recommendation Rating ›

2.8

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (5) ›

Average 70.60

Low 59.00 High 86.00

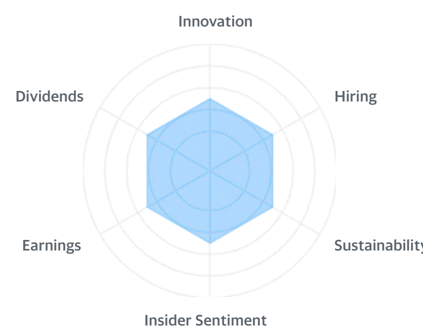
Current 55.65

Upgrades & Downgrades ›

Upgrade	Mizuho: Underperform to Neutral	3/3/2020
Upgrade	Guggenheim: Neutral to Buy	1/8/2020
Downgrade	Mizuho: Neutral to Underperform	2/11/2019
Maintains	Wells Fargo: Market Perform to Market Perform	9/17/2018
Downgrade	Mizuho: Buy to Neutral	5/7/2018
Maintains	JP Morgan: Underweight to Underweight	4/10/2018

ALE vs Sector More details

ALE Sector



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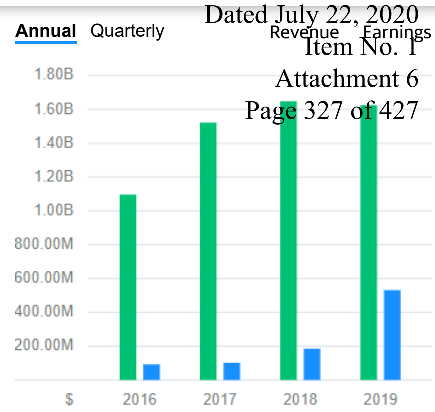
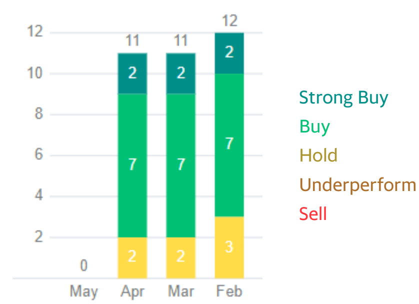
Up Last 7 Days	1	N/A	N/A	N/A
Up Last 30 Days	1	N/A	1	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	N/A	2	N/A

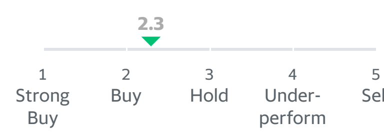
Growth Estimates	AQN.TO	Industry	Sector	S&P 500
Current Qtr.	15.80%	N/A	N/A	-0.31
Next Qtr.	9.10%	N/A	N/A	-0.13
Current Year	9.50%	N/A	N/A	-0.17
Next Year	11.60%	N/A	N/A	0.25
Next 5 Years (per annum)	7.80%	N/A	N/A	0.04
Past 5 Years (per annum)	17.39%	N/A	N/A	N/A



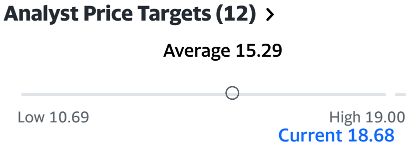
Recommendation Trends ›



Recommendation Rating ›



Analyst Price Targets (12) ›



Upgrades & Downgrades ›

Maintains	Morgan Stanley: to Equal-Weight	4/15/2020
↓ Downgrade	Morgan Stanley: Overweight to Equal-Weight	3/10/2020
Initiated	Morgan Stanley: to Overweight	2/7/2020
Maintains	TD Securities: to Buy	12/4/2019

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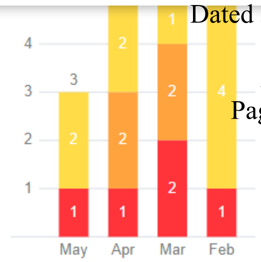
Up Last 30 Days	1	1	1	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	2	1	2	1

Growth Estimates	AVA	Industry	Sector	S&P 500
Current Qtr.	-13.30%	N/A	N/A	-0.31
Next Qtr.	12.10%	N/A	N/A	-0.13
Current Year	5.30%	N/A	N/A	-0.17
Next Year	10.10%	N/A	N/A	0.25
Next 5 Years (per annum)	6.10%	N/A	N/A	0.04
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 44.00

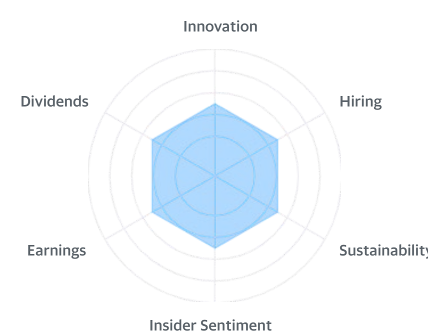
Low 39.00 High 52.00
Current 40.90

Upgrades & Downgrades ›

↑ 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
↓ Downgrade	Williams Capital: Hold to Sell	9/16/2019

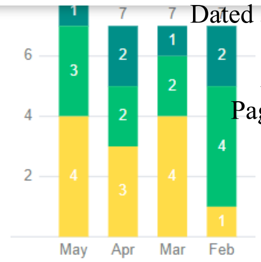
AVA vs Sector More details

AVA Sector



Up Last 30 Days	1	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	1	1	2

Growth Estimates	BKH	Industry	Sector	S&P 500
Current Qtr.	-4.60%	N/A	N/A	-0.31
Next Qtr.	33.30%	N/A	N/A	-0.13
Current Year	2.50%	N/A	N/A	-0.17
Next Year	8.00%	N/A	N/A	0.25
Next 5 Years (per annum)	5.83%	N/A	N/A	0.04
Past 5 Years (per annum)	-7.70%	N/A	N/A	N/A



Recommendation Rating ›

2.7

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (8) ›

Average 74.88

Low 64.00 High 88.00

Current 59.73

Upgrades & Downgrades ›

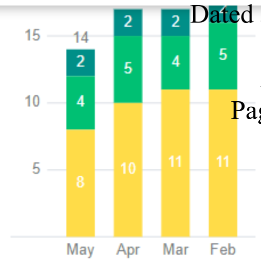
Downgrade	B of A Securities: Buy to Neutral	4/29/2020
Maintains	Wells Fargo: to Market Perform	11/6/2019
Upgrade	Bank of America: Neutral to Buy	10/10/2019
Maintains	Credit Suisse: to Neutral	8/9/2019
Upgrade	Scotiabank: Underperform to Sector Perform	5/9/2019
Maintains	Credit Suisse: Neutral to Neutral	2/11/2019

BKH vs Sector

More details

Up Last 30 Days	2	3	2	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	5	5	4	3

Growth Estimates	CMS	Industry	Sector	S&P 500
Current Qtr.	9.10%	N/A	N/A	-0.31
Next Qtr.	-4.10%	N/A	N/A	-0.13
Current Year	5.20%	N/A	N/A	-0.17
Next Year	8.40%	N/A	N/A	0.25
Next 5 Years (per annum)	7.30%	N/A	N/A	0.04
Past 5 Years (per annum)	7.18%	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 64.21

Low 59.00 High 73.00
Current 55.95

Upgrades & Downgrades >

Maintains	Citigroup: to Neutral	4/28/2020
Maintains	Credit Suisse: to Neutral	4/23/2020
Maintains	Morgan Stanley: to Equal-Weight	4/15/2020
Maintains	Barclays: to Equal-Weight	3/26/2020
Maintains	JP Morgan: to Overweight	3/26/2020
Maintains	Morgan Stanley: to Equal-Weight	3/12/2020

CMS vs Sector

More details

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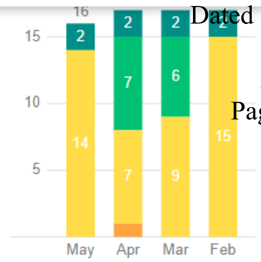
Up Last 30 Days	3	1	3	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	1	1	2

Growth Estimates	CNP	Industry	Sector	S&P 500
Current Qtr.	-6.50%	N/A	N/A	-0.31
Next Qtr.	-25.70%	N/A	N/A	-0.13
Current Year	-21.80%	N/A	N/A	-0.17
Next Year	-2.10%	N/A	N/A	0.25
Next 5 Years (per annum)	-5.96%	N/A	N/A	0.04
Past 5 Years (per annum)	10.26%	N/A	N/A	N/A



Recommendation Rating ›

2.4

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (15) ›

Average 19.57

Low 12.00 — Current 16.46 — High 30.00

Upgrades & Downgrades ›

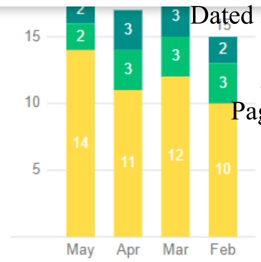
↓ Downgrade	Evercore ISI Group: Outperform to In-Line	4/20/2020
Maintains	Credit Suisse: to Outperform	4/16/2020
Maintains	Morgan Stanley: to Equal-Weight	4/15/2020
Maintains	Morgan Stanley: to Equal-Weight	4/3/2020
Maintains	JP Morgan: to Overweight	4/3/2020
Maintains	Wells Fargo: to Equal-Weight	4/2/2020

CNP vs Sector More details

CNP Sector

Up Last 30 Days	N/A	5	1	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	2	6	2

Growth Estimates	D	Industry	Sector	S&P 500
Current Qtr.	N/A	N/A	N/A	-0.31
Next Qtr.	19.50%	N/A	N/A	-0.13
Current Year	3.10%	N/A	N/A	-0.17
Next Year	5.70%	N/A	N/A	0.25
Next 5 Years (per annum)	4.88%	N/A	N/A	0.04
Past 5 Years (per annum)	3.37%	N/A	N/A	N/A



Recommendation Rating ›

2.5

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (14) ›

Average 86.36

Low 79.00 High 95.00

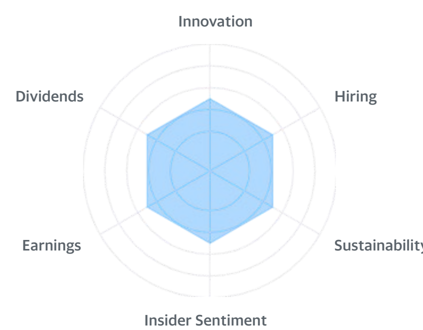
Current 75.61

Upgrades & Downgrades ›

Maintains	Mizuho: to Neutral	4/20/2020
Maintains	Morgan Stanley: to Equal-Weight	4/15/2020
Maintains	JP Morgan: to Neutral	4/3/2020
Maintains	Morgan Stanley: to Equal-Weight	4/2/2020
Maintains	Barclays: to Overweight	3/26/2020
Maintains	Morgan Stanley: to Equal-Weight	3/12/2020

D vs Sector More details

D Sector



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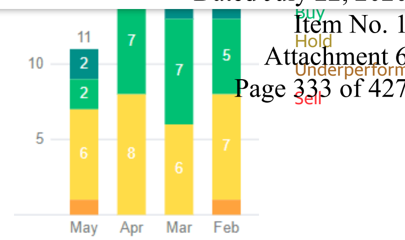
Up Last 30 Days	6	6	3	2
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	2	3	4	6

Growth Estimates	DTE	Industry	Sector	S&P 500
Current Qtr.	9.10%	N/A	N/A	-0.31
Next Qtr.	-1.60%	N/A	N/A	-0.13
Current Year	4.40%	N/A	N/A	-0.17
Next Year	7.30%	N/A	N/A	0.25
Next 5 Years (per annum)	5.96%	N/A	N/A	0.04
Past 5 Years (per annum)	7.07%	N/A	N/A	N/A



Recommendation Rating ›

2.4

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (14) ›

Average 121.93

Low 104.00 | High 155.00

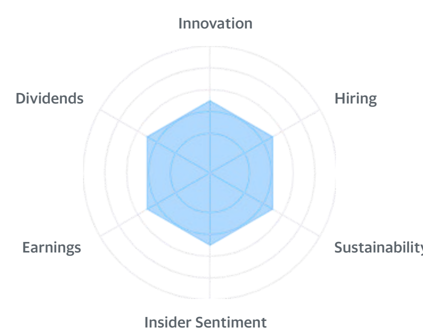
Current 100.68

Upgrades & Downgrades ›

Maintains	Credit Suisse: to Neutral	4/23/2020
↓ Downgrade	Evercore ISI Group: Outperform to In-Line	4/20/2020
Maintains	Morgan Stanley: to Equal-Weight	4/15/2020
↑ Upgrade	Citigroup: Neutral to Buy	4/2/2020
Maintains	Morgan Stanley: to Equal-Weight	4/2/2020
Maintains	Wells Fargo: to Overweight	3/30/2020

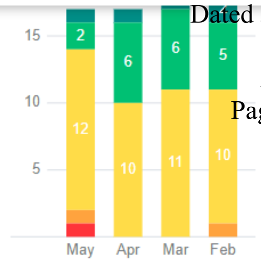
DTE vs Sector More details

DTE Sector



Up Last 30 Days	1	3	N/A	4
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	1	1	N/A

Growth Estimates	DUK	Industry	Sector	S&P 500
Current Qtr.	-4.00%	N/A	N/A	-0.31
Next Qtr.	-5.40%	N/A	N/A	-0.13
Current Year	2.00%	N/A	N/A	-0.17
Next Year	5.80%	N/A	N/A	0.25
Next 5 Years (per annum)	4.14%	N/A	N/A	0.04
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 95.71

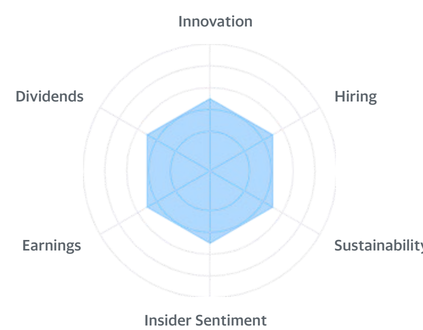
Low 75.00 High 113.00
Current 82.64

Upgrades & Downgrades >

Maintains	Morgan Stanley: to Equal-Weight	4/15/2020
Maintains	JP Morgan: to Neutral	3/27/2020
Maintains	Barclays: to Equal-Weight	3/26/2020
Maintains	UBS: to Buy	3/16/2020
Downgrade	Barclays: Overweight to Equal-Weight	3/12/2020
Maintains	Morgan Stanley: to Equal-Weight	3/12/2020

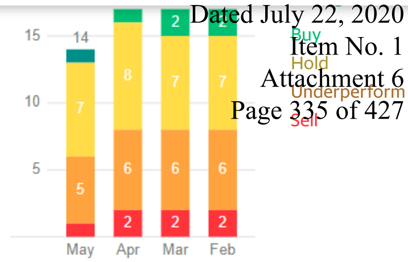
DUK vs Sector More details

DUK Sector



Up Last 30 Days	2	1	1	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	1	2	3

Growth Estimates	ED	Industry	Sector	S&P 500
Current Qtr.	1.40%	N/A	N/A	-0.31
Next Qtr.	-1.70%	N/A	N/A	-0.13
Current Year	-0.20%	N/A	N/A	-0.17
Next Year	4.60%	N/A	N/A	0.25
Next 5 Years (per annum)	2.41%	N/A	N/A	0.04
Past 5 Years (per annum)	1.62%	N/A	N/A	N/A



Recommendation Rating ›

3.4

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (15) ›

Average 86.60

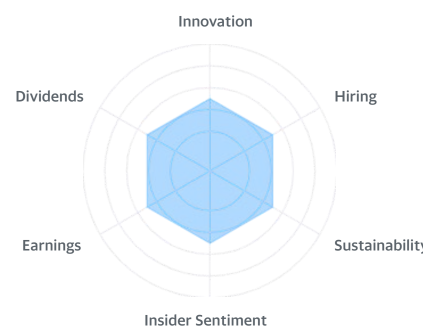
Low 76.00 High 99.00
Current 77.25

Upgrades & Downgrades ›

↑ Upgrade	B of A Securities: Neutral to Buy	4/29/2020
Maintains	Morgan Stanley: to Underweight	4/15/2020
Maintains	Barclays: to Underweight	3/26/2020
Maintains	UBS: to Neutral	3/16/2020
Maintains	Morgan Stanley: to Underweight	3/12/2020
↓ Downgrade	Mizuho: Buy to Neutral	2/24/2020

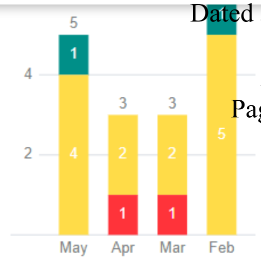
ED vs Sector More details

ED Sector



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	EE	Industry	Sector	S&P 500
Current Qtr.	65.80%	N/A	N/A	-0.31
Next Qtr.	14.70%	N/A	N/A	-0.13
Current Year	-13.20%	N/A	N/A	-0.17
Next Year	6.00%	N/A	N/A	0.25
Next 5 Years (per annum)	4.50%	N/A	N/A	0.04
Past 5 Years (per annum)	41.74%	N/A	N/A	N/A



Recommendation Rating ›

3.7

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (2) ›

Average 60.25

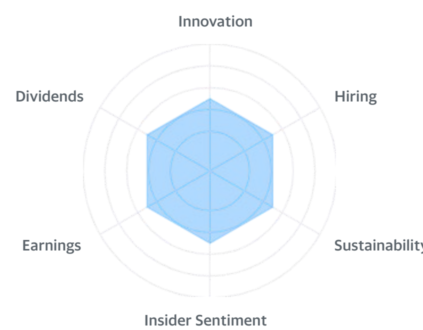
Low 54.00 | High 66.50 | Current 68.09

Upgrades & Downgrades ›

Maintains	Mizuho: Neutral to Neutral	3/29/2019
↑ Upgrade	Williams Capital: Sell to Hold	3/4/2019
↓ Downgrade	Bank of America: Buy to Neutral	11/22/2017
↓ Downgrade	Jefferies: Hold to Underperform	10/16/2017
Initiated	Mizuho: to Neutral	8/17/2017
↓ Downgrade	Jefferies: Buy to Hold	11/15/2016

EE vs Sector More details

EE Sector



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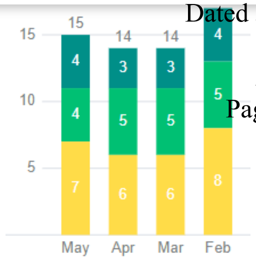
Up Last 30 Days	1	1	1	2
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	1	N/A

Growth Estimates	EIX	Industry	Sector	S&P 500
Current Qtr.	-29.10%	N/A	N/A	-0.31
Next Qtr.	-2.70%	N/A	N/A	-0.13
Current Year	-5.10%	N/A	N/A	-0.17
Next Year	3.80%	N/A	N/A	0.25
Next 5 Years (per annum)	3.30%	N/A	N/A	0.04
Past 5 Years (per annum)	0.95%	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 (12) >

Average 70.92

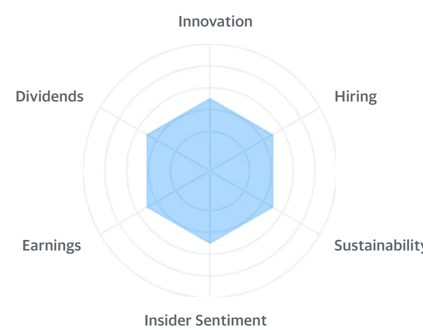
Low 59.00 High 87.00
Current 55.69

Upgrades & Downgrades >

Maintains	Wells Fargo: to Equal-Weight	5/1/2020
Maintains	Morgan Stanley: to Equal-Weight	4/29/2020
Maintains	Morgan Stanley: to Equal-Weight	4/15/2020
Maintains	JP Morgan: to Neutral	3/27/2020
Maintains	Barclays: to Equal-Weight	3/26/2020
Maintains	Morgan Stanley: to Equal-Weight	3/12/2020

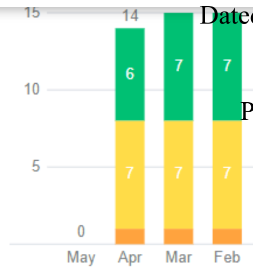
EIX vs Sector More details

EIX Sector



Up Last 7 Days	N/A	N/A	N/A	2
Up Last 30 Days	1	1	1	4
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	1	1	N/A

Growth Estimates	EMA.TO	Industry	Sector	S&P 500
Current Qtr.	-14.70%	N/A	N/A	-0.31
Next Qtr.	7.40%	N/A	N/A	-0.13
Current Year	8.10%	N/A	N/A	-0.17
Next Year	8.90%	N/A	N/A	0.25
Next 5 Years (per annum)	4.07%	N/A	N/A	0.04
Past 5 Years (per annum)	12.34%	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 62.08

Low 55.00 · High 65.00

Current 54.11

Upgrades & Downgrades ›

↑ Upgrade	UBS: Neutral to Buy	11/29/2018

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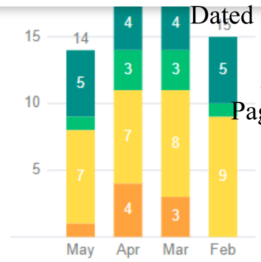
Up Last 30 Days	2	3	1	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	2	1	2	1

Growth Estimates	ES	Industry	Sector	S&P 500
Current Qtr.	4.10%	N/A	N/A	-0.31
Next Qtr.	6.80%	N/A	N/A	-0.13
Current Year	7.70%	N/A	N/A	-0.17
Next Year	6.30%	N/A	N/A	0.25
Next 5 Years (per annum)	5.73%	N/A	N/A	0.04
Past 5 Years (per annum)	4.45%	N/A	N/A	N/A



Recommendation Rating >

2.6

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (16) >

Average 90.50

Low 82.00 High 104.00

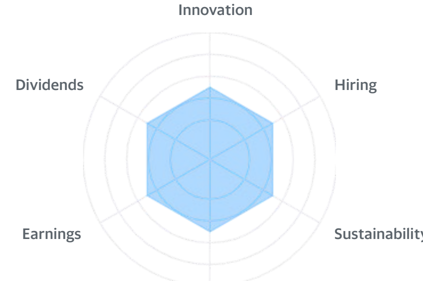
Current 79.87

Upgrades & Downgrades >

↑ Upgrade	Evercore ISI Group: Underperform to In-Line	4/20/2020
Maintains	Morgan Stanley: to Underweight	4/15/2020
Maintains	Barclays: to Equal-Weight	3/26/2020
Maintains	UBS: to Neutral	3/16/2020
↓ Downgrade	Morgan Stanley: Equal-Weight to Underweight	3/10/2020
Maintains	KeyBanc: to Overweight	2/21/2020

ES vs Sector More details

ES Sector



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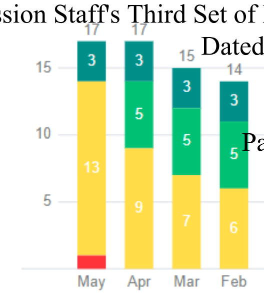
EPS Revisions	Current Qtr. (Mar 2020)	Next Qtr. (Jun 2020)	Current Year (2020)	Next Year (2021)
Up Last 30 Days	1	1	3	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	N/A	2	3

Growth Estimates	ETR	Industry	Sector	S&P 500
Current Qtr.	12.20%	N/A	N/A	-0.31
Next Qtr.	-3.70%	N/A	N/A	-0.13
Current Year	2.40%	N/A	N/A	-0.17
Next Year	6.90%	N/A	N/A	0.25
Next 5 Years (per annum)	6.00%	N/A	N/A	0.04
Past 5 Years (per annum)	1.88%	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 (15) ›

Average 122.40

Low 102.00 · High 150.00

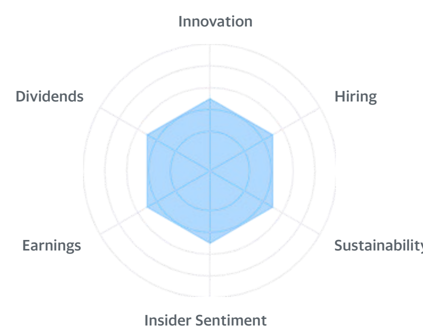
Current 93.57

Upgrades & Downgrades ›

↑ Upgrade	Argus Research: Hold to Buy	4/27/2020
Maintains	Morgan Stanley: to Equal-Weight	4/15/2020
↓ Downgrade	Citigroup: Buy to Neutral	4/2/2020
Maintains	JP Morgan: to Overweight	3/27/2020
Maintains	Morgan Stanley: to Equal-Weight	3/12/2020
Initiated	Vertical Research: to Hold	2/25/2020

ETR vs Sector More details

ETR Sector



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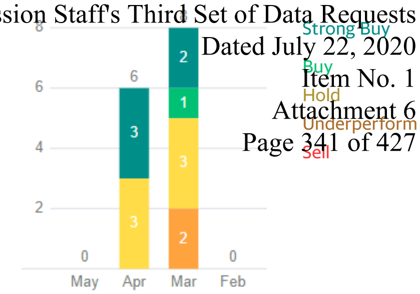
EPS Revisions	Current Qtr. (Mar 2020)	Next Qtr. (Jun 2020)	Current Year (2020)	Next Year (2021)
Up Last 30 Days	N/A	2	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	N/A	N/A	1

Growth Estimates	EVRG	Industry	Sector	S&P 500
Current Qtr.	7.70%	N/A	N/A	-0.31
Next Qtr.	19.00%	N/A	N/A	-0.13
Current Year	5.90%	N/A	N/A	-0.17
Next Year	4.90%	N/A	N/A	0.25
Next 5 Years (per annum)	3.90%	N/A	N/A	0.04
Past 5 Years (per annum)	-0.13%	N/A	N/A	N/A



Recommendation Rating ›

2

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (6) ›

Average 70.17

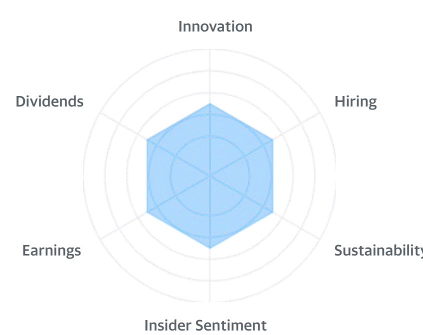
Low 64.00 High 75.00
Current 55.92

Upgrades & Downgrades ›

↑ Upgrade	B of A Securities: Underperform to Buy	3/3/2020
Maintains	B of A Securities: to Underperform	1/22/2020
↓ Downgrade	Evercore ISI Group: Outperform to In-Line	11/25/2019
↓ Downgrade	Bank of America: Neutral to Underperform	11/20/2019
Maintains	UBS: to Neutral	10/18/2019
↓ Downgrade	Bank of America: Buy to Neutral	10/10/2019

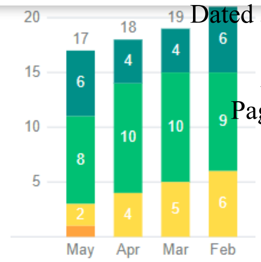
EVRG vs Sector More details

EVRG Sector



Up Last 30 Days	4	N/A	N/A	2
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	6	9	4

Growth Estimates	EXC	Industry	Sector	S&P 500
Current Qtr.	-3.40%	N/A	N/A	-0.31
Next Qtr.	N/A	N/A	N/A	-0.13
Current Year	-5.60%	N/A	N/A	-0.17
Next Year	-2.30%	N/A	N/A	0.25
Next 5 Years (per annum)	-2.45%	N/A	N/A	0.04
Past 5 Years (per annum)	5.11%	N/A	N/A	N/A



Recommendation Rating ›

2

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (15) ›

Average 48.87

Low 37.00 High 59.00

Current 35.80

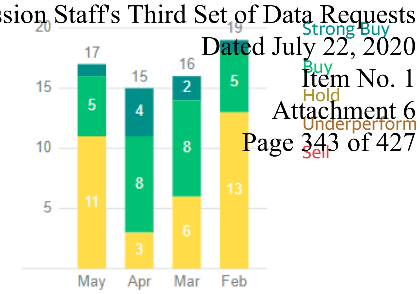
Upgrades & Downgrades ›

Maintains	Morgan Stanley: to Overweight	4/30/2020
Maintains	Morgan Stanley: to Overweight	4/23/2020
Maintains	Mizuho: to Neutral	4/20/2020
Maintains	Morgan Stanley: to Overweight	4/15/2020
Maintains	Barclays: to Overweight	3/26/2020
Maintains	Argus Research: to Buy	3/19/2020

EXC vs Sector More details

EPS Revisions	Current Qtr. (Jun 2020)	Next Qtr. (Sep 2020)	Current Year (2020)	Next Year (2021)
Up Last 30 Days	1	3	2	4
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	3	2	1	2

Growth Estimates	FE	Industry	Sector	S&P 500
Current Qtr.	-6.60%	N/A	N/A	-0.31
Next Qtr.	-1.30%	N/A	N/A	-0.13
Current Year	-3.90%	N/A	N/A	-0.17
Next Year	5.60%	N/A	N/A	0.25
Next 5 Years (per annum)	-6.60%	N/A	N/A	0.04
Past 5 Years (per annum)	-2.09%	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 (13) ›

Average 49.54

Low 39.00 High 54.00

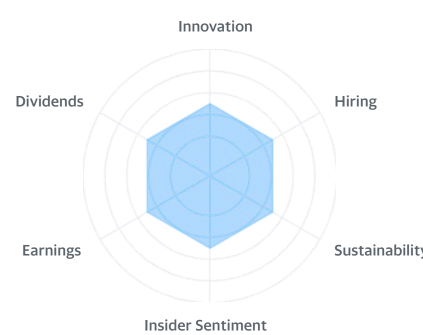
Current 40.84

Upgrades & Downgrades ›

Maintains	Morgan Stanley: to Overweight	4/15/2020
Maintains	Barclays: to Overweight	3/26/2020
Upgrade	Morgan Stanley: Equal-Weight to Overweight	3/23/2020
Upgrade	Argus Research: Hold to Buy	3/16/2020
Maintains	JP Morgan: to Neutral	2/24/2020
Maintains	B of A Securities: to Neutral	1/22/2020

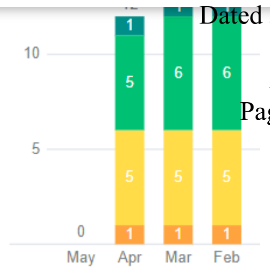
FE vs Sector More details

FE Sector



Up Last 7 Days	1	N/A	2	1
Up Last 30 Days	1	N/A	3	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	4	3	3	2

Growth Estimates	FTS.TO	Industry	Sector	S&P 500
Current Qtr.	-1.40%	N/A	N/A	-0.31
Next Qtr.	3.70%	N/A	N/A	-0.13
Current Year	3.50%	N/A	N/A	-0.17
Next Year	9.10%	N/A	N/A	0.25
Next 5 Years (per annum)	5.03%	N/A	N/A	0.04
Past 5 Years (per annum)	17.84%	N/A	N/A	N/A



Recommendation Rating ›

2.4

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (13) ›

Average 58.97

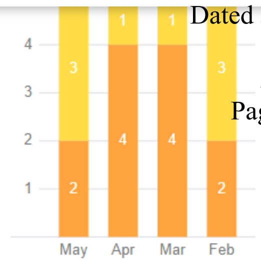
Low 50.65 Current 52.87 High 64.00

Upgrades & Downgrades ›

Maintains	Wells Fargo: to Overweight	2/14/2020
↓ Downgrade	CiBC: Outperformer to Neutral	1/30/2020
Reiterates	Wells Fargo: to Outperform	11/22/2019
↓ Downgrade	CIBC: Outperformer to Neutral	8/22/2019
↓ Downgrade	TD Securities: Buy to Hold	1/29/2019
Initiated	UBS: to Buy	5/2/2018

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	HE	Industry	Sector	S&P 500
Current Qtr.	7.10%	N/A	N/A	-0.31
Next Qtr.	2.60%	N/A	N/A	-0.13
Current Year	-2.50%	N/A	N/A	-0.17
Next Year	8.20%	N/A	N/A	0.25
Next 5 Years (per annum)	3.30%	N/A	N/A	0.04
Past 5 Years (per annum)	3.87%	N/A	N/A	N/A



Recommendation Rating ›

3.8

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (5) ›

Average 38.60

Low 37.00 High 40.00

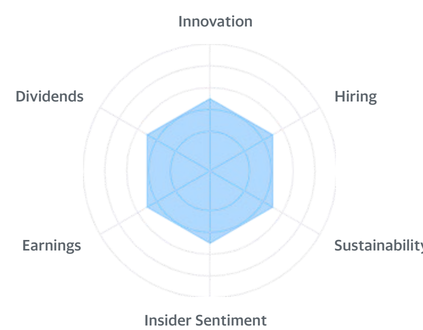
Current 38.10

Upgrades & Downgrades ›

Maintains	Wells Fargo: to Underweight	4/14/2020
Initiated	Guggenheim: to Neutral	1/8/2020
Maintains	UBS: to Sell	9/13/2019
Downgrade	JP Morgan: Neutral to Underweight	8/9/2019
Downgrade	Bank of America: Neutral to Underperform	11/15/2018
Maintains	Wells Fargo: Market Perform to Market Perform	9/17/2018

HE vs Sector More details

HE Sector



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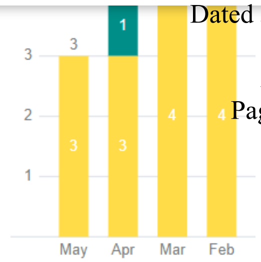
Up Last 30 Days	N/A	1	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	IDA	Industry	Sector	S&P 500
Current Qtr.	9.50%	N/A	N/A	-0.31
Next Qtr.	3.40%	N/A	N/A	-0.13
Current Year	-0.20%	N/A	N/A	-0.17
Next Year	3.70%	N/A	N/A	0.25
Next 5 Years (per annum)	2.60%	N/A	N/A	0.04
Past 5 Years (per annum)	4.44%	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 (4) ›

Average 100.50

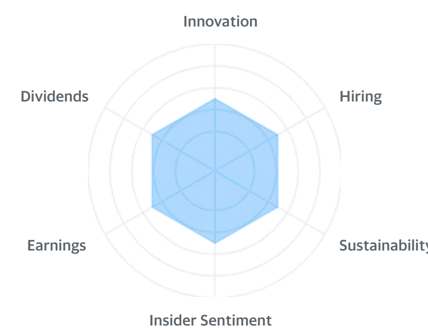
Low 96.00 High 105.00
Current 88.47

Upgrades & Downgrades ›

Upgrade	B of A Securities: Neutral to Buy	3/18/2020
Maintains	Wells Fargo: to Equal-Weight	2/21/2020
Upgrade	Bank of America: Underperform to Neutral	11/4/2019
Maintains	Wells Fargo: to Market Perform	11/1/2019
Maintains	Wells Fargo: Market Perform to Market Perform	9/17/2018
Downgrade	Williams Capital: Hold to Sell	6/4/2018

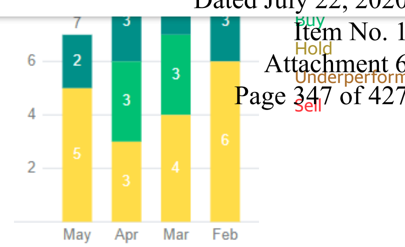
IDA vs Sector More details

IDA Sector



Up Last 30 Days	N/A	2	1	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	2	2	1	1

Growth Estimates	LNT	Industry	Sector	S&P 500
Current Qtr.	1.90%	N/A	N/A	-0.31
Next Qtr.	17.50%	N/A	N/A	-0.13
Current Year	3.90%	N/A	N/A	-0.17
Next Year	6.60%	N/A	N/A	0.25
Next 5 Years (per annum)	5.65%	N/A	N/A	0.04
Past 5 Years (per annum)	8.33%	N/A	N/A	N/A



Recommendation Rating ›

2

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (8) ›

Average 56.13

Low 43.00 | Current 47.25 | High 65.00

Upgrades & Downgrades ›

Maintains	Barclays: to Overweight	3/26/2020
↑ Upgrade	Guggenheim: Neutral to Buy	3/16/2020
Maintains	Mizuho: to Neutral	3/3/2020
Maintains	UBS: to Neutral	1/10/2020
↑ Upgrade	ScotiaBank: Sector Perform to Sector Outperform	12/20/2019
↑ Upgrade	Barclays: Equal-Weight to Overweight	11/21/2019

LNT vs Sector More details

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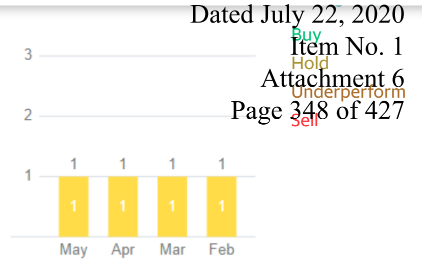
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	MGEE	Industry	Sector	S&P 500
Current Qtr.	N/A	N/A	N/A	-0.31
Next Qtr.	N/A	N/A	N/A	-0.13
Current Year	N/A	N/A	N/A	-0.17
Next Year	N/A	N/A	N/A	0.25
Next 5 Years (per annum)	4.00%	N/A	N/A	0.04
Past 5 Years (per annum)	N/A	N/A	N/A	N/A



Analyst Price Targets (1) ›

Low 50.00 High 50.00

Upgrades & Downgrades ›

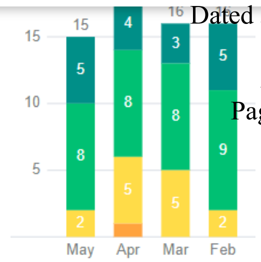
Maintains	DA Davidson: to Neutral	8/7/2013
Maintains	DA Davidson: to Neutral	2/27/2013
Initiated	Gabelli & Co.: to Hold	10/19/2012
Maintains	DA Davidson: to Neutral	9/4/2012
Maintains	DA Davidson: to Underperform	2/28/2012

MGEE vs Sector

More details

Up Last 30 Days	5	2	8	7
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	4	5	N/A	1

Growth Estimates	NEE	Industry	Sector	S&P 500
Current Qtr.	5.50%	N/A	N/A	-0.31
Next Qtr.	9.60%	N/A	N/A	-0.13
Current Year	8.50%	N/A	N/A	-0.17
Next Year	8.60%	N/A	N/A	0.25
Next 5 Years (per annum)	7.71%	N/A	N/A	0.04
Past 5 Years (per annum)	11.17%	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 (15)

Average 255.80

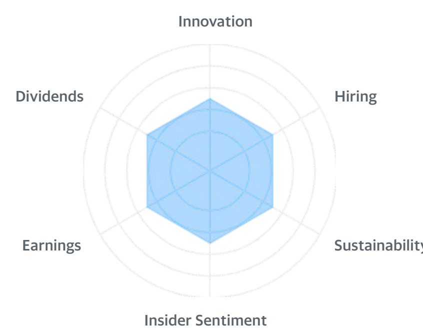
Low 215.00 | Current 227.05 | High 280.00

Upgrades & Downgrades

Maintains	Credit Suisse: to Neutral	4/17/2020
Downgrade	Morgan Stanley: Overweight to Equal-Weight	4/14/2020
Maintains	Barclays: to Equal-Weight	3/26/2020
Maintains	UBS: to Buy	3/16/2020
Maintains	Morgan Stanley: to Overweight	3/12/2020
Maintains	UBS: to Buy	2/21/2020

NEE vs Sector More details

NEE Sector



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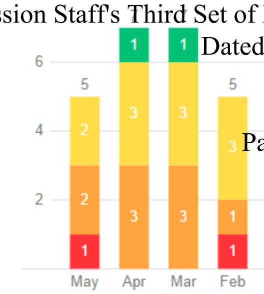
EPS Revisions	Current Qtr. (Jun 2020)	Next Qtr. (Sep 2020)	Current Year (2020)	Next Year (2021)
Up Last 30 Days	1	3	N/A	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	1	1	1

Growth Estimates	NWE	Industry	Sector	S&P 500
Current Qtr.	36.00%	N/A	N/A	-0.31
Next Qtr.	10.00%	N/A	N/A	-0.13
Current Year	-2.00%	N/A	N/A	-0.17
Next Year	8.70%	N/A	N/A	0.25
Next 5 Years (per annum)	3.66%	N/A	N/A	0.04
Past 5 Years (per annum)	3.94%	N/A	N/A	N/A



Recommendation Rating ›

2.7

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (7) ›

Average 64.86

Low 61.00 High 68.00

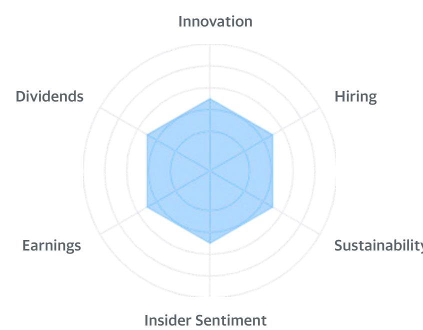
Current 56.07

Upgrades & Downgrades ›

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
Maintains	Credit Suisse: to Underperform	2/18/2020
Initiated	Guggenheim: to Neutral	1/8/2020

NWE vs Sector More details

NWE Sector



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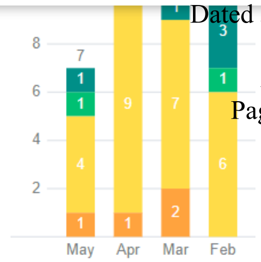
Up Last 30 Days	N/A	N/A	1	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	2	2	N/A	1

Growth Estimates	OGE	Industry	Sector	S&P 500
Current Qtr.	-16.70%	N/A	N/A	-0.31
Next Qtr.	2.00%	N/A	N/A	-0.13
Current Year	1.40%	N/A	N/A	-0.17
Next Year	1.80%	N/A	N/A	0.25
Next 5 Years (per annum)	1.70%	N/A	N/A	0.04
Past 5 Years (per annum)	9.96%	N/A	N/A	N/A



Recommendation Rating ›

3.1

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (9) ›

Average 33.67

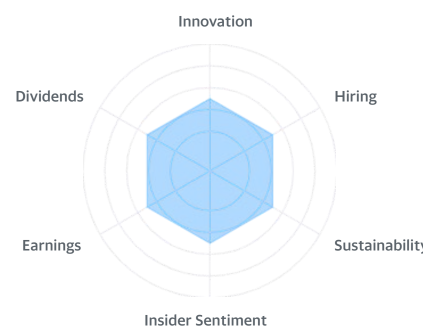
Low 30.00 High 40.00
Current 30.31

Upgrades & Downgrades ›

↑ Upgrade	Evercore ISI Group: In-Line to Outperform	4/20/2020
Maintains	UBS: to Neutral	4/3/2020
Maintains	Wells Fargo: to Equal-Weight	4/2/2020
Maintains	Wells Fargo: to Equal-Weight	3/31/2020
Maintains	Barclays: to Equal-Weight	3/26/2020
Maintains	Wells Fargo: to Equal-Weight	2/28/2020

OGE vs Sector More details

OGE Sector



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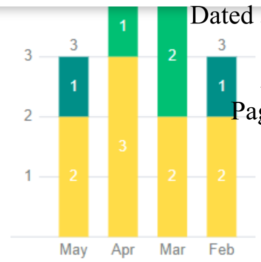
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	2	1	1	1

Growth Estimates	OTTR	Industry	Sector	S&P 500
Current Qtr.	1.50%	N/A	N/A	-0.31
Next Qtr.	-2.60%	N/A	N/A	-0.13
Current Year	4.10%	N/A	N/A	-0.17
Next Year	7.10%	N/A	N/A	0.25
Next 5 Years (per annum)	9.00%	N/A	N/A	0.04
Past 5 Years (per annum)	7.60%	N/A	N/A	N/A



Recommendation Rating ›

2.7

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (3) ›

Average 46.67

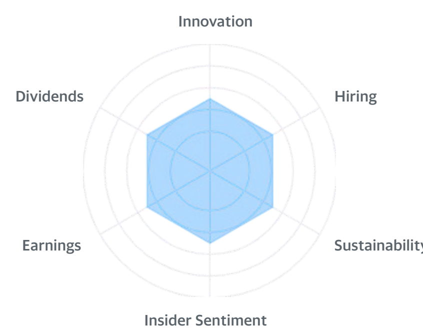
Low 41.00 Current 42.91 High 51.00

Upgrades & Downgrades ›

↓ Downgrade	KeyBanc: Overweight to Sector Weight	3/13/2020
Maintains	Sidoti & Co.: to Neutral	2/19/2020
Maintains	KeyBanc: to Overweight	1/17/2020
Initiated	KeyBanc: to Overweight	12/16/2019
↑ Upgrade	Williams Capital: Sell to Hold	11/6/2019
Initiated	Maxim Group: to Buy	4/12/2019

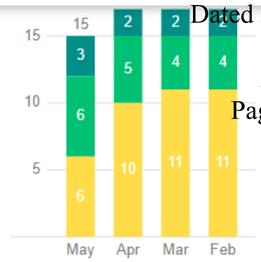
OTTR vs Sector More details

OTTR Sector



Up Last 30 Days	1	5	1	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	2	N/A	3

Growth Estimates	PEG	Industry	Sector	S&P 500
Current Qtr.	-6.50%	N/A	N/A	-0.31
Next Qtr.	12.10%	N/A	N/A	-0.13
Current Year	2.10%	N/A	N/A	-0.17
Next Year	3.00%	N/A	N/A	0.25
Next 5 Years (per annum)	2.35%	N/A	N/A	0.04
Past 5 Years (per annum)	3.50%	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 (14)

Average 59.18

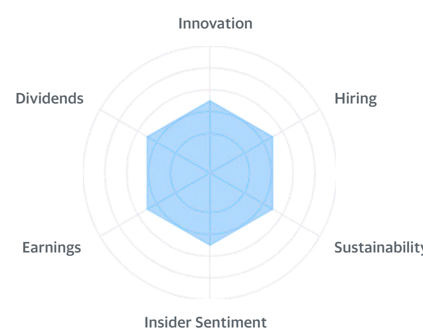
Low 52.00 High 71.00
Current 49.41

Upgrades & Downgrades

Maintains	Morgan Stanley: to Overweight	4/30/2020
Downgrade	Barclays: Overweight to Equal-Weight	4/21/2020
Downgrade	Mizuho: Buy to Neutral	4/20/2020
Maintains	Morgan Stanley: to Overweight	4/15/2020
Maintains	Mizuho: to Buy	4/13/2020
Maintains	Barclays: to Overweight	3/26/2020

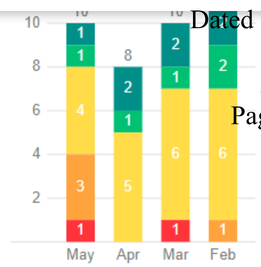
PEG vs Sector More details

PEG Sector



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	1

Growth Estimates	PNM	Industry	Sector	S&P 500
Current Qtr.	N/A	N/A	N/A	-0.31
Next Qtr.	N/A	N/A	N/A	-0.13
Current Year	1.90%	N/A	N/A	-0.17
Next Year	7.30%	N/A	N/A	0.25
Next 5 Years (per annum)	6.30%	N/A	N/A	0.04
Past 5 Years (per annum)	4.02%	N/A	N/A	N/A



Recommendation Rating >

2.6

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (8) >

Average 46.13

Low 40.00 | High 54.00

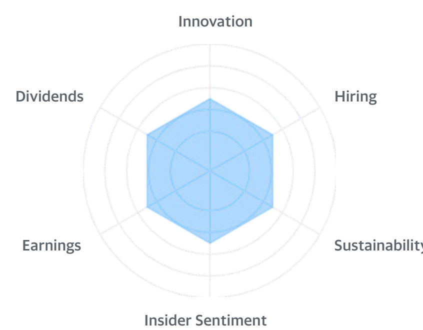
Current 39.06

Upgrades & Downgrades >

Maintains	Wells Fargo: to Equal-Weight	4/2/2020
Upgrade	UBS: Neutral to Buy	4/1/2020
Maintains	Barclays: to Equal-Weight	3/26/2020
Maintains	Mizuho: to Buy	1/13/2020
Maintains	UBS: to Neutral	12/19/2019
Maintains	Wells Fargo: to Equal-Weight	12/19/2019

PNM vs Sector More details

PNM Sector



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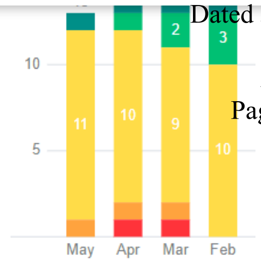
Up Last 30 Days	3	N/A	N/A	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	2	1	1

Growth Estimates	PNW	Industry	Sector	S&P 500
Current Qtr.	-6.30%	N/A	N/A	-0.31
Next Qtr.	6.20%	N/A	N/A	-0.13
Current Year	0.80%	N/A	N/A	-0.17
Next Year	6.70%	N/A	N/A	0.25
Next 5 Years (per annum)	4.98%	N/A	N/A	0.04
Past 5 Years (per annum)	13.63%	N/A	N/A	N/A



Recommendation Rating

2.9

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (12)

Average 89.08

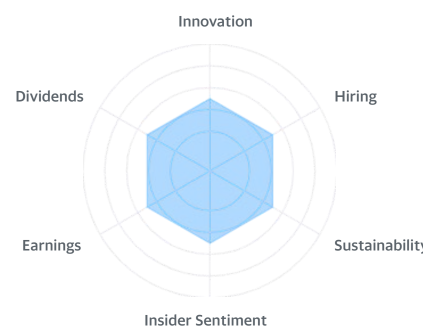
Low 81.00 High 105.00
Current 74.12

Upgrades & Downgrades

Upgrade	Wells Fargo: Equal-Weight to Overweight	4/24/2020
Maintains	Credit Suisse: to Outperform	4/16/2020
Maintains	Morgan Stanley: to Equal-Weight	4/15/2020
Maintains	Barclays: to Equal-Weight	3/26/2020
Upgrade	Morgan Stanley: Underweight to Equal-Weight	3/23/2020
Maintains	UBS: to Neutral	3/16/2020

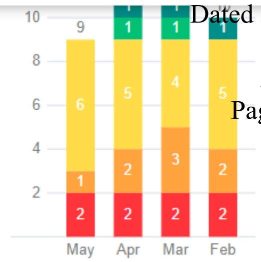
PNW vs Sector More details

PNW Sector



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	8	8	10	10

Growth Estimates	POR	Industry	Sector	S&P 500
Current Qtr.	-3.60%	N/A	N/A	-0.31
Next Qtr.	-6.60%	N/A	N/A	-0.13
Current Year	0.80%	N/A	N/A	-0.17
Next Year	7.50%	N/A	N/A	0.25
Next 5 Years (per annum)	4.15%	N/A	N/A	0.04
Past 5 Years (per annum)	1.78%	N/A	N/A	N/A



Recommendation Rating ›

3.1

1 Strong Buy | 2 Buy | 3 Hold | 4 Under-perform | 5 Sell

Analyst Price Targets (10) ›

Average 48.30

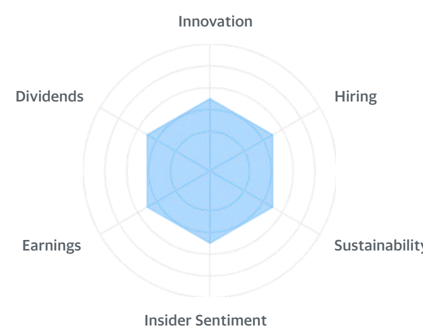
Low 44.00 | Current 44.61 | High 52.00

Upgrades & Downgrades ›

↑ Upgrade	Guggenheim: Sell to Neutral	4/27/2020
Maintains	Wells Fargo: to Equal-Weight	4/27/2020
Maintains	Barclays: to Underweight	3/26/2020
↑ Upgrade	UBS: Sell to Neutral	3/16/2020
Initiated	KeyBanc: to Sector Weight	1/28/2020
Maintains	Sidoti & Co.: to Neutral	1/23/2020

POR vs Sector More details

POR Sector



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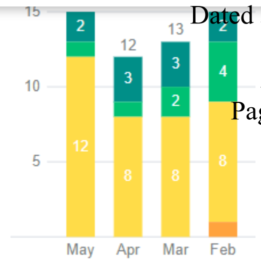
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	1	2	3

Growth Estimates	PPL	Industry	Sector	S&P 500
Current Qtr.	1.40%	N/A	N/A	-0.31
Next Qtr.	-5.20%	N/A	N/A	-0.13
Current Year	0.40%	N/A	N/A	-0.17
Next Year	0.40%	N/A	N/A	0.25
Next 5 Years (per annum)	0.50%	N/A	N/A	0.04
Past 5 Years (per annum)	1.54%	N/A	N/A	N/A



Recommendation Rating >

2.4

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (11) >

Average 31.36

Low 25.00 High 37.00

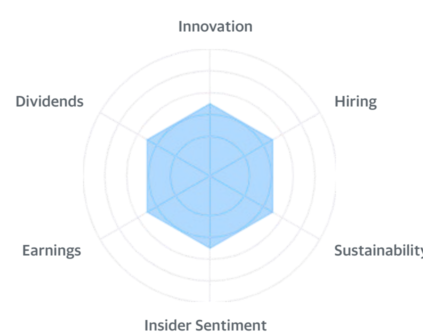
Current 24.87

Upgrades & Downgrades >

Maintains	Morgan Stanley: to Equal-Weight	4/15/2020
Maintains	CFRA: to Strong Buy	2/14/2020
Maintains	Citigroup: to Neutral	1/27/2020
Maintains	B of A Securities: to Neutral	1/22/2020
Maintains	UBS: to Neutral	1/10/2020
↑ Upgrade	Guggenheim: Neutral to Buy	1/8/2020

PPL vs Sector More details

PPL Sector



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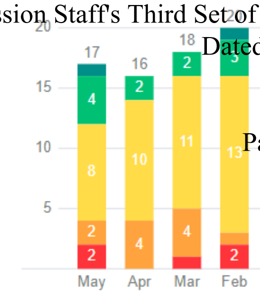
EPS Revisions	Current Qtr. (Jun 2020)	Next Qtr. (Sep 2020)	Current Year (2020)	Next Year (2021)
Up Last 30 Days	1	2	2	2
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	N/A	2	2

Growth Estimates	SO	Industry	Sector	S&P 500
Current Qtr.	-2.50%	N/A	N/A	-0.31
Next Qtr.	-4.50%	N/A	N/A	-0.13
Current Year	1.00%	N/A	N/A	-0.17
Next Year	5.40%	N/A	N/A	0.25
Next 5 Years (per annum)	4.36%	N/A	N/A	0.04
Past 5 Years (per annum)	3.96%	N/A	N/A	N/A



Recommendation Rating >

3

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (14) >

Average 61.50

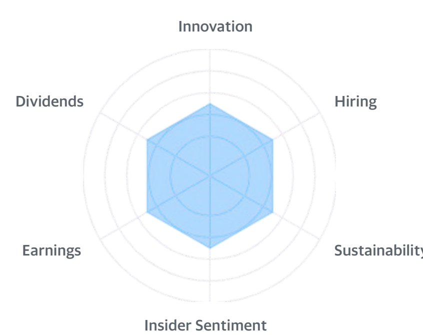
Low 49.00 High 73.00
Current 54.41

Upgrades & Downgrades >

Maintains	Credit Suisse: to Underperform	4/27/2020
Maintains	Morgan Stanley: to Underweight	4/15/2020
↑ Upgrade	Argus Research: Hold to Buy	4/13/2020
Maintains	Barclays: to Equal-Weight	3/26/2020
Maintains	UBS: to Neutral	3/16/2020
Maintains	Morgan Stanley: to Underweight	3/12/2020

SO vs Sector More details

SO Sector



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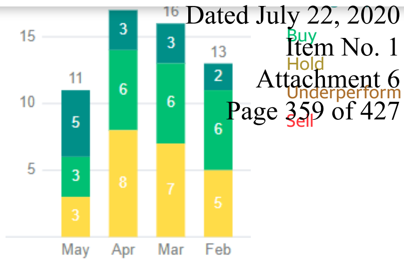
Up Last 30 Days	10	2	5	4
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	1	N/A	N/A

Growth Estimates	SRE	Industry	Sector	S&P 500
Current Qtr.	17.70%	N/A	N/A	-0.31
Next Qtr.	15.50%	N/A	N/A	-0.13
Current Year	5.30%	N/A	N/A	-0.17
Next Year	10.40%	N/A	N/A	0.25
Next 5 Years (per annum)	4.20%	N/A	N/A	0.04
Past 5 Years (per annum)	3.17%	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 (14) ›

Average 141.93

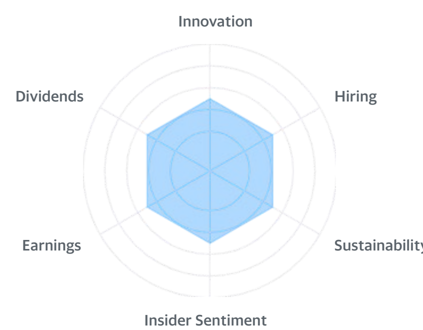
Low 112.00 | Current 119.93 | High 169.00

Upgrades & Downgrades ›

Maintains	Morgan Stanley: to Equal-Weight	4/29/2020
Maintains	Morgan Stanley: to Equal-Weight	4/15/2020
Maintains	JP Morgan: to Neutral	4/3/2020
Maintains	BMO Capital: to Market Perform	3/26/2020
Maintains	Barclays: to Overweight	3/26/2020
Maintains	UBS: to Buy	3/23/2020

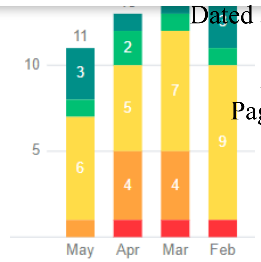
SRE vs Sector More details

SRE Sector



Up Last 30 Days	N/A	2	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	WEC	Industry	Sector	S&P 500
Current Qtr.	-0.80%	N/A	N/A	-0.31
Next Qtr.	1.40%	N/A	N/A	-0.13
Current Year	3.90%	N/A	N/A	-0.17
Next Year	7.30%	N/A	N/A	0.25
Next 5 Years (per annum)	5.96%	N/A	N/A	0.04
Past 5 Years (per annum)	6.98%	N/A	N/A	N/A



Recommendation Rating

3.2

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (11)

Average 91.91

Low 79.00 High 103.00

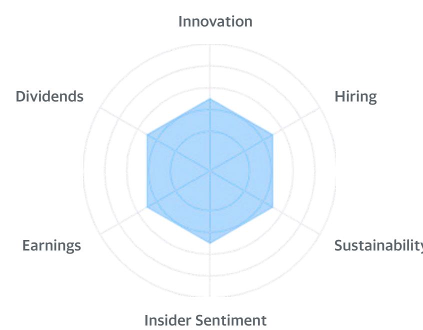
Current 88.46

Upgrades & Downgrades

Maintains	Credit Suisse: to Underperform	4/30/2020
Downgrade	Wells Fargo: Overweight to Equal-Weight	4/24/2020
Maintains	JP Morgan: to Neutral	3/31/2020
Maintains	Barclays: to Underweight	3/26/2020
Maintains	UBS: to Neutral	3/16/2020
Upgrade	Evercore ISI Group: Underperform to In-Line	3/16/2020

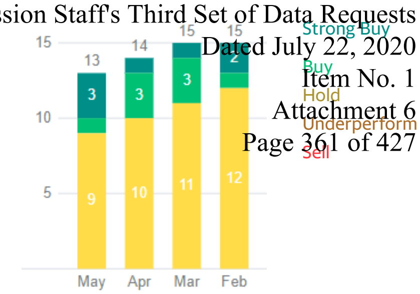
WEC vs Sector More details

WEC Sector



EPS Revisions	Current Qtr. (Mar 2020)	Next Qtr. (Jun 2020)	Current Year (2020)	Next Year (2021)
Up Last 30 Days	2	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	1	4	1

Growth Estimates	XEL	Industry	Sector	S&P 500
Current Qtr.	-1.60%	N/A	N/A	-0.31
Next Qtr.	4.30%	N/A	N/A	-0.13
Current Year	4.50%	N/A	N/A	-0.17
Next Year	7.20%	N/A	N/A	0.25
Next 5 Years (per annum)	5.40%	N/A	N/A	0.04
Past 5 Years (per annum)	5.68%	N/A	N/A	N/A



Recommendation Rating ›

2.7

1	2	3	4	5
Strong Buy	Buy	Hold	Under-perform	Sell

Analyst Price Targets (12) ›

Average 66.13

Low 61.00 High 71.00
Current 62.18

Upgrades & Downgrades ›

↓ Downgrade	Wells Fargo: Overweight to Equal-Weight	4/24/2020
Maintains	Morgan Stanley: to Equal-Weight	4/15/2020
Maintains	Mizuho: to Neutral	4/15/2020
Maintains	JP Morgan: to Overweight	3/27/2020
Maintains	Barclays: to Equal-Weight	3/26/2020
Maintains	UBS: to Neutral	3/16/2020

XEL vs Sector More details

Quote Overview

Stock Activity	
Open	13.54
Day Low	13.26
Day High	13.65
52 Wk Low	9.53
52 Wk High	16.85
Avg. Volume	830,134
Market Cap	7.28 B
Dividend	0.56 (4.07%)
Beta	0.52

Key Earnings Data	
Earnings ESP	1.59%
Most Accurate Est	0.21
Current Qtr Est	0.21
Current Yr Est	0.67
Exp Earnings Date	*AMC 5/7/20
Prior Year EPS	0.63
Exp EPS Growth (3-5yr)	7.10%
Forward PE	20.61
PEG Ratio	2.90

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	56.43
Day Low	55.23
Day High	56.46
52 Wk Low	50.01
52 Wk High	88.60
Avg. Volume	417,838
Market Cap	2.98 B
Dividend	2.47 (4.29%)
Beta	0.34

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	1.23
Current Qtr Est	1.23
Current Yr Est	3.59
Exp Earnings Date	*BMO 5/6/20
Prior Year EPS	3.59
Exp EPS Growth (3-5yr)	NA
Forward PE	16.03
PEG Ratio	NA

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	48.18
Day Low	46.81
Day High	48.36
52 Wk Low	37.66
52 Wk High	60.28
Avg. Volume	1,262,708
Market Cap	11.91 B
Dividend	1.52 (3.13%)
Beta	0.41

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	0.55
Current Qtr Est	0.55
Current Yr Est	2.43
Exp Earnings Date	*AMC5/7/20
Prior Year EPS	2.31
Exp EPS Growth (3-5yr)	5.51%
Forward PE	19.98
PEG Ratio	3.63

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	71.71
Day Low	70.40
Day High	71.97
52 Wk Low	58.74
52 Wk High	87.66
Avg. Volume	1,545,134
Market Cap	17.95 B
Dividend	1.98 (2.72%)
Beta	0.28

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	0.71
Current Qtr Est	0.71
Current Yr Est	3.41
Exp Earnings Date	*AMC 5/11/20
Prior Year EPS	3.35
Exp EPS Growth (3-5yr)	6.75%
Forward PE	21.32
PEG Ratio	3.16

Utilities » Utility - Electric Power

Quote Overview

Stock Activity	
Open	82.39
Day Low	81.05
Day High	82.66
52 Wk Low	65.14
52 Wk High	104.97
Avg. Volume	2,665,908
Market Cap	41.13 B
Dividend	2.80 (3.37%)
Beta	0.38

Key Earnings Data	
Earnings ESP	0.00%
Most Accurate Est	1.09
Current Qtr Est	1.09
Current Yr Est	4.28
Exp Earnings Date	*BMO 5/6/20
Prior Year EPS	4.24
Exp EPS Growth (3-5yr)	5.78%
Forward PE	19.42
PEG Ratio	3.36

Utilities » Utility - Electric Power

Quote Overview

Stock Activity	
Open	42.58
Day Low	41.15
Day High	43.11
52 Wk Low	35.62
52 Wk High	57.24
Avg. Volume	688,355
Market Cap	13.31 B
Dividend	1.76 (4.09%)
Beta	0.28

Key Earnings Data	
Earnings ESP	0.00%
Most Accurate Est	0.39
Current Qtr Est	0.39
Current Yr Est	2.21
Exp Earnings Date	7/28/20
Prior Year EPS	2.17
Exp EPS Growth (3-5yr)	5.24%
Forward PE	19.42
PEG Ratio	3.71

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	42.53
Day Low	40.55
Day High	42.53
52 Wk Low	32.09
52 Wk High	53.00
Avg. Volume	387,018
Market Cap	2.89 B
Dividend	1.62 (3.76%)
Beta	0.47

Key Earnings Data

Earnings ESP	-4.55%
Most Accurate Est	0.63
Current Qtr Est	0.66
Current Yr Est	2.00
Exp Earnings Date	*BMO 5/8/20
Prior Year EPS	1.74
Exp EPS Growth (3-5yr)	5.31%
Forward PE	21.52
PEG Ratio	4.05

Utilities » Utility - Electric Power

Quote Overview

Stock Activity	
Open	60.62
Day Low	58.84
Day High	60.62
52 Wk Low	48.07
52 Wk High	87.12
Avg. Volume	358,906
Market Cap	3.89 B
Dividend	2.14 (3.45%)
Beta	0.34

Key Earnings Data	
Earnings ESP	0.00%
Most Accurate Est	1.56
Current Qtr Est	1.56
Current Yr Est	3.55
Exp Earnings Date	*AMC 5/4/20
Prior Year EPS	3.53
Exp EPS Growth (3-5yr)	5.89%
Forward PE	17.45
PEG Ratio	2.96

Utilities » Utility - Electric Power

*BMO = Before Market Open

Quote Overview

Stock Activity

Open	16.68
Day Low	16.17
Day High	16.73
52 Wk Low	11.58
52 Wk High	31.17
Avg. Volume	7,122,770
Market Cap	8.56 B
Dividend	1.16 (6.81%)
Beta	0.96

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	0.45
Current Qtr Est	0.45
Current Yr Est	1.32
Exp Earnings Date	*BMO 5/7/20
Prior Year EPS	1.79
Exp EPS Growth (3-5yr)	5.00%
Forward PE	12.90
PEG Ratio	2.58

Utilities » Utility - Electric Power

*BMO = Before Market Op

Quote Overview

Stock Activity

Open	56.56
Day Low	55.65
Day High	56.58
52 Wk Low	46.03
52 Wk High	69.17
Avg. Volume	2,101,094
Market Cap	16.34 B
Dividend	1.63 (2.86%)
Beta	0.20

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	0.39
Current Qtr Est	0.39
Current Yr Est	2.59
Exp Earnings Date	7/23/20
Prior Year EPS	2.49
Exp EPS Growth (3-5yr)	6.95%
Forward PE	22.02
PEG Ratio	3.17

Utilities » Utility - Electric Power

Quote Overview

Stock Activity	
Open	78.35
Day Low	76.64
Day High	78.45
52 Wk Low	62.03
52 Wk High	95.10
Avg. Volume	1,852,714
Market Cap	26.30 B
Dividend	3.06 (3.88%)
Beta	0.23

Key Earnings Data	
Earnings ESP	0.52%
Most Accurate Est	1.44
Current Qtr Est	1.43
Current Yr Est	4.37
Exp Earnings Date	*AMC5/7/20
Prior Year EPS	4.37
Exp EPS Growth (3-5yr)	2.00%
Forward PE	18.02
PEG Ratio	9.01

Utilities » Utility - Electric Power

Quote Overview

Stock Activity	
Open	76.29
Day Low	75.17
Day High	76.62
52 Wk Low	57.79
52 Wk High	90.89
Avg. Volume	3,133,309
Market Cap	64.63 B
Dividend	3.76 (4.87%)
Beta	0.41

Key Earnings Data	
Earnings ESP	0.00%
Most Accurate Est	1.10
Current Qtr Est	1.10
Current Yr Est	4.31
Exp Earnings Date	*BMO 5/5/20
Prior Year EPS	4.24
Exp EPS Growth (3-5yr)	4.68%
Forward PE	17.89
PEG Ratio	3.83

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	102.27
Day Low	99.82
Day High	102.27
52 Wk Low	71.21
52 Wk High	135.67
Avg. Volume	1,214,372
Market Cap	19.98 B
Dividend	4.05 (3.90%)
Beta	0.60

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	1.07
Current Qtr Est	1.07
Current Yr Est	6.45
Exp Earnings Date	7/22/20
Prior Year EPS	6.30
Exp EPS Growth (3-5yr)	5.50%
Forward PE	16.09
PEG Ratio	2.93

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	83.86
Day Low	82.09
Day High	83.95
52 Wk Low	62.13
52 Wk High	103.79
Avg. Volume	3,540,135
Market Cap	62.14 B
Dividend	3.78 (4.46%)
Beta	0.33

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	1.21
Current Qtr Est	1.21
Current Yr Est	5.10
Exp Earnings Date	*BMO 5/12/20
Prior Year EPS	5.06
Exp EPS Growth (3-5yr)	4.64%
Forward PE	16.61
PEG Ratio	3.58

Utilities » Utility - Electric Power

Quote Overview

Stock Activity	
Open	57.50
Day Low	54.57
Day High	57.88
52 Wk Low	43.63
52 Wk High	78.93
Avg. Volume	2,467,315
Market Cap	21.29 B
Dividend	2.55 (4.34%)
Beta	0.52

Key Earnings Data	
Earnings ESP	1.64%
Most Accurate Est	0.93
Current Qtr Est	0.92
Current Yr Est	4.47
Exp Earnings Date	7/23/20
Prior Year EPS	4.70
Exp EPS Growth (3-5yr)	3.31%
Forward PE	13.13
PEG Ratio	3.97

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	68.00
Day Low	68.00
Day High	68.09
52 Wk Low	57.07
52 Wk High	74.44
Avg. Volume	590,658
Market Cap	2.77 B
Dividend	1.54 (2.26%)
Beta	0.39

Key Earnings Data

Earnings ESP	NA
Most Accurate Est	NA
Current Qtr Est	NA
Current Yr Est	NA
Exp Earnings Date	5/8/20
Prior Year EPS	2.25
Exp EPS Growth (3-5yr)	NA
Forward PE	NA
PEG Ratio	NA

Utilities » Utility - Electric Power

Quote Overview

Stock Activity	
Open	94.56
Day Low	92.10
Day High	94.56
52 Wk Low	75.20
52 Wk High	135.55
Avg. Volume	1,389,392
Market Cap	19.18 B
Dividend	3.72 (3.89%)
Beta	0.56

Key Earnings Data	
Earnings ESP	0.00%
Most Accurate Est	0.94
Current Qtr Est	0.94
Current Yr Est	5.51
Exp Earnings Date	*BMO 5/11/20
Prior Year EPS	5.40
Exp EPS Growth (3-5yr)	5.95%
Forward PE	17.32
PEG Ratio	2.91

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	57.68
Day Low	55.71
Day High	57.97
52 Wk Low	42.01
52 Wk High	76.57
Avg. Volume	1,697,096
Market Cap	13.24 B
Dividend	2.02 (3.46%)
Beta	0.48

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	0.40
Current Qtr Est	0.40
Current Yr Est	3.07
Exp Earnings Date	*AMC 5/6/20
Prior Year EPS	2.89
Exp EPS Growth (3-5yr)	4.95%
Forward PE	19.03
PEG Ratio	3.85

Oils-Energy » Alternative Energy - Other

Quote Overview

Stock Activity

Open	80.22
Day Low	79.33
Day High	80.84
52 Wk Low	60.69
52 Wk High	99.42
Avg. Volume	1,898,311
Market Cap	26.66 B
Dividend	2.27 (2.81%)
Beta	0.36

Key Earnings Data

Earnings ESP	-0.49%
Most Accurate Est	1.01
Current Qtr Est	1.02
Current Yr Est	3.64
Exp Earnings Date	5/6/20
Prior Year EPS	3.45
Exp EPS Growth (3-5yr)	6.13%
Forward PE	22.14
PEG Ratio	3.61

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	36.54
Day Low	35.49
Day High	36.85
52 Wk Low	29.28
52 Wk High	51.18
Avg. Volume	5,459,868
Market Cap	36.11 B
Dividend	1.53 (4.13%)
Beta	0.44

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	0.85
Current Qtr Est	0.85
Current Yr Est	3.00
Exp Earnings Date	*BMO 5/8/20
Prior Year EPS	3.22
Exp EPS Growth (3-5yr)	4.00%
Forward PE	12.34
PEG Ratio	3.09

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	40.88
Day Low	40.22
Day High	40.88
52 Wk Low	32.00
52 Wk High	52.52
Avg. Volume	3,564,201
Market Cap	22.36 B
Dividend	1.56 (3.78%)
Beta	0.46

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	0.57
Current Qtr Est	0.57
Current Yr Est	2.49
Exp Earnings Date	7/28/20
Prior Year EPS	2.58
Exp EPS Growth (3-5yr)	NA
Forward PE	16.59
PEG Ratio	NA

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	38.39
Day Low	37.51
Day High	38.39
52 Wk Low	28.59
52 Wk High	44.72
Avg. Volume	580,186
Market Cap	17.96 B
Dividend	1.44 (3.72%)
Beta	0.22

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	0.52
Current Qtr Est	0.52
Current Yr Est	1.95
Exp Earnings Date	*BMO 5/6/20
Prior Year EPS	1.92
Exp EPS Growth (3-5yr)	5.93%
Forward PE	19.91
PEG Ratio	3.36

Utilities » Utility - Electric Power

Quote Overview

Stock Activity	
Open	39.15
Day Low	37.87
Day High	39.17
52 Wk Low	33.51
52 Wk High	55.15
Avg. Volume	514,395
Market Cap	4.31 B
Dividend	1.32 (3.34%)
Beta	0.18

Key Earnings Data	
Earnings ESP	NA
Most Accurate Est	NA
Current Qtr Est	NA
Current Yr Est	1.88
Exp Earnings Date	*BMO 5/5/20
Prior Year EPS	1.99
Exp EPS Growth (3-5yr)	3.05%
Forward PE	21.00
PEG Ratio	6.88

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	90.90
Day Low	87.90
Day High	91.09
52 Wk Low	69.05
52 Wk High	114.01
Avg. Volume	295,321
Market Cap	4.63 B
Dividend	2.68 (2.92%)
Beta	0.45

Key Earnings Data

Earnings ESP	NA
Most Accurate Est	NA
Current Qtr Est	NA
Current Yr Est	4.56
Exp Earnings Date	8/6/20
Prior Year EPS	4.61
Exp EPS Growth (3-5yr)	2.50%
Forward PE	20.13
PEG Ratio	8.05

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	64.00
Day Low	61.63
Day High	64.25
52 Wk Low	47.19
52 Wk High	83.26
Avg. Volume	109,753
Market Cap	2.24 B
Dividend	1.41 (2.18%)
Beta	0.44

Key Earnings Data

Earnings ESP	NA
Most Accurate Est	NA
Current Qtr Est	NA
Current Yr Est	NA
Exp Earnings Date	5/13/20
Prior Year EPS	2.51
Exp EPS Growth (3-5yr)	NA
Forward PE	NA
PEG Ratio	NA

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	229.91
Day Low	225.00
Day High	230.02
52 Wk Low	174.80
52 Wk High	283.35
Avg. Volume	2,717,072
Market Cap	113.12 B
Dividend	5.60 (2.42%)
Beta	0.20

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	2.49
Current Qtr Est	2.49
Current Yr Est	9.05
Exp Earnings Date	7/22/20
Prior Year EPS	8.37
Exp EPS Growth (3-5yr)	7.72%
Forward PE	25.54
PEG Ratio	3.31

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	56.83
Day Low	55.38
Day High	56.83
52 Wk Low	45.06
52 Wk High	80.52
Avg. Volume	488,074
Market Cap	2.92 B
Dividend	2.40 (4.16%)
Beta	0.36

Key Earnings Data

Earnings ESP	NA
Most Accurate Est	NA
Current Qtr Est	NA
Current Yr Est	3.35
Exp Earnings Date	7/28/20
Prior Year EPS	3.42
Exp EPS Growth (3-5yr)	3.39%
Forward PE	17.22
PEG Ratio	5.08

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	31.00
Day Low	30.14
Day High	31.29
52 Wk Low	23.01
52 Wk High	46.43
Avg. Volume	1,503,151
Market Cap	6.31 B
Dividend	1.55 (4.92%)
Beta	0.78

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	0.18
Current Qtr Est	0.18
Current Yr Est	2.19
Exp Earnings Date	*BMO 5/7/20
Prior Year EPS	2.16
Exp EPS Growth (3-5yr)	3.37%
Forward PE	14.39
PEG Ratio	4.28

Utilities » Utility - Electric Power

Quote Overview

Stock Activity	
Open	43.31
Day Low	41.98
Day High	43.55
52 Wk Low	30.95
52 Wk High	57.74
Avg. Volume	120,363
Market Cap	1.79 B
Dividend	1.48 (3.33%)
Beta	0.35

Key Earnings Data	
Earnings ESP	0.00%
Most Accurate Est	0.68
Current Qtr Est	0.68
Current Yr Est	2.28
Exp Earnings Date	*AMC 5/5/20
Prior Year EPS	2.17
Exp EPS Growth (3-5yr)	NA
Forward PE	19.47
PEG Ratio	NA

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	75.48
Day Low	72.99
Day High	75.48
52 Wk Low	60.05
52 Wk High	105.51
Avg. Volume	989,818
Market Cap	8.66 B
Dividend	3.13 (4.07%)
Beta	0.37

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	0.16
Current Qtr Est	0.16
Current Yr Est	4.68
Exp Earnings Date	*BMO 5/8/20
Prior Year EPS	4.77
Exp EPS Growth (3-5yr)	5.21%
Forward PE	16.46
PEG Ratio	3.16

Utilities » Utility - Electric Power

*BMO = Before Market Open *

Quote Overview

Stock Activity

Open	39.83
Day Low	38.62
Day High	39.83
52 Wk Low	27.08
52 Wk High	56.14
Avg. Volume	631,613
Market Cap	3.23 B
Dividend	1.23 (3.04%)
Beta	0.60

Key Earnings Data

Earnings ESP	NA
Most Accurate Est	NA
Current Qtr Est	NA
Current Yr Est	2.15
Exp Earnings Date	8/7/20
Prior Year EPS	2.16
Exp EPS Growth (3-5yr)	5.87%
Forward PE	18.83
PEG Ratio	3.21

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	46.13
Day Low	44.11
Day High	46.24
52 Wk Low	37.83
52 Wk High	63.08
Avg. Volume	775,184
Market Cap	4.19 B
Dividend	1.54 (3.29%)
Beta	0.34

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	0.30
Current Qtr Est	0.30
Current Yr Est	2.38
Exp Earnings Date	8/7/20
Prior Year EPS	2.39
Exp EPS Growth (3-5yr)	5.27%
Forward PE	19.70
PEG Ratio	3.74

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	25.07
Day Low	24.51
Day High	25.10
52 Wk Low	18.12
52 Wk High	36.83
Avg. Volume	5,025,380
Market Cap	19.52 B
Dividend	1.66 (6.53%)
Beta	0.74

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	0.72
Current Qtr Est	0.72
Current Yr Est	2.42
Exp Earnings Date	*BMO 5/8/20
Prior Year EPS	2.45
Exp EPS Growth (3-5yr)	NA
Forward PE	10.48
PEG Ratio	NA

Utilities » Utility - Electric Power

Quote Overview

Stock Activity	
Open	50.20
Day Low	49.03
Day High	50.36
52 Wk Low	34.75
52 Wk High	63.88
Avg. Volume	2,880,463
Market Cap	25.62 B
Dividend	1.96 (3.87%)
Beta	0.59

Key Earnings Data	
Earnings ESP	0.00%
Most Accurate Est	1.03
Current Qtr Est	1.03
Current Yr Est	3.31
Exp Earnings Date	*BMO 5/4/20
Prior Year EPS	3.28
Exp EPS Growth (3-5yr)	3.41%
Forward PE	15.32
PEG Ratio	4.49

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	122.05
Day Low	119.01
Day High	122.05
52 Wk Low	88.00
52 Wk High	161.87
Avg. Volume	1,564,247
Market Cap	36.21 B
Dividend	4.18 (3.38%)
Beta	0.75

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	2.32
Current Qtr Est	2.32
Current Yr Est	7.17
Exp Earnings Date	*BMO 5/4/20
Prior Year EPS	6.78
Exp EPS Growth (3-5yr)	6.80%
Forward PE	17.26
PEG Ratio	2.54

Utilities » Utility - Gas Distribution

Quote Overview

Stock Activity

Open	56.18
Day Low	54.09
Day High	56.32
52 Wk Low	41.96
52 Wk High	71.10
Avg. Volume	5,065,959
Market Cap	59.96 B
Dividend	2.48 (4.37%)
Beta	0.44

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	0.76
Current Qtr Est	0.76
Current Yr Est	3.13
Exp Earnings Date	7/29/20
Prior Year EPS	3.11
Exp EPS Growth (3-5yr)	4.00%
Forward PE	18.15
PEG Ratio	4.54

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	89.97
Day Low	87.95
Day High	90.15
52 Wk Low	68.01
52 Wk High	109.53
Avg. Volume	1,599,008
Market Cap	28.56 B
Dividend	2.53 (2.79%)
Beta	0.20

Key Earnings Data

Earnings ESP	0.25%
Most Accurate Est	1.32
Current Qtr Est	1.32
Current Yr Est	3.73
Exp Earnings Date	*BMO 5/4/20
Prior Year EPS	3.58
Exp EPS Growth (3-5yr)	5.91%
Forward PE	24.29
PEG Ratio	4.11

Utilities » Utility - Electric Power

Quote Overview

Stock Activity

Open	63.18
Day Low	61.54
Day High	63.18
52 Wk Low	46.58
52 Wk High	72.14
Avg. Volume	3,107,890
Market Cap	33.35 B
Dividend	1.72 (2.71%)
Beta	0.28

Key Earnings Data

Earnings ESP	0.00%
Most Accurate Est	0.59
Current Qtr Est	0.59
Current Yr Est	2.75
Exp Earnings Date	*BMO 5/7/20
Prior Year EPS	2.64
Exp EPS Growth (3-5yr)	5.72%
Forward PE	23.15
PEG Ratio	4.05

Utilities » Utility - Electric Power

S&P Global
Market Intelligence

Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

Table 1: ROEs authorized January 1990-December 2019

		Electric utilities			Gas utilities		
Year	**Period**	**Average ROE (%)**	**Median ROE (%)**	**Number of observations**	**Average ROE (%)**	**Median ROE (%)**	**Number of observations**
1990	Full year	12.70	12.77	38	12.68	12.75	33
1991	Full year	12.54	12.50	42	12.45	12.50	31
1992	Full year	12.09	12.00	45	12.02	12.00	28
1993	Full year	11.46	11.50	28	11.37	11.50	40
1994	Full year	11.21	11.13	28	11.24	11.27	24
1995	Full year	11.58	11.45	28	11.44	11.30	13
1996	Full year	11.40	11.25	18	11.12	11.25	17
1997	Full year	11.33	11.58	10	11.30	11.25	12
1998	Full year	11.77	12.00	10	11.51	11.40	10
1999	Full year	10.72	10.75	6	10.74	10.65	6
2000	Full year	11.58	11.50	9	11.34	11.16	13
2001	Full year	11.07	11.00	15	10.96	11.00	5
2002	Full year	11.21	11.28	14	11.17	11.00	19
2003	Full year	10.96	10.75	20	10.99	11.00	25
2004	Full year	10.81	10.70	21	10.63	10.50	22
2005	Full year	10.51	10.35	24	10.41	10.40	26
2006	Full year	10.32	10.23	26	10.40	10.50	15
2007	Full year	10.30	10.20	38	10.22	10.20	35
2008	Full year	10.41	10.30	37	10.39	10.45	32
2009	Full year	10.52	10.50	40	10.22	10.26	30
2010	Full year	10.37	10.30	61	10.15	10.10	39
2011	Full year	10.29	10.17	42	9.92	10.03	16
2012	Full year	10.17	10.08	58	9.94	10.00	35
2013	Full year	10.03	9.95	49	9.68	9.72	21
2014	Full year	9.91	9.78	38	9.78	9.78	26
	1st quarter	10.37	9.83	9	9.47	9.05	3
	2nd quarter	9.73	9.60	7	9.43	9.50	3
	3rd quarter	9.40	9.40	2	9.75	9.75	1
	4th quarter	9.62	9.55	12	9.68	9.75	9
2015	**Full year**	**9.85**	**9.65**	**30**	**9.60**	**9.68**	**16**
	1st quarter	10.29	10.50	9	9.48	9.50	6
	2nd quarter	9.60	9.60	7	9.42	9.52	6
	3rd quarter	9.76	9.80	8	9.47	9.50	4
	4th quarter	9.57	9.58	18	9.68	9.73	10
2016	**Full year**	**9.77**	**9.75**	**42**	**9.54**	**9.50**	**26**
	1st quarter	9.87	9.60	15	9.60	9.25	3
	2nd quarter	9.63	9.50	14	9.47	9.60	7
	3rd quarter	9.66	9.60	5	10.14	9.90	6
	4th quarter	9.74	9.60	19	9.68	9.55	8
2017	**Full year**	**9.74**	**9.60**	**53**	**9.72**	**9.60**	**24**
	1st quarter	9.75	9.90	13	9.68	9.80	6
	2nd quarter	9.54	9.50	13	9.43	9.50	7
	3rd quarter	9.67	9.70	11	9.69	9.60	13
	4th quarter	9.42	9.50	11	9.53	9.60	14
2018	**Full year**	**9.60**	**9.58**	**48**	**9.59**	**9.60**	**40**
	1st quarter	9.73	9.70	12	9.55	9.70	4
	2nd quarter	9.58	9.50	12	9.73	9.73	3
	3rd quarter	9.55	9.60	7	9.80	9.90	3
	4th quarter	9.70	9.68	16	9.73	9.70	22
2019	**Full year**	**9.65**	**9.60**	**47**	**9.71**	**9.70**	**32**

Data compiled Jan. 29, 2020.

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)	[illegible] (8)
2nd Quarter	14.25 (25)	14.36 (9)	[illegible] (10)
3rd Quarter	14.30 (25)	13.87 (12)	[illegible] (12)
4th Quarter	14.35 (33)	14.36 (23)	[illegible] (12)
1980 Full Year	14.23(104)	14.05 (57)	12.94 (40)
1981 1st Quarter	14.87 (21)	14.69 (9)	13.[illegible] (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.[illegible] (64)
1982 1st Quarter	15.71 (29)	15.55 (15)	14.[illegible] (12)
2nd Quarter	15.60 (35)	15.62 (16)	15.06 (17)
3rd Quarter	15.83 (27)	15.72 (22)	15.21 (11)
4th Quarter	15.97 (34)	15.62 (30)	15.[illegible] (14)
1982 Full Year	15.78(125)	15.62 (83)	15.[illegible] (54)
1983 1st Quarter	15.53 (26)	15.41 (15)	14.75 (15)
2nd Quarter	15.10 (18)	14.84 (14)	14.75 (17)
3rd Quarter	15.39 (23)	15.24 (16)	14.[illegible] (9)
4th Quarter	15.35 (28)	15.41 (20)	14.[illegible] ([illegible])
1983 Full Year	15.36 (95)	15.25 (65)	14.[illegible] (71)
1984 1st Quarter	15.08 (19)	15.39 (8)	14.15 (12)
2nd Quarter	15.07 (15)	15.07 (7)	14.[illegible] (8)
3rd Quarter	15.38 (22)	15.37 (12)	14.[illegible] (10)
4th Quarter	15.89 (19)	15.33 (12)	14.70 (7)
1984 Full Year	15.32 (75)	15.31 (39)	14.50 (35)
1985 1st Quarter	15.51 (15)	15.03 (8)	14.[illegible] (10)
2nd Quarter	15.27 (12)	15.44 (4)	14.[illegible] (10)
3rd Quarter	14.91 (14)	14.64 (8)	14.[illegible] (6)
4th Quarter	15.11 (17)	14.44 (13)	14.[illegible] (14)
1985 Full Year	15.20 (58)	14.75 (34)	14.[illegible] (40)
1986 1st Quarter	14.35 (14)	14.05 (4)	14.[illegible] (8)
2nd Quarter	14.27 (16)	13.28 (9)	14.[illegible] (7)
3rd Quarter	13.16 (10)	13.00 (5)	13.[illegible] (3)
4th Quarter	13.52 (9)	13.62 (7)	13.[illegible] (3)
1986 Full Year	13.93 (49)	13.46 (26)	13.[illegible] (18)
1987 1st Quarter	12.82 (12)	12.81 (7)	12.[illegible] (1)
2nd Quarter	13.15 (10)	13.13 (5)	12.[illegible] (4)
3rd Quarter	13.17 (16)	12.58 (6)	13.[illegible] (4)
4th Quarter	12.79 (19)	12.73 (12)	12.[illegible] (4)
1987 Full Year	12.99 (57)	12.74 (29)	12.[illegible] (13)
1988 1st Quarter	12.74 (8)	12.94 (8)	12.[illegible] (2)
2nd Quarter	12.70 (7)	13.48 (4)	12.[illegible] (1)
3rd Quarter	12.55 (8)	12.75 (8)	13.37 (3)
4th Quarter	12.96 (10)	12.96 (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.[illegible] (3)
2nd Quarter	13.22 (7)	13.25 (3)	12.[illegible] (3)
3rd Quarter	12.36 (2)	12.56 (7)	13.75 (2)
4th Quarter	12.84 (9)	12.94 (15)	12.[illegible] (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

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	$ 2,996.003	-	$ 13,455.802	0.91%
Low Cap 6-8	730.047	-	2,992.251	1.60%
Micro-Cap 9-10	2.455	-	727.843	3.37%
Breakdown of Deciles 1-10				
1-Largest	$ 29,428.909	-	$ 1,073,390.566	-0.29%
2	13,512.960	-	29,022.867	0.50%
3	7,275.967	-	13,455.802	0.84%
4	4,504.066	-	7,254.230	0.82%
5	2,996.003	-	4,503.549	1.26%
6	1,961.831	-	2,992.251	1.54%
7	1,292.791	-	1,960.201	1.58%
8	730.047	-	1,292.224	1.82%
9	325.360	-	727.843	2.42%
10- Smallest	2.455	-	321.578	5.23%
Breakdown of CRSP 10th Decile				
10a	$ 185.418	-	$ 321.578	3.74%
10w	250.270	-	321.578	2.88%
10x	185.418	-	250.248	4.71%
10b	$ 2.455	-	$ 184.785	8.23%
10y	109.462	-	184.785	6.85%
10z	2.455	-	109.406	11.16%

Source: *Duff & Phelps; 2019 CRSP Deciles Size Study -- Supplementary Data Exhibits.*

CRSP Deciles Size Study – Supplementary Data Exhibits

Starting in 2018, the essential information and valuation data previously published in the hardcover *Valuation Handbook – U.S. Guide to Cost of Capital* are available exclusively in the new Duff & Phelps online Cost of Capital Navigator platform.

Essential Valuation Data in the Cost of Capital Navigator

It's in there: The essential valuation inputs previously published in the hardcover *Valuation Handbook – U.S. Guide to Cost of Capital* (e.g., risk-free rates, equity risk premia, size premia, risk premia over the risk-free rate, and industry risk premia) are in the new Duff & Phelps online Cost of Capital Navigator platform and available for you to use to estimate cost of equity capital using both the capital asset pricing model (CAPM), and various build-up models.

Essential Content in the Cost of Capital Navigator

It's in there: Chapters from the previous *2014–2017 Valuation Handbooks – U.S. Guide to Cost of Capital*, and the new 2018 and 2019 chapters updated through December 31, 2017 and December 31, 2018, respectively. Included are dozens of examples for properly using the data to estimate levered and unlevered cost of equity capital, using both the capital asset pricing model (CAPM) and various build-up models. Also included is a comprehensive Cost of Capital Navigator Q&A that contains answers to commonly-asked questions.

Supplementary Data in the Cost of Capital Navigator

It's in there: This document provides supplementary data from the 2018 and 2019 data years (with data through December 31, 2017 and December 31, 2018, respectively) for the CRSP Deciles Size Study and the Risk Premium Report Study.

Summary Statistics of Annual Total Returns, Income Returns, and Capital Appreciation Returns of Basic U.S. Asset Classes
1926–2018

1926–2018	Geometric Mean Returns (%)	Arithmetic Mean Returns (%)	Standard Deviation of Returns (%)
Large Company Stocks			
Total Return	9.99	11.88	19.76
Income Return	3.94	3.96	1.61
Capital Appreciation Return	5.84	7.69	19.08
Small Company Stocks			
Total Return	11.82	16.21	31.65
Mid-cap Stocks (Decile 3-5)			
Total Return	10.92	13.62	24.25
Income Return	3.72	3.73	1.79
Capital Appreciation Return	7.02	9.67	23.57
Low-cap Stocks (Decile 6-8)			
Total Return	11.30	15.00	28.54
Income Return	3.39	3.41	1.96
Capital Appreciation Return	7.76	11.42	27.90
Micro-cap Stocks (Decile 9-10)			
Total Return	11.88	17.67	38.47
Income Return	2.45	2.46	1.67
Capital Appreciation Return	9.41	15.07	37.65
Long-term Corporate Bonds			
Total Return	5.94	6.25	8.38
Long-term Government Bonds			
Total Return	5.47	5.90	9.83
Income Return	4.94	4.97	2.63
Capital Appreciation Return	0.34	0.71	8.82
Intermediate-term Government Bonds			
Total Return	5.06	5.20	5.60
Income Return	4.35	4.39	2.89
Capital Appreciation Return	0.54	0.64	4.42
US Treasury Bills			
Total Return	3.34	3.38	3.10
Inflation	2.88	2.96	4.02

Source of underlying data: (i) Stocks, Bonds, Bills, and Inflation® (SBBI®) return series from the Morningstar *Direct* database. Series used: Large Company Stocks (IA SBBI US Large Stock TR USD Ext). The "SBBI US Large Stock" return series is essentially the S&P 500 index; Small Company Stocks (IA SBBI US Small Stock TR USD); Long-term Corp. Bonds (IA SBBI US LT Corp TR USD); Long-term Gov't Bonds (IA SBBI US LT Govt TR USD); Intermediate-term Gov't Bonds (IA SBBI US IT Govt TR USD); T-bills (IA SBBI US 30 Day TBill TR USD); Inflation (IA SBBI US Inflation). All rights reserved. Used with permission. (ii) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. *CRSP standard market-cap-weighted NYSE/NYSE MKT/NASDAQ deciles 1–10. Mid-cap stocks represented by a market-capitalization weighted portfolio comprised of CRSP deciles 3-5; Low-cap stocks represented by a market-capitalization weighted portfolio comprised of CRSP deciles 6-8; Micro-cap stocks represented by a market-capitalization weighted portfolio comprised of CRSP deciles 9-10. Total return is equal to sum of three components returns: income return, capital appreciation, and reinvestment return. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.*

Summary Statistics of Annual Total Returns, Income Returns, and Capital Appreciation Returns of Basic U.S. Asset Classes
1926–2017

1926–2017	Geometric Mean Returns (%)	Arithmetic Mean Returns (%)	Standard Deviation of Returns (%)
Large Company Stocks			
Total Return	10.16	12.06	19.80
Income Return	3.96	3.98	1.61
Capital Appreciation Return	5.98	7.84	19.13
Small Company Stocks			
Total Return	12.11	16.52	31.69
Mid-cap Stocks (Decile 3-5)			
Total Return	11.18	13.89	24.26
Income Return	3.74	3.75	1.78
Capital Appreciation Return	7.25	9.91	23.60
Low-cap Stocks (Decile 6-8)			
Total Return	11.56	15.28	28.55
Income Return	3.41	3.43	1.97
Capital Appreciation Return	8.00	11.67	27.92
Micro-cap Stocks (Decile 9-10)			
Total Return	12.17	17.99	38.60
Income Return	2.46	2.47	1.68
Capital Appreciation Return	9.68	15.38	37.78
Long-term Corporate Bonds			
Total Return	6.06	6.37	8.35
Long-term Government Bonds			
Total Return	5.54	5.97	9.86
Income Return	4.96	4.99	2.63
Capital Appreciation Return	0.38	0.76	8.86
Intermediate-term Government Bonds			
Total Return	5.10	5.24	5.61
Income Return	4.37	4.41	2.90
Capital Appreciation Return	0.56	0.66	4.44
US Treasury Bills			
Total Return	3.35	3.40	3.11
Inflation	2.89	2.97	4.04

Source of underlying data: (i) Stocks, Bonds, Bills, and Inflation® (SBBI®) return series from the Morningstar *Direct* database. Series used: Large Company Stocks (IA SBBI US Large Stock TR USD Ext). The "SBBI US Large Stock" return series is essentially the S&P 500 index; Small Company Stocks (IA SBBI US Small Stock TR USD); Long-term Corp. Bonds (IA SBBI US LT Corp TR USD); Long-term Gov't Bonds (IA SBBI US LT Govt TR USD); Intermediate-term Gov't Bonds (IA SBBI US IT Govt TR USD); T-bills (IA SBBI US 30 Day TBill TR USD); Inflation (IA SBBI US Inflation). All rights reserved. Used with permission. (ii) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2018 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. *CRSP standard market-cap-weighted NYSE/NYSE MKT/NASDAQ deciles 1–10. Mid-cap stocks represented by a market-capitalization weighted portfolio comprised of CRSP deciles 3-5; Low-cap stocks represented by a market-capitalization weighted portfolio comprised of CRSP deciles 6-8; Micro-cap stocks represented by a market-capitalization weighted portfolio comprised of CRSP deciles 9-10. Total return is equal to sum of three components returns: income return, capital appreciation, and reinvestment return. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.*

CRSP Decile Size Study, Supplementary Data – Decile Breakpoints, Summary Statistics of Annual Total Returns by Decile, and Decile Betas

CRSP decile "breakpoints" are the lower and upper bounds of a CRSP decile. The *lower* bound is represented by the *smallest* company in the decile (or size grouping, or 10th decile sub-decile), and the *upper* bound is represented by the *largest* company in the decile (or size grouping, or 10th decile sub-decile).

On the following pages are the breakpoints, summary statistics of annual total returns, OLS Betas, and Sum Betas of CRSP deciles 1–10, CRSP Mid-Cap, Low-Cap, and Micro-Cap size groupings, and 10th decile split into its sub-deciles 10a (and its upper and lower halves 10w and 10x), and 10b (and its upper and lower halves 10y and 10z).

CRSP Deciles Size Study

Decile 1

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$29,428.909	–	$1,073,390.566	11.04%	9.31%	18.81%	0.92	0.92
2018	12/31/17	$25,142.834	–	$790,050.073	11.19%	9.45%	18.86%	0.92	0.92

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 2

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$13,512.960	–	$29,022.867	12.66%	10.42%	21.36%	1.04	1.06
2018	12/31/17	$12,067.589	–	$25,096.258	12.89%	10.65%	21.37%	1.04	1.06

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 3

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$7,275.967	–	$13,455.802	13.41%	10.91%	23.23%	1.10	1.14
2018	12/31/17	$6,557.519	–	$11,978.971	13.67%	11.16%	23.24%	1.11	1.14

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 4

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$4,504.066	–	$7,254.230	13.60%	10.69%	25.39%	1.13	1.19
2018	12/31/17	$4,097.960	–	$6,545.548	13.84%	10.93%	25.42%	1.13	1.19

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 5

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$2,996.003	–	$4,503.549	14.31%	11.22%	26.04%	1.17	1.25
2018	12/31/17	$2,763.719	–	$4,091.971	14.62%	11.53%	26.03%	1.17	1.25

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 6

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$1,961.831	–	$2,992.251	14.59%	11.18%	27.00%	1.17	1.28
2018	12/31/17	$1,815.680	–	$2,759.939	14.89%	11.48%	26.97%	1.17	1.28

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 7

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$1,292.791	–	$1,960.201	15.19%	11.42%	28.86%	1.25	1.39
2018	12/31/17	$1,175.369	–	$1,814.568	15.41%	11.63%	28.87%	1.25	1.39

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 8

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$730.047	–	$1,292.224	15.77%	11.28%	32.69%	1.30	1.48
2018	12/31/17	$657.705	–	$1,170.063	16.08%	11.55%	32.84%	1.30	1.48

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 9

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$325.360	–	$727.843	16.65%	11.34%	36.84%	1.34	1.54
2018	12/31/17	$299.400	–	$656.845	16.94%	11.59%	36.97%	1.34	1.55

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 10

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$2.455	–	$321.578	19.80%	12.95%	42.11%	1.39	1.68
2018	12/31/17	$2.531	–	$299.290	20.19%	13.31%	42.22%	1.39	1.68

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 10a

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$185.418	–	$321.578	18.38%	12.30%	38.91%	1.40	1.67
2018	12/31/17	$166.505	–	$299.290	18.78%	12.67%	39.05%	1.40	1.67

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 10w

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$250.270	–	$321.578	17.39%	11.94%	36.31%	1.38	1.57
2018	12/31/17	$228.014	–	$299.290	17.66%	12.23%	36.12%	1.38	1.57

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 10x

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$185.418	–	$250.248	19.63%	12.26%	44.04%	1.44	1.80
2018	12/31/17	$166.505	–	$227.819	20.24%	12.73%	45.01%	1.44	1.80

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 10b

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$2.455	–	$184.785	22.67%	13.89%	49.91%	1.37	1.71
2018	12/31/17	$2.531	–	$166.349	23.07%	14.27%	49.88%	1.37	1.71

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 10y

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$109.462	–	$184.785	21.63%	12.70%	50.88%	1.42	1.74
2018	12/31/17	$87.646	–	$166.349	22.00%	13.05%	50.80%	1.42	1.75

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Decile 10z

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$2.455	–	$109.406	24.97%	15.47%	53.10%	1.28	1.64
2018	12/31/17	$2.531	–	$87.600	25.44%	15.90%	53.18%	1.28	1.64

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Mid-Cap 3-5

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$2,996.003	–	$13,455.802	13.62%	10.92%	24.25%	1.12	1.17
2018	12/31/17	$2,763.719	–	$11,978.971	13.89%	11.18%	24.26%	1.12	1.17

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Low-Cap 6-8

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$730.047	–	$2,992.251	15.00%	11.30%	28.54%	1.22	1.36
2018	12/31/17	$657.705	–	$2,759.939	15.28%	11.56%	28.55%	1.22	1.36

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.

CRSP Deciles Size Study

Micro-Cap 9-10

Data Year	Data Through	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns	OLS Beta	Sum Beta
2019	12/31/18	$2.455	–	$727.843	17.67%	11.88%	38.47%	1.35	1.58
2018	12/31/17	$2.531	–	$656.845	17.99%	12.17%	38.60%	1.35	1.59

Sources of underlying data: 1.) CRSP U.S. Stock Database and CRSP U.S. Indices Database , University of Chicago Booth School of Business. 2.) Morningstar *Direct* database. Used with permission. Calculations performed by Duff & Phelps, LLC.

Annual Arithmetic Mean Returns, Geometric Mean Returns, and Standard Deviation of Returns are calculated over the period 1926–Present.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–Present.