BEFORE THE PUBLIC SERVICE COMMISSION
COMMONWEALTH OF KENTUCKY

In the Matter of:

ELECTRONIC INVESTIGATION INTO TRANSFER OF OWNERSHIP TO PRESTONSBURG CITY UTILITIES COMMISSION OF THE WASTEWATER SYSTEM AND CERTAIN PORTIONS OF THE WATER SYSTEM OF SOUTHERN WATER AND SEWER DISTRICT PURSUANT TO KRS 278.250 AND KRS 278.390	)	**CASE NO. 2020-00228**

RESPONSE OF PRESTONSBURG CITY'S UTILITIES COMMISSION TO THE COMMISSION'S ORDER DATED JULY 20, 2020

Come the Prestonsburg City's Utilities Commission (hereinafter "Prestonsburg"), by counsel, for its Response to the Commission's Order dated July 20, 2020, and states on the following pages:

Respectfully submitted,

Kipley J. McNally

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Counsel for Prestonsburg City's
Utilities Commission

Date submitted: 7/29/20

INTRODUCTION AND HISTORY

On May 2, 2017, the Commission entered an Order ("Order") in Case No. 2017-00044 approving the transfer of all of the wastewater assets and designated water distribution assets owned, controlled and operated (hereinafter, the "Assets") by Southern Water and Sewer District to Prestonsburg.

That Order, inter alia, stated:

1. Approved the proposed transfer of ownership and control of Southern's Assets to Prestonsburg;

2. Within ten (10) days of the transfer of the Assets, Southern District and Prestonsburg shall notify the Commission in writing of the transfer's occurrence; and

3. Any material revisions of the proposed transaction must be approved by the Commission in order for the amendment to be effective.

PRESTONSURG'S STATEMENTS

1. Wastewater Assets.

Effective July 1, 2016, the parties entered into the Wastewater Operating & Management Agreement to permit Prestonsburg to promptly commence the rehabilitation of the Wayland and Eastern wastewater treatment plants to forestall the pending enforcement action by the Kentucky Division of Water filed as Exhibit 7 to the Joint Application in Case no. 2017-00044. After the Commission's Order was entered approving the transfer of the Assets, the parties held an interim closing only for the wastewater assets on June 28, 2018. The actions completed at the closing are summarized in the Closing Memorandum prepared by Damon Talley. Please see Exhibit

A attached. In addition, he filed a compliance statement with Commission by letter dated July 20, 2018. Please see Exhibit B attached.

2. Water System Assets.

Due to the liens held by United States Department of Agriculture, Rural Development Agency ("RD") on the water system assets and the revenue stream from the water system, the proposed transfer of the designated water system assets could not be transferred, free and clear of all encumbrances, without the consent and approval of RD. Such consent and approval by RD was expected by the parties to occur within a relatively short period of time. Since it was the parties' expectation that RD would grant its approval within a short period of time, the decision was made to wait to file a Compliance Statement with the Commission after the transfer of all of the Assets. However, pending the RD's approval, the wastewater assets were transferred and the "beneficial ownership" interest in the designated water distribution assets were transferred to Prestonsburg pursuant to a second Operation and Management Agreement dated July 1, 2017 (hereinafter, the "Water Systems O & M Agreement"). Paragraph 3 of the Commission's Order dated May 2, 2017 required that any material revisions of the proposed transaction must be approved by the Commission in order for that Amendment to be effective. The Water Systems O & M Agreement is based upon and is consistent with the Commission's Order approving the transfer of the Assets. Southern and Prestonsburg entered into the Water Systems O & M Agreement with the expectation that RD would approve the transfer of the assets within a relatively short period of time. Prestonsburg continues to operate the designated water distribution assets pursuant to the

Water Systems O & M Agreement. Please find enclosed with this Response a copy of the Water Systems O & M Agreement for filing. Please see Exhibit C attached.

3. Appraisals.

RD required the parties to have an independent accounting firm prepare an appraisal of the designated water assets of Southern being transferred. Consequently, Eddie Campbell, former superintendent of Prestonsburg hired Terry R. Tyffe, CPA, ABV to perform an appraisal ("First Appraisal"). After cross-examination of Mr. Fyffe by the PSC, the parties determined that they would not rely on his opinion of valuation. Please find enclosed a copy of an Appraisal dated June 15, 2020 ("Second Appraisal") prepared by John Herring with DeanDorton, that valued designated water assets previously owned by Sandy Valley Water District at $1,510,960.00. Please see copy attached for filing. Please see Exhibit D attached

4. First Amendment To Asset Purchase Agreement

Southern, Prestonsburg and RD have given serious consideration to entering into the First Amendment to the Asset Purchase Agreement ("First Amendment") that provides that Prestonsburg will pay additional consideration to Southern and to RD for the benefit of Southern in exchange for the consent and release of RD's lien. Please find attached a draft of an unsigned copy of the First Amendment for filing, which delineates the details of the parties' agreement, and reflects the status of the assets. Please see Exhibit E attached.

5. Unpaid Sewer Fees.

Prestonsburg and Southern have agreed that the unpaid sewer fees that have accrued since June 28, 2018 total $275,000.00. In the First Amendment, Prestonsburg has agreed to forgive a total of $137,500.00.

Pursuant to a Financial Management Services Contract, Southern has agreed to pay Prestonsburg currently for future sewer fees collected from its water customers. Please find attached a copy of the unsigned Financial Management Services Contract for filing. Please see Exhibit F attached.

CERTIFICATE OF SERVICE

In accordance with 807 KAR 5:001, Section 8, I certify that the Prestonsburg City's Utilities Commission, and the City of Prestonsburg's electronic filing of this Response is a true and accurate copy of the same document being filed in paper medium; that the electronic filing was transmitted to the Public Service Commission on July 29, 2020; that there are currently no parties that the Public Service Commission has excused from participation by electronic means in this proceeding; and that an original and copy paper medium of this Response will be delivered to the Public Service Commission within thirty (30) days after the lifting of the emergency, as discussed in Case No. 2020-00085.

Kipley J. McNally

Kipley J. McNally

CERTIFICATE OF SERVICE

Since an Electronic Certification has not been filed on behalf of Southern Water & Sewer District, a copy of this Response has not been served on Southern Water & Sewer District.

Kipley J. McNally

Kipley J. McNally

LIST OF EXHIBITS

A. Wastewater Closing Memorandum;

B. Damon Talley Letter Dated July 20, 2018;

C. Water System O & M Agreement dated July 1, 2017;

D. Appraisal Report dated June 15, 2020 by John Herring;

E. Unsigned Draft of First Amendment;

F. Unsigned Draft of Financial Management Services Contract.

EXHIBIT A

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PO BOX 150
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HODGENVILLE, KY 42748

CLOSING MEMO

RE: Sale of Southern Water and Sewer District's
Wastewater System Assets to the City of Prestonsburg
For the Use and Benefit of Prestonsburg City's Utilities Commission

1. The Closing was held at 11:30 a.m. E.D.T. on June 28, 2018 at the PCUC Office located at 2560 South Lake Drive, Prestonsburg, Kentucky. Duly authorized officers and officials of all parties were present.

2. All documents, as shown in the Index of the Transcript of Proceedings, were executed, notarized where appropriate, dated and placed in the file.

3. The Seller's Kentucky Infrastructure Authority ("KIA") Loans (KIA Loans A04-06 and A11-16) were assumed by the Buyer pursuant to the provisions of the Asset Purchase Agreement.

4. The Seller executed a Receipt acknowledging payment in full of the portion of the purchase price attributable to the Seller's Wastewater System Assets.

5. The Deeds, Assignment of Lease, other Assignments, Bill of Sale, and other Conveyance Instruments were delivered to the Buyer.

6. The transaction was considered closed.

This 28th day of June, 2018.

STOLL KEENON OGDEN PLLC

Damon R. Talley

Damon R. Talley

EXHIBIT B

STOLL
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PO BOX 150
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HODGENVILLE, KY 42748

July 20, 2018

Ms. Gwen R. Pinson
Executive Director
Public Service Commission
PO Box 615
Frankfort, KY 40602

RE: Case No. 2017-00044
Southern Water and Sewer District

Dear Ms. Pinson:

Pursuant to Ordering paragraph 2 of the Commission's May 2, 2017 Order, the Joint Applicants, Southern Water and Sewer District ("District") and Prestonsburg City's Utility Commission ("PCUC"), hereby notify the Commission that the Closing of this transaction and the transfer of the District's Wastewater Assets to PCUC took place on June 28, 2018.

The transfer of Assets took place pursuant to the provisions of the Asset Purchase Agreement dated January 1, 2017 and in accordance with the terms and conditions set forth in the Commission's May 2, 2017 Order.

Yours truly,

STOLL KEENON OGDEN PLLC

Damon R. Talley

Damon R. Talley

cc: Southern Water and Sewer District
Prestonsburg City's Utility Commission
DRT:vl

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June 29, 2017

RECEIVED

JUN 30 2017

Public Service
Commission

Dr. Talina R. Mathews
Executive Director
Public Service Commission
P.O. Box 615
Frankfort, KY 40602-0615

RE: Case No. 2017-00044
Joint Application of Southern Water and Sewer District, Prestonsburg City's Utilities Commission, and the City of Prestonsburg, Kentucky

Dear Dr. Mathews:

On May 2, 2017, the Public Service Commission ("Commission") approved the joint application for approval of the transfer of ownership and control of Southern Water and Sewer District's ("Southern District") wastewater treatment and collection facilities and portions of its water distribution system to Prestonsburg City's Utilities Commission ("PCUC") and the City of Prestonsburg, Kentucky ("Prestonsburg") in the above-referenced case.

In ordering paragraph 4 of the Commission's May 2, 2017 Order, the Commission required: "No later than June 30, 2017, Southern District shall submit its Gross Report and Annual Report for its sewer system for the period January 1, 2017, through the date of the transfer." The closing date for the transfer of Southern District's assets has been delayed because the joint applicants are still awaiting approval from Southern District's creditors. Consequently, Southern District is unable to file its Gross Report and Annual Report through the date of the transfer by June 30, 2017. Southern District will file its Gross Report and Annual Report required by ordering paragraph 4 within ninety (90) days of the closing date. The joint applicants anticipate the closing will occur in July or August of this year.

Yours truly,

Damon R. Talley

Damon R. Talley

DRT:MEW

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC JOINT APPLICATION OF SOUTHERN WATER AND SEWER DISTRICT; PRESTONSBURG CITY'S UTILITY COMMISSION; AND THE CITY OF PRESTONSBURG FOR AN ORDER APPROVING THE TRANSFER OF OWNERSHIP OF THE WASTEWATER SYSTEM AND CERTAIN PORTIONS OF THE WATER SYSTEM OF SOUTHERN WATER AND SEWER DISTRICT	))))))))))	CASE NO. 2017-00044

ORDER

On February 6, 2017, joint applicants Southern Water and Sewer District ("Southern District"), Prestonsburg City's Utility Commission ("PCUC"), and the city of Prestonsburg, Kentucky, ("Prestonburg") (collectively, "Joint Applicants") filed an application for approval of the transfer of ownership and control of Southern District's wastewater treatment and collection facilities and portions of its water distribution system to PCUC and Prestonsburg. In support of the request, Joint Applicants submitted a written Asset Purchase Agreement between Southern District, Prestonsburg, and PCUC.

By Order entered on February 20, 2017, the Commission established a procedural schedule to ensure the orderly review of Joint Applicants' application. On March 6, 2017, Commission Staff filed its First Request for Information to Joint Applicants ("Staff's First Request"). Joint Applicants filed their response to Staff's First Request on March 13, 2017. Finding that it required additional information from Joint Applicants regarding the proposed transfer, the Commission by Order entered April 6, 2017, directed Joint

Applicants to file responses to requests for information listed in the Appendix to the Order. Pursuant to KRS 278.020(7), the Commission also extended the period for a decision on Joint Applicants' application an additional 60 days so that it could review and fully consider the Joint Applicants' responses to these requests. Joint Applicants filed their responses on April 21, 2017.

No person has sought to intervene in this proceeding, and Joint Applicants did not request a formal hearing. Having reviewed the application and the responses to the discovery requests, and being otherwise sufficiently advised, the Commission finds that:

1. Southern District is a water district organized pursuant to KRS Chapter 74.

2. Southern District owns and operates facilities used for the collection and treatment of sewage for compensation to approximately 306 customers in Floyd County, Kentucky ("Southern District Wastewater System").[1]

3. Southern District owns and operates facilities used for the treatment and distribution of water for compensation to approximately 6,724 customers in Floyd and Knott counties, Kentucky ("Southern District Water System").[2]

4. Southern District is a utility subject to the Commission's jurisdiction pursuant to KRS 278.010(3)(d) and (f) and KRS 278.040.

5. As of December 31, 2015, Southern District had, with respect to its wastewater facilities, net utility plant of $6,520,476, total current and accrued assets of

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[1] *Annual Report of Southern Water and Sewer District for the Year Ended December 31, 2015* ("2015 Sewer Annual Report") at 12.

[2] *Annual Report of Southern Water and Sewer District for the Year Ended December 31, 2015* ("2015 Water Annual Report") at 25.

$127,764, total current and accrued liabilities of $6,136,250, and total long-term debt of $660,525.[3]

6. As of December 31, 2015, Southern District had, with respect to its water facilities, net utility plant of $18,284,151, total current and accrued assets of $7,230,124, total current and accrued liabilities of $1,386,379, and total long-term debt of $5,200,254.[4]

7. Prestonsburg is a municipal corporation and home rule class city in Floyd County, Kentucky.[5]

8. PCUC is a component unit and agency of Prestonsburg.[6]

9. Prestonsburg owns, and PCUC operates, water supply, treatment and distribution facilities that provide water service to approximately 7,806 customers in Floyd County, Kentucky.[7]

10. PCUC employs 14 operators who hold water certification licenses issued by the Kentucky Board of Certification of Water System Operators: four are certified as Water Distribution Operators; five are certified as Water Treatment Operators; and five are certified as both Water Distribution Operators and Water Treatment Operators.[8]

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[3] 2015 Annual Sewer Report at 12 and 13.

[4] 2015 Annual Water Report at 20 and 22.

[5] Joint Application at 3.

[6] *Id.* at 2.

[7] *Id.* at 3.

[8] *Id.* at 12.

11. Prestonsburg owns, and PCUC operates, wastewater collection and treatment facilities that provide sewer service to approximately 2,817 customers in Floyd County, Kentucky.[9]

12. PCUC employs eight operators who hold wastewater certification licenses issued by the Kentucky Board of Certification of Wastewater System Operators: four are certified Wastewater Collection System Operators; three are certified Wastewater Treatment Operators; and one is certified as both a Wastewater Collection System Operator and a Wastewater Treatment Operator.[10]

13. Joint Applicants submitted as Exhibit 8 to the Joint Application a copy of PCUC's audited financial statements for the fiscal year ended June 30, 2016. According to these financial statements, for the fiscal year ended June 30, 2016, PCUC reported total assets of $24,190,362, total liabilities of $16,382,694, and cash and cash equivalents on hand of $1,018,754.[11]

14. The Division of Enforcement of the Kentucky Energy and Environment Cabinet has issued numerous Notices of Violation to Southern District for alleged violations of Kentucky water-quality laws in connection with its operation of the Southern Wastewater System. Joint Applicants state that to mitigate or eliminate any civil penalties that could result from these violations, Southern District entered into an operating agreement with PCUC, and that pursuant to this operating agreement, PCUC has

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[9] *Id.* at 3.

[10] *Id.* at 11.

[11] *Id.*, Exhibit 8, at 4 and 8.

managed, operated, repaired, and maintained the Southern District Wastewater System since July 1, 2016.[12]

15. Joint Applicants executed an Asset Purchase Agreement ("Agreement") pursuant to which Southern District agrees to convey and transfer to Prestonsburg, for the use and benefit of PCUC, the Southern District Wastewater System and portions of the Southern District Water System (collectively, the "Assets"). The Agreement has an effective date of January 1, 2017, and a scheduled closing date of May 1, 2017.[13]

16. The obligations of the parties to the Agreement are contingent on the Commission's approval of the proposed transfer of assets.[14]

17. On December 19, 2016, Southern District adopted Resolution No. 2016-12-01 approving the Agreement.[15]

18. On December 19, 2016, Prestonsburg adopted Resolution No. 09-2016 approving the Agreement.[16]

19. Under the terms of the Agreement, Southern District will transfer to Prestonsburg all of its wastewater facilities, including but not limited to: the Harold Wastewater Treatment Plant ("WWTP"); the Harold/Betsy Lane Wastewater Collection System; the Eastern Wastewater Collection System; the Eastern WWTP and Collection

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[12] *Id.* at 7.

[13] *Id.*, Exhibit 1.

[14] *Id.* at 6; and Exhibit 1, at 26.

[15] *Id.* at 6; and Exhibit 4.

[16] *Id.* at 7; and Exhibit 6.

System; the Wayland WWTP and Collection System; all sewer lift stations; and real property related to the Southern District Wastewater System.[17]

20. Prestonsburg and PCUC intend to continue to operate the Harold WWTP, the Eastern WWTP, and the Wayland WWTP upon the transfer of the Southern District Wastewater System to Prestonsburg.[18]

21. Under the terms of the Agreement, Southern District will transfer to Prestonsburg the following water facilities: the Pyramid Distribution System, including the Hippo Hill Tank; and the Former Sandy Valley Water Distribution System, including the Eagle Trace Tank, the Mare Creek Road Booster Station the Pike-Floyd Hollow Road Booster Station, and the Stanville Tank. Southern District will also transfer to Prestonsburg real property on which these assets are located and certain other tangible and intangible property and rights used in the operation of these facilities.[19]

22. In the Agreement, Joint Applicants state that the water system facilities proposed to be transferred are in remote sections of the Southern District Water System. Joint Applicants further state that PCUC can more easily provide adequate and reliable water service to those areas.[20]

23. Southern District will retain ownership of and continue to operate the portions of its Water System that it is not transferring to Prestonsburg.[21]

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[17] *Id.* at 4.

[18] Response to Staff's First Request, Item 2.

[19] Joint Application at 4–5; Response to Staff's First Request, Item 3.

[20] Joint Application, Exhibit 1, at 3–4.

[21] Response to Staff's First Request, Item 3.

24. In response to Commission Staff's First Request for Information, Item 3, Joint Applicants submitted a map showing the location of the water system facilities Southern District proposes to transfer, as well as the location of the water system facilities it intends to retain.[22]

25. Prestonsburg will pay Southern District $2,140,000 for the Assets through a combination of cash payments to Southern District, the assumption or payment of certain Southern District debt obligations, and expenditures incurred for the rehabilitation of certain wastewater facilities. Prestonsburg will either assume or pay in full at closing the following debt obligations of Southern District: (a) KIA Loan No. A04-06 in the approximate principal amount of $30,588; (b) KIA Loan No. A11-16 in the approximate principal amount of $660,525; and (c) USDA-RD Loan No. 91-05 in the approximate principal amount of $501,509, which was originally incurred by the Sandy Valley Water District and later assumed by Southern District.[23]

26. After closing, Southern District will have no debt obligations related to the Southern District Wastewater System or the portions of the Southern District Water System conveyed to Prestonsburg.[24]

27. The total utility plant to be transferred from Southern District's wastewater facilities is $7,865,636,[25] and the net book value of the assets is $6,263,206.[26]

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[22] *Id.*

[23] Joint Application at 5.

[24] *Id.*

[25] Joint Applicants' Response to Commission Staff's Second Request for Information ("Response to Second Request"), Item 1.a.

[26] Total Utility Plant $7,865,636 - Accumulated Depreciation $1,602,430 = $6,263,206.

28. The total utility plant to be transferred from Southern District's water facilities is $542,732,[27] and the net book value of the assets is $424,595.[28]

29. Joint Applicants state that the proposed transfer of assets will enhance and strengthen Southern District's financial position.[29]

30. Joint Applicants represent that the proposed transfer is an "arm's length" transaction, and that they mutually agreed upon the purchase price for the Assets and other terms of the Agreement following months of negotiation. Joint Applicants further represent that the purchase price represents the fair market value of the Assets, although they did not obtain an appraisal of the Assets.[30]

31. At closing, Southern District will transfer to PCUC and Prestonsburg customer deposits that it holds, including accrued interest through the day of closing. Subsequent to closing, PCUC will be responsible for the refund of these deposits in accordance with its rules and regulations.

32. Upon Prestonsburg's acquisition of the Assets, PCUC will charge Southern District's customers the same rates that Southern District is currently charging, and PCUC will not increase these rates for at least three years from the date of the transfer.

Based upon these findings, the Commission makes the following conclusions of law:

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[27] Response to Second Request, Item 1.b.

[28] Total Utility Plant $542,732 - Accumulated Depreciation $118,137 = $424,595.

[29] Joint Application at 8

[30] *Id.* at 6; Response to Staff's First Request, Item 1.

1. Southern District is a utility subject to the jurisdiction of the Commission.[31]

2. As a city, Prestonsburg, by and through PCUC, is not a utility and is not subject to the jurisdiction of the Commission.[32]

3. Prestonsburg is a "corporation" and a "person" for purposes of KRS 278.[33]

4. KRS 278.020(6) provides that "[n]o person shall acquire or transfer ownership of, or control, or the right to control, any utility under the jurisdiction of the commission . . . without prior approval by the commission." As Prestonsburg is a person and is acquiring ownership of Southern District's sewage collection facilities and a portion of its water distribution facilities, this statute is applicable to and requires Commission approval of the proposed transfer.

5. KRS 278.020(7) provides that "[n]o individual, group, syndicate, general or limited partnership, association, corporation, joint stock company, trust, or other entity (an 'acquirer'), whether or not organized under the laws of this state, shall acquire control, either directly or indirectly, of any utility furnishing utility service in this state, without having first obtained the approval of the commission." As Prestonsburg is a corporation and is acquiring control, by and through PCUC of Southern District's sewage collection facilities and a portion of its water distribution facilities, this statute is applicable to and requires prior Commission approval of the transfer of these facilities.

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[31] KRS 278.010(3)(f).

[32] *Simpson Co. Water Dist. v. City of Franklin*, 872 S.W.2d 460 (Ky. 1994).

[33] *See* KRS 278.010(1) (providing that a corporation "includes private, quasipublic, and public corporations, and all boards, agencies, and instrumentalities thereof, associations, joint-stock companies, WLI and business trusts"). Cities are municipal corporations. *See* e.g., Wilson v. Central City, 2012 4501 36 at *2 (Ky. Apr. 26, 2012) ("a city is both a 'municipality' and a 'municipal corporation'").

6. Prestonsburg, by and through PCUC, has the legal authority to provide wastewater and water service in the territory served by the Southern District Wastewater System and the portions of the Southern District Water System proposed to be transferred.[34]

7. Due to Prestonsburg's and PCUC's financial assets and their status as a municipal corporation and a department of a municipal corporation, respectively, Prestonsburg and PCUC have sufficient financial integrity to ensure the continuity of utility service.

8. Prestonsburg, by and through PCUC, has the financial, technical, and managerial abilities to provide reasonable service to the customers that Southern District currently serves with the facilities proposed to be transferred.

9. Prestonsburg's proposed acquisition of the Southern District Wastewater System and portions of the Southern District Water System is consistent with the Commonwealth's policy to encourage the regionalization and consolidation of wastewater and water systems.[35]

10. The proposed transfer is in accordance with law, for a proper purpose, and is consistent with the public interest.

11. Upon completion of the proposed transfer, the Southern District Wastewater System and the portions of the Southern District Water System acquired by Prestonsburg will no longer be subject to the Commission's jurisdiction.

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[34] KRS 106.010,020.

[35] KRS 224A.300(1); KRS 74.361(1).

12. Upon completion of the proposed transfer, the portions of the Southern District Water System retained by Southern District will remain subject to the Commission's jurisdiction.

IT IS THEREFORE ORDERED that:

1. The proposed transfer of ownership and control of the Southern District Wastewater System and portions of the Southern District Water System to Prestonsburg is approved.

2. Within ten days of the transfer of the Assets, Southern District and Prestonsburg shall notify the Commission in writing of the transfer's occurrence.

3. Any material revision to the proposed transaction must be approved by the Commission in order for the amendment to be effective.

4. No later than June 30, 2017, Southern District shall submit its Gross Report and Annual Report for its sewer system for the period January 1, 2017, through the date of the transfer. Southern District shall submit its Gross Report and Annual Report for its water system for the year ending December 31, 2017, in accordance with the Commission's regulations.

5. Any documents filed pursuant to ordering paragraphs 2 and 4 shall reference this case number and shall be retained in Southern District's general correspondence file.

6. The Executive Director is delegated authority to grant reasonable extensions of time for the filing of any documents required by this Order upon a showing of good cause for such extension.

7. A copy of this Order shall be served on the Kentucky Division of Water.

8. This case shall be closed and removed from the Commission's docket.

By the Commission

ENTERED

MAY 02 2017

KENTUCKY PUBLIC SERVICE COMMISSION

ATTEST:

Talina R. Mathews

Executive Director

*Honorable Damon R Talley
Attorney at Law
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EXHIBIT C

OPERATING AND MAINTENANCE AGREEMENT

This is an Operating and Maintenance Agreement (the "O&M Agreement"), having an effective date of July 1, 2017, made and entered into by and between the **SOUTHERN WATER AND SEWER DISTRICT**, P. O. Box 610, McDowell, Kentucky 41647, hereinafter referred to as "Southern District"; and the **PRESTONSBURG CITY'S UTILITIES COMMISSION**, 2560 South Lake Drive, Prestonsburg, Kentucky 41653, hereinafter referred to as "PCUC";

WITNESSETH

WHEREAS, the Southern Water and Sewer District (the "Southern District") is a water district organized under the provisions of KRS Chapter 74;

WHEREAS, Southern District currently owns and operates both water supply, treatment, and distribution facilities (the "Southern Water System") and wastewater collection and treatment facilities (the "Southern Wastewater System");

WHEREAS, the Prestonsburg City's Utilities Commission (the "PCUC") is a duly organized and existing independent, component unit and agency of the City of Prestonsburg;

WHEREAS, PCUC currently owns and operates both water supply, treatment, and distribution facilities (the "PCUC Water System") and wastewater collection and treatment facilities (the "PCUC Wastewater System");

WHEREAS, the Parties executed an Asset Purchase Agreement (the "Agreement"), effective January 1, 2017, whereby Southern District agreed to transfer and convey its entire Wastewater System and certain water system assets described in paragraph 3 of the Agreement (the "Designated Water Assets") to PCUC and PCUC agreed to acquire Southern District's entire Wastewater System and the Designated Water Assets, subject to the terms, conditions, and provisions set forth in the Agreement;

WHEREAS, by Order dated May 2, 2017, the Kentucky Public Service Commission (the "PSC") authorized Southern District to transfer its entire Wastewater System and the Designated Water Assets to PCUC, subject to the terms, conditions, and provisions set forth in the Agreement;

WHEREAS, the Closing cannot take place until the Parties obtain approval of the proposed loan assumptions and transfer of Assets from Southern District's creditors and PCUC has obtained the necessary funds from the Kentucky Rural Water Finance Corporation;

WHEREAS, the Parties were planning for the Closing to take place on or before July 1, 2017;

WHEREAS, because of unforeseen circumstances, these approvals have been delayed and will not be obtained until after July 1, 2017;

WHEREAS, it is uncertain when approval by Southern District's creditors will be obtained;

WHEREAS, Southern District and PCUC have made plans and taken certain steps for PCUC to commence, starting on July 1, 2017, managing, operating, repairing, and maintaining the Southern Wastewater System and the Designated Water Assets;

WHEREAS, KRS 74.414 authorizes the Board of Commissioners of a water district to contract with a city whereby the city will operate all or a portion of that district's water distribution system and wastewater system; and

WHEREAS, the Parties desire for PCUC to commence, starting on July 1, 2017, managing, operating, repairing, and maintaining the Southern Wastewater System and the Designated Water Assets.

NOW, THEREFORE, FOR AND IN CONSIDERATION of the mutual promises, covenants, and conditions contained herein and in the Agreement, it is agreed by and between the Parties as follows:

1. **Defined Terms.** The terms used in this O&M Agreement and not defined herein shall have the meanings assigned to them in the Agreement.

2. **Affirmation of Preamble.** The facts, recitals, and statements

contained in the foregoing preamble of this O&M Agreement are true and correct and are hereby affirmed and incorporated as a part of this O&M Agreement.

3. **General Benefits.** In accordance with KRS 74.414, Southern District's Board of Commissioners has determined, and does hereby declare, that it is necessary, desirable, in the public interest, in the best interests of its customers, and for the general benefit of the water district itself to contract with PCUC to manage, operate, repair, and maintain the Southern Wastewater System and the Designated Water Assets (collectively, the "Assets") until the Closing.

4. **Ownership of Assets.** During the term of this O&M Agreement, Southern District shall retain legal ownership of the Assets, but PCUC shall be the beneficial owner.

5. **Closing.** Conveyance of legal title to the Assets and final closing of the transaction contemplated by the Agreement (the "Closing") cannot take place until: (a) Southern District's creditors approve the proposed transfer of Assets; and (b) certain other Closing requirements have been satisfied. The Closing shall take place at a mutually convenient date, time, and place once the Closing requirements have been satisfied.

6. **Term.** This O&M Agreement is a month-to-month agreement, commencing on July 1, 2017 and ending on July 31, 2017. Thereafter, it shall be automatically renewed on a month-to-month basis until the Closing takes place.

7. **Operation and Maintenance of Assets.** During the term of this O&M Agreement, PCUC shall manage, operate, repair, and maintain the Assets, which consist of the assets described in paragraphs 2 and 3 of the Agreement. From and after the effective date of this O&M Agreement, PCUC shall be responsible for all expenses incurred in the operation, repair, and maintenance of the Assets.

8. **Revenues.** As consideration for PCUC undertaking the management, operation, repair, and maintenance of the Assets, PCUC shall receive all the water and sewer revenues for water and sewer services rendered on and after July 1, 2017.

9. **Billing and Collection.** During the term of this O&M Agreement, Southern District shall provide billing and collection services for PCUC for the wastewater customers served by the Eastern and Wayland Wastewater Treatment Plants. Southern District shall receive a billing and collection fee in an amount equal to 3% of the wastewater revenues which it actually collects. Southern District shall remit the net wastewater revenue to PCUC on a monthly basis on or before the last business day of each month.

10. **Utilities.** The Parties shall notify and instruct all applicable utility companies to transfer the electric and telephone service to the Assets from Southern District to PCUC, effective July 1, 2017. PCUC shall be responsible for

the costs of all utility services incurred on and after July 1, 2017.

11. **Debt Service.** Southern District shall be responsible for making its interest payments on all its Rural Development (the "RD") loans on or before July 1, 2017. Thereafter, PCUC shall be responsible for assuming payment of RD Loan No. 91-05 in the approximate amount of $489,125. As provided in paragraph 4 of the Agreement, PCUC shall be responsible for: (a) making all the required semi-annual debt service payments to the Kentucky Infrastructure Authority (the "KIA") for KIA Loan No. A04-06 in the approximate principal amount of $28,860, which was incurred for the Wayland WWTP; and (b) making all the required semi-annual debt service payments to KIA for KIA Loan No. A11-16 in the approximate principal amount of $642,654, which was incurred for the Harold WWTP.

12. **Capital Improvements.** The Parties contemplate that PCUC will immediately undertake, at its own expense, major repairs, replacements, and other capital improvements (the "Capital Improvements") to the Assets. Southern District hereby consents to, and authorizes PCUC to make, these Capital Improvements. PCUC acknowledges that it will be making these Capital Improvements at its own risk and expense and will not seek reimbursement from Southern District for the cost of these Capital Improvements.

13. **Cooperation.** To facilitate a smooth transition of the water and wastewater customers that are being transferred to Southern District, the Parties

agree to cooperate and coordinate customer communications.

14. **Customer Deposits.** Southern District shall **not** transfer any customer deposits to PCUC during the term of this O&M Agreement. The Customer Deposits shall be transferred at the Closing pursuant to the terms of paragraph 5 of the Agreement.

15. **Insurance.** During the term of this O&M Agreement, PCUC shall, at its expense, keep the Assets insured with an insurance company or companies against fire and such other hazards as are included within extended coverage. PCUC shall, at its expense, maintain comprehensive public liability insurance in an amount not less than $1,000,000 combined single limits for each occurrence for claims for bodily injury or death and property damage along with excess liability coverage (umbrella policy) of not less than $2,000,000. All such insurance policies shall name Southern District as an additional insured or certificate holder.

16. **Indemnification.** PCUC hereby agrees to indemnify Southern District for, and hold Southern District harmless from, any and all losses, liabilities, costs, and expenses (including, but not limited to, reasonable attorneys' fees) incurred by Southern District as a result of any negligence or willful misconduct by PCUC, its employees, contractors, and agents, arising from PCUC's management, operation, repair, replacement, and maintenance of the Assets pursuant to the provisions of this O&M Agreement. To that end, immediately

upon notification by Southern District, PCUC shall assume, at its own cost, the defense of any such action or suit which may be brought against Southern District because of PCUC's operation and maintenance of the Assets.

17. **Existing Operating Agreement Terminated.** PCUC has been managing, operating, repairing, and maintaining the Southern Wastewater System pursuant to an Operating Agreement dated July 1, 2016 (the "Existing Operating Agreement"). The Existing Operating Agreement is hereby terminated.

18. **No Assignment.** PCUC shall not assign this O&M Agreement.

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IN TESTIMONY WHEREOF, this O&M Agreement has been executed in multiple counterparts, each of which is deemed to be an original, by the duly authorized officers and officials of the Parties, as of its effective date.

SOUTHERN WATER AND SEWER DISTRICT

BY: Paula Johnson
Paula Johnson, Chairperson

DATE: 7-3-17

ATTEST: Barry Hall
Barry Hall, Secretary

PRESTONSBURG CITY'S UTILITIES COMMISSION

BY: Jimmy Calhoun
Jimmy A. Calhoun, Chairman

DATE: 6-29-17

ATTEST: Edford L. Clark Jr.
Edford L. Clark, Secretary

17/PCUC/O&MAgreement-v2/7-1-17

OPERATING AGREEMENT

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EXHIBIT D

DEANDORTON

Prestonsburg City's Utilities Commission (Prestonsburg, Kentucky)

Valuation of a 100% Controlling Interest in Certain Water Assets of the Southern Water and Sewer District Acquired by Prestonsburg City's Utility Commission as of December 31, 2016

Report Dated June 15, 2020

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DEANDORTON

INTRODUCTION

Description of the Engagement

Dean Dorton Allen Ford, PLLC ("Dean Dorton") has been retained by Mr. Brian Music, Superintendent of Prestonsburg City's Utility Commission, to render the business valuation services described below. The following information summarizes our engagement:

Business Name	Prestonsburg City's Utilities Commission ("PCUC")
Type of Entity	S-Corporation
Principal Business Location	Prestonsburg, Kentucky
Asset Interest Valued	100% Controlling Interest in certain water assets of the Southern Water and Sewer District ("Southern Water") acquired by PCUC (collectively, the "Subject Assets" or the "Interest")
Standard of Value	Fair Market Value
Level of Value	Controlling Value
Premise of Value	Going Concern
Valuation Date	December 31, 2016
Conclusion of Value	$1,510,960
Purpose and Intended Use	Acquisition of Subject Assets
Intended Users	Southern Water and their professional advisors; PCUC and their professional advisors
Valuation Standards Followed	AICPA's Statement on Standards for Valuation Services No. 1 (SSVS)
Type of Report	Detailed Report (as defined by SSVS)

Standard of Value

We have used fair market value as the appropriate standard of value for this engagement. Fair market value is defined in *The International Glossary of Business Valuation Terms* issued by the American Institute of Certified Public Accountants (AICPA), the American Society of Appraisers, the Canadian Institute of Chartered Business Valuators, the National Association of Certified Valuation Analysts, and the Institute of Business Appraisers as:

> "The price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm's length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of relevant facts."

We have appraised the Subject Assets under the premise of value in continued use, as a going-concern business entity.

Among other factors, this appraisal takes into consideration all elements of appraisal listed in Internal Revenue Service Ruling 59-60, which generally outlines the valuation of closely-held stocks and includes the following:

1. The nature of the business and the history of the company.
2. The economic outlook in general and the outlook of the company's industry in particular.
3. The book value and the financial condition of the company.
4. The earning capacity of the company.
5. The dividend-paying capacity of the company.
6. Whether or not the company has goodwill or other intangible value.
7. Sales of stock and the size of the block to be valued.
8. The market prices of stocks of corporations engaged in the same or similar lines of business as the company and whose stocks are actively traded in a free and open market, either on an exchange or over-the-counter.

Hypothetical Willing Buyer vs. Hypothetical Willing Seller

Consistent with the definition of fair market value, our analysis focuses on a hypothetical transaction between a willing buyer and a willing seller. Our discussion may appear to focus on the buyer's view of the transaction, but we consider both hypothetical parties to be concerned with the same primary issue – what are my investment alternatives? Neither party has "inside" information on the prospects of the investment. Both have similar expectations regarding the future benefits to be received by holding this investment (or any of a number of alternative investments). Also, neither party has rights exceeding the rights of the other party. Just as the public stock market demonstrates daily that certain stockholders believe a good investment decision is to sell at the current market price, others believe a good investment decision is to buy at the same price. However, both evaluate the security using the same information, including information regarding alternative investments. Because our analysis focuses on returns anticipated from the subject investment, it applies equally to a hypothetical willing buyer and to a hypothetical willing seller.

Sources of Information

We used the following information and documents in our appraisal:

- Audited financial statements of Southern Water for the periods ended December 31, 2014, 2015 and 2016
- Annual Report of Southern Water to the Public Service Commission for the calendar years ended December 31, 2014, 2015 and 2016
- Joint Application for Transfer of Assets
- Public Service Commission Staff Report Case No. 2019-00131
- Billing, Collection, and Transaction History Reports for the Subject Assets for the years ended December 31, 2014, 2015 and 2016 provided by Southern Water
- Electrical power usage history for 2 booster stations on US Route 23 provided by Southern Water

- 2014-2016 water purchase transaction history from PCUC
- 2014-2016 water purchase transaction history from Pikeville Utilities provided by Southern Water
- 2014-2016 detail of wages for water plant employees provided by Southern Water
- July 2015 detailed insurance billing for Southern Water provided by Southern Water

John Herring of our firm had discussions with Brian Music of PCUC, and Jeff Prater and Grondall Potter of Utilities Management Group, about the Subject Assets, and their related operations.

Other sources of information used in our valuation are cited within the text of our report.

In all cases, we have relied upon the referenced information without independent verification. This report is, therefore, dependent upon the information provided. A list of assumptions and limiting conditions applicable to this report is included at Appendix A. The qualifications of the valuation analyst are included at Appendix B.

DESCRIPTION OF SUBJECT ASSETS

Overview of the Transaction

Southern Water and Sewer District is a water district organized pursuant to KRS Chapter 74. Southern Water owns and operates facilities in Floyd County, Kentucky that treat and distribute water to approximately 6,724 customers and that collect and treat wastewater for approximately 306 wastewater customers (as of the valuation date). Southern District is a utility subject to the Commission's jurisdiction pursuant to KRS 278.010(3)(d) and (f) and KRS 278.040.

Prestonsburg City's Utilities Commission is a duly organized and existing independent, component unit and agency of the City of Prestonsburg. It is delegated the authority and responsibility to manage and operate the City of Prestonsburg's water and wastewater facilities. The City of Prestonsburg is a duly organized and existing municipal corporation and the city of the home rule class of the Commonwealth of Kentucky. As of the valuation date, the City of Prestonsburg currently owns, and PCUC manages and operates, water supply, treatment, and distribution facilities that provide water service to approximately 7,806 customers in Floyd County, and wastewater collection and treatment facilities that provide wastewater service to 2,817 customers in Floyd County.

Effective January 1, 2017, PCUC and Southern Water entered into an Asset Purchase Agreement (the "Agreement") related to certain water assets held by Southern Water. The portion of the Southern Water System located along Kentucky Route 850 described as "the Pyramid Area" (later referred to as "KY 850 Route") and the portion of the Southern Water System located US Route 23 described as "the Stanville/Betsy Layne/Harold Area" (later referred to as "US 23 route") were both considered remote portions of the Southern Water System (the "Subject Assets").

Under the terms of the Agreement, Southern Water transferred the water assets (as described in Paragraph 3 of the Agreement) associated with the Pyramid Area and the Stanville/Betsy Layne/Harold Area to PCUC. As consideration for the transfer of the Assets, the City of Prestonsburg and PCUC paid Southern Water consideration of $2,140,000.

ECONOMIC CONDITIONS AND INDUSTRY OVERVIEW

The value of a business interest is impacted, in part, by various economic and industry factors that influence the operations of the business. Therefore, we performed an economic and industry analysis as a part of our valuation analysis.

The Economy

In conjunction with our valuation, we reviewed the Business Valuation Resources' Economic Outlook Update (the "Update") for the 4th quarter of 2016. This document provides an overview of the general economic climate of the U.S. economy, a review of some selected economic factors that prevailed during the quarter, and an economic outlook for the future. The Update is included in its entirety at Appendix D, but we provide a brief summary herein. (Please see the disclaimer and permission statement at the bottom of page 36 of Appendix D.)

The gross domestic product (GDP), considered the broadest measure of the economy's health, expanded at a 1.9% annual rate in the 4th quarter of 2016. This was slower than the rate in the 3rd quarter, and slower than the GDP growth in the 4th quarter of 2015, 1.6% in 2016 and 2.6% in 2015. Consumer spending rose at a 2.6% rate and helped maintain GDP in the 4th quarter. Purchases of durable goods grew significantly by 11% in the 4th quarter. The trade deficit widened in the 4th quarter, lowering by 1.7 percentage points. The Index of Consumer Expectations found that 18% of consumers became more optimistic about prospects for the economy and the expected favorable impact of the new President's policies on the economy, twice as high as the 9% peak when Ronald Reagan took office.

The Consumer Confidence Index improved 6.6 points to 113.7, reaching its highest level since August 2001. The Consumer Confidence survey found that respondents' assessment of post-election conditions reflect the best reading since 2001, primarily due to their more positive view of business conditions, short-term outlooks, and personal finances and jobs. The National Federation of Independent Business's Small Business Optimism Index rose 7.4 points, to 105.8, its highest levels since 2004. Seven of the 10 components that comprise the Small Business Optimism Index reflected a gain in the final quarter. The component that measures whether owners expect the economy to improve surged 38.0 points in December. The Institute for Supply Management's ("ISM") manufacturing index in December reported an expansion, raising 1.3 percentage points to 54.7%. This report depicts the third consecutive month of growth, suggesting an overall expansion of the economy.

Consumer spending, which accounts for approximately 70% of the U.S. GDP, grew by 2.5% during the 4th quarter of 2016, slower than the 3.0% pace in the previous 3rd quarter. Total government spending for the quarter increased 1.2% after growth of 0.8% in the prior quarter. Business investment, or nonresidential fixed investment, rose 2.4% during the 4th quarter of 2016, stemming from increased business spending on equipment and intellectual property products. Residential fixed investment (often considered a proxy for the housing market) grew at a rate of 10.2% in the 4th quarter. The 4th quarter increase in residential fixed investment added 0.37 percentage points to the 4th quarter GDP.
The consumer price index for gross domestic purchases, which measures prices paid by U.S. residents, rose 2.0% in the 4th quarter of 2016, an increase of 1.5% from the previous quarter. CPI is comprised of three main indexes: the food index, the energy index, and the all items less food and energy index (also known as "Core CPI"). Core CPI is a measure of inflation that excludes volatile food and energy costs. Core CPI has risen 2.2% over the past 12 months.

The Federal Reserve Bank discount rate (the interest rate a commercial bank is charged to borrow funds) rose in the 4th quarter of 2016 to 1.25%. The unemployment rate edged up 0.1 percentage points to 4.7% at the end of the December. While job growth increased during the past year, labor force participation during the 4th quarter remained unchanged at 62.7%. In 2016, job gains were nearly 2.2 million, about half a million less than in the previous year. The broadest measure of labor underutilization, the U6 unemployment rate, fell 0.1 point in December at a seasonally adjusted 9.2%. Personal saving—disposable personal income less personal outlays—was $791.2 billion in the fourth quarter, down significantly from $818.1 billion in the 3rd quarter. The personal saving rate—saving as a percentage of disposable personal income—was 5.6% in the 4th quarter, down from 5.8% in the prior quarter.

The major stock indexes recorded gains in the 4th quarter, continuing the momentum from the previous quarter. The Dow Jones Industrial Average (Dow) saw a 7.9% price return in the 4th quarter. In 2016, the Dow had a total return of 16.5%, its highest annual gains in three years. The Nasdaq Composite Index, consisting mainly of high-tech stocks, rose 2.5% in the 4th quarter and is up 7.5% year-to-date. The S&P 500 Index increased 3.3% in the 4th quarter. Including dividends, the S&P 500's total return was 3.8% in the 4th quarter and 12% in 2016.

Housing starts increased by 11.3% in December from the previous month and 5.7% over the past 12 months. Housing starts rose at a seasonally adjusted annual rate of 1,226,000 in December. Building permits, a better leading indicator of demand for new homes, decreased by 0.2% in December from the previous month but 0.7% above the rate from one year ago. The National Association of Realtors (NAR) expects housing starts to increase to 1,177,000 (+5.8%) in 2016, then to 1,311,000 (+11.4%) in 2017.

Looking forward, Consensus Economics Inc., publisher of Consensus Forecasts—USA, reports that the consensus of U.S. forecasters is that real GDP will increase at a seasonally adjusted annual rate of 2.1% in the 1st quarter of 2017 and 2.2% in the 2nd quarter of 2017. They forecast consumer spending will increase at a rate of 2.3% in the 1st quarter of 2017 and 2.3% in the 2nd quarter of 2017. These forecasters believe unemployment will average 4.7% in the 1st quarter of 2017 and remaining at 4.7% in the 2nd quarter of 2017. They also believe consumer prices will rise at a rate of 2.1% in the 1st quarter of 2016 and 2.4% in the 2nd quarter of 2017. The forecasters believe the three-month Treasury bill rate will be 0.6% at the end of the 1st quarter of 2017 and 0.8% at the end of the 2nd quarter of 2017.

The Industry

The Subject Assets are used in business activities and services typically performed by participants in the water and sewer utility services industry. Appendix D includes a copy of First Research's Industry Profile for Water & Sewer Utilities. The following section (which represents primarily excerpts from the First Research report) provides an overview of the industry and the present outlook.

Industry Overview – Water & Sewer Utilities

Companies in the Water & Sewer Utilities industry operate water treatment and water supply systems; sewer systems and sewage treatment facilities; and steam and air-conditioning supply systems. Major companies include American Water Works, Aqua America, and California Water Service. The size of the global water utility market is estimated to be $185 billion, according to S-Network Global Water Indexes. Private-sector operators make up about 20% of that market. Though public utilities dominate, competition among private water management companies takes place in major markets in Europe, Asia, Australia, and North America.

The US commercial water and sewer utilities industry includes about 4,900 establishments (single-location companies and units of multi-location companies) with combined annual revenue of about $14 billion. The commercial industry is small compared to the water and sewer services operated by many regional and local governments in the United States. Government-owned water and sewer utility services have annual revenue of about $110 billion.

Demand depends on commercial and residential water needs, which are related to population growth and to the level of economic activity. The profitability of individual companies depends on efficiency of operations, because prices are fixed by public utility commissions (PUCs). Large companies have economies of scale in operations and the ability to raise capital for infrastructure improvements. Small companies can compete successfully through superior engineering or by serving desirable local markets. The US industry is concentrated: the 50 largest companies account for about 75% of industry revenue. High barriers to entry, such as capital investments, make the industry somewhat resistant to competition; many companies operate as de facto monopolies.

Water services account for about 70% of industry revenue, sewer services for about 15%. Steam supply, irrigation, and other services account for the rest. The operations of small or large water and sewer systems and commercial or municipal utilities are similar. Water and sewer operations are local monopolies, mainly because of the large infrastructure of reservoirs, pipes, and treatment facilities needed. Competition exists only in determining who operates a system. Commercial companies may own a local system, or operate a system on behalf of a local government ("contract operations"), or may own parts of a system, such as water wells or a reservoir.

A water system consists of a water source, a system of storage reservoirs and pumping stations, a water treatment facility, and a pipe distribution system. The water source may be surface (lakes or rivers) or ground water (springs and wells). While water from lakes or rivers is sometimes free, companies must often pay wholesale fees for water owned by private owners or local or regional public water authorities.

To ensure that water is available during periods of peak use, utilities may operate various types of reservoirs, including tanks, artificial lakes, and covered ground reservoirs. Water treatment consists of various steps to remove contaminants. A coagulant like alum may be added to the water to attract and clump suspended particles, which settle to the bottom or top of sedimentation or flotation basins. Water is then filtered through sand and gravel beds, and disinfected with chlorine to kill bacteria and viruses. Fluoride is usually added to help prevent tooth decay, and lime is added to adjust the water's acuity and prevent corrosion of distribution pipes. Treated water run through meters before flowing through distribution pipes to final customers. Water is periodically tested for quality at various stages in the system.

The operation of both water and sewer systems is highly automated and requires mainly monitoring. The average local water or sewer utility has fewer than a dozen employees. Maintenance and capital costs are often higher than operating costs, because of the large network of pipes, valves, pumps, reservoirs, and treatment facilities that make up a complete system. Pipe maintenance or replacement is especially expensive, as pipes are usually under roadways.

Computer systems have become important to some water or sewer systems to monitor flow and quality at many points of the large networks of pipes and valves. Many older systems operate with only rudimentary monitoring. Some companies invest in updating antiquated technology to improve efficiency and customer service. New plant technologies use biological processes (instead of costly chemicals) to remove contaminants. Wireless meter reading systems allow consumers to monitor daily use and compare usage to that of other area households and businesses. Utilities use smart meters to detect leaks and cut manual meter reading costs. As of mid-2015, smart meters accounted for less than 20% of installed water meters in the US but about half of North American meter shipments, according to *The Wall Street Journal*.

Customers are individuals, businesses, and municipalities. Large commercial customers pay lower rates than residential customers, but residential customers provide stable and predictable income. Residential customers make up the majority of customers for commercial utilities. Rates are set by state public utility commissions (PUCs). The rate setting mechanism of most PUCs is complicated and slow, sometimes stretching out for years. Consequently, the managers of utilities are constantly involved in rate-setting procedures.

The cash flow of water or sewer companies can be highly seasonal, as water demand may be higher in the summer but water availability lower. The US industry has a working capital turnover ratio of about 29%. Accounts receivable average about 80 days' sales. Companies typically keep an allowance for uncollectible customer accounts. Many companies make large annual capital investments to maintain or expand their systems. Transmission and distribution infrastructure accounts for the majority of capital expenditures, other investments include treatment, storage, and water source rights.

Water and sewer utilities are regulated by federal, state, and local authorities. Rates charged by water and sewer companies typically are set by state public utility commissions (PUCs). Rates are generally set to allow a utility to earn a reasonable return on investment. State PUCs also set conditions and standards for services and often must approve long-term financing programs, capital expenditures, and reorganizations. The EPA monitors state compliance with the Safe Drinking Water Act (SDWA), which sets regulations concerning contaminants in drinking water. All water system operators are required to post "consumer confidence reports" about the contaminants in their water. Under the Clean Water Act (CWA), the EPA also regulates the types of contaminants that may be discharged into public waters from sewage systems. Utilities are also subject to regulations regarding storage and disposal of hazardous substances, such as water treatment chemicals, and occupational safety laws.

Industry Trends and Outlook

The EPA estimates that about $380 billion is needed over the next 20 years to replace and update water treatment plants, storage tanks, and thousands of miles of pipe, as well as other drinking water supply infrastructure. Wastewater systems require another $390 billion. The American Water Works Association estimates the bill to be around $1 trillion by 2035. Most of the water infrastructure in the US is designed to last 60 to 80 years, and much of it is nearing or has passed that lifespan, according to the American Society of Civil Engineers. Spending requirements to meet federal standards in the commercial end of the industry are smaller but just as urgent.

The revenue of water utilities depends on the volume of water consumed, which in turn depends on weather conditions. Residential water use increases in hot, dry weather and decreases during cool, rainy periods. During dry periods, municipalities may also restrict water use to conserve depleted supplies; consequently, profitability can vary highly throughout the year. Consumption is also impacted by shifting water use habits; indoor water use in the US has declined 22% since 1999 due to more efficient appliances and other conservation efforts, according to Circle of Blue.

Larger utilities have easier access to capital, can apply "best practices" to all their local systems, and have greater resources to apply to the regulatory process for rate increases. Small systems are therefore often willing to be bought by large operators.

The public is demanding more water testing and treatment, due to greater awareness about drinking water contamination by industrial and natural pollution. The list of possible contaminants has become very long, and includes chromium, arsenic, PCBs, and MTBE (a gasoline additive). Federal and state water quality and testing requirements have become more stringent.

Because water and sewer pipes are usually located under city streets, repair and replacement are very expensive and disrupt traffic. Several methods that don't require excavation have become more widely used: trenchless pipe repair in which plastic sleeve liners can be installed in corroded pipes simply by pulling them through existing pipes, and the use of epoxy and resins to coat the interior of pipes, even for potable water pipelines.

Impact of Economic and Industry Conditions

The short-term outlook for the U.S. economy is to continue its recent low growth, and the long-term outlook is generally favorable, as well. The Subject Assets may be exposed to increased pressure for water testing but repair expenses could be reduced through new repair & replacement techniques. All factors being considered, we believe the economic and industry outlook for the Subject Assets is generally positive.

FINANCIAL ANALYSIS OF THE SUBJECT ASSETS' OPERATIONS

Billings and Collections

To determine the revenues associated with the Subject Assets, we reviewed the billing, collection, and transaction history for the Subject Assets for the years ended December 31, 2014, 2015 and 2016. We noted that total billings were approximately $618,000 in 2014, $628,000 in 2015, and $605,000 in 2016. Total collections were approximately $590,000 in 2014, decreased to $578,000 in 2015, and further declined to $490,000 in 2016.

Total Operating Expenses and Adjustments

Southern Water was not able to provide information on operating expenses by route. Southern Water did provide audited financial statements as of and for the years ended December 31, 2014, 2015 and 2016 and Annual Reports of Southern Water and Sewer District to the Public Service Commission ("SWAR") for the calendar years ended December 31, 2014, 2015 and 2016, which included analyses detailing total expenditures for the Water Division of Southern Water. In the SWAR, the Water Utility Expense Accounts are reported in detail as shown in Appendix E.

Operating expenses for Southern Water totaled $2.96 million in 2014, $2.86 million in 2015, and $3.23 million in 2016. Salaries and wages were the largest expense for Southern Water. Other significant expenses included employee pension and benefits, purchased water, purchased power, materials and supplies, transportation expenses, and general liability insurance. We also noted significant bad debt expense in 2015 and 2016.

In order to estimate the expenses associated with the Subject Assets, we started with the totals by year of the water utility expenses as reported in the SWAR and presented in the "Original" columns by year in Appendix E. Based on the information that was available to us, we determined that the best way for us to compute the expenses associated with the Subject Assets was to allocate total expenses based on the number of customers associated with the Subject Assets divided by the total customers serviced by Southern Water. However, in discussing the individual expense lines with the management of PCUC and Southern Water, we determined that there were certain expense lines that needed to be adjusted or removed prior to making this general allocation.

First, we determined that we would be able to obtain direct expense information for the Subject Assets for both purchased water and purchased power. Accordingly, these items were removed from the annual lists of expenses to be allocated in Appendix E. Chemicals expense was also removed from the annual lists of expenses to be allocated as this expense was only associated with customers on the KY 850 route. Bad debt expense was also removed as the revenues in our analysis of operating results are based on collections (cash received) as opposed to billings.

Next, we adjusted certain expense line items based on information obtained from the Public Service Commission Staff Report Case No. 2019-00131 ("PSCSR"). The PSCSR, prepared in August 2019, documented various concerns with the expense structure of Southern Water, including expenses which were noted to be unreasonable. We have incorporated the following adjustments from the PSCSR:

- Employee Pension and Benefits reduced by 42%
- Legal Services adjusted to $0
- Miscellaneous Expense reduced by 95%

Next, per our discussion with management, we adjusted expenses to remove expenses directly associated with Southern Water's water plant. Southern Water did not provide its own water directly to customers on the US 23 route – all water was purchased from either PCUC or the City of Pikeville. Accordingly, water plant expenses are associated only with customers on the KY 850 route. These adjustments included the following:

- Salaries and Wages were reduced by payroll costs associated with water plant employees based on annual payroll records
- Contractual Services – Water Testing reduced by $12,000
- Transportation Expenses reduced by 5%
- Insurance General Liability reduced by $16,554 based on July 2015 insurance bills
- Insurance Worker's Compensation reduced by 4.79% of the water plant salaries as determined above

Based on the adjustments noted above, we determined that total water plant expenses to be allocated to KY 850 customers were $220,759 in 2014, $238,385 in 2015 and $214,725 in 2016. The allocation of water plant expenses is addressed later in this report.

Allocation of Expenses to All Customers

After making the adjustments noted above to first remove certain expenses, and then to adjust for expenses noted per the PSCSR and for water plant expenses, total remaining expenses to be allocated to the customers of the Subject Assets were $$1,569,133 in 2014, $1,420,823 in 2015, and $1,695,032 in 2016. See Appendix E for details of all expenses and adjustments for each of the years from 2014 through 2016.

Based on the information that was available, we determined that the best method to allocate expenses from Southern Water totals to the US 23 and KY 850 routes was to determine the number of customers on those routes and allocate based on that number divided by the total customers for Southern Water based on the SWARs for 2014 through 2016. We note that the routes associated with the Subject Assets have 1,124 customers, based on water meters in service in July 2017 based on PCUC records. We noted that customers for Southern Water totaled 6,798 for 2014, 6,724 for 2015, and 6,661 for 2016. Using this data, we allocated the total remaining expenses as noted above to each of those years. See Appendix F for further details of this allocation.

Allocation of Expenses to KY 850 Customers

Next we address the allocation of chemical expenses and water plant expenses. As noted previously, Southern Water did not provide its own water directly to customers on the US 23 route – all water was purchased from either PCUC or the City of Pikeville. Accordingly, chemical expenses and water plant expenses are associated only with customers on the KY 850 route. The allocation of chemical and water plant expenses is based on the Subject Asset KY 850 Customers obtained from billing records provided by PCUC for waters meters in service in 2017 divided by the total customers obtained from the PSC annual filing less the Subject Asset US 23 customers provided by PCUC for waters meters in service in 2017. We note that the KY 850 route had 130 customers and the US 23 route had 994 customers. Southern Water customer totals by year were as noted previously in the Allocation of Expenses to All Customers section. The resulting calculations for allocated chemical and allocated water plant expenses are presented in Appendix F.

Purchased Water and Purchased Power

Based on our discussions with management of PCUC and Southern Water, we determined that Southern Water purchased its water for the US 23 route from PCUC and City of Pikeville during the period from 2014 through 2016. We obtained billing records from PCUC and invoice records from City of Pikeville for purchased water and included these amounts directly in our schedule of operating results for the Subject Assets for 2014 through 2016. In reviewing these records, we noted that 2014 invoice amounts reflect a significantly higher volume of water purchased, with no corresponding increase in sales and that management of Southern Water was not able to explain this difference.

Based on our discussions with management of PCUC and Southern Water, we noted that purchased power for these routes related solely to two booster stations along the routes. Southern Water was able to provide electrical bills for each booster station. Based on our review of these billing records, we determined that purchased power approximated $3,000 per year for the period from 2014 through 2016.

Schedule of Operating Results for the Subject Assets

Using the billing and collection information, along with the allocated and direct expenses as noted above, we estimated the operating results of the Subject Assets for 2014, 2015, and 2016. This schedule is presented at Appendix G. Based on this analysis, The Subject Assets' adjusted earnings before interest and taxes ("EBIT") for calendar years 2014, 2015, and 2016 were $105,287, $193,375, and $44,552, respectively.

DETERMINATION OF FAIR MARKET VALUE

Valuation Approaches and Methods

The Business Valuation Committee of the American Society of Appraisers (ASA) has adopted several business valuation standards. Within these standards, the ASA has set forth three general approaches to the valuation of a business. The American Institute of Certified Public Accountants' Statement on Standards for Valuation Services recognizes these same commonly-accepted valuation approaches. They are:

• Asset-Based Approach

• Income Approach

• Market Approach

In our appraisal of the Interest, we have considered the applicability of each of these three approaches.

The *asset-based approach* can be considered analogous to the cost approach of other appraisal disciplines. In an asset based approach, the appraiser looks to the underlying assets, liabilities, and equity of a company. This approach can be viewed from two angles. First, if the assets were reduced to cash and all liabilities were paid, how much cash would remain for the shareholders? This "liquidation of the business" view can assume either a forced or orderly liquidation of the company. The second view of the asset based approach is a consideration of what it would cost to "create" the business. For example, one would not expect a rational investor to purchase a business for more than it would cost to create the same business.

The *income approach* is used to determine value based on the conversion of anticipated benefits of ownership. Regarding this approach, it is useful to think of an investment such as a U.S. Treasury bond. A U.S. Treasury bond, which is supported by the full faith and credit of the United States Government, is clearly an anticipated stream of economic benefits to the investor. That is, an investor is willing to part with a sum of cash in return for a series of future cash inflows. A rational investor would not be willing to part with $10,000 today in return for only $10,000 five years from today. The investor would require a return on his/her investment. Similarly, a rational investor would require a return on his/her investment in the equity of a company. The anticipated future benefits from an equity investment in a corporation can be discounted to a present value that an investor would be willing to pay. This discounted amount provides us with an indication of the value of the business interest.

ASA Business Valuation Standard V says the *market approach* is ".... a general way of determining a value indication of a business, business ownership interest, or security using one or more methods that compare the subject to similar businesses, business ownership interests, and securities that have been sold...(emphasis added)." For a moment, assume that we can find two completely identical companies trading on the public stock market. The two companies are exactly the same in every regard (they pay the same dividends, have the same cash flow, etc.). If these two companies are completely identical, we would not expect the stock of one of the companies to trade for $20 per share and the stock of the other company to trade for $10 per share. In fact, theoretically, we would expect the trading price to be identical for the two businesses. In the real world, one never finds two completely identical businesses. Accordingly, an appraiser's goal is to find companies which are similar to the subject company and, through qualitative and quantitative analyses, adjust the market prices of the publicly traded companies up or down to derive a value indication of the subject business.

Within each of these three approaches are a number of valuation methods that can be applied. The following table lists the methods commonly used in modern business valuations.

VALUATION APPROACHES AND METHODS*		
Approaches	**Methods**	
Market	Value multiples using comparative company data or transactions	• Price/earnings • Price/dividends • Price/gross cash flow • Price/book value • Price/revenues • Price/net asset value • Rules of thumb • Multiple of discretionary earnings • Company specific methods
Income	Discounted future returns	• Discounted future net cash flow • Discounted future net earnings
	Capitalized returns	• Capitalization of earnings • Capitalization of net cash flow
Asset-Based	Underlying assets	• Net asset value • Liquidation value • Excess earnings

* Adapted from Practitioners Publishing Company, *Guide to Business Valuations*, by Jay E. Fishman, Shannon P. Pratt, J. Clifford Griffith, and James R. Hitchner, Twenty-Second Edition (February 2012).

In our appraisal of the Interest, we have considered each of these approaches and methods. The following is a discussion regarding why certain methods have been excluded from our analysis.

The *income approach* has two broad categories of methods - capitalized returns and discounted future returns. The capitalized returns category is a "mathematical simplification" (of the discounted future returns category) which can only be used when a stable level of future earnings or cash flows is being assumed. On the other hand, the discounted future returns category allows a fluctuating stream of cash flows or earnings. Since a stream of cash flows or earnings cannot be both stable and fluctuating at the same time, a valuation typically does not include methods from both categories. Because our analysis has not indicated an expectation of fluctuating future earnings, we have eliminated the discounted future returns methods from consideration. The remaining category of methods under the income approach is capitalized returns. Of the two methods listed in this category, we have selected net cash flows as the most appropriate benefit to be capitalized.

The critical step in applying a method within the *market approach* is the identification of appropriate comparative company or industry data or transactions. If such data or transactions can be located, we will analyze and apply one or more of the multiples (methods) noted in the table. Per ASA Business Valuation Standard V, "...rules of thumbs may provide insight on the value of a business, business ownership interest or security. However, value indications derived from the use of rules of thumb should not be given substantial weight unless supported by other valuation methods and it can be established that knowledgeable buyers and sellers place substantial reliance on them." Given the specific assets involved in our valuation, we were unable to find a rule of thumb that was applicable to this situation. Also, the multiple of discretionary earnings method has not been used since it is generally used in the valuation of very small companies.

There are two basic methods within the *asset-based approach*. These two methods are mutually exclusive. The net asset value method assumes a going concern business while the liquidation value method assumes a business that is "worth more dead than alive." Our premise of value assumes a going concern business. Accordingly, we have eliminated the liquidation value method from consideration. The excess earnings method is a hybrid method of valuation which combines elements of an asset-based approach with elements of an income approach. In general, this method has fallen into disfavor with the business valuation community unless it is the only method that can be applied in a particular situation. As this is not the case with the Subject Assets, we have eliminated it from consideration. Having eliminated the liquidation value method and the excess earnings method, the net asset value method is the only method under the asset approach that we considered. However, there was no available historical cost or current book value for the Subject Assets

VALUATION METHODS USED

Income Approach - Capitalized Net Cash Flow Method

The capitalized net cash flow method requires a forecasted level of annual net cash flows and an appropriate capitalization rate. The capitalization rate represents a rate of return investors would require considering the risks associated with the forecasted net cash flows, adjusted for the expected long-term growth rate of the net cash flows. The rate of return has two components: a risk-free rate - a pure measure of the time value of money - and a rate to compensate an investor for the risks associated with the estimated net cash flows.

Future Net Cash Flows

In forecasting future net cash flows, we began with the Schedule of Operating Results of the Subject Assets in Appendix G. Because we are valuing a controlling interest, we believe it is appropriate to focus on the cash flows that would be available to a controlling owner. Accordingly, it is necessary to normalize the cash flows associated with the Subject Assets by adjusting cash flows for any nonrecurring income or expense items or adding back to cash flows any discretionary expenses that are not required to be paid in the normal course of business.

In the section entitled "Financial Analysis", we noted that collections for 2016 had declined significantly, particularly as a percentage of billings. Based on our discussions with Southern Water management, we were not able to determine the cause of this change in the collections as a percentage of billing, but there was some concern that the records did not reflect the true collections for the period. Accordingly, we decided to normalize the collections for 2016 to reflect the average collections as a percentage of billings for 2014 and 2015. This adjustment resulted in collections for 2016 being increased from $489,556 to $567,424.

We also noted in the section entitled "Financial Analysis" that 2014 invoice amounts for purchased water reflected a significantly higher volume of water purchased, with no corresponding increase in sales and that management of Southern Water was not able to explain this difference. Accordingly, we also decided to normalize 2014 purchased water to reflect the percentage of purchased water to water billings for US 23 Customers for 2015 and 2016. This adjustment resulted in purchased water expense for 2014 decreasing from $215,769 to $142,766.

After making these two adjustments, normalized earnings before interest and taxes ("EBIT") for the Subject Assets was $178,290 for 2014, $193,375 for 2015, and $122,420 for 2016. Considering the ebbs and flows of the industry from year to year and the various factors that will/could impact future operations, we believe the best indication of future annual net cash flows is an average of recent historical net cash flows. Accordingly, we used the average EBIT results of the three-year period from 2014 through 2016 ($164,695).

Normally, to arrive at forecasted net cash flows, we must apply a tax provision, and then adjust from net income to net cash flows. However, because the Subject Assets are owned by governmental entities and are not subject to federal or state income taxes, no adjustment for taxes is needed to arrive at net income.

Based on our discussions with management of PCUC and Southern Water, we were not able to determine whether there would be any capital expenditures necessary in the near-term. Accordingly, we decided not to adjust cash flows for capital expenditures. Instead, we will adjust our capitalization rate to address the risks associated with potential cash flows for deferred maintenance for the Subject Assets. Therefore, future net annual cash flows available to equity investors is $164,695.

Capitalization Rate

As previously mentioned, the capitalization rate represents a rate of return investors would require considering the risks associated with the forecasted net cash flows, adjusted for the estimated long-term growth rate of the net cash flows. Thus, the capitalization rate results from two other rates: the required rate of return (also referred to as the "discount rate") and the long-term growth rate.

A primary method for developing the required rate of return for equity investments is the build-up method, which requires the summation of the components of the required rate of return on investment. The appropriate equity rate components for the Subject Assets include:

Current risk-free rate. This is measured as the yield to maturity on long-term U.S. Treasury bonds, which was approximately 2.79% as of December 31, 2016. However, many valuation analysts, including those at Dean Dorton, believe that the "spot" yield on December 31, 2016 is somewhat lower than the long-term average yield, which is a more appropriate measure of the estimated risk-free rate for the future. Based on historical rates over the long-term, we have estimated the risk-free rate at 3.5%.

\+ **Common stock equity premium** (average annual returns for large capitalization stocks minus average annual returns for long-term government bonds). Based on *Duff & Phelps Cost of Capital Calculator*, Duff & Phelps recommends using an equity risk premium of 5.5% with a normalized risk-free rate of 3.5% as of December 31, 2016.

+/- **Industry risk adjustment** (average annual returns for stocks in a particular SIC Code group minus average annual returns for large capitalization stocks). Based on *Duff & Phelps Cost of Capital Calculator*, the equity discount rate should be increased by -3.74% for SIC code 494X – Water Supply.

+ **Small capitalization equity risk premium** (average annual returns for small capitalization stocks minus average annual returns for large capitalization stocks). Based on *Duff & Phelps Cost of Capital Calculator*, the small capitalization equity risk premium averaged 5.59% from 1926 to 2016. This represents the smallest decile of publicly-traded companies included in Duff & Phelps' analysis.

+/- **Specific company risk premium.** This component is based upon factors specific to the Subject Assets. Significant factors which decrease the required rate of return include the long-term, tangible nature of the Subject Assets. Significant factors which increase the required rate of return are the small size of the operations associated with the Subject Assets (in comparison to the smallest decile of publicly-traded companies) and the potential need for repairs and maintenance to the Subject Assets. On balance, we believe the required rate of return should be increased by between 1% and 3% to reflect the "net additional" risks related to these specific factors. We have added 2.0%.

Using these factors, we believe the appropriate equity discount rate approximates 12.9%.

The equity discount rate represents the overall required rate of return, which can be converted to a capitalization rate by subtracting the estimated long-term growth rate of the cash flows. A capitalization rate is in essence a "mathematical shortcut" to calculate the present value of future cash flows when those cash flows are expected to grow or decline at a constant rate. Considering the Subject Assets' historical operating results, the various economic and industry factors previously discussed and the long-term general inflation rate, we estimate the long-term annual growth rate of the Subject Assets' net cash flows to be 2.0%. Therefore, the capitalization rate is 10.9% (12.9% WACC minus 2.0% growth rate).

Indicated Value

Based on estimated annual net cash flow of $164,695 and a capitalization rate of 10.9%, the capitalization of net cash flow method indicates a value for the Subject Assets of $1,510,960 - See Appendix H.

Market Approach

In order to apply any valuation methods under the market approach, an appraiser must locate appropriate guideline companies or transactions that are similar to this transaction. However, due to the very specific nature of the Subject Assets, we were unable to find a suitable comparison.

Because we did not find the publicly-traded guideline company information useful, and because we could not locate any useful private transaction data, we did not employ the market approach in our valuation of the Interest.

Asset Approach - Net Asset Value Method

Under the asset approach, we have considered the net asset value method (which assumes a going-concern business). In short, this method develops an estimate of value for the Subject Assets' equity by adjusting individual assets and liabilities recorded on the Subject Assets' balance sheet to their fair market values and adding the value of any assets (whether tangible or intangible) and the amount of any liabilities not recorded on the balance sheet.

However, as neither book value information nor historical cost information was available for the Subject Assets, we were unable to perform an asset approach analysis.

CONCLUSION OF VALUE

We have performed a *valuation engagement,* as that term is defined in the Statement on Standards for Valuation Services (SSVS) of the American Institute of Certified Public Accountants, of a 100% equity interest (a controlling interest) in the Subject Assets as of December 31, 2016. This valuation was performed solely to assist Prestonsburg City's Utilities Commission and Southern Water and Sewer District with the acquisition of the Subject Assets; the resulting estimate of value should not be used for any other purpose or by any other party for any purpose. The estimate of value that results from a valuation engagement is expressed as a conclusion of value.

There were no restrictions or limitations in the scope of our work or in the data available for analysis.

Based on our analysis, as described in this valuation report, and the facts and circumstances as of the valuation date, the estimate of fair market value of a 100% equity interest (a controlling interest) in the Subject Assets as of December 31, 2016 is $1,510,960. This conclusion is subject to the Statement of Assumptions and Limiting Conditions located at Appendix A and the Valuation Analyst's Representations located on page 18. We have no obligation to update this report or our conclusion of value for information that comes to our attention after the date of this report.

PRESTONSBURG CITY'S UTILITIES COMMISSION
(PRESTONSBURG, KENTUCKY)

VALUATION OF A
100% EQUITY INTEREST
IN THE SUBJECT ASSETS
as of
DECEMBER 31, 2016

SIGNATURE OF VALUATION ANALYST

JOHN W. HERRING
DEAN DORTON ALLEN FORD, PLLC

Representations of the Valuation Analyst

I represent that to the best of my knowledge and belief:

1. This valuation engagement was performed in accordance with the American Institute of Certified Public Accountants' Statement on Standards for Valuation Services No. 1.
2. The statements of fact contained in this detailed valuation report are true and correct.
3. The analyses, opinions, and conclusion of value included in the valuation report are subject to the specified assumptions and limiting conditions, and they are the personal, unbiased, and objective analyses, opinions, and conclusion of value of the valuation analyst.
4. The economic and industry data included in the valuation report have been obtained from various printed or electronic reference sources that the valuation analyst believes to be reliable, but the valuation analyst has not performed any corroborating procedures to substantiate that data.
5. The parties for which the information and use of the valuation report are restricted are identified; the valuation report is not intended to be and should not be used by anyone other than such parties.
6. The valuation analyst has no obligation to update the report or the opinion of value for information that comes to his or her attention after the date of the report.
7. Neither the valuation analyst nor any officers, shareholders, or employees of Dean Dorton Allen Ford, PLLC has any present or prospective/contemplated financial or other interest in the business or property that is the subject of this report, and the valuation analyst has no personal interest or bias with respect to the property or the parties involved.
8. The valuation analyst's compensation is fee-based and is not contingent on the outcome of the valuation.
9. No one provided significant professional assistance to the valuation analyst signing this report, except for the following: Missy DeArk, CPA/CFF, CVA/MAFF and Michael Dilly, CPA.

Valuation Analyst

(SEE APPENDIX B FOR QUALIFICATIONS)

APPENDICES

Appendix	Description
A	Assumptions and Limiting Conditions
B	Qualifications of Valuation Analyst
C	BVR Economic Outlook Update 4th Quarter 2016
D	Water and Sewer Utilities Industry Data
E	Water Utility Expense Accounts 2014 through 2016
F	Allocation of Certain Operating Expenses for 2014 through 2016
G	Summary of Operating Results for the Subject Assets from 2014 through 2016
H	Capitalized Net Cash Flow Method

ASSUMPTIONS AND LIMITING CONDITIONS (APPENDIX A)

1. The conclusion of value arrived at herein is valid only for the stated purpose as of the date of the valuation.
2. Financial statements and other related information provided by Southern Water or its representatives in the course of this engagement have been accepted without any verification as fully and correctly reflecting the enterprise's business conditions and operating results for the respective periods, except as specifically noted herein. Dean Dorton Allen Ford, PLLC has not audited, reviewed, or compiled the financial information provided to us and, accordingly, we express no audit opinion or any other form of assurance on this information.
3. Public information and industry and statistical information have been obtained from sources we believe to be reliable. However, we make no representation as to the accuracy or completeness of such information and have performed no procedures to corroborate the information.
4. Except as noted, we have relied on the representations of the management of PCUC and Southern Water concerning the value and useful condition of the Subject Assets. We have not attempted to confirm whether or not the Subject Assets are free and clear of liens and encumbrances or that Southern Water has good title to all assets.
5. If prospective financial information approved by management has been used in our work, we have not examined or compiled the prospective financial information and therefore, do not express an audit opinion or any other form of assurance on the prospective financial information or the related assumptions. Events and circumstances frequently do not occur as expected, and there will usually be differences between prospective financial information and actual results, and those differences may be material.
6. The conclusion of value arrived at herein assumes that the Subject Assets will continue to operate as a going concern and that the character of the Subject Assets will remain intact. It further assumes that the current level of management expertise and effectiveness would continue to be maintained, and that the character and integrity of the enterprise through any sale, reorganization, exchange, or diminution of the owners' participation would not be materially or significantly changed.
7. This report and the conclusion of value arrived at herein are for the exclusive use of our client for the sole and specific purposes as noted herein. They may not be used for any other purpose or by any other party for any purpose. Furthermore, the report and conclusion of value are not intended by the author and should not be construed by the reader to be investment advice in any manner whatsoever. The conclusion of value represents the opinion of Dean Dorton Allen Ford, PLLC based on information furnished to it by Southern Water, PCUC, and other sources.
8. The valuation contemplates facts and conditions existing as of the valuation date. Events and conditions occurring after that date have not been considered, and we have no obligation to update our report for such events and conditions.
9. Neither all nor any part of the contents of this report should be disseminated to the public through advertising media, public relations, news media, sales media, mail, direct transmittal, or any other means of communication without the prior written consent and approval of Dean Dorton Allen Ford, PLLC.
10. No change of any item in this appraisal report shall be made by anyone other than Dean Dorton Allen Ford, PLLC and we shall have no responsibility for any such unauthorized change.

11. Future services regarding the subject matter of this report, including, but not limited to testimony or attendance in court, shall not be required of Dean Dorton Allen Ford, PLLC unless previous arrangements have been made in writing.

12. Dean Dorton Allen Ford, PLLC is not an environmental consultant or auditor. It has not determined independently whether the Subject Assets are subject to any present or future liability relating to environmental matters (including, but not limited to CERCLA/Superfund liability), nor what the scope of any such liabilities might be, if any. Dean Dorton Allen Ford, PLLC's valuation takes no such liabilities into account, except as they have been reported to Dean Dorton Allen Ford, PLLC by Southern Water, PCUC, or by an environmental consultant working for either entity, and then only to the extent that the liability was reported to us in an actual or estimated dollar amount. Such matters, if any, are noted in the report. To the extent such information has been reported to us, Dean Dorton Allen Ford, PLLC has relied on it without verification and offers no warranty or representation as to its accuracy or completeness. Any person entitled to rely on this report who wishes to know more about existing or potential environmental liabilities of the Subject Assets is encouraged to obtain a professional environmental assessment.

13. Dean Dorton Allen Ford, PLLC has assumed that there is full compliance with all applicable federal, state, and local regulations and laws, unless otherwise specified in this report.

14. Unless otherwise stated, no effort has been made to determine the possible effect, if any, on the subject business of future federal, state, or local legislation, including any environmental or ecological matters or interpretations thereof.

QUALIFICATIONS OF VALUATION ANALYST (APPENDIX B)

Dean Dorton Allen Ford, PLLC is a Certified Public Accounting, business, and financial consulting firm which provides, among other services, the valuation of businesses and business interests. The Firm (and its predecessors) has been retained in hundreds of valuation matters.

The work on this engagement was performed under the direction of John W. Herring. Melissa G. DeArk provided significant professional assistance. A brief summary of their qualifications follows.

JOHN W. HERRING (VALUATION ANALYST)

Education: University of Virginia (BS-Commerce, 1986).

Career: Deloitte & Touche, Lexington, 1986-1992; Dulworth, Breeding & Karns, LLP, 1992-1997 and 2000-2006; Georgetown College, 1997-2000; Perdue Environmental Contracting, 2006-2007; Dean Dorton Ford, PSC, 2007-2010; Dean Dorton Allen Ford, PLLC, 2011-current.

Professional credentials: CPA/ABV (Certified Public Accountant Accredited in Business Valuation)

Business valuation experience: Performed valuations in a variety of contexts, including estate, gift, and income tax planning and reporting, marital dissolutions, shareholder transactions, ESOP reporting, and mergers and acquisitions; valued companies engaged in the following industries: coal, construction, manufacturing, equine, healthcare, and wholesale distribution; also valued a variety of retail establishments, service businesses, and holding companies owning real estate, marketable securities, closely-held stocks, and other assets.

Professional activities: Member of American Institute of Certified Public Accountants; Member of Kentucky Society of Certified Public Accountants; regular attendee of business valuation conferences and other continuing education courses.

MELISSA G. DEARK (VALUATION ANALYST)

Education: Bellarmine University (BA-Accounting, 1991); Indiana University (Masters in Business Administration, 1995).

Career: Ernst & Young, Louisville, 1991-1992; Paul Schultz Company, 1992-2006; Smoothstone IP Communications, 2006-2008; Cotton + Allen, PSC, 2008-2010; Dean Dorton Allen Ford, PLLC, 2011-current.

Professional credentials: CPA/CFF (Certified Public Accountant Certified in Financial Forensics), CVA/MAFF (Certified Valuation Analyst and Master Analyst in Financial Forensics).

Business Valuation Experience: Performed valuations in a variety of contexts, including estate, gift, and income tax planning and reporting, marital dissolutions, shareholder transactions, and mergers and acquisitions; valued companies engaged in the following industries: manufacturing, and healthcare; also valued a variety of retail establishments, service businesses, and holding companies owning real estate, marketable securities, closely-held stocks, and other assets.

Professional activities: Member of American Institute of Certified Public Accountants-Business Valuation and Forensic & Valuation Services Section; Member of National Association of Certified Valuation Analysts; Member of Kentucky Society of Certified Public Accountants; regular attendee of business valuation conferences and other continuing education courses.

Appendix C

BVR
What It's Worth

ECONOMIC OUTLOOK UPDATE

QUARTERLY

4Q 2016

ECONOMIC OUTLOOK UPDATE QUARTERLY 4Q 2016

ECONOMIC UPDATE AT A GLANCE (4Q 2016 SUMMARY)

The U.S. economy—as indicated by GDP—grew at an annual rate of 1.9% in the fourth quarter of 2016, which is slower than the 3.5% rate reported in the third quarter of 2016. The slowing rate is due to a decline in exports and federal government spending. Imports, however, which are subtracted in the calculation of GDP, increased. For the year 2016, GDP increased 1.6% compared with 2.6% in 2015. Consumer spending rose 2.5% in the fourth quarter. Increased spending on big-ticket items drove the fourth-quarter rise in consumer spending. Spending on long-lasting or durable goods leaped nearly 11.0%. Comparatively, consumer spending rose at a rate of 3.0% in the third quarter, although both quarters suggest the economy is growing at a steady pace. Private inventory investment also helped boost GDP. Excluding inventories, GDP rose at a 0.9% rate in the fourth quarter. Total government spending rose 1.2% in the fourth quarter, marking the second consecutive quarterly increase, while state and local government spending increased following two consecutive quarters of declines. Private fixed investment, which includes residential and business spending, increased 4.2%. This marks a trend reversal after private fixed investment dropped for four straight quarters. The trade deficit widened in the fourth quarter, lowering by 1.7 percentage points.

The Conference Board reported the Leading Economic Index increased 0.5% in December. Improving consumer sentiment towards the outlook for the economy drove the December increase. This indicates that the business cycle still showed strong momentum in the final months of 2016, which also suggests the economy will continue to grow, at least at a moderate pace, for the early months of 2017. For the last six months of 2016, the Leading Economic Index grew 1.4%, well ahead of the 0.2% growth recorded during the first half of the year.

Job growth continued on a solid pace in December, as employment rose by 156,000, but came in lower than the 170,000 initially projected. Job growth has averaged 165,000 jobs per month over the past three months, well above the 80,000-jobs-a-month pace the White House Council of Economic Advisers believes is needed to maintain a low and stable unemployment rate. For year-end 2016, job gains totaled nearly 2.2 million, a decline of more than a half a million from the previous year. The unemployment rate increased 0.1 percentage point in December, to 4.7%, while the labor-force participation rate remained unchanged, at 62.7%.

As job growth continued to move forward in December, wage growth also rose. Average hourly earnings for all private-sector employees increased 10 cents in December. Average hourly earnings grew at a 2.9% annual rate in 2016, which is the fastest year-over-year gain in nearly seven years and much faster than the rate of inflation.

In December, the Federal Open Market Committee voted unanimously to raise its target range for the federal funds rate by 0.25%, to between 0.5% and 0.75%. This was the second increase in the federal funds rate since the 2008 financial crisis. In making its decision to raise the federal funds rate, the Federal Open Market Committee cited a change for the better in the economic environment since the election of President Trump.

Readings for consumer confidence improved in December. The Consumer Confidence Index improved 6.6 points, to 113.7, reaching its highest level since August 2001. The post-election surge in the index reflects consumer optimism in the economy, jobs, and their personal income. The survey is a leading indicator of consumer attitudes, measures of confidence toward business conditions, short-term outlook, and personal finances and jobs. The Consumer Sentiment Index rose 4.4 points in December, to 98.2, reaching its highest total since 2004. The median projection in a Bloomberg survey called for a reading of 98.0. The Thomson Reuters/University of Michigan's Consumer Sentiment Index survey found that 18.0% of consumers became more optimistic about prospects for the economy and the expected favorable impact of the new president's policies on the economy. Notably, this is twice as high as the 9.0% peak in 1981, when Ronald Reagan took office.

The 4Q 2016 Wells Fargo/Gallup Small Business Index, which was reported in August, surged 12.0 points, to a reading of 80.0. This represents the highest optimism reading since January 2008 and the largest quarterly increase in a year. The report highlighted that small-business owners are more optimistic about the operating environment in 2017. The 4Q survey asked small-business owners about their priorities for the incoming president and Congress. Eighty-one percent said actions relating to the tax code, tax regulations, and tax rates for small businesses were most important. Other top priorities included the healthcare law (76.0%), government regulation of small business (70.0%), and actions that could affect oil prices or energy costs (59.0%). The report went on to note that in six key areas—financial situation, cash flow, revenues, capital spending allocation, hiring, and credit availability—the present situation dipped 5.0 points, from a reading of 29.0 in July to 24.0 points in November, while the future expectations score rose 17.0 points, from 39.0 in July to 56.0 in November.

The RSM U.S. Middle Market Business Index (MMBI) jumped 4.5 points in the fourth quarter of 2016, climbing to a reading of 120.1. The MMBI reading indicated that overall growth in the U.S. middle market is likely to slow in the final quarter of the year, though the information was gathered before the results of the presidential election. Data for six months ahead are more encouraging, particularly with respect to capital expenditures, investments, and compensation, when compared to three

About the Analysis in this Report

A well-prepared business valuation contains a thorough and relevant economic section. Revenue Ruling 59-60 requires consideration of "the economic outlook in general and the condition and outlook of the specific industry in particular." An understanding of the economic outlook is fundamental to developing reasonable expectations about a subject company's future prospects. In any business valuation, the general economic outlook as of the appraisal date should be considered, since the national economic outlook is often the basis of how investors perceive alternative investment opportunities at any given time. Appraisers and analysts should integrate the information presented in the Economic Outlook Update with their valuation assignment and discuss how the economic information impacts their valuation assumptions and conclusions.

In this analysis, we examine the general economic climate that existed at the end of the fourth quarter of 2016. This summary provides an overview of some selected economic factors that prevailed at that time as well as a discussion of the factors that are crucial over an extended time period. Topics addressed include general economic conditions, gross domestic product, consumer prices and inflation rates, energy prices, interest rates, unemployment, consumer spending, the stock and bond markets, construction, manufacturing, real estate markets, and the future economic outlook.

Kenny Woo Economics and Data Editor

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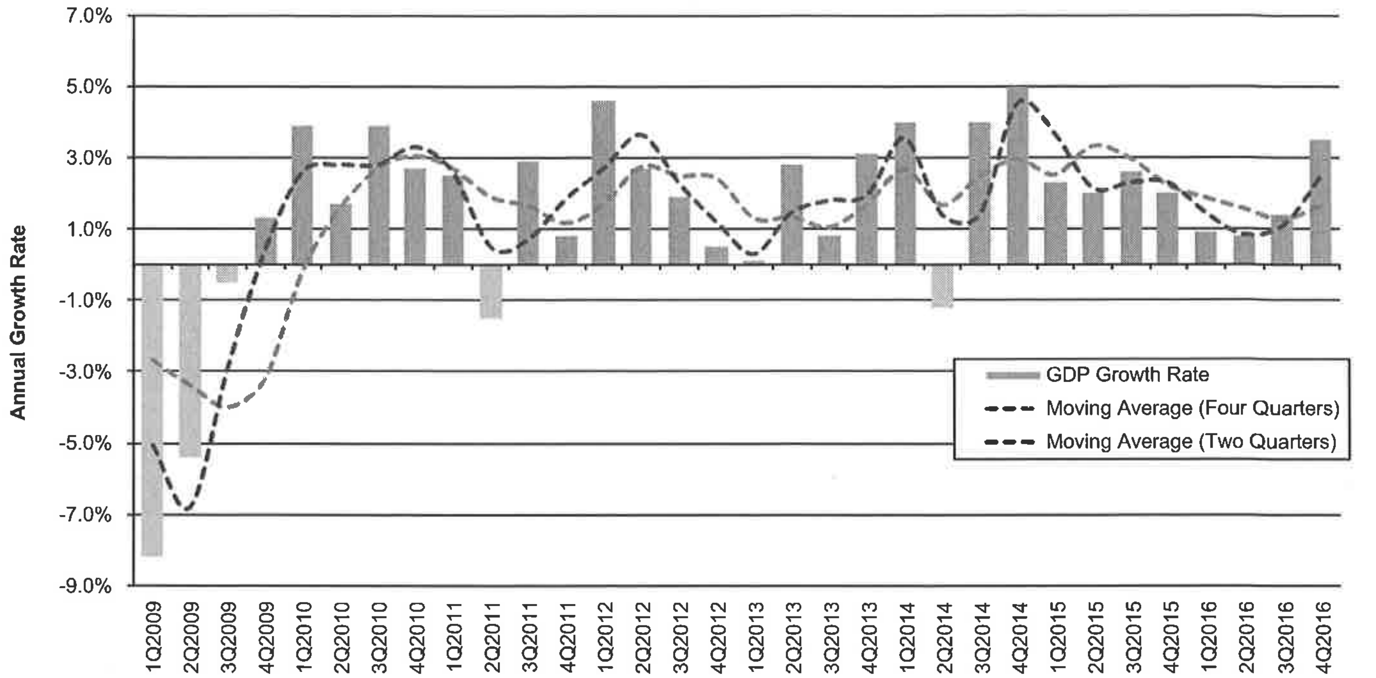
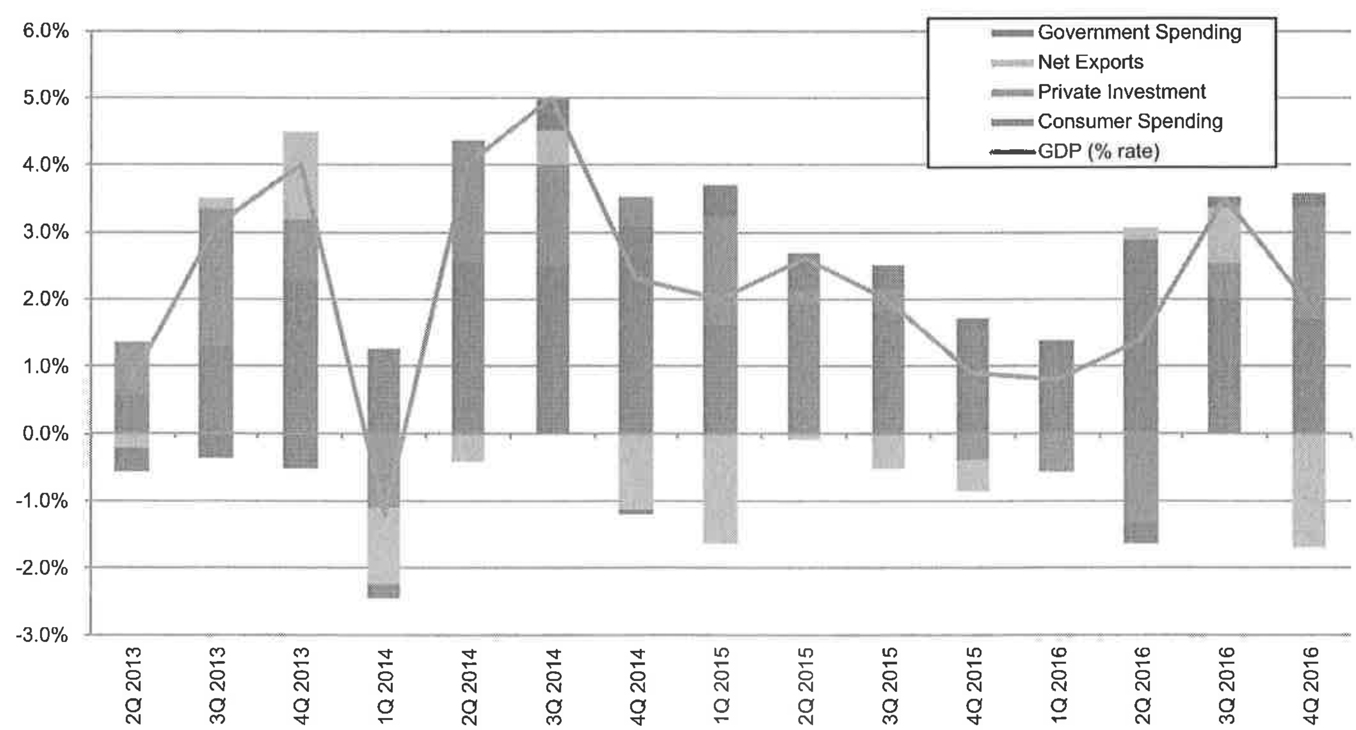
EXHIBIT 1A: Real Gross Domestic Product and Moving Averages



Source of data: U.S. Department of Commerce.
Note: Figures are seasonally adjusted at annual rates. As the U.S. Department of Commerce issues revised data, some historically reported figures may change.

EXHIBIT 1B: GDP Components—Contribution to GDP Rate



months prior. U.S. long-term growth rebounded to 3.2%, from 1.4%, based on the Bureau of Economic Analysis's second estimate of gross domestic product. Of particular note, the analysis shows improvement in hiring and compensation, both of which stand near cyclical highs and are indicative of the sharp tightening seen in the U.S. labor markets, arriving at a point in the business cycle where rising wages and salaries are now likely to create narrowing profit margins for the middle market. The manufacturing sector continued to expand in December. The Institute for Supply Management (ISM) reported that its manufacturing index (PMI) rose 1.5 percentage points in December, to 54.7%. The component of the index that measures new orders rose 7.2 percentage points, and the component for production advanced 4.3 percentage points. Industrial production edged up 0.8% in December, which was the biggest increase for the index since November 2014. The manufacturing component, which is the biggest component of industrial production, advanced 0.2%. The production of durable goods increased 0.5% in December, while the production of nondurable goods declined 0.3%.

Growth in the services sector was unchanged in December and remained at the strong growth levels established in November. The ISM reported that its Non-Manufacturing Index (NMI) stayed at 57.2%, which is a 12-month high.

EXHIBIT 2A: Historical Economic Data 2004-2016 and Forecasts 2017-2026

	HISTORICAL DATA													CONSENSUS FORECASTS**					
	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022-2026**
Real GDP*	3.8	3.3	2.7	1.8	-0.3	-2.8	2.5	1.6	2.2	1.7	2.4	2.6	1.6	2.3	2.3	2.2	2.2	2.2	2.2
Industrial production*	2.6	3.3	2.2	2.5	-3.6	-11.5	5.5	2.9	2.8	1.9	2.9	0.3	-1.0	1.5	2.3	2.4	2.5	2.4	2.3
Consumer spending*	3.8	3.5	3.0	2.2	-0.3	-1.6	1.9	2.3	1.5	1.5	2.9	3.2	2.7	2.5	2.5	2.3	2.3	2.3	2.3
Real disposable personal income*	3.6	1.5	4.0	2.1	1.5	-0.4	1.0	2.5	3.1	-1.4	3.5	3.5	2.7	2.5	2.7	2.5	2.3	2.2	2.3
Business investment*	5.2	7.0	7.1	5.9	-0.7	-15.6	2.5	7.7	9.0	3.5	6.0	2.1	-0.4	2.7	3.7	3.8	3.7	3.8	3.6
Nominal pretax corp. profits*	21.5	15.1	11.4	-7.1	-16.0	8.4	25.0	4.0	10.0	1.7	5.9	-3.0	-0.3	4.0	3.7	4.1	3.4	3.6	3.9
Total government spending*	1.6	0.6	1.5	1.6	2.8	3.2	0.1	-3.0	-1.9	-2.9	-0.9	1.8	0.9	0.8	1.2	NA	NA	NA	NA
Consumer price inflation*	2.7	3.4	3.2	2.8	3.8	-0.4	1.6	3.2	2.1	1.5	1.6	0.1	1.3	2.4	2.3	2.3	2.3	2.3	2.3
3-month Treasury bill rate	1.40	3.22	4.85	4.48	1.40	0.15	0.14	0.05	0.09	0.06	0.03	0.1	0.5	1.1	1.9	2.8	2.9	3.0	3.1
10-year Treasury bond yield	4.27	4.29	4.80	4.63	3.66	3.26	3.22	2.78	1.80	2.35	2.54	2.1	2.5	2.7	3.3	3.7	3.8	3.9	4.1
Unemployment rate	5.5	5.1	4.6	4.6	5.8	9.3	9.6	8.9	8.1	7.4	6.2	5.3	4.9	4.6	4.5	NA	NA	NA	NA
Housing starts (millions)	1.956	2.068	1.801	1.355	0.906	0.554	0.587	0.609	0.781	0.925	1.003	1.112	1.17	1.26	1.4	NA	NA	NA	NA

Source of historical data: U.S. Department of Commerce, U.S. Department of Labor, U.S. Census Bureau and The Federal Reserve Board.
Source of forecasts: *Consensus Forecasts - USA*, December 2016.
Notes:
*Numbers are based on percent change from preceding period.
Historic consumer price inflation, unemployment rate, 3-month Treasury rate, and 10-year Treasury yield are the annual averages.
**Forecast numbers are based on percent change from preceding period (excludes unemployment rate, housing starts, 3-month Treasury rate, and 10-year Treasury yield). Consumer price inflation information is annual averages. The 2016 through 2021 forecasts for the 3-month Treasury rate and 10-year Treasury yield are for the end of each period. Forecasts for 2022-2026 signify the average for that period.
Consumer spending, also known as personal consumption expenditures, includes spending on services, durable, and nondurable goods. Business investment is also referred to as nonresidential fixed investment. Total government spending includes federal, state, and local government spending.
Every month, Consensus Economics surveys a panel of 30 prominent United States economic and financial forecasters for their predictions on a range of variables including future growth, inflation, current account and budget balances, and interest rates.

The December reading marked the 89th consecutive month of growth for the services sector. The majority of respondents' comments were positive about business conditions and the overall economy, citing a very busy fourth quarter due to customers' year-end spending boost. The component that measures business activity decreased 0.3 percentage point, to 61.4%, but still indicated growth in business activity, while the component for new orders climbed 4.6 percentage points, to 61.6%.

The major stock indexes recorded gains in the fourth quarter and closed out 2016 with positive figures. The Dow Jones climbed 7.9% in the quarter and finished the year with a 13.4% gain. The Nasdaq Composite Index saw gains of 2.5% in the quarter and finished at 87% for the year. The Russell 2000 Index posted an 8.4% quarterly increase and finished the year up 19.5%, while the S&P 500 Index achieved a total return of 3.3% in the fourth quarter and recorded gains of 9.5% for the year. Treasury yields rose throughout the fourth quarter as a combination of anticipated higher levels of growth and inflation drove long-term yields higher. In addition, the Federal Reserve's decision to raise interest rates in December and raise their guidance of the pace of future rate hikes drove shorter-term yields higher. The 10-year Treasury peaked at a yield of 2.6% on December 15 as yield curves steepened and Treasury yields rose, putting downward pressure on bond prices in anticipation of the future economic policies of President Trump.

EXHIBIT 2B: Historical Energy Data 2005-2016 and Forecasts 2017-2018

	HISTORICAL DATA												EIA FORECASTS		% CHANGE	
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2017	2018
Brent crude oil spot price*	54.60	65.18	72.49	96.94	61.75	79.64	111.33	111.65	108.56	98.89	52.32	43.74	53.50	56.18	22.3%	5.0%
West Texas intermediate crude oil price*	56.65	66.06	72.34	99.67	61.96	79.50	94.90	94.08	97.98	93.17	48.67	43.33	52.50	55.18	21.2%	5.1%
Heating oil retail price**	219.50	247.30	266.40	350.90	252.40	297.10	365.70	378.60	378.30	371.40	264.90	211.90	259.80	211.90	22.6%	-18.4%
Gasoline regular grade retail price**	227.10	257.60	280.60	325.70	234.90	278.10	352.60	362.70	350.60	336.40	242.80	212.30	226.10	212.30	6.5%	-6.1%
Electricity residential retail price***	9.43	10.40	10.65	11.26	11.51	11.54	11.72	11.88	12.13	12.52	12.67	12.54	12.95	12.54	3.3%	-3.2%
Electricity commerical retail price***	8.72	9.46	9.65	10.26	10.16	10.19	10.23	10.09	10.26	10.74	10.59	10.37	10.64	10.37	2.6%	-2.5%
Electricity industrial retail price***	5.57	6.16	6.39	6.96	6.83	6.77	6.82	6.67	6.89	7.10	6.90	6.75	6.90	6.75	2.2%	-2.2%
Natural gas Henry Hub spot price****	8.81	6.74	6.98	8.86	3.95	4.39	4.00	2.75	3.73	4.39	2.72	2.60	3.67	3.85	41.2%	4.9%
Airline Ticket Price Index	236.60	247.30	251.70	282.00	258.00	278.20	304.00	305.00	312.70	307.70	292.23	282.95	294.40	309.07	4.0%	5.0%
Producer Price Index: Petroleum	1.65	1.93	2.14	2.72	1.76	2.25	2.99	3.07	2.95	2.78	1.76	1.44	1.66	1.44	15.3%	-13.3%
Producer Price Index: all commodities	1.57	1.65	1.73	1.90	1.73	1.85	2.01	2.02	2.03	2.05	1.90	1.86	1.92	1.86	3.2%	-3.1%

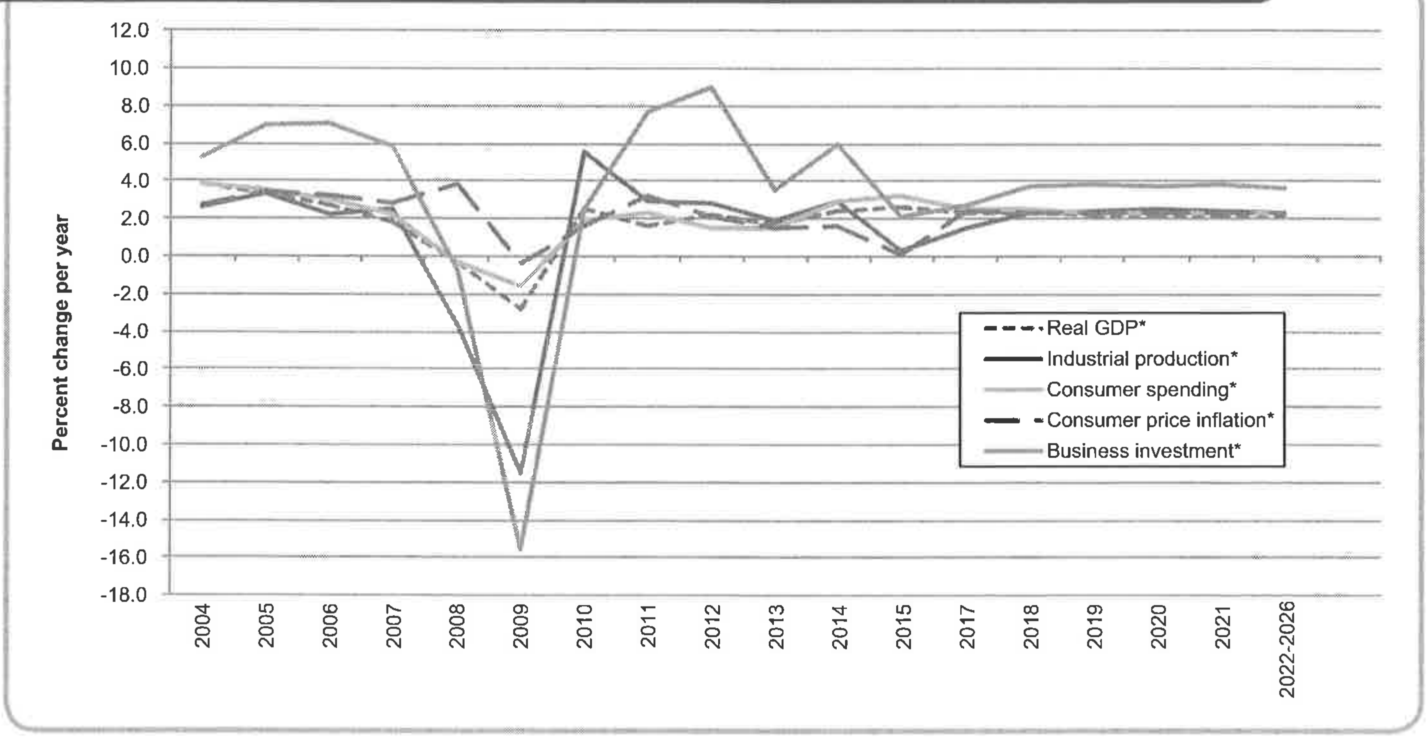
Source of historical and forecast data: U.S. Energy Information Administration.
Notes:
*Dollars per barrel
**Cents per gallon, U.S. average
***Cents per kilowatthour, U.S. average
****Dollars per million Btu

Housing starts rose 11.3% in December. The 2016 growth in housing starts, the strongest since 2007, came in 5.7% higher than figures for 2015. The increase can be partly attributed to a rebound in multifamily units. Building permits authorized fell 0.2% in December but remained 0.7% above their levels from a year ago due to a rise in both single-family and multifamily permits. Existing-home sales fell 2.8% in December, halting a three-month upswing. Regardless, it was the best year for home sales in a decade. In December, homebuyers dealt with a lack of listings and quickly rising home prices as the major headwinds. Meanwhile, the surge in rates since early November ultimately caught some prospective buyers off guard and dimmed their appetite or ability to buy a home as 2016 ended. Three of the four major regions saw sales decrease in December, and the share of distressed home sales increased to 7%, up from 6% in November but down from 8% one year ago.

The National Association of Realtors Confidence Index for current conditions decreased 1.0 point in December, to a reading of 62.0 points, but remained 5.0 points higher than one year ago. Builder confidence, as measured by the National Association of Home Builders/Wells Fargo Housing Market Index, increased 7.0 points in December, to 70.0. The report noted that the indicators show that the housing market will continue on an upward path into 2017.

NAR's most recent "Commercial Real Estate Market Survey," analyzing the second quarter of 2016 (the third-quarter survey was not yet available as of this *EOU* publication date), found that commercial real estate investments continued to keep a positive pace. The report stated that 66.0% of realtors closed a commercial sale and sales volumes were up 8.4% from the same period one year ago.

EXHIBIT 3: Key Economic Variables Actual 2004-2016 and Forecast 2017-2026



Source of historical data: U.S. Department of Commerce, U.S. Department of Labor and The Federal Reserve Board.
Source of forecasts: Consensus Forecasts.
*Numbers are based on percent change from preceding period. Consumer price inflation information is annual averages.

EXHIBIT 4: Economic Indicators Historical Data

	MONTHLY DATA											
	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16
Real GDP			0.8			1.4			3.5			1.9
Consumer Spending			1.6			4.3			3.0			2.5
Business investment			-3.4			1.0			1.2			2.4
Total government spending			1.6			-1.7			0.8			1.2
Exports			-0.7			1.8			10.0			-4.3
Imports			-0.6			0.2			2.2			8.3
CPI (one-month % change)	0.0	-0.2	0.1	0.4	0.2	0.2	0.0	0.2	0.3	0.4	0.2	0.3
Unemployment rate	4.9	4.9	5.0	5.0	4.7	4.9	4.9	4.9	4.9	4.8	4.6	4.7
PMI	48.2	49.5	51.8	50.8	51.3	53.2	52.6	49.4	51.5	51.9	53.2	54.7
NMI	53.5	53.4	54.5	55.7	52.9	56.5	55.5	51.4	57.1	54.8	57.2	57.2
HMI	61.0	58.0	58.0	58.0	58.0	60.0	58.0	54.0	60.0	63.0	63.0	70.0
Housing starts (millions)	1.128	1.213	1.113	1.155	1.128	1.195	1.218	1.164	1.052	1.320	1.102	1.226
Building permits (millions)	1.188	1.162	1.077	1.130	1.136	1.153	1.144	1.152	1.225	1.260	1.212	1.210

Notes: Real GDP and subcomponents data only available on a quarterly basis and therefore, are quarterly figures. GDP and its subcomponents, along with housing starts and building permits, are seasonally adjusted at annual rates. PMI is the Institute of Supply Management's Manufacturing Index—any reading above 50.0% suggests growth in the manufacturing economy, whereas a reading below 50.0% indicates contraction. NMI is the Institute of Supply Management's Non-Manufacturing Index, which measures the strength of the services sector—any reading above 50.0% suggests growth, whereas a reading below 50.0% indicates contraction. HMI is the National Association of Home Builders/Wells Fargo Housing Market Index—any reading over 50 indicates that more builders view sales conditions as good than poor.

	QUARTERLY DATA											
	1Q 13	2Q 13	3Q 13	4Q 13	1Q 14	2Q 14	3Q 14	4Q 14	1Q 15	2Q 15	3Q 15	4Q 15
Real GDP	2.8	0.8	3.1	4	-1.2	4.0	5.0	2.3	2.0	2.6	2.0	0.9
Consumer Spending	1.9	0.8	1.9	3.4	1.9	3.8	3.7	4.6	2.4	2.9	2.7	2.3
Business investment	5.2	2.5	2.1	9.5	7.0	6.1	8.3	-1.1	1.3	1.6	3.9	-3.3
Total government spending	-4.3	-2.0	-2.0	-2.8	-1.0	0.1	2.5	-0.4	2.6	3.2	1.9	1.0
Exports	4.0	5.0	3.1	11.8	-2.7	8.7	2.1	4.5	-5.8	2.9	-2.8	-2.7
Imports	1.3	5.3	1.7	1.6	4.9	9.9	-1.2	11.2	5.6	2.9	1.1	0.7
CPI (3-month % change)	0.5	0.0	0.6	0.5	0.4	0.5	0.2	-0.4	-0.3	0.7	0.0	0.2
Unemployment rate	7.5	7.5	7.2	6.7	6.6	6.1	5.9	5.6	5.5	5.3	5.1	5.0
PMI	52.5	52.3	55.4	55.9	55.1	55.3	55.8	54.9	52.3	53.1	50.0	48.0
NMI	55.1	54.1	53.8	53.4	53.9	56.7	57.9	56.9	56.9	56.2	56.7	55.8
HMI	44.0	51.0	57.0	57.0	46.0	49.0	59.0	58.0	52.0	60.0	61.0	60.0
Housing starts (millions)	0.999	0.852	0.860	1.010	0.963	0.927	1.026	1.080	0.954	1.211	1.189	1.16
Building permits (millions)	0.932	0.951	1.015	1.013	1.061	1.033	1.053	1.077	1.038	1.337	1.129	1.201

Notes: Unemployment rate, housing starts, building permits, PMI, NMI, and HMI are readings from the last month of the quarter. GDP and its subcomponents, along with housing starts and building permits, are seasonally adjusted at annual rates.

	YEARLY DATA											
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Real GDP	3.3	2.7	1.8	-0.3	-2.8	2.5	1.6	2.2	1.7	2.4	2.6	1.6
Consumer Spending	3.5	3.0	2.2	-0.3	-1.6	1.9	2.3	1.5	1.5	2.9	3.2	2.7
Business investment	7.0	7.1	5.9	-0.7	-15.6	2.5	7.7	9.0	3.5	6.0	2.1	-0.4
Total government spending	0.6	1.5	1.6	2.8	3.2	0.1	-3.0	-1.9	-2.9	-0.9	1.8	0.9
Exports	6.3	9.0	9.3	5.7	-8.8	11.9	6.9	3.4	3.5	4.3	0.1	0.4
Imports	6.3	6.3	2.5	-2.6	-13.7	12.7	5.5	2.2	1.1	4.4	4.6	1.1
Consumer Price Index	3.4	3.2	2.8	3.8	-0.4	1.6	3.2	2.1	1.5	1.6	0.1	1.3
Unemployment rate	5.1	4.6	4.6	5.8	9.3	9.6	8.9	8.1	7.4	6.2	5.3	4.9
Housing starts (millions)	2.068	1.801	1.355	0.906	0.554	0.587	0.609	0.781	0.925	1.003	1.112	1.166
Building permits (millions)	2.155	1.838	1.398	0.905	0.583	0.605	0.624	0.830	0.991	1.052	1.183	1.187

Notes: Yearly Consumer Price Index rates and yearly unemployment rates are the annual average rates.
Personal consumption includes spending on services and durable and nondurable goods. Government spending includes federal, state, and local government spending. As the government issues revised data, some historical reported figures may have changed.
Source of data: U.S. Department of Commerce, U.S. Department of Labor, U.S. Census Bureau, The Federal Reserve Board, the Institute of Supply Management, and the National Association of Home Builders.

1. GROSS DOMESTIC PRODUCT

The Bureau of Economic Analysis (BEA) reported that the nation's economy—as indicated by GDP—grew at an annual rate of 1.9% in the fourth quarter of 2016. GDP growth for the fourth quarter represents a slowdown from the 3.5% growth the economy experienced in the third quarter and is also below analysts' estimates of 2.2%. This also marked the 11th straight year the economy failed to grow at a 3.0% rate. GDP growth for the quarter saw contributions from personal consumption expenditures, private inventory investment, residential fixed investment, nonresidential fixed investment, and state and local government spending that were partly offset by negative contributions from exports and federal government spending. Imports, which are subtracted in the calculation of GDP, increased.

Final sales of domestic product rose in the fourth quarter, increasing at a rate of 0.9%, which is slower than the rate of 3.0% in the third quarter. Final sales of domestic product are GDP minus the influence of private inventory investment, which tends to be volatile from quarter to quarter. Final sales to domestic purchasers, or GDP excluding trade and inventories, rose at a rate of 2.5% in the fourth quarter compared to a rate of 2.1% in the third quarter.

The increase in fourth-quarter GDP was the result of positive contributions from personal consumption expenditures, private inventory investment, residential fixed investment, nonresidential fixed investment, and state and local government spending that were partly offset by negative contributions from exports and federal government spending. Imports, which are subtracted in the calculation of GDP, increased.

(See Exhibits 1A, 1B, 2A, and 4 for historic and forecasted GDP figures.)

1.1 CONSUMER SPENDING

Consumer spending grew at a rate of 2.5% during the fourth quarter of 2016, maintaining a healthy rate despite a slowdown in GDP. Consumer spending growth decelerated from the third-quarter rate of 3.0%. For the year, consumer spending grew 2.7%. Consumer spending, also referred to as "personal consumption," accounts for approximately 70% of the U.S. GDP.

The fourth quarter's figures in consumer spending reflected a slowdown in spending on services but growth in long-lasting goods. Consumer spending contributed 1.70 percentage points to the fourth-quarter GDP rate.

(See Exhibits 2A and 4 for historic and forecasted consumer spending figures.)

Consumer spending on durable goods—items meant to last three years or more, such as computers, cars, and machinery—rose at a rate of 10.9% in the fourth quarter. This was a deceleration from the third-quarter rate, when durable goods spending increased at an 11.6% pace. Consumer spending on durable goods grew 5.7% in 2016, a decline from 6.9% the previous year. Overall, consumer spending on durable goods accounted for 0.79 percentage point to the GDP. Consumer spending on nondurable goods—items such as food and gasoline—increased at a rate of 2.3% in the fourth quarter, a reversal from the declining rate of 0.5% in the prior quarter. Consumer spending on nondurable goods grew 2.4% in 2016, a decline from 2.6% the previous year.

Service expenditures grew at a rate of 1.3% in the fourth quarter of 2016, down from the 2.7% rate in the prior quarter. The decrease in spending on household services occurred most notably on housing and utilities. On the year, service expenditures grew at 2.3%, down from 2.8% the previous year.

EXHIBIT 5A: Total U.S. Retail Sales—Past 24 Months

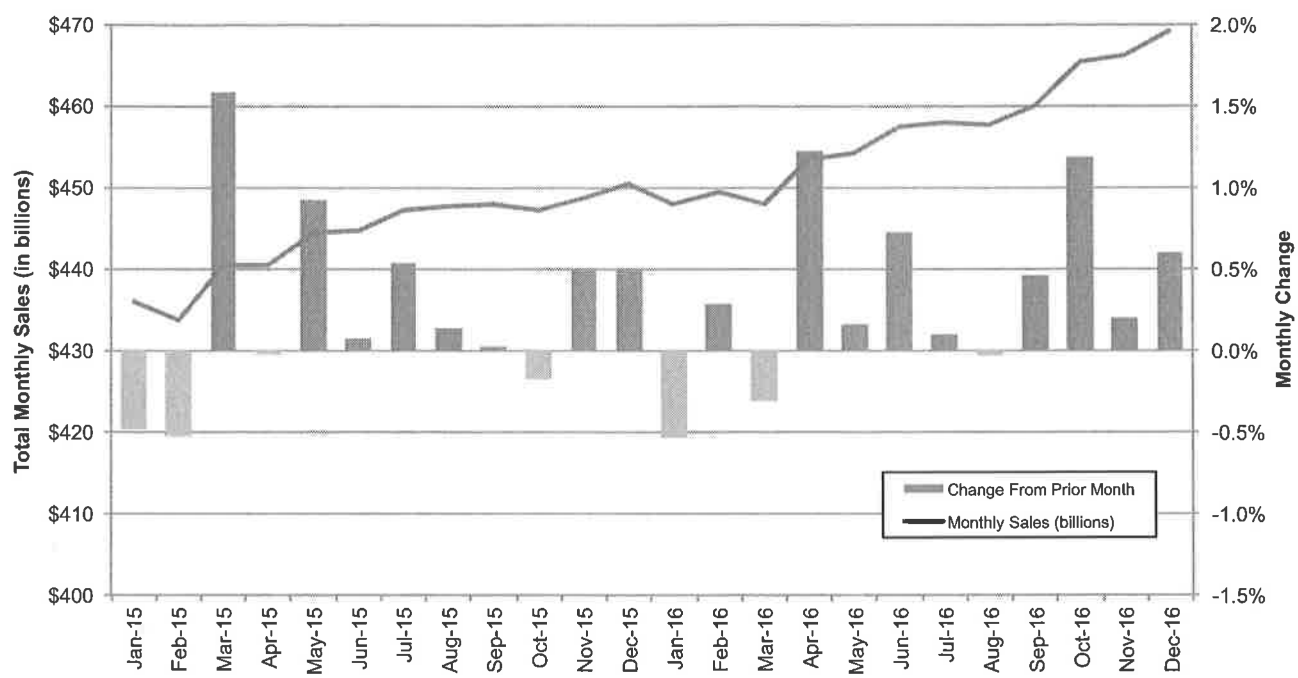
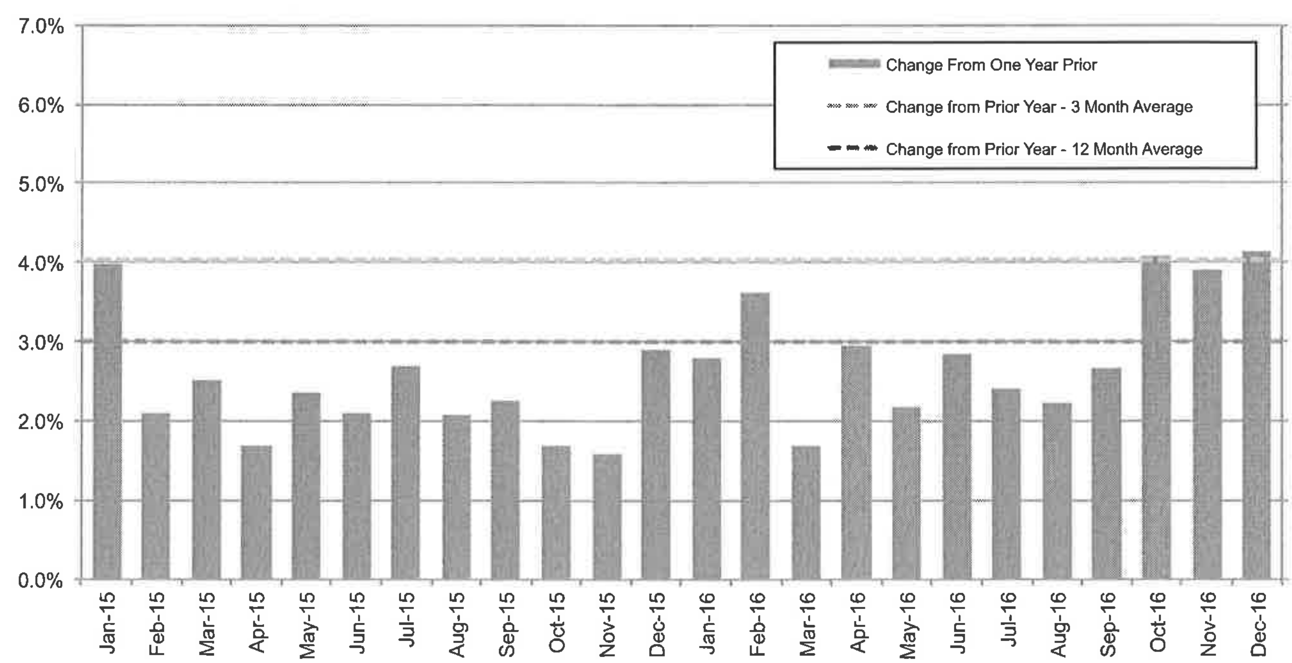


EXHIBIT 5B: Total U.S. Retail Sales Change From One Year Prior—Past 24 Months With Averages



Source of data: U.S. Department of Commerce.
Notes: Monthly retail and food services sale are seasonally adjusted.

EXHIBIT 5C: Total Retail Sales—Monthly Change Since 2008

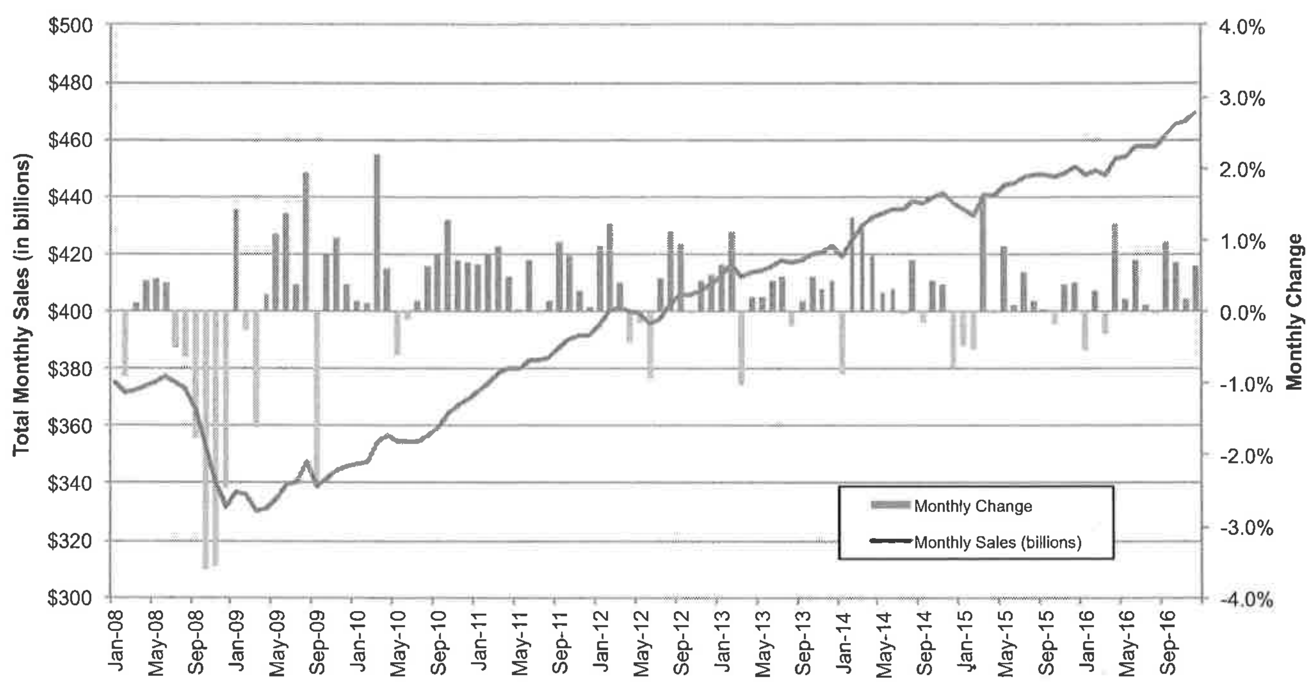
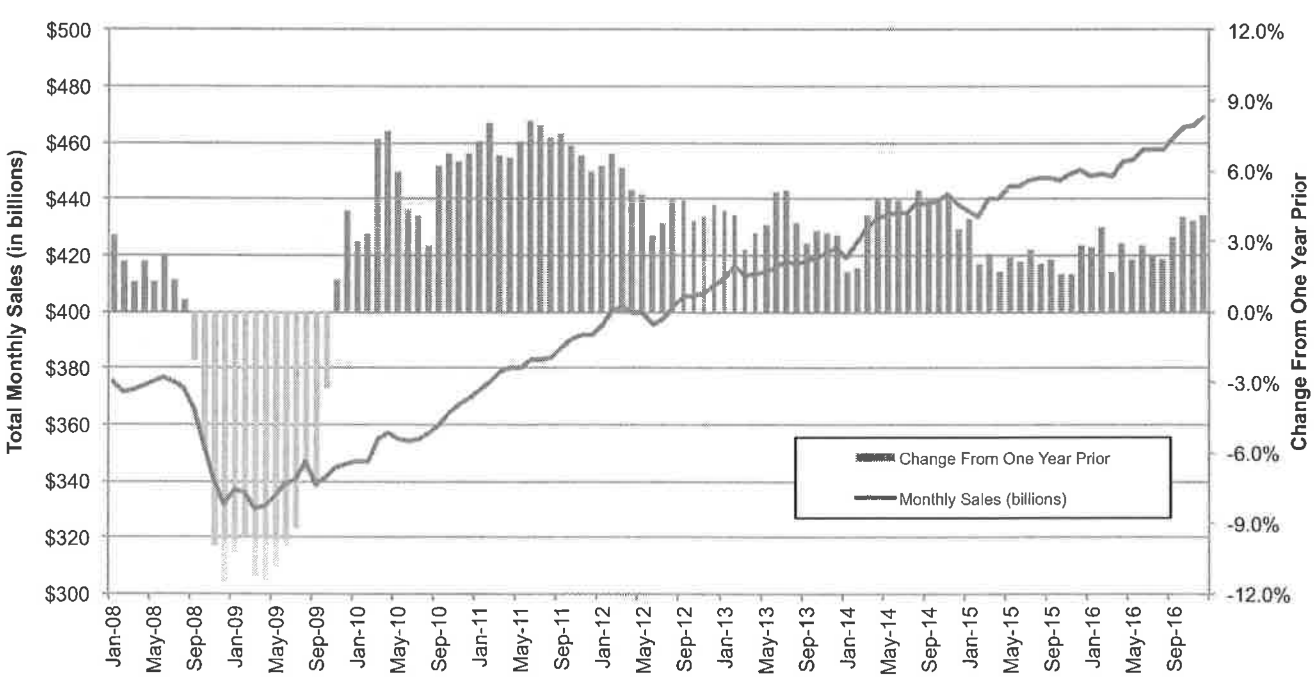


EXHIBIT 5D: Total Retail Sales—Percent Change From One Year Prior Since 2008



Source of data: U.S. Department of Commerce.
Notes: Monthly retail and food services sale are seasonally adjusted.

American spending increased in December, marking the eighth monthly increase in the past nine months. Retail sales climbed up 0.6% in December. Retail sales remain up 4.1% from one year ago. Economists view retail sales as a key economic indicator since consumer spending accounts for nearly two-thirds of the U.S. economy.

The report showed that the sales increases were broad-based in December, with eight of the 13 major categories seeing greater sales. Motor vehicle and parts dealers, gasoline stations, and nonstore retailers showed the biggest increases in December. Sales at miscellaneous store retailers declined 1.0%, and sales at food services and drinking places declined 0.8%. Sales at gas stations rose 2.0% in December, though some of the rise was attributed to higher prices. (The data are not adjusted for changes in prices, so fluctuating fuel costs can affect gas station receipts.)

Core retail sales rose modestly, by 0.2%, in December. Core retail sales have increased 3.3% over the past year. The core retail sales figure excludes sales of automobiles, gasoline, building materials, and food services and corresponds most closely with the consumer-spending component of gross domestic product.

(See Exhibit 5 for total retail and food service sales figures.)

1.2 GOVERNMENT SPENDING

Total government spending grew at a rate of 1.2% in the fourth quarter of 2016, after growing at a rate of 0.8% in the prior quarter. The fourth-quarter rise in government spending added 0.21 percentage point to the GDP rate. In 2016, government spending increased at 0.9% compared to 1.8% in 2015.

(See Exhibits 2A and 4 for historic and forecasted government spending figures.)

Federal government spending declined at a rate of 1.2% in the fourth quarter, the third quarterly decline in 2016. Federal government spending subtracted 0.08 percentage point from the fourth-quarter GDP rate. Overall, government spending has been an absentee player in GDP growth since 2010.

National defense spending declined at a 3.6% rate in the fourth quarter of 2016. National defense spending declined 0.7% in 2016, after falling 2.1% in 2015. National defense spending has declined in 13 of the past 16 quarters.

Federal nondefense spending grew at a rate of 2.3% in the fourth quarter, marking the 10th consecutive quarter of increased spending.

State and local government spending grew at a rate of 2.6% in the fourth quarter, reversing declines from the previous two quarters. For the year, state and local government spending grew at 1.0% compared to 2.6% growth in 2015.

1.3 FIXED INVESTMENT

Business investment, also referred to as "nonresidential fixed investment," rose at a rate of 2.4% in the fourth quarter of 2016. This was the third consecutive quarterly rise in business investment and stemmed from increased business spending on equipment and intellectual property products. The rise in business investment added 0.30 percentage point to the fourth-quarter GDP.

(See Exhibits 2A and 4 for historic and forecasted business spending figures.)

Business spending on structures declined at an annual rate of 5.0% in the fourth quarter, a sharp reversal from the growth rate of 12.0% in the prior quarter. Business spending has increased three times in the past 10 quarters (in one quarter where spending on structures rose, the rate was only 0.1%). Business spending on equipment increased at a rate of 3.1% in the fourth quarter, breaking a four-quarter consecutive decline. Business spending on intellectual property products continued to be positive, rising for the 14th consecutive quarter and increasing at a rate of 6.4%.

Residential fixed investment, often considered a proxy for the housing market, grew at a rate of 10.2% in the fourth quarter. Residential fixed investment has grown in nine of the past 11 quarters. The fourth-quarter growth in residential fixed investment added 0.37 percentage point to the fourth-quarter GDP.

1.4 BUSINESS INVENTORIES

Businesses' inventory investments rose at a $48.7 billion pace in the fourth quarter of 2016, following a rise of $7.1 billion in the previous quarter. The fourth-quarter growth in inventory investment contributed 1.00 percentage point to GDP, making a second consecutive quarter of gains. Excluding inventories, GDP rose at a 0.9% rate in the fourth quarter.

1.5 EXPORTS AND IMPORTS

The GDP report showed that America's trade deficit widened in the fourth quarter due to a substantial increase in imports and a significant decrease in exports. Exports declined at a rate of 4.3% in the fourth quarter of 2016, after rising at a rate of 10.0% in the prior quarter. Exported goods decreased at a rate of 6.9% in the fourth quarter, after increasing at a rate of 14.4% in the third quarter. Exported services increased at a rate of 0.9%.

Imports, which are subtracted in the calculation of GDP, advanced at a rate of 8.3% in the fourth quarter after rising at a rate of 2.2% in the previous quarter. Imported goods moved up at a rate of 10.9% in the fourth quarter, while imported services declined at a rate of 2.7%.

Net exports (the value of exports minus the value of imports) subtracted 1.70 percentage points from the fourth-quarter GDP, after adding 0.85 point in the prior quarter.

(See Exhibit 4 for historic export and import figures.)

2. CONSUMER PRICES AND INFLATION RATES

According to the Bureau of Economic Analysis, the price index for gross domestic purchases rose 2.0% in the fourth quarter of 2016, following an increase from the 1.5% in the previous quarter. The price index for gross domestic purchases measures prices U.S. residents pay for goods and services. The "core" (less food and energy prices) personal consumption expenditures index increased 1.3% in the fourth quarter, compared to a 1.7% increase in the prior quarter. The core personal consumption expenditures index measures the prices consumers pay for goods and services without the volatility caused by movements in food and energy prices to reveal underlying inflation trends.

Consumer prices rose in December, driven by a substantial increase in the indices for gas and for shelter, as in September, October, and November. The Consumer Price Index (CPI) rose 0.3% in December, on a seasonally adjusted basis, and is up 2.1% over the past 12 months. CPI is a measure of a basket of products and services—including housing, electricity, food, and transportation—and is used as a measure of inflation. CPI is comprised of three main indices: the food index, the energy index, and the all items less food and energy index (also known as "Core CPI"). Core CPI is a measure of inflation that excludes volatile food and energy costs.

The food index remained unchanged in December for the sixth consecutive month. The food-at-home index declined 0.2%, marking the eighth month in a row of declines and offsetting an increase in the index for food away from home. The index for food has declined 0.2% over the past 12 months.

The energy index increased 1.5% in December, primarily driven by an increase in the gasoline index. The electricity index remained unchanged in December, although, for the year, the index increased 0.7% after declining 1.5% in 2015. The index for natural gas fell 0.4% in December, its second straight month of decline after following four consecutive months of gains.

Core CPI increased 0.2% in December, following a rise of 0.2% in the prior month. The indices for transportation services advanced 0.6%, while the index for medical care rose 0.1% in December. Core CPI has risen 2.2% over the past 12 months.

(See Exhibits 2A, 4, and 6 for historic and forecasted CPI figures.)

The Producer Price Index (PPI) increased 0.3% in December, on a seasonally adjusted basis. For the year, PPI is up 1.6% after falling 1.1% in 2015. The year 2016 posted the largest rise since a 1.3% gain for the 12 months that ended November 2014. PPI is a gauge of inflation in the manufacturing process that can be a precursor to inflation in consumer prices. PPI for final demand is comprised of two main indices: final demand services and final demand goods.

The index for final demand goods advanced 0.7% in December following a gain of 0.2% in the prior month. This is the largest increase for the index since it rose 0.7% in June. Nearly 80% of the advance in the final demand index is attributable to the 0.7% gain for the month. The final demand index increased 1.6% over the year.

The index for final demand services increased 0.1% in December, after increasing 0.5% in November. Most of the December advance can be attributed to prices for securities brokerage, dealing, investment advice, and related services. The index for final demand trade services advanced 0.2%. Conversely, prices for final demand transportation and warehousing services declined 0.4%.

The index for final demand goods less volatile food and energy rose 0.3% in December. The index for final demand goods less food and energy was up 1.7% from its level one year ago.

(See Exhibit 6 for historic PPI figures.)

3. ENERGY PRICES

The Energy Information Administration (EIA) reported that the spot price for a barrel of West Texas Intermediate (WTI) crude oil was $53.75 at the end of 2016. This was up from $47.72 at the end of the third quarter and above the price of $36.59 per barrel from a year ago. Forecasts project prices to average $53.46 in 2017 and $56.18 in 2018.

EXHIBIT 6A: U.S. Consumer Price Index—Past 24 Months

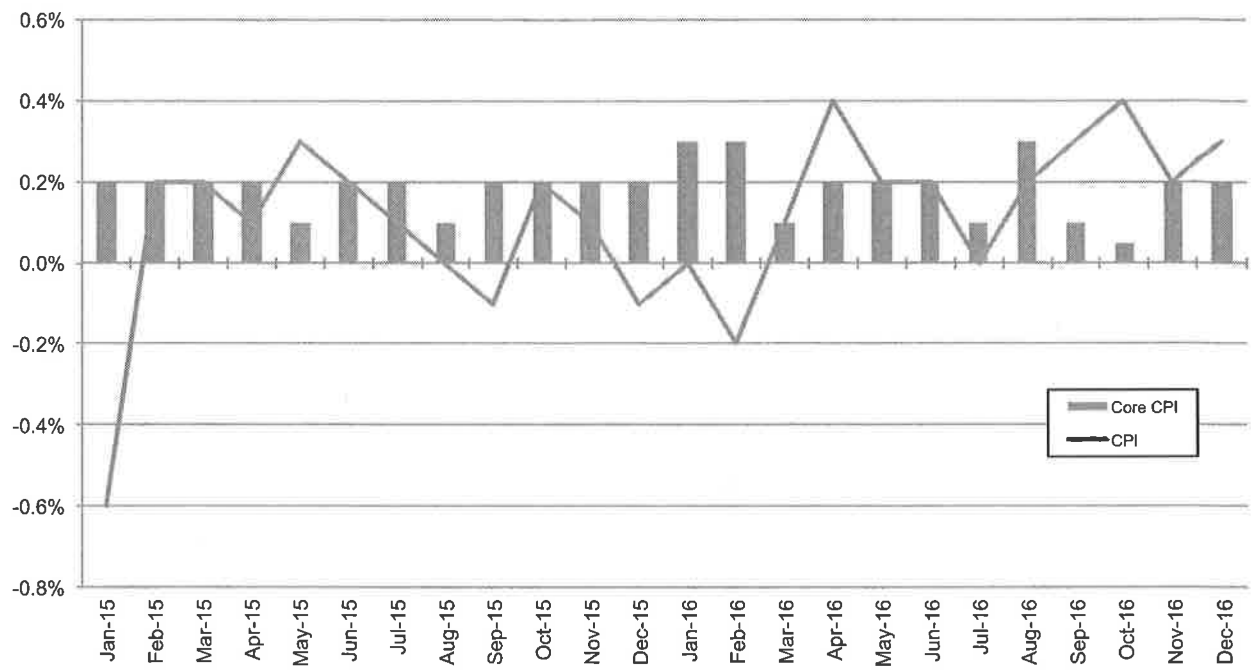
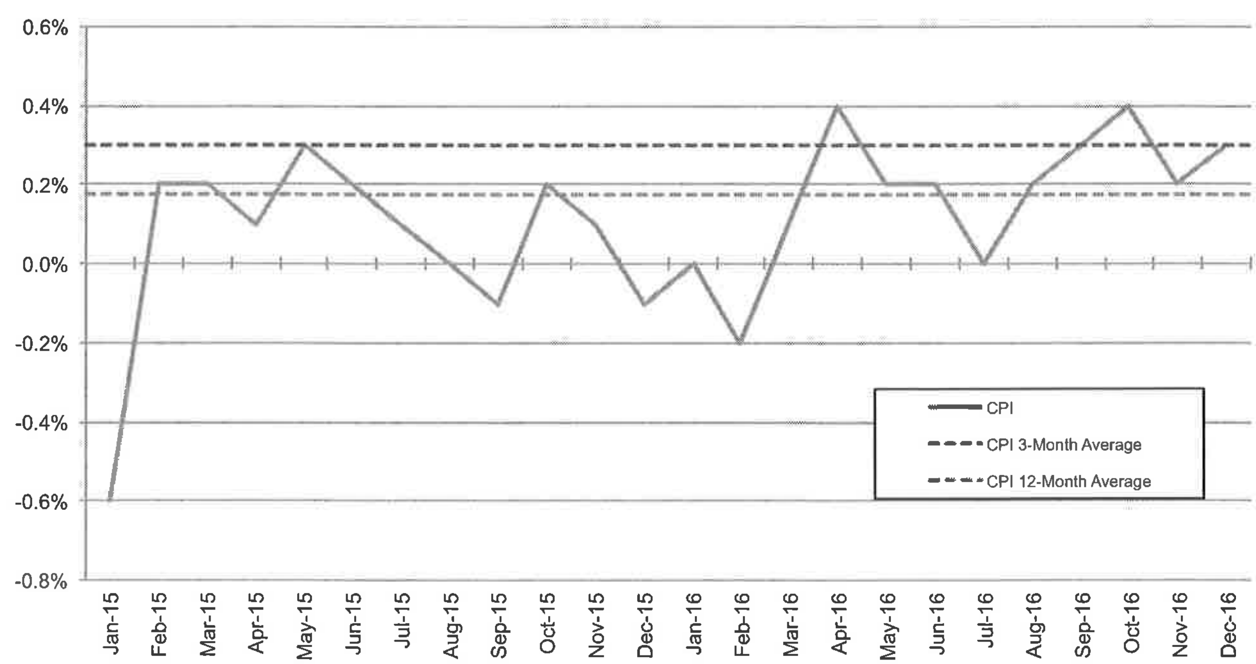


EXHIBIT 6B: U.S. Consumer Price Index—Past 24 Months With Averages



Source of data: U.S. Department of Labor.
Note: Data are seasonally adjusted change from the prior month. Core CPI is the All Items Less Food and Energy Index. Core PPI is the Final Demand Goods Less Foods and Energy Index.

EXHIBIT 6C: U.S. Producer Price Index—Past 24 Months

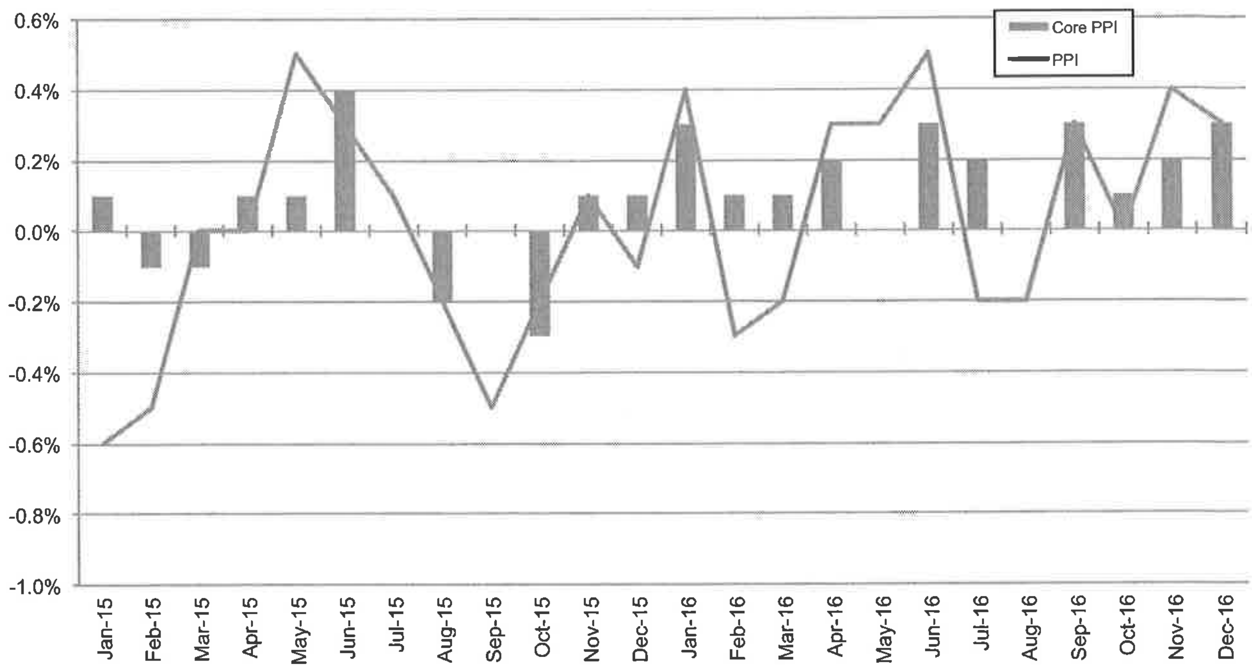
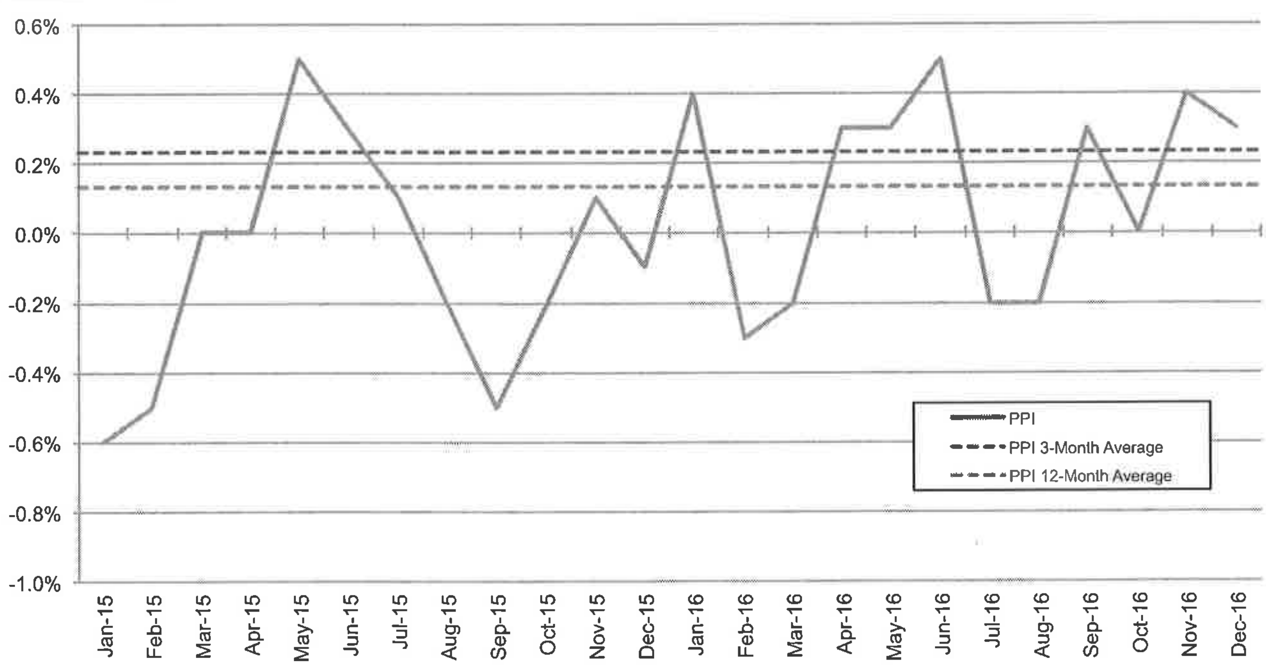


EXHIBIT 6D: U.S. Producer Price Index—Past 24 Months With Averages



Source of data: U.S. Department of Labor.
Note: Data are seasonally adjusted change from the prior month. Core CPI is the All Items Less Food and Energy Index. Core PPI is the Final Demand Goods Less Foods and Energy Index.

The regular retail gas price (conventional areas) was $2.25 per gallon at the end of the fourth quarter, up slightly from $2.17 per gallon at the end of the previous quarter and up from one year ago when the price was $1.93 per gallon. Prices are expected to rise to an average of $2.39 per gallon in 2017 and $2.44 per gallon in 2018.

The Henry Hub natural gas spot price was $3.71 per million Btu (MMBtu) at the end of the fourth quarter, up from $2.84 per MMBtu at the end of the previous quarter and above the price of $2.28 per MMBtu from one year ago.

(See Exhibit 2B for historic and forecasted energy price figures.)

4. INTEREST RATES

The Federal Open Market Committee (FOMC) met twice during the fourth quarter of 2016, issuing a statement from each meeting. In the December meeting, the FOMC decided to raise the target range for the federal funds rate to between 0.5% and 0.75%. The federal funds rate is the interest rate at which a commercial bank lends immediately available funds in balances at the Federal Reserve to another commercial bank. The FOMC establishes a target rate and expands or contracts the money supply with the aim that the federal funds rate, a market rate, will approximate the target rate.

The FOMC stated that it wishes to maintain an accommodative policy to further support improvement in labor market conditions and a return to 2.0% inflation. In making its decision to raise the federal funds rate, the FOMC acknowledged that economic conditions will evolve in a manner that will warrant only gradual increases in the federal funds rate. The federal funds rate is likely to remain below levels that are expected to prevail in the longer run. The actual path of the federal funds rate will depend on the economic outlook as informed by incoming data, although the FOMC also announced plans to raise rates up to three times in 2017, two to three times in 2018, and three times in 2019.

The FOMC stated that it would continue to assess a wide range of information in determining the timing and size of future adjustments to the federal funds rate, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments. The statement also noted that, based on the Committee's expectations of economic conditions, the federal funds rate will only rise gradually and will likely remain low for some time.

FOMC stated that it found that the labor market had continued to strengthen and that economic activity has been expanding at a moderate pace since midyear. It also noted the job gains have been solid, and unemployment has declined. In addition, household spending has been rising moderately, but business investment has remained soft. It also noted that inflation increased but has continued to remain below the committee's 2.0% target, mostly due to earlier declines in energy prices and nonenergy imports.

To maintain accommodative financial conditions, the FOMC maintained its existing policy of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities. The committee anticipated that it would continue this policy until the federal funds rate normalizes to its longer-run level.

During the fourth quarter of 2016, the Board of Governors of the Federal Reserve raised the discount rate 1.00%, to 1.25%. The discount rate is the interest rate a commercial bank is charged to borrow funds, typically for a short period, directly from a Federal Reserve Bank. This is only the second time in a decade the FOMC has raised rates.

The board of directors of each Reserve Bank establishes the discount rate every 14 days, subject to the approval of the Board of Governors.

5. UNEMPLOYMENT AND PERSONAL INCOME

Job growth continued to be solid in December, as employment rose by 156,000. Job growth has averaged 165,000 jobs per month over the past three months, well above the 80,000-jobs-a-month pace the White House Council of Economic Advisers believes is needed to maintain a low and stable unemployment rate. The unemployment rate increased 0.1 percentage point in December, to 4.7%, while the labor-force participation rate remained unchanged, at 62.7%. In 2016, job gains totaled nearly 2.2 million, a decline of about a half a million from the previous year.

Employment in professional and business services rose by 15,000 in December and has now risen 522,000 over the year. The healthcare sector added 43,000 jobs in December and averaged 35,000 jobs per month in 2016. Employment in the food services industry continued to rise, increasing by 30,000 in December and 247,000 over the past year. Jobs in social assistance increased, growing by 20,000 over the month and 92,000 over the last 12 months. Employment in mining, construction, wholesale trade, retail trade, information, and government changed little in December.

The unemployment rate (also known as the U3 unemployment rate) ticked upward 0.1 point in December, to 4.7%. The U3 unemployment rate is the official unemployment rate per the International Labour Organization definition and occurs when people who have actively looked for work within the past four weeks are still without jobs.

The report found that the labor-force participation rate remained unchanged in December, at 62.7%, a figure that also remained unchanged for the year. The employment-population ratio, which is the share of the working-age population with a job, remained unchanged, at 59.7%, in December. The number of long-term unemployed (those jobless for 27 weeks or more) changed little in December, at 1.8 million, or 24.2% of the unemployed. In 2016, this figure declined by 263,000.

The broadest measure of labor underutilization, the U6 unemployment rate, fell 0.1 point in December at a seasonally adjusted 9.2%. U6 unemployment is broader than U3 and includes "marginally attached workers" and people who are looking for and want full-time work but have settled for part-time employment. Marginally attached workers are people who are not actively looking for work but who have indicated that they want a job and have looked for work (without success) sometime in the past 12 months. This class also includes "discouraged workers," those who have completely given up on finding a job because they feel that they would be unable to find one.

The Hamilton Project calculates that, if the economy adds 180,000 jobs a month, which is the average monthly rate of job creation for the past 12 months, then it will take until June 2017 to close the "jobs gap" left by the recession. According to the Hamilton Project, the U.S. had a jobs gap of 0.8 million jobs as of December 2016. The jobs gap is the number of jobs that the U.S. economy needs to create to return to prerecession employment levels while also absorbing the people who enter the labor force each month. The Hamilton Project was launched in 2006 as an economic policy initiative at the Brookings Institution. The Hamilton Project is guided by an advisory council of academics, business leaders, and former public policymakers.

(See Exhibits 2A, 4, and 7 for historic and forecasted unemployment figures.)

EXHIBIT 7A: U.S. Employment—Past 24 Months

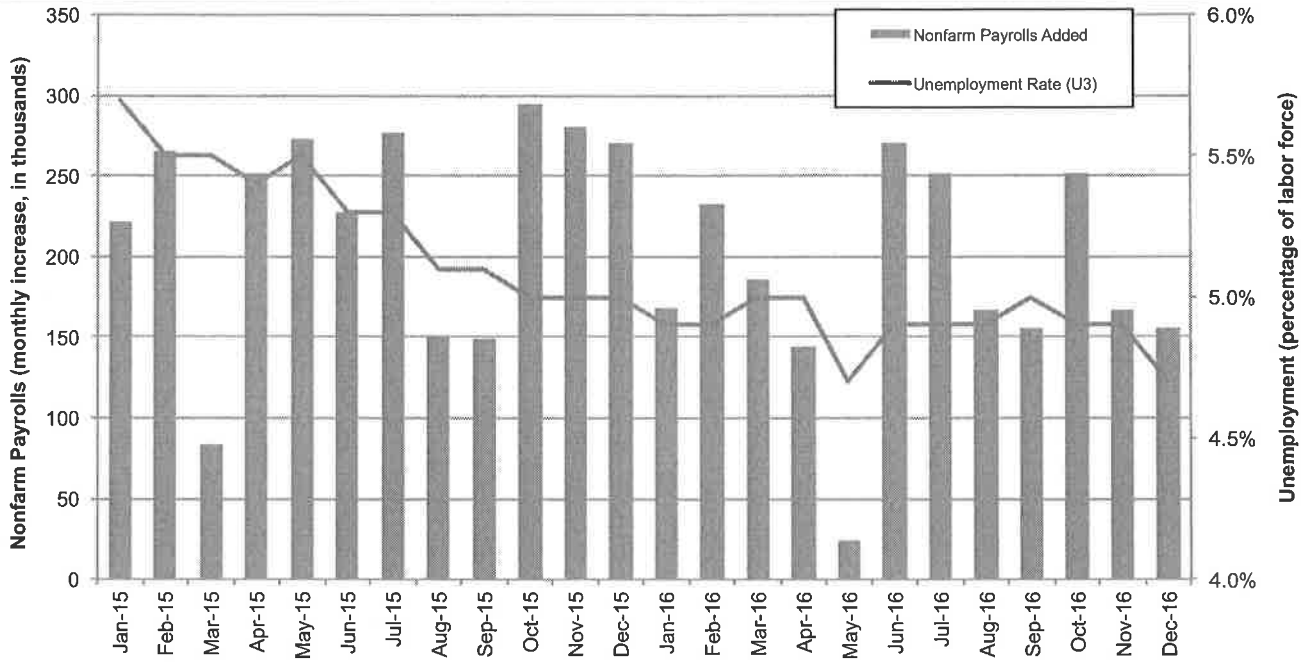
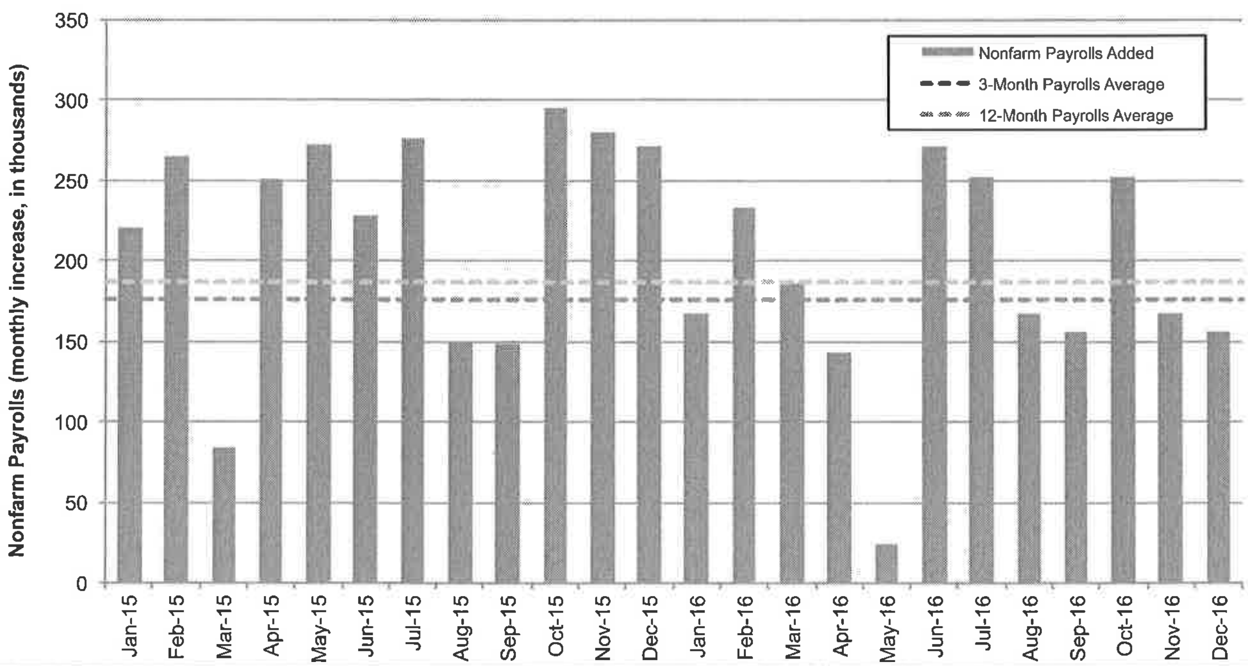


EXHIBIT 7B: U.S. Employment—Past 24 Months With Averages



Source of data: U.S. Department of Labor.

Notes: U3 is the official unemployment rate per the International Labour Organization definition and occurs when people are without jobs and they have actively looked for work within the past four weeks. U6 unemployment is broader than U3 to include "marginally attached workers" and people who are looking for and want full-time work but have to settle on part-time employment. "Marginally attached workers" are people who are not actively looking for work, but who have indicated that they want a job and have looked for work (without success) sometime in the past 12 months. This class also includes "discouraged workers" who have completely given up on finding a job because they feel that they just won't find one.

EXHIBIT 7C: U.S. Employment—Since 2008

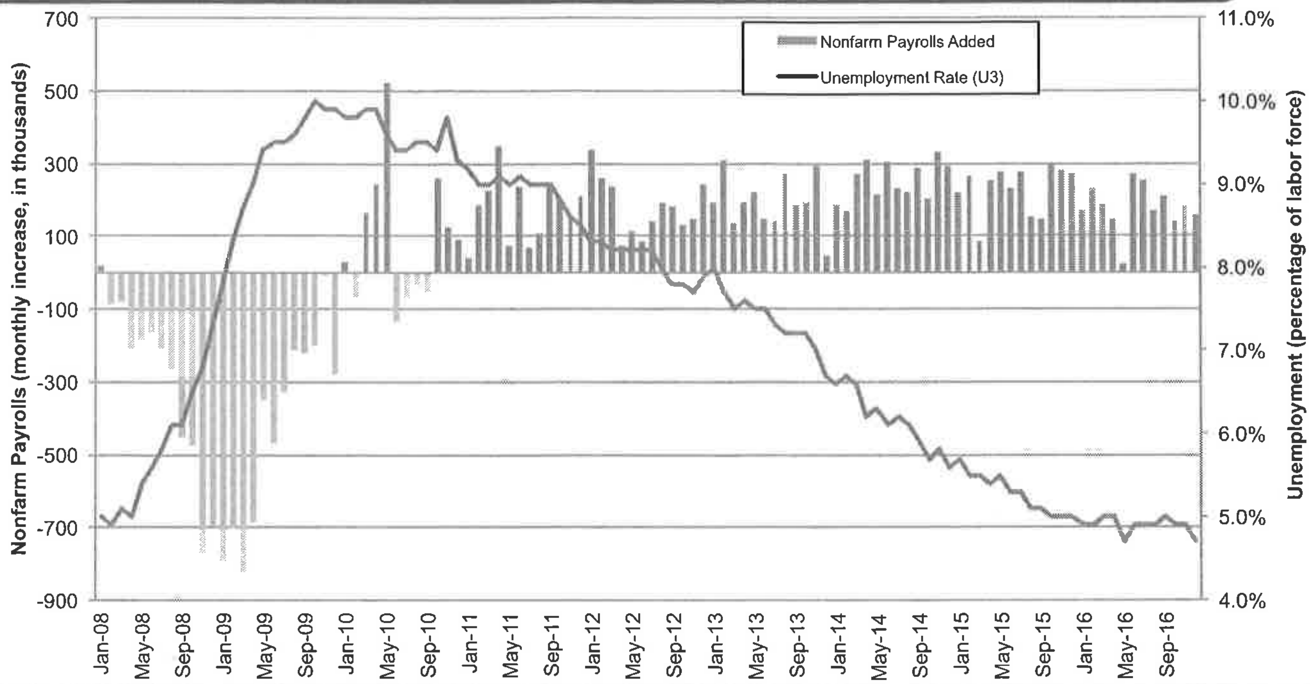


EXHIBIT 7D: U3 Unemployment Compared With U6 Unemployment—Since 2008

Source of data: U.S. Department of Labor.

Notes: U3 is the official unemployment rate per the International Labour Organization definition and occurs when people are without jobs and they have actively looked for work within the past four weeks. U6 unemployment is broader than U3 to include "marginally attached workers" and people who are looking for and want full-time work but have to settle on part-time employment. "Marginally attached workers" are people who are not actively looking for work, but who have indicated that they want a job and have looked for work (without success) sometime in the past 12 months. This class also includes "discouraged workers" who have completely given up on finding a job because they feel that they just won't find one.

Job growth continued to be solid in December, and wage growth also experienced a boost. Average hourly earnings for all private-sector employees climbed 10 cents in December, to $26.00. By contrast, average hourly earnings for all private-sector employees were up 74 cents, or 2.9%, over the past 12 months, a rate much faster than the pace of inflation. Average hourly earnings for private-sector production and nonsupervisory employees rose by seven cents in December, to $21.80. Over the last 12 months, average hourly earnings for private-sector production and nonsupervisory employees have increased 54 cents, or 2.5%.

The average workweek for all private workers remained unchanged in December, at 34.4 hours, but was down slightly from the 34.5-hour workweek a year ago. The manufacturing workweek rose 0.1 hour in December, to 40.7 hours, while manufacturing overtime rose 0.1 hour, to 3.3 hours. The average workweek for production and nonsupervisory employees remained unchanged, at 33.6 hours.

The Bureau of Economic Analysis reported that current-dollar personal income increased $152.0 billion in the fourth quarter of 2016, following an increase of $172.3 billion in the third quarter. The deceleration in personal income primarily reflected a deceleration in wages and salaries.

Disposable personal income increased $130.2 billion (+3.7%) in the fourth quarter, compared with an increase of $141.5 billion (+4.1%) in the third. Real disposable personal income rose 1.5% in the fourth quarter, compared with an increase of 2.6% in the third.

Personal saving—disposable personal income less personal outlays—was $791.2 billion in the fourth quarter, down from $818.1 billion in the third. The personal saving rate—saving as a percentage of disposable personal income—was 5.6% in the fourth quarter, down from 5.8% in the prior quarter.

6. INDEX OF LEADING INDICATORS

The Conference Board's Leading Economic Index (LEI) increased 0.5% in December, marking a gain for the fourth consecutive month. The gain in December brought the index level to a reading of 124.6%. The gain was fueled by positive contributions from the yield spread, stock prices, and average consumer expectations for business conditions. Over the second half of 2016, the leading economic index grew 1.4% (about a 2.8% annual rate), which is significantly faster than the 0.2% (0.3% annual rate) during the first half of 2016. With gains in the final months of 2016, the index suggests that the economy is expected to grow at least at a moderate pace in the early months of 2017.

In December, six of the 10 components that comprise LEI rose. The positive contributors, beginning with the largest, were the interest rate spread, stock prices, consumer expectations, ISM new orders, leading credit index, and orders for consumer goods and materials. The two negative contributors, beginning with the largest, were initial claims and nondefense capital goods excluding aircraft. Manufacturing workweek and building permits were the two components that remained unchanged.

The LEI is a leading American economic indicator intended to forecast future activity. The Conference Board, a nongovernmental organization, calculates the index from the values of 10 key variables, including:

- Average weekly hours, manufacturing;
- Average weekly initial claims for unemployment insurance;

- Manufacturers' new orders, consumer goods and materials;
- Institute for Supply Management's Index of New Orders;
- Manufacturers' new orders, nondefense capital goods excluding aircraft orders;
- Building permits, new private housing units;
- Stock prices, 500 common stocks;
- Leading Credit Index;
- Interest rate spread, 10-year Treasury bonds less federal funds; and
- Average consumer expectations for business conditions.

7. CONSUMER CONFIDENCE

Following a considerable increase in November, the Consumer Confidence Index increased in December by 6.6 points, to 113.7. This is the best reading since August 2001. The post-election surge in the index reflects consumer optimism in the economy, jobs, and their personal income. The survey is a leading indicator of consumer attitudes, measures of confidence toward business conditions, short-term outlook, and personal finances and jobs.

Consumers' impressions of current economic situations declined in December. The Present Situation Index dropped 5.9 points, to 126.1, although at levels that still show signs of confidence in the present and near-term future economy. The index's November levels had reported the highest levels since July 2007. The share of respondents who said that jobs were plentiful declined 0.9 points in December, to 26.9, while those who believed jobs are hard to get increased 1.3%, to 22.5%.

Consumers were more optimistic about the short-term outlook in December. The Expectations Index surged up 11.1 points, to 105.5. The share of consumers who expect business conditions to improve over the next six months increased by 7.2 points, to 23.6%, while the percentage who expect their incomes to increase also improved, gaining 3.6 points, moving up to 21.0%. The percentage of consumers expecting business conditions to worsen fell by 1.2%, to 8.7%.

The Conference Board found that consumers' expectations for buying plans improved modestly. Plans to purchase major appliances and homes improved slightly, while plans to purchase an automobile declined modestly.

The Consumer Confidence Index is an indicator designed to measure the degree of optimism about the state of the economy that consumers are expressing through their savings and spending. A month-on-month decreasing trend in the Consumer Confidence Index suggests consumers have a negative outlook on their ability to secure and retain good jobs, whereas a rising trend in consumer confidence indicates improvements in consumer buying patterns. Opinions on current conditions make up 40% of the index (the Present Situation Index), while expectations of future conditions comprise the remaining 60% (the Expectations Index).

Consumer sentiment increased in December, recording an annual high and reaching the highest total since 2004. The Thomson Reuters/University of Michigan's Consumer Sentiment Index climbed 4.4 points to end December with a reading of 98.2. The median projection in a Bloomberg survey called for a reading of 98.0. The Current

Conditions Index increased 4.6 points in December, to 111.9, reaching its highest level since 2005. Meanwhile, the Index of Consumer Expectations increased by 4.3 points, to 89.5, its highest level since January 2015. Overall, the data indicate that expectations for personal finances will improve in 2017.

The survey found that 18% of consumers became more optimistic about prospects for the economy and the expected favorable impact of the new president's policies on the economy. Notably, this is twice as high as the 9% peak in 1981, when Ronald Reagan took office.

Respondents' buying plans soured in December due to concerns about higher interest rates, which affect the purchases of housing and vehicles.

The Thomson Reuters/University of Michigan's Survey of Consumers is a rotating panel survey based on a nationally representative sample that gives each household in the contiguous U.S. an equal probability of being selected. Interviews are conducted by telephone throughout the month. The Index of Consumer Sentiment is composed of the Expectations Index and the Current Conditions Index and is intended to gauge how consumers feel the economic environment will change. The survey's Index of Consumer Expectations is an official component of the U.S. Leading Economic Index.

(See Exhibit 8 for consumer confidence and consumer sentiment figures.)

8. BUSINESS OPTIMISM

Business-owner optimism continued to climb in December. The National Federation of Independent Business's (NFIB) Small Business Optimism Index rose 7.4 points, to 105.8, its highest levels since 2004. This marks the second consecutive month in which small-business owners reported a much brighter outlook for the economy and higher expectations for their business. The December reading remained above the 42-year average of 98.0.

Seven of the 10 components that make up the Small Business Optimism Index posted a gain in December. The component that measures whether owners expected the economy to improve surged 38.0 points, to a net 50.0%, while the component that measures the expectations for higher real sales improved 20.0 points, to a net 31.0% in December. However, the component that measures owners' expectations of current job openings fell 2.0 points, to a net 29.0%. The index that measures plans to increase inventory remained unchanged.

The Small Business Optimism Index is compiled from a survey of the NFIB's 350,000 members that it conducts each month. NFIB, founded in 1943, began conducting its survey quarterly in 1974, transitioning to a monthly survey in 1986. The index is a composite of 10 seasonally adjusted components based on questions about the following: plans to increase employment, plans to make capital outlays, plans to increase inventories, whether members expect the economy to improve, whether they expect real sales will be higher, current inventory, current job opening, expected credit conditions, whether now is a good time to expand, and earnings trend. Analysts watch the index because small businesses are responsible for the majority of new job creation and the NFIB focuses on this sector of the economy.

The 4Q 2016 Wells Fargo/Gallup Small Business Index, which was reported in August, surged up 12.0 points, to 80.0. This represents the highest optimism reading since January 2008 and the largest quarterly increase in a year. The report highlighted that small-business owners are more optimistic about the operating environment in 2017. The 4Q survey asked small-business owners about their priorities for the incoming president and Congress.

Eighty-one percent said actions relating to the tax code, tax regulations, and tax rates for small businesses were most important. Other top priorities included the healthcare law (76%), government regulation of small business (70%), and actions that could affect oil prices or energy costs (59%). The report went on to note that, in six key areas—financial situation, cash flow, revenues, capital spending allocation, hiring, and credit availability—the present situation dipped five points, from 29 points in July to 24 points in November, while the future expectations score rose 17 points, from 39 in July to 56 in November.

Since August 2003, the Wells Fargo/Gallup Small Business Index has surveyed small-business owners on current and future perceptions of their business's financial situation. The Small Business Index is published once a quarter. The Small Business Index consists of owners' ratings of their business's current situation and their expectations for the next 12 months, measured in terms of their overall financial situation, revenue, cash flow, capital spending, number of jobs, and ease of obtaining credit. Before the recession and financial crisis of 2008-2009, Small Business Index scores were generally in triple digits. The Small Business Index reached its peak of 114.0 in December 2006 and hit its low point of -28.0 in July 2010.

The RSM U.S. Middle Market Business Index (MMBI) jumped 4.5 points in the fourth quarter of 2016, climbing to a reading of 120.1. The MMBI reading indicated that overall growth in the U.S. middle market is likely to slow in the final quarter of the year, though the information was gathered before the results of the presidential election. Data for six months ahead are more encouraging, particularly with respect to capital expenditures, investments, and compensation, when compared to three months prior. U.S. long-term growth rebounded to 3.2%, from 1.4%, based on the Bureau of Economic Analysis's second estimate of gross domestic product. Of particular note, the analysis shows improvement in hiring and compensation, both of which stand near cyclical highs and are indicative of the sharp tightening seen in the U.S. labor markets, arriving at a point in the business cycle where rising wages and salaries are now likely to create narrowing profit margins for the middle market.

The RSM U.S. Middle Market Business Index is based on quarterly survey data collected by RSM U.S. LLP and Nielsen N.V. and is developed in partnership with Moody's Analytics. The MMBI survey and data began in the first quarter of 2015, and the survey panel consists of 700 middle-market executives. An MMBI reading above 100 generally indicates that the middle market is expanding, and a reading below 100 generally indicates that the middle market is contracting.

(See Exhibit 8 for business optimism figures.)

9. STOCK MARKETS AND VOLATILITY

The major stock indexes recorded gains in the fourth quarter, carrying on the previous quarter's upward momentum. The Nasdaq Composite Index saw strong gains, as did the Russell 2000 index. Within the S&P 500 sectors, financial stocks jumped 21.1%, while telecommunication services stocks—which are dividend-heavy—fell nearly 4.4% as expectations grew for competition from higher bond yields.

The Dow Jones Industrial Average (Dow) saw a 7.9% price return in the fourth quarter. In 2016, the Dow had a total return of 16.5%, while also posting its best annual gains in three years. The Dow is an index of 30 of the largest and most widely held public companies in the U.S. and is considered the most-watched index in the world.

The Nasdaq Composite Index, consisting mainly of high-tech stocks, rose 2.5% in the fourth quarter and was up 7.5% for the year.

EXHIBIT 8A: Consumer Confidence and Small Business Optimism—One Year

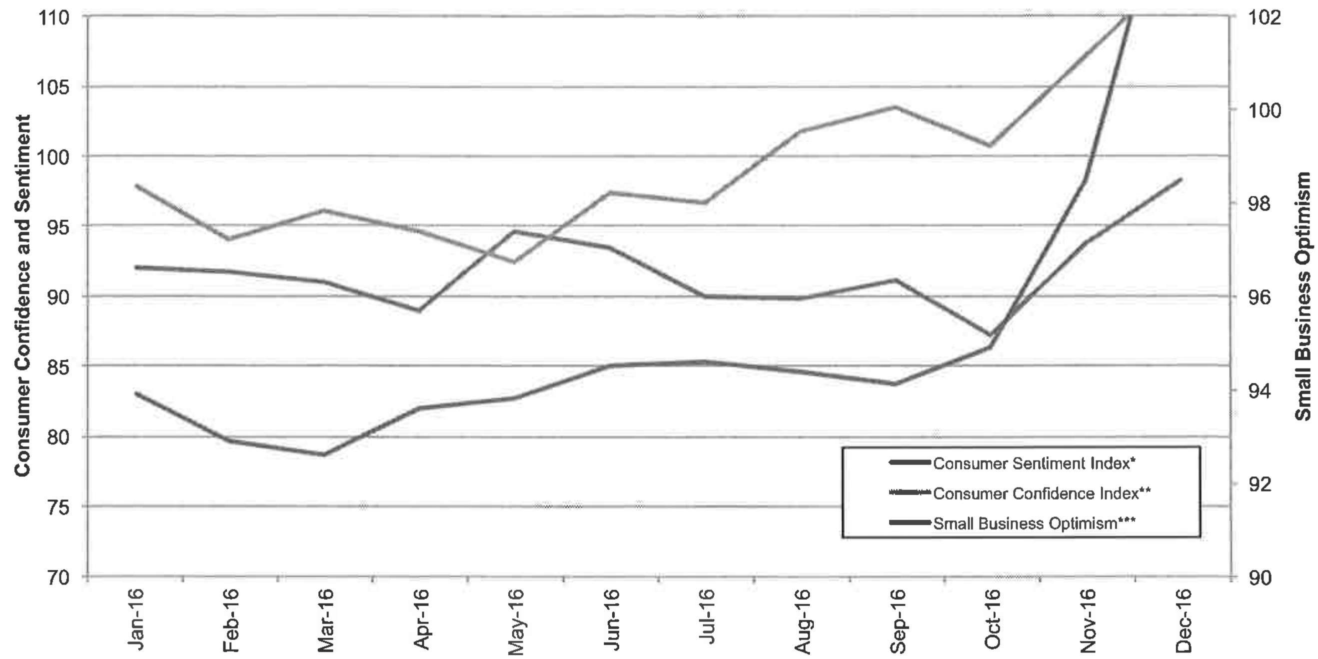
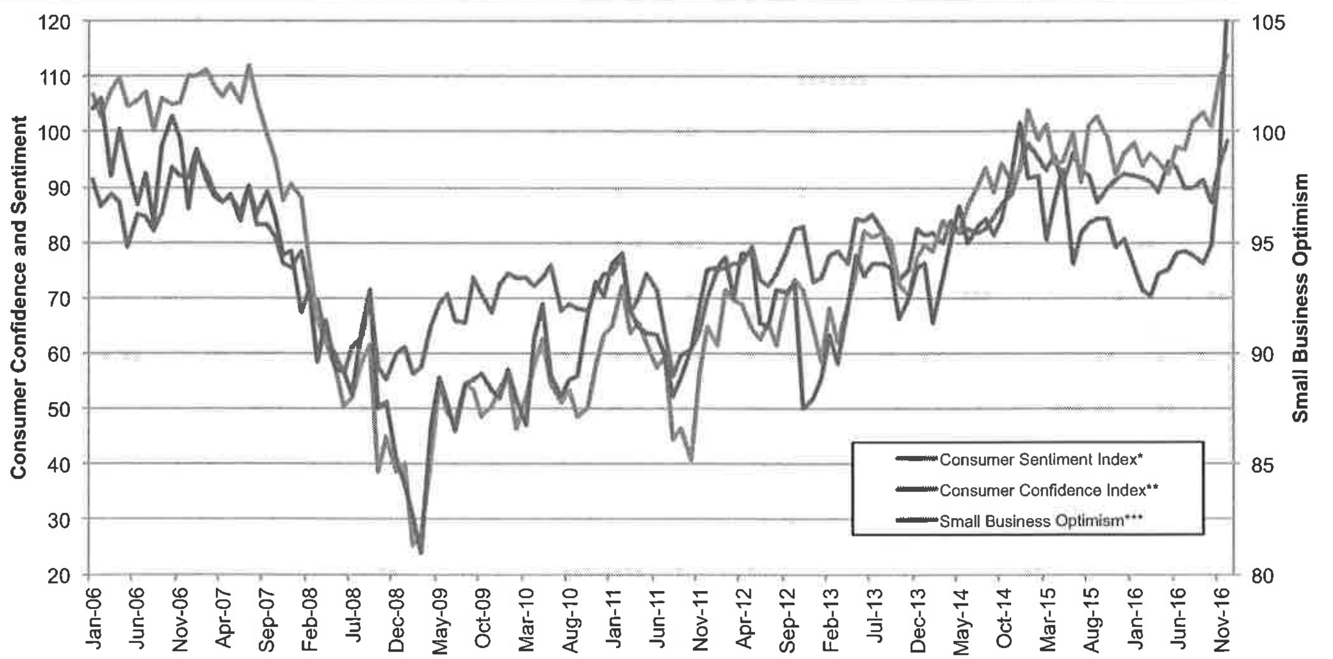


EXHIBIT 8B: Consumer Confidence and Small Business Optimism—Since 2006



Source of data: The Conference Board, Thomson Reuters/University of Michigan, National Federation of Independent Business.
Notes:
* Thomson Reuters/University of Michigan Index of Consumer Sentiment
** The Conference Board Consumer Confidence Index®
*** National Federation of Independent Business Small Business Optimism Index
**** Wells Fargo/Gallup Small Business Index

EXHIBIT 8C: Small Business Index—Prior 12 Quarters

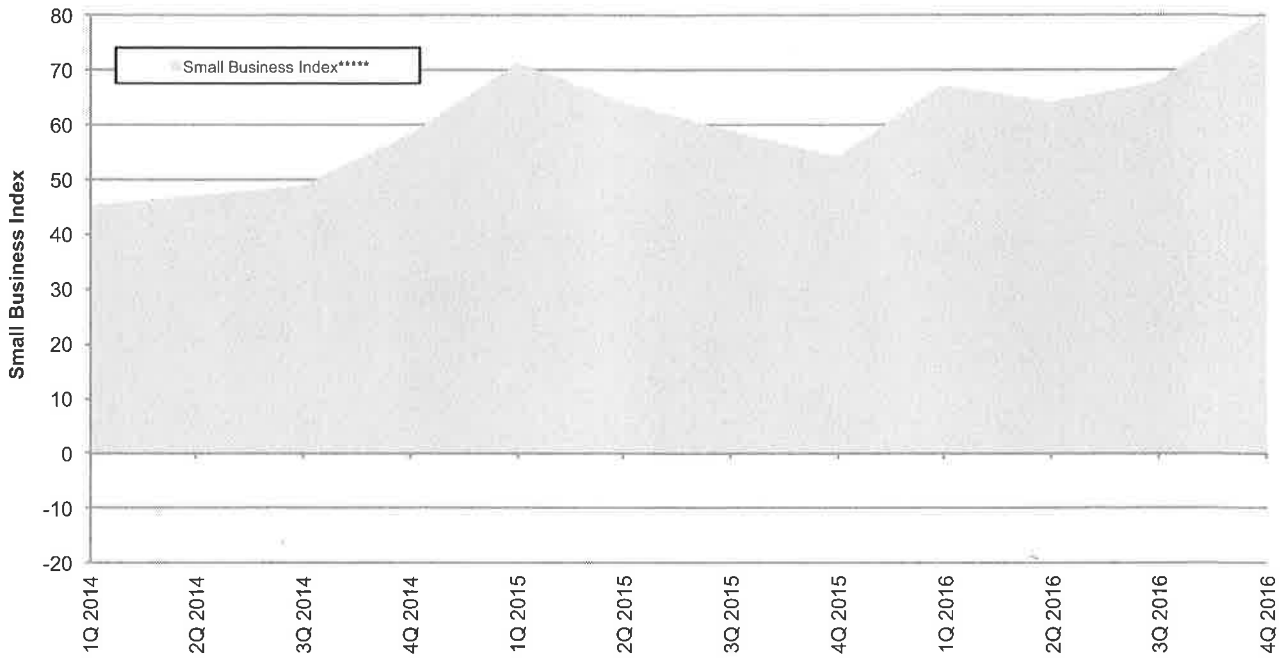
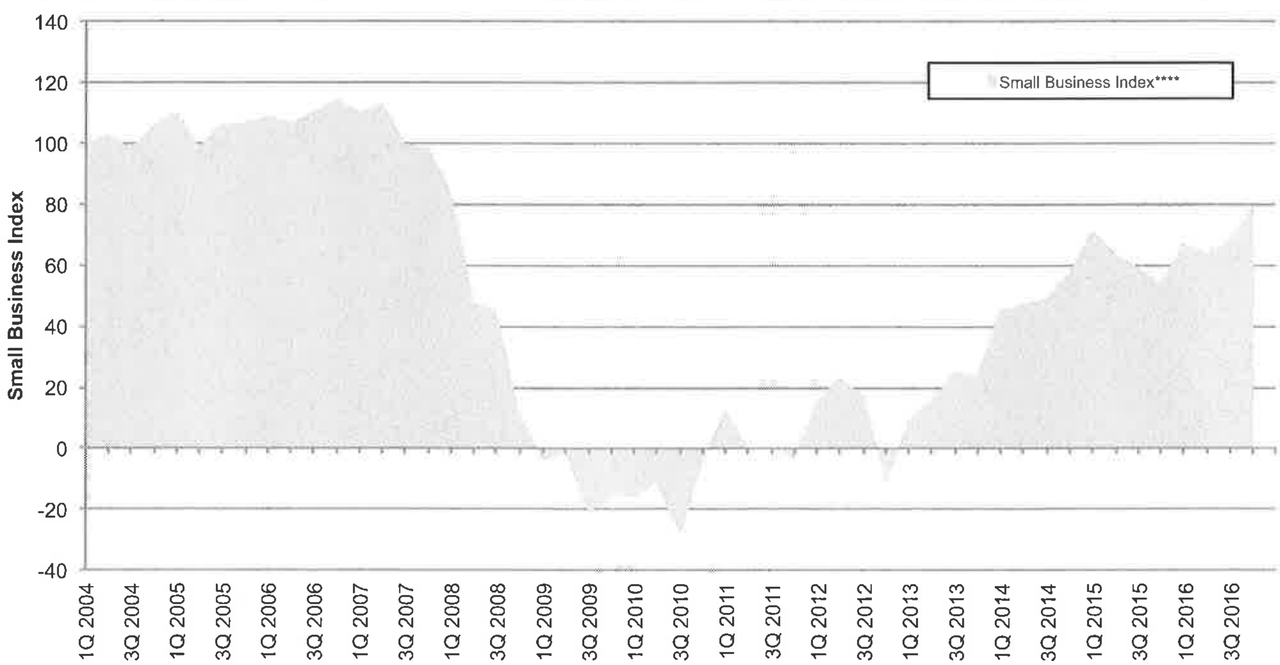


EXHIBIT 8D: Small Business Index—Since 2004



Source of data: The Conference Board, Thomson Reuters/University of Michigan, National Federation of Independent Business.
Notes:
* Thomson Reuters/University of Michigan Index of Consumer Sentiment
** The Conference Board Consumer Confidence Index®
*** National Federation of Independent Business Small Business Optimism Index
**** Wells Fargo/Gallup Small Business Index

The S&P 500 Index increased 3.3% in the fourth quarter. Including dividends, the S&P 500's total return was 3.8% in the fourth quarter and 12.0% in 2016. The S&P 500 consists of a representative sample of 500 leading companies of the U.S. economy and is one of the most commonly used benchmarks for the overall U.S. stock market.

The S&P MidCap 400 index improved 7.0% in the fourth quarter. The total return for the S&P MidCap 400 in 2016 was 20.1%. The S&P MidCap 400, which is distinct from the large-cap S&P 500, measures the performance of midsized companies and is the most widely followed midcap index.

The Russell 2000 Index advanced 8.4% this quarter. The total return for the Russell 2000 in 2016 was 21.3%. The Russell 2000 Index serves as a benchmark for small-cap stocks in the U.S. stock market.

(See Exhibit 9 for stock price figures.)

Market volatility eased somewhat in the fourth quarter. The Chicago Board Options Exchange Volatility Index (VIX)—a popular volatility measure—saw a high reading of 22.5, up from a high of 18.1 in the third quarter. The average VIX reading for the fourth quarter was comparable to that in the second: 14.1 compared to 13.2.

The VIX represents the implied volatility of 30-day options on the Standard & Poor's 500 stocks and has been termed by analysts and investors as the "fear gauge." Accordingly, the VIX represents the expected volatility of the market, as represented by the S&P 500. Stock market professionals use the VIX to gauge investor sentiment. Values greater than 30 are generally associated with a large amount of volatility as a result of investor fear or uncertainty, while values below 20 generally correspond to less stressful, even complacent, times in the markets.

(See Exhibit 9 for VIX figures.)

10. BOND MARKETS

Treasury yields rose throughout the fourth quarter, as markets reacted to potential economic policies implemented under President Trump. Pro-growth policy proposals such as infrastructure spending, tax cuts, and deregulation would cause inflation to accelerate and force the Fed to raise interest rates, which in turn would push yields higher.

The 30-day T-bill rate was 0.25% at the beginning of the fourth quarter of 2016 and rose to 0.44% by the end of the quarter. The five-year Treasury ended the fourth quarter with a yield of 1.93%, up from a yield of 1.18% at the beginning of the quarter.

The 10-year Treasury bond yield rose from 1.63% at the beginning of the fourth quarter to 2.45% at the end of December. The 20-year Treasury bond yield advanced from 2.01% at the start of the fourth quarter to 2.79% at the end.

The prime lending rate began the fourth quarter at 3.50% before finishing December at 3.75%. The discount window (primary credit) also rose in the fourth quarter, gaining 0.25 percentage point, to 1.25%.

(See Exhibits 2A, 10, 11, and 12 for historic and forecasted Treasury, bond, and federal funds rate figures.)

11. CONSTRUCTION

Housing starts increased in December, with privately owned housing starts rising at a seasonally adjusted annual rate of 1,226,000 in December, up 11.3% from the previous month and up 5.7% over the past 12 months. The

EXHIBIT 9: Stock Market Historical Data

	QUARTERLY PRICE RETURNS											
(%)	1Q 14	2Q 14	3Q 14	4Q 14	1Q 15	2Q 15	3Q 15	4Q 15	1Q 16	2Q 16	3Q 16	4Q 16
DJIA	-0.7	2.2	1.3	4.6	-0.3	-0.9	-7.6	7.0	1.5	1.4	2.1	7.9
Nasdaq Composite	0.5	5	1.9	5.4	3.5	1.8	-7.4	8.4	-2.7	-0.6	9.7	2.5
S&P 500	1.3	4.7	0.6	4.4	0.4	-0.2	-6.9	6.5	0.8	1.9	3.3	3.3
S&P MidCap 400	2.7	3.9	-4.3	5.9	4.9	-1.4	-8.9	2.2	3.3	3.6	3.7	7.0
Russell 2000	0.8	1.7	-7.7	9.4	4	0.1	-12.2	3.2	-1.9	3.4	8.7	8.4

	YEARLY PRICE RETURNS										FORECAST*	
(%)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
DJIA	6.4	-33.8	18.8	11.0	5.5	7.3	26.5	7.5	-2.2	16.5		
Nasdaq Composite	9.8	-40.5	43.9	16.9	-1.8	15.9	38.3	13.4	5.7	7.5		
S&P 500	3.5	-38.5	23.5	12.8	0.0	13.4	29.6	11.4	-0.7	12.0	2.9	
S&P MidCap 400	6.7	-37.3	35.0	24.9	-3.1	16.1	31.6	8.2	-3.7	20.7		
Russell 2000	-2.7	-34.8	25.2	25.3	-5.5	14.6	37.0	3.5	-5.7	21.3		

	MONTHLY DATA											
	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16
DJIA	16,466.3	16,516.5	17,685.1	17,773.6	17,787.2	17,930.0	18,432.2	18,400.9	18,308.2	18,142.4	19,123.6	19,762.6
Nasdaq Composite	4,614.0	4,558.0	4,869.9	4,775.4	4,948.1	4,842.7	5,162.1	5,213.2	5,312.0	5,819.1	5,323.7	5,444.5
S&P 500	1,940.2	1,932.2	2,059.7	2,065.3	2,097.0	2,098.9	2,173.6	2,171.0	2,168.3	2,126.2	2,198.8	2,238.8
S&P MidCap 400	1,317.7	1,334.2	1,445.2	1,461.7	1,493.1	1,496.5	1,559.5	1,564.8	1,552.3	1,509.5	1,627.5	1,660.6
Russell 2000	1,035.4	1,033.9	1,114.0	1,130.9	1,154.8	1,151.9	1,219.9	1,239.9	1,251.7	1,191.4	1,322.3	1,357.1
VIX**	27.6	28.1	18.7	16.3	16.3	25.8	15.6	13.7	18.1	17.1	22.5	14.1

	Quarterly Data											
	1Q 13	2Q 13	3Q 13	4Q 13	1Q 14	2Q 14	3Q 14	4Q 14	1Q 15	2Q 15	3Q 15	4Q 15
DJIA	14,578.54	14,909.60	15,129.67	16,576.66	16,457.66	16,826.60	17,042.90	17,823.07	17,776.12	17,619.51	16,284.70	17,425.03
Nasdaq Composite	3,267.52	3,403.25	3,771.48	4,176.59	4,198.99	4,408.18	4,493.39	4,736.05	4,900.88	4,986.87	4,620.16	4,736.05
S&P 500	1,569.19	1,606.28	1,681.55	1,848.36	1,872.34	1,960.23	1,972.29	2,058.90	2,067.89	2,063.11	1,920.03	2,058.90
S&P MidCap 400	1,153.68	1,160.82	1,243.85	1,342.53	1,378.50	1,432.94	1,370.97	1,452.44	1,524.03	1,502.17	1,368.91	1,452.44
Russell 2000	951.54	977.48	1,073.79	1,163.64	1,173.04	1,192.96	1,101.68	1,204.70	1,252.77	1,253.95	1,100.69	1204.7
VIX**	19.0	20.5	17.0	20.3	21.4	12.7	17.0	25.3	22.4	18.9	40.7	25.3

	YEARLY DATA										FORECAST*	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
DJIA	13,264.82	8,776.39	10,428.05	11,577.51	12,217.56	13,104.14	16,576.66	17,823.07	17,425.03	19,762.60		
Nasdaq Composite	2,652.28	1,577.03	2,269.15	2,652.87	2,605.15	3,019.51	4,176.59	4,736.05	5,007.41	5,383.12		
S&P 500	1,468.36	903.25	1,115.10	1,257.64	1,257.60	1,426.19	1,848.36	2,058.90	2,043.94	2,238.83	2,314.50	2,400.00
S&P MidCap 400	858.20	538.28	726.67	907.25	879.16	1,020.43	1,342.53	1,452.44	1,398.58	1,660.58		
Russell 2000	766.03	499.45	625.39	783.65	740.92	849.35	1,163.64	1204.7	1,135.89	1,357.13		
VIX**	31.1	80.9	56.7	45.8	48.0	26.7	20.5	25.3	40.7	28.1		

Source of data: Yahoo! Finance
Index Tickers: ^DJI, ^IXIC, ^GSPC, ^MID, ^RUT, ^VIX
Notes: Quotes are closing prices on the last day of trade for the month.
*Source: The Livingston Survey, June 2016
**VIX values reported are the highest value of the respective time period. VIX is a popular volatility measure; higher values correspond to greater volatility.

EXHIBIT 10: Bond Market Historical Data

	PERIODIC DATA								
	10/16			11/16			12/16		
(%)	BM	MM	EM	BM	MM	EM	BM	MM	EM
30-day Treasury Bill[1]	0.25	0.26	0.20	0.24	0.30	0.38	0.32	0.48	0.44
5-year Treasury Note[1]	1.18	1.28	1.31	1.30	1.68	1.83	1.90	2.10	1.93
10-year Treasury Bond[1]	1.63	1.80	1.84	1.83	2.23	2.37	2.45	2.60	2.45
20-year Treasury Bond[1]	2.01	2.22	2.25	2.24	2.64	2.73	2.82	2.89	2.79
Prime lending rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.75	3.75
Federal funds rate	0.29	0.41	0.31	0.41	0.41	0.31	0.41	0.66	0.55
Discount window primary credit rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.25	1.25
Corporate Bonds Moody's Seasoned Aaa[4]	N/A	N/A	N/A	N/A	N/A	N/A	3.24	3.52	3.44
Corporate Bonds Moody's Seasoned Baa[4]	N/A	N/A	N/A	N/A	N/A	N/A	4.19	4.43	4.29

Notes: BM=beginning of month, MM = mid-month, EM = end of month

	MONTHLY DATA								
(%)	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16
30-day Treasury Bill[1]	0.23	0.26	0.25	0.19	0.23	0.22	0.26	0.26	0.19
5-year Treasury Note[1]	1.52	1.22	1.38	1.26	1.30	1.17	1.07	1.13	1.18
10-year Treasury Bond[1]	2.09	1.78	1.89	1.81	1.81	1.64	1.50	1.56	1.63
20-year Treasury Bond[1]	2.49	2.20	2.28	2.21	2.22	2.02	1.82	1.89	2.02
Prime lending rate[2]	3.50	3.50	3.50	3.50	3.50	3.50	0.35	0.35	0.35
Federal funds rate[2]	0.34	0.38	0.36	0.37	0.37	0.38	0.39	0.40	0.40
Discount window primary credit rate[2]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Corporate Bonds Moody's Seasoned Aaa[4]	4.00	3.96	3.82	3.62	3.65	3.5	3.28	3.31	3.41
Corporate Bonds Moody's Seasoned Baa[4]	5.45	5.34	5.13	4.79	4.68	4.53	4.22	4.24	4.31

	YEARLY DATA								
(%)	2008	2009	2010	2011	2012	2013	2014	2015	2016
30-day Treasury Bill[1]	1.29	0.10	0.11	0.04	0.07	0.05	0.03	0.04	0.25
5-year Treasury Note[1]	2.80	2.20	1.93	1.52	0.76	1.17	1.64	1.53	1.33
10-year Treasury Bond[1]	3.66	3.26	3.22	2.78	1.80	2.35	2.54	2.14	1.84
20-year Treasury Bond[1]	4.36	4.11	4.03	3.62	2.54	3.12	3.07	2.55	2.22
Prime lending rate[3]	5.09	3.25	3.25	3.25	3.25	3.25	3.25	3.26	3.51
Federal funds rate[3]	1.92	0.16	0.18	0.10	0.14	0.11	0.09	0.13	0.39
Discount window primary credit rate[3]	2.39	0.50	0.72	0.75	0.75	0.75	0.75	0.76	1.01
Corporate Bonds Moody's Seasoned Aaa[4]	5.63	5.31	4.94	4.64	3.67	4.23	4.16	3.89	N/A
Corporate Bonds Moody's Seasoned Baa[4]	7.44	7.29	6.04	5.66	4.94	5.10	4.85	5.00	N/A

Source of data: The Federal Reserve Board.

Notes: (1) Yields on actively traded non-inflation-indexed issues adjusted to constant maturities (2) Monthly figures are averages of each calendar day in the month (3) Annualized figures use a 360-day year or bank interest (4) Average yield to maturity on selected long-term bonds

EXHIBIT 11: Treasury Historical Data

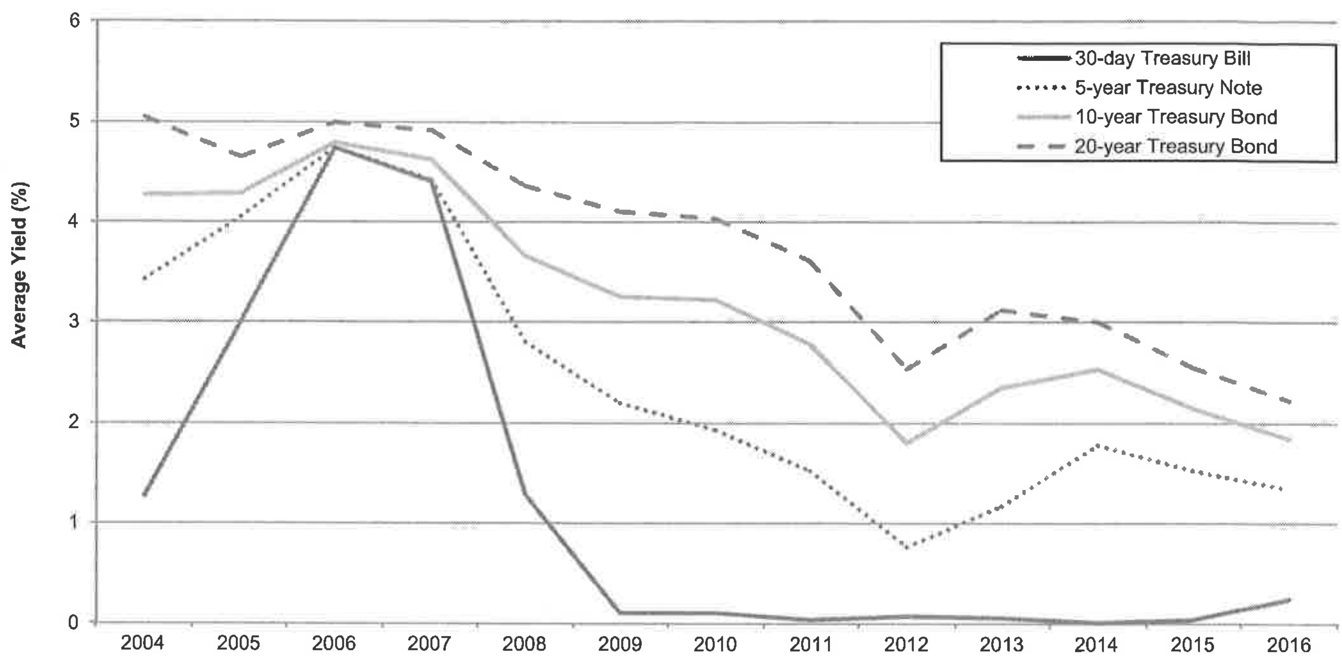
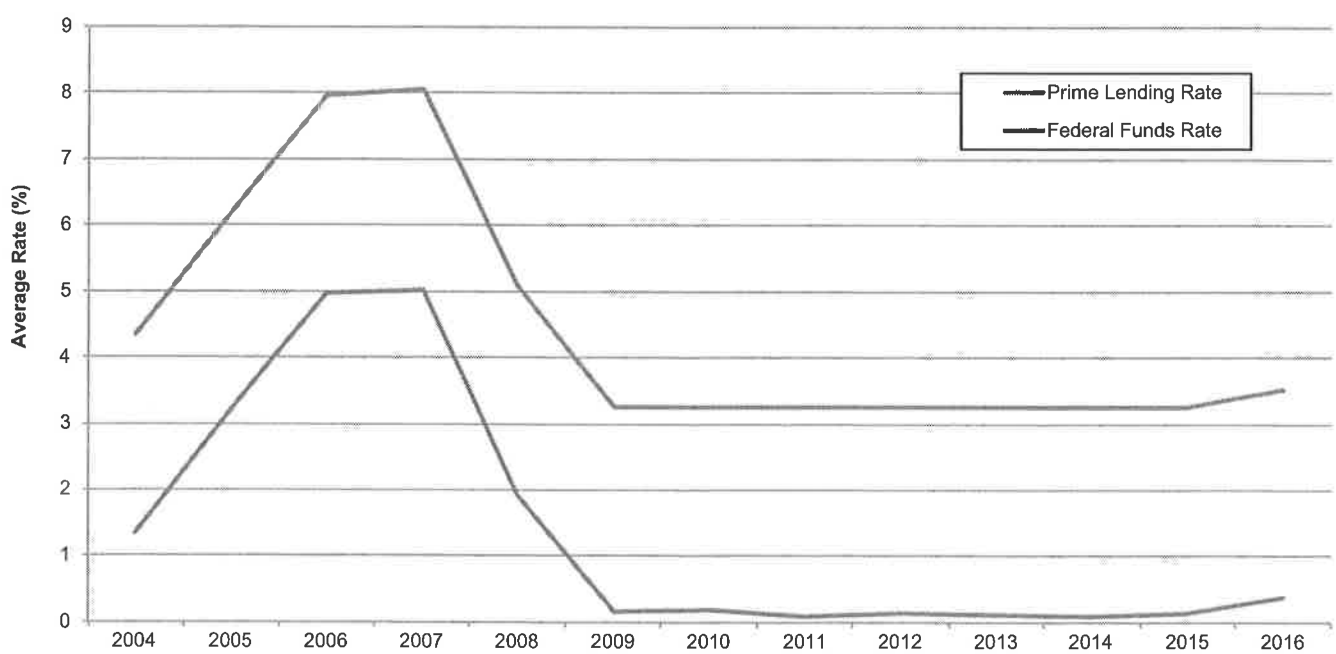


EXHIBIT 12: Prime Lending and Federal Funds Historical Data



construction of single-family homes decreased 4.0% in December but rose 3.9% over the past 12 months. The construction of multifamily homes increased 53.9% in December and 10.3% over the past year. The multifamily-home sector, which consists of buildings with five units or more, tends to be more volatile than the single-family-home sector.

(See Exhibits 2 and 4 for historic and forecasted housing starts figures.)

Building permit authorizations for privately owned housing units, considered a leading indicator of demand for new homes, rose at a seasonally adjusted rate of 1,210,000 in December. This is 0.2% below the rate reported in the prior month but 0.7% above the rate from one year ago. Building permits for single-family housing units edged up 4.7% in December and were up 10.7% from one year ago. Building permits for multifamily housing units fell 10.1% in December and were down 17.1% from one year ago.

(See Exhibit 4 for building permit authorization figures.)

The U.S. Census Bureau reported that overall spending on construction was at a seasonally adjusted annual rate of $1,181.5 billion in December. This figure was 0.2% below the November rate of $1,184.4 billion but 4.2% above the $1,133.7 billion rate from one year ago. Overall construction spending amounted to $1,162.4 billion in 2016, 4.5% above the $1,112.4 billion spent in 2015.

Spending on all private construction was at a seasonally adjusted annual rate of $897.0 billion in December, 0.2% above the November rate of $894.8 billion and 6.3% above the rate from one year ago. Private residential construction spending was at a seasonally adjusted annual rate of $466.9 billion in December, 0.5% above the rate of $464.8 billion in November and 3.7% above the rate from one year ago. Private nonresidential construction was at a seasonally adjusted annual rate of $430.1 billion in December, nearly the same as the November rate of $430.1 billion but 9.2% above the rate from a year ago.

The total amount spent on private construction was $876.3 billion in 2016, up 6.4% from the amount spent during that same period in 2015. Spending on residential construction was $456.2 billion in 2016, 5.2% greater than the amount spent during that same period in 2015. Spending on nonresidential private construction was $420.1 billion in 2016, 7.8% above the amount spent during the same period in 2015.

The seasonally adjusted annual rate of total public construction spending was $284.5 billion in December, a 1.7% decrease from the November rate of $289.6 billion and 1.8% below the rate from a year ago. Educational construction was at a seasonally adjusted annual rate of $70.1 billion in December, 2.2% below the November rate of $71.6 billion but 1.5% above the rate from a year ago. Highway and street construction was at a seasonally adjusted annual rate of $94.3 billion in December, 0.6% below the November rate of $94.9 billion but 1.5% above the rate from one year ago.

The total amount spent on public construction was $286.0 billion in 2016, down 1.0% from the amount spent during that period in 2015. Spending on educational construction was $69.7 billion in 2016, 4.7% above the amount spent during that period in 2015. Spending on highway and street construction was $91.2 billion in 2016, up 2.0% from the amount spent during the same period in 2015.

12. MANUFACTURING

The Federal Reserve reported that total industrial production rose 0.8% in December, after falling 0.7% in November. Capacity utilization for the industrial sector increased 0.6% in December, to 75.5%, a rate that is 4.5 percentage points below its long run (1972 to 2015) average. Industrial production was up 0.5% over the past 12 months. Industrial production is an output measure of the industrial sector of the economy. The industrial sector includes manufacturing, mining, and utilities. Manufacturing accounts for approximately 75% of total industrial production.

Manufacturing increased 0.2% in December and remained above 0.2% from a year ago. The production of durable goods improved 0.5% in December, while the production of nondurable goods fell 0.3%.

In December, the jump in the output of utilities contributed substantially to gains in the indexes for consumer goods, business supplies, and materials through their energy components. The increases in utilities were due to a return to more normal temperatures following unseasonably warm weather in November. The gain last month was the largest since December 1989.

The mining index remained unchanged in December. In December, most mining industries, with the exception of coal mining, posted increases. The gains posted in crude oil extraction and in oil and gas well drilling and servicing were offset by declines reported in other mining categories. After falling for six consecutive quarters, the index for mining advanced 3.4% at an annual rate in the third quarter and jumped nearly 12.0% in the fourth quarter.

(See Exhibit 1 for historical and forecasted industrial production figures.)

Industrial capacity utilization moved up 0.6 percentage point in December, to 75.5%. Capacity utilization is the percentage of production capacity manufacturers actually use. The December capacity utilization rate is 0.4 percentage point above its level from a year ago but 4.5 percentage points below its long-run average between 1972 and 2015.

The U.S. Census Bureau announced that new orders for manufactured durable goods decreased $1.0 billion (-0.4%) in December, to $227.0 billion. December marks the second consecutive month of decline, following a 4.8% decline in November. Excluding transportation, new orders increased 0.5%. Excluding defense, new orders increased 1.7%. Orders for transportation equipment, also down for the second consecutive month, drove the December decrease by falling $1.7 billion, or 2.2%. New orders for nondefense capital goods excluding volatile aircraft orders—an indicator of business spending strength—increased 0.8% in December after rising 1.5% in February.

The manufacturing sector continued to expand in December. The Institute for Supply Management (ISM) reported that its manufacturing index (PMI) rose 1.3 percentage points in December, to 54.7%. PMI is an indicator of the economic health of the manufacturing sector and is based on data compiled from purchasing and supply executives nationwide.

A reading above 50.0% indicates that the manufacturing economy is generally expanding; a reading below 50.0% indicates that it is generally contracting. A PMI in excess of 43.2%, over a period of time, generally indicates an expansion of the overall economy. Therefore, the PMI reading indicates that December was the third consecutive month of growth in the manufacturing sector and the 90th straight month of growth in the overall economy.

Eleven of the 18 manufacturing sectors surveyed in December reported growth. The report stated that, based on the past relationship between PMI and the overall economy, if the average PMI for January through December

(51.5%) were annualized, it would correspond to a 2.6% increase in real GDP annually. If PMI for December were annualized (54.7%), it would correspond to a 3.6% increase in GDP annually.

The component for new orders increased 7.2 percentage points in December, to 60.2%. This reading indicates growth in new orders for the fourth consecutive month. A New Orders Index above 52.2%, over time, is generally consistent with an increase in the census bureau's series on manufacturing orders.

The component for production increased 4.3 percentage points in December, improving to 60.3%. This indicates growth in new orders for the fourth consecutive month. An index above 51.3%, over time, is generally consistent with an increase in the Federal Reserve Board's industrial production figures.

The manufacturing employment component improved 0.8 percentage points in December, to 53.1%, indicating growth in manufacturing in December for the third consecutive month. An Employment Index above 50.6%, over time, is generally consistent with an increase in the Bureau of Labor Statistics' data on manufacturing employment.

The index that tracks inventory declined 2.0 percentage points in December, to 47.0%, and indicated that raw materials inventories contracted for the 18th consecutive month. This indicates that manufacturers' inventory levels were in line with current and expected demand. An Inventories Index greater than 42.8%, over time, is generally consistent with expansion in the Bureau of Economic Analysis's figures on overall manufacturing inventories.

The component that measures prices surged in December, up 11.0 percentage points, to 65.5%. This measure indicates growth. In December, 21.0% of respondents reported paying higher prices, 12.0% reported paying lower prices, and 67.0% reported paying the same prices. A Prices Index above 52.4%, over time, is generally consistent with an increase in the Bureau of Labor Statistics' Index of Manufacturers Prices.

(See Exhibits 4 and 13 for historical PMI figures.)

13. SERVICES

Growth in the services sector was unchanged in December, remaining at the strong levels established in November. The ISM reported that its Non-Manufacturing Index (NMI) stayed at 57.2%.

NMI measures the strength of the services sector and is based on data compiled from purchasing and supply executives nationwide. A reading above 50.0% indicates that the services sector of the economy is generally expanding, whereas a reading below 50.0% indicates that the services sector is generally contracting. An NMI in excess of 48.9%, over time, generally indicates an expansion in the overall economy. Therefore, the December NMI indicates an expansion in the services sector for the 83rd consecutive month and growth in the overall economy for the 89th consecutive month.

Twelve of the 18 nonmanufacturing sectors surveyed in December reported growth. The majority of the respondents' comments were positive about business conditions and the direction of the overall economy. The report noted that, based on the past relationship between the NMI and the overall economy, if NMI for December were annualized (57.2%), it would correspond to a 3.3% increase in GDP.

The component that measures business activity declined 0.3 percentage points in December, to 61.4%, although the index indicates that business activity grew for the 89th consecutive month. Eleven of the industries in the index reported growth in business activity for the month. The new orders component of the index climbed 4.6 percentage

EXHIBIT 13A: Manufacturing, Services, and Housing Indicators—Past 24 Months

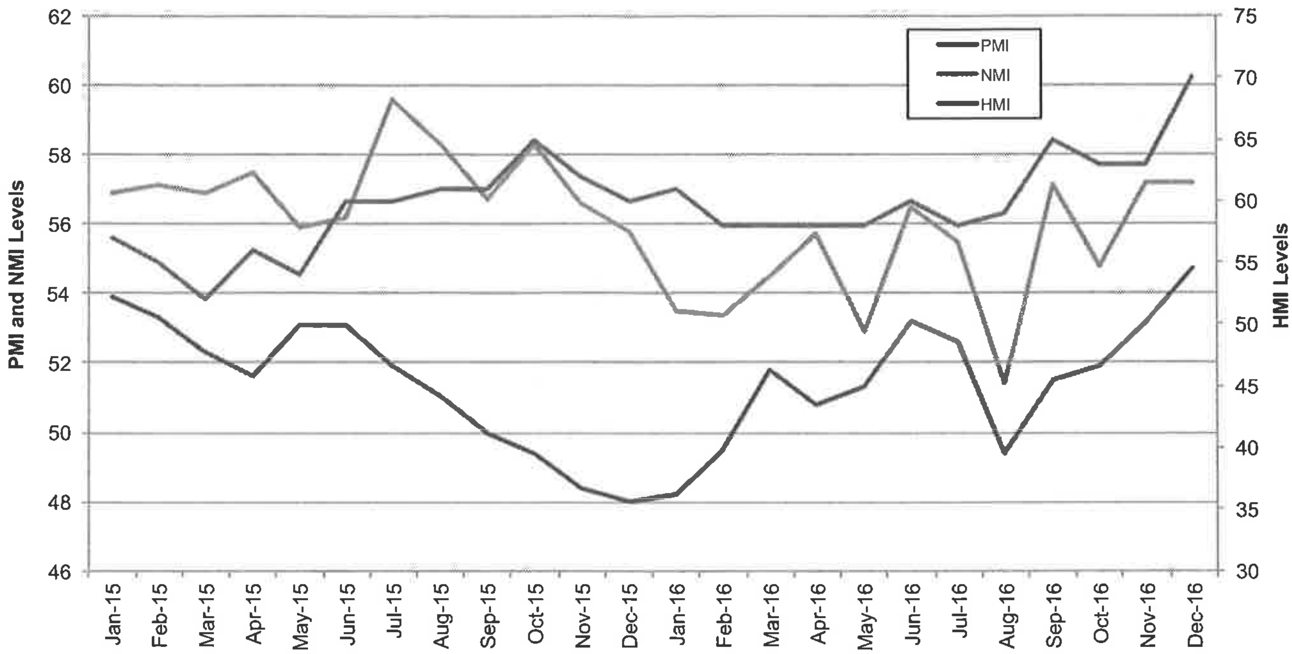


EXHIBIT 13B: Manufacturing, Services, and Housing Indicators—Since 2008

Source of data: Institute for Supply Management and the National Association of Home Builders.
Notes: PMI is the Institute of Supply Management's Manufacturing Index—any reading above 50.0% suggests growth in the manufacturing economy, whereas a reading below 50.0% indicates contraction. NMI is the Institute of Supply Management's Non-Manufacturing Index, which measures the strength of the services sector—any reading above 50.0% suggests growth, whereas a reading below 50.0% indicates contraction. HMI is the National Association of Home Builders/Wells Fargo Housing Market Index—any reading over 50 indicates that more builders view sales conditions as good than poor.

points, to 61.6%, signaling growth in new orders for the 89th consecutive month. Ten of the industries in this index reported a growth in new orders for the month. The employment component declined 4.4 percentage points, to 53.8%, in December, although it remained at a reading indicating employment grew for the seventh consecutive month. Nine of the industries reported increased employment, while four industries reported decreased employment for the month.

(See Exhibits 4 and 13 for historical NMI figures.)

14. REAL ESTATE

NATIONAL ASSOCIATION OF HOME BUILDERS

Builder confidence rose in December, indicating that homebuilders continue to be positive about the housing market. The National Association of Home Builders (NAHB)/Wells Fargo Housing Market Index (HMI) reached a reading of 70.0 in December, the index's highest level since July 2005. An HMI reading above 50.0 indicates that more builders view sales conditions as good, rather than poor. HMI has now been above the 50.0-point benchmark for 29 consecutive months. The report noted that the indicators show that the housing market will continue on an upward path into 2017.

All of the three HMI components increased in December. The component that measures expectations for single-family sales in the next six months increased 9.0 points, to 78.0, while the component measuring traffic of prospective buyers rose 6.0 points, to 53.0. The component that measures current sales conditions increased 7.0 points, to 76.0.

All four HMI regional indexes improved in December. The index for the Midwest rose 7.0 points, to 58.0; the Northeast climbed 10.0 points, to 57.0; the West increased 10.0 points, to 86.0, while the South improved 5.0 points, to 70.0.

(See Exhibit 13 for historical HMI figures.)

NATIONAL ASSOCIATION OF REALTORS (NAR)

Existing-home sales fell in December, halting a three-month upswing. In December, homebuyers dealt with a lack of listings and quickly rising home prices as the major headwind. Meanwhile, the surge in rates since early November ultimately caught some prospective buyers off guard and dimmed their appetite or ability to buy a home as 2016 ended. Three of the four major regions saw sales decrease in December and the share of distressed home sales increased to 7%, up from 6% in November but down from 8% one year ago.

Existing-home sales fell 2.8% in December, to an annual pace of 5.49 million sales from 5.65 million in November. Despite the December slide, home sales remain 0.7% higher than one year ago. In addition, 2016 closed with the highest level of sales since 2006, when the U.S. reached 6.48 million sales. Existing-home sales are completed transactions that include single-family houses, townhomes, condominiums and co-ops. Existing-home sales are expected to increase 1.7% from 2016, to a total of 5.54 million. The national median existing-home price in 2017 is expected to increase around 4.0%. The year 2016 saw existing sales increase 3.8% and prices rise 5.2%.

Home sales in the Northeast slid 6.2% in December but remain up 2.7% from a year ago. Sales in the Midwest decreased 3.8% in December but were up 2.4% from a year ago. December sales in the South were unchanged from November but are up 0.4% compared to this time last year. Sales in the West declined 4.8% and are down 1.6% from a year ago.

The national median existing-home price for all housing types was $232,200 in December, up 4.0% from a year ago. This marked the 58th consecutive month of year-over-year price gains. In December, home prices in the Northeast moved down 3.8% from one year ago, while prices in the Midwest climbed 4.6%. Home prices in the South rose 0.4%, and prices in the West jumped 6.0% over the last 12 months.

Distressed home sales comprised 7.0% of all home sales in December, up from 6.0% in November but down from 8.0% one year ago. Distressed homes include foreclosures and short sales, which are generally sold at deep discounts. In December, 5.0% of home sales were foreclosures and 2.0% were short sales. December foreclosures sold for an average discount of 20.0% below market value, and short sales sold at an average discount of 10.0%.

The median time on the market for all homes sold in December was 52 days, up from 43 days in the previous month but down from 58 days from a year ago. The median time on the market for short sales in December was 97 days, while foreclosures sold in 53 days and nondistressed homes sold in 50 days. In December, 37.0% of all homes on the market sold in less than a month.

Total housing inventory declined 10.8% in December, to 1.65 million existing homes available for sale, which is the lowest inventory level since the National Association of Realtors began tracking the supply of housing types in 1999. Housing inventory remains down 6.3% from one year ago and has fallen year-over-year for 19 consecutive months. Unsold inventory was at a 3.6-month supply at the current sales pace in December, down from 4.0 months in November.

NAR reports that, according to Freddie Mac, the national average commitment rate for a 30-year, conventional, fixed-rate mortgage surged to 4.20% in December, rising from the 3.77% rate in the prior month. This marked the highest rate since April 2014, when it was 4.32%. The average 30-year rate for 2015 was 3.85%.

NAR's Realtors Confidence Index (RCI) for current conditions decreased in December but remained up from a year ago. The RCI for single-family houses dropped 1.0 point in December, to a reading of 62.0, but was up 5.0 points over the past 12 months (strong = 100; moderate = 50; weak = 0). The RCI is a key indicator of housing market strength based on a monthly survey of over 50,000 real estate practitioners.

Pending home sales rose in December after dipping in November, and, despite mixed contract activity for the month, 2016 closed on a high note. The pending home sales report found that December's rebound came despite pressures of rising mortgage rates and low inventory levels. The early months of 2017 will be important to see whether supply can increase to keep price growth at moderate levels for households to absorb higher borrowing costs. NAR's Pending Home Sales Index (PHSI), a forward-looking indicator based on contract signings, rose 1.6 points in December, to a reading of 109.0. The index was also 0.3 points above its level from a year ago and has now risen year-over-year in 24 of the last 28 months.

The PHSI in the Northeast fell 1.6 points in December, to 96.4, but remains 1.2 points above its level from one year ago. The Midwest index decreased 0.8 point in December, to 102.7, and is 3.4 points below its level from a year ago. The South index rose 2.4 points in December, to a reading of 121.3, and was 0.5 point above its level from a year ago. The West index moved up 5.0 points in December, to 106.1, and was 5.0 points above its reading from one year ago.

The PHSI is an indicator for the housing sector, based on pending sales of existing homes. A sale is listed as pending when the contract has been signed but the transaction has not closed, though the sale usually is finalized within one or two months of signing. There is a closer relationship between annual index changes (from the same month a year earlier) and year-ago changes in sales performance than with month-to-month comparisons. An index of 100 is equal to the average level of contract activity during 2001, which was the first year to be examined, as well as the first of five consecutive record years for existing-home sales.

NAR's most recent Commercial Real Estate Market Survey, analyzing the second quarter of 2016, found that commercial real estate investments continued to keep a positive pace. The report found that 66.0% of Realtors closed a commercial sale and sales volumes were up 8.4% from the same period one year ago.

A shortage of inventory remained the No. 1 concern among respondents, and limited inventory pushed price growth upward. Commercial properties traded at average prices that were 5.3% higher in the second quarter, and the average transaction price was $1.4 million.

Average capitalization rates declined slightly across all property types, averaging 7.0% in the second quarter compared with 7.2% in the prior quarter. This rate was 50 basis points lower on a yearly basis. Apartments posted the lowest cap rate, at 6.5%, followed by office properties, at 6.8%. Hotel and retail spaces posted cap rates of 7.0% and 7.1%, respectively. Industrial properties recorded average cap rates of 7.4%.

NAR members were positive about the general direction of business opportunities, which is a broad market indicator tracked by NAR. Business opportunities rose 5.6% in the second quarter. This was greater than the 5.2% increase in the first quarter.

Leasing volume rose 8.7% in the second quarter, and leasing rates advanced 3.7%. Tenant demand was the greatest in the 5,000-square-foot-or-less space, accounting for 82.0% of all leased properties. Lease terms remained consistent, with 36-month and 60-month leases accounting for 59.0% of the market.

Vacancy rates continued to decline. Office vacancies fell 365 basis points from a year ago, to reach 12.3%. Industrial availability saw a yearly decrease of 95 basis points, bringing the rate to 9.8%. Retail vacancies declined 70 basis points over the past 12 months, to 11.8%. Hotel properties remained the highest, with vacancy rates of 13.2%, while apartments were the lowest, at 5.0%. Lease concessions declined 5.5% in the second quarter.

(See Exhibit 14 for forecasted figures from NAR.)

HOMEOWNERSHIP RATES, HOMEOWNER VACANCY RATES, AND RENTAL VACANCY RATES

The U.S. Census Bureau found that the homeownership rate was 63.7% in the fourth quarter of 2016, up from 63.5% in the third quarter, but slightly below the 63.8% rate from one year ago. The national vacancy rate for rental housing was 6.9% in the fourth quarter of 2016, up slightly from 6.8% in the third quarter. Rental vacancy is down from this time one year ago, when the rate was 7.0%. The national vacancy rate for homeowners was 1.8% in the fourth quarter, unchanged from 1.8% in the third quarter but below the 1.9% rate from a year ago.

MORTGAGE BANKERS ASSOCIATION

The Mortgage Bankers Association (MBA) finance commentary report stated the association believes refinance origination volume for 2017 will be $471 billion, a 47.7% decrease from 2016, which totaled $901 billion. The MBA projects the 30-year mortgage rate will hit 4.7% by the end of 2017, reach 5% by the second half of 2018, and increase further, to 5.5%, by the end of 2019. With a large segment of borrowers having taken advantage of sub-4%

EXHIBIT 14: National Association of Realtors® Market Forecast

	Q1 2017	Q2 2017	2017	2018
Housing measures (thousands)				
Housing starts	1,271	1,298	1,311	1419
Single-family	891	911	923	1028
Multifamily	380	388	388	391
Home sales				
Total existing homes	5,402	5,521	5,520	5746
New homes	593	615	620	684
Home prices (median)				
Existing homes	$225.8	$249.3	$243.3	$251.1
New homes	$313.6	$321.2	$314.7	$322.5
Mortgage Rates				
30-year fixed rate	4.1%	N/A	4.4%	N/A
5/1-year hybrid adjustable	3.0%	N/A	3.2%	N/A

Source of data: National Association of Realtors®
Notes:
Figures are in thousands, except for rates. Quarterly housing starts and home sales are seasonally adjusted at annual rate. Total existing home sales include single-family homes, condos, and co-ops.

EXHIBIT 15: Mortgage Bankers Association® Market Forecast

	Q1 2017	Q2 2017	2017	2018	2019
Housing measures (thousands)					
Housing starts	1,220	1,260	1,265	1,358	1,465
Single-family	820	850	860	963	1,075
Multifamily	400	410	405	395	390
Home sales					
Total existing homes	5,605	5,686	5,740	5,950	6,045
New homes	621	657	645	695	729
Home prices (median)					
Existing homes	$241.7	$249.4	$244.0	$247.7	$251.8
New homes	$312.3	$313.6	$311.8	$315.2	$318.0
Interest Rates					
30-year fixed rate mortgage	4.3%	4.4%	4.5%	4.9%	5.3%
10-Year Treasury yield	2.5%	2.5%	2.6%	3.0%	3.4%

Source of data: Mortgage Bankers Association®.
Notes:
Figures are in thousands, except for rates. Quarterly housing starts and home sales are seasonally adjusted at annual rate.
Total existing home sales include single-family homes, condos, and co-ops.

rates in recent years, refinance volume will decrease even though rates in the 5% range are still very low by historical standards. The MBA believes purchase originations will total $1.1 trillion in 2017, an 11.0% increase from 2016. The gains in the purchase market are driven by strong household formation, coupled with continued job growth, rising wages, and continuing growth in home prices. The MBA expects overall origination volume to total $1.56 trillion in 2017, compared to $1.89 trillion in 2016.

(See Exhibit 15 for forecasted figures from MBA.)

EXHIBIT 16: REIT Returns Historical Data

	MONTHLY DATA											
(%)	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16
All Equity REITs*	-3.5	-0.4	10.2	-1.8	2.3	6.9	3.9	-3.5	-1.5	-5.1	-2.4	4.5
Industrial**	-6.1	0.1	13.3	1.1	6.0	7.6	8.4	-2.0	0.4	-3.3	-1.4	4.6
Office**	-8.2	-2.6	12.2	2.8	0.5	5.0	7.5	-1.0	-3.0	-5.2	2.3	3.8
Retail**	0.2	0.6	7.4	-2.6	-0.2	10.4	5.2	-4.8	-2.8	-9.2	-2.8	1.2
Residential**	-4.9	-1.5	10.5	-6.3	4.1	3.5	2.1	-4.2	1.2	-2.7	-2.9	7.0
Diversified**	-8.4	0.1	10.5	-0.1	3.4	5.2	7.6	-3.6	-1.5	-6.2	-1.5	6.0
Lodging/Resorts**	-9.7	7.6	9.1	-5.4	-2.8	5.7	10.2	-0.1	-9.1	-2.1	13.1	8.7
Health Care**	-4.4	-1.4	10.2	0.3	2.3	9.2	5.9	-1.1	-2.1	-6.8	-8.7	4.8
Self Storage**	2.7	-3.6	12.0	-10.7	4.9	0.5	-5.9	-6.9	0.1	-5.3	-2.4	8.4
Timber**	-13.2	1.5	19.6	3.5	-1.2	-3.3	9.1	-2.1	0.9	-4.5	2.7	-1.6
Infrastructure**	-1.5	-1.2	7.2	2.0	2.6	10.2	-0.3	-2.0	0.5	0.0	-10.9	4.4
Mortgage REITs	-5.3	2.7	7.2	1.7	4.3	3.5	3.2	1.2	0.5	-0.1	1.7	0.7
Home Financing	-4.1	5.4	6.2	1.6	4.2	4.9	2.2	0.4	0.5	-0.4	1.9	0.9
Commercial Financing	-8.5	-5.2	10.1	2.1	4.6	-0.5	6.2	3.6	0.6	0.6	1.2	0.1

	YEARLY DATA											
(%)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
All Equity REITs*	12.2	35.1	-15.7	-37.7	28.0	28.0	8.3	19.7	2.9	28.0	2.8	8.6
Industrial**	15.4	28.9	0.4	-67.5	12.2	18.9	-5.2	31.3	7.4	21.0	2.6	30.7
Office**	13.1	45.2	-19.0	-41.1	35.5	18.4	-0.8	14.2	5.6	25.9	0.3	13.2
Retail**	11.8	29.0	-15.8	-48.4	27.2	33.4	12.2	26.7	1.9	27.6	4.6	1.0
Residential**	13.7	38.9	-25.2	-24.9	30.8	46.0	15.4	6.9	-5.4	40.0	17.1	4.5
Diversified**	9.9	38.0	-22.3	-28.2	17.0	23.8	2.8	12.2	4.3	27.2	-0.5	10.3
Lodging/Resorts**	9.8	28.2	-22.4	-59.7	67.2	42.8	-14.3	12.5	27.2	32.5	-24.4	24.3
Health Care**	1.8	44.5	2.1	-12.0	24.6	19.2	13.6	20.4	-7.1	33.3	-7.2	6.4
Self Storage**	26.5	40.9	-24.8	5.0	8.4	29.3	35.2	19.9	9.5	31.4	40.6	-8.1
Timber**	N/A	N/A	N/A	N/A	N/A	N/A	7.7	37.0	7.9	8.6	-7.0	8.3
Infrastructure**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	29.9	4.8	20.2	3.7	10.0
Mortgage REITs	-23.2	19.3	-42.3	-31.3	24.6	22.6	-2.4	19.9	-2.0	17.9	-8.9	22.9
Home Financing	-26.0	14.8	-38.2	-20.0	28.2	21.0	-0.9	16.4	-12.7	19.4	-9.8	25.9
Commercial Financing	-16.1	30.3	-48.8	-74.8	-41.0	42.0	-11.3	43.0	41.8	14.5	-6.0	14.3

Source of data: National Association of Real Estate Investment Trusts (NAREIT).
Notes:
* FTSE NAREIT All Equity REIT Index. Does not include Mortgage REITS.
** Components of the FTSE NAREIT All Equity REIT Index.

EXHIBIT 17: Property Index Returns Historical Data

	QUARTERLY DATA											
(%)	1Q 14	2Q 14	3Q 14	4Q 14	1Q 15	2Q 15	3Q 15	4Q 15	1Q 16	2Q 16	3Q 16	4Q 16
National*	2.7	2.9	2.6	3.0	3.6	3.1	3.1	2.9	2.2	2.0	1.8	1.7
East region*	2.1	2.3	2.2	2.5	3.0	2.9	2.6	2.3	1.7	1.7	1.5	1.4
West region*	3.1	3.4	3.0	3.5	3.8	3.4	3.6	3.6	2.8	2.5	2.2	2.2
South region*	3.4	3.2	2.8	3.2	4.2	3.1	3.1	3.0	2.2	1.8	1.6	1.6
Midwest region*	2.6	2.8	2.6	3.0	3.4	3.0	2.9	2.4	2.2	2.0	1.8	1.7
Hotel*	0.8	2.6	2.9	4.3	2.5	3.5	3.5	3.0	1.2	1.5	1.4	0.7
Apartment*	2.2	2.4	2.5	2.8	2.9	3.0	2.9	2.7	1.9	1.9	1.7	1.7
Retail*	4.3	3.2	2.3	2.7	4.9	3.0	3.1	3.5	3.0	2.2	2.0	1.7
Industrial*	2.8	3.3	2.9	3.9	3.5	3.8	3.7	3.2	3.0	2.9	2.9	3.0
Office*	2.2	2.9	2.8	3.1	3.3	3.1	3.0	2.6	1.7	1.7	1.3	1.4

Source of data: National Council of Real Estate Investment Fiduciaries (NCREIF).
Notes:
* NCREIF Property Index.
The NCREIF Property Index is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. All properties in the NPI have been acquired, at least in part, on behalf of tax-exempt institutional investors, the great majority being pension funds. As such, all properties are held in a fiduciary environment.

NATIONAL ASSOCIATION OF REAL ESTATE INVESTMENT TRUSTS

Investment returns for properties, as measured by the National Association of Real Estate Investment Trusts (NAREIT), rose 8.63% in 2016. Industrials were the strongest performing segment for the year, followed by residential-single family homes and data centers. The worst performing segment in 2016 was self-storage and regional malls. Home financing and commercial financing ended the year with positive gains.

(See Exhibit 16 for more REIT return figures from NAREIT.)

NATIONAL COUNCIL OF REAL ESTATE INVESTMENT FIDUCIARIES

Property index returns, as measured by the National Council of Real Estate Investment Fiduciaries (NCREIF), remained positive in the fourth quarter. The total return for the quarter was 1.73%, which was down from 1.77% in the third quarter. For the year ended 2016, the total return of the index was 7.97%. Of the property-type indexes, industrial had the best returns for the third quarter in a row, followed by apartments. Of the regional indexes, the West outperformed the others for the seventh straight quarter.

The NCREIF Property Index (NPI) is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. All properties in the NPI have been acquired, at least in part, on behalf of tax-exempt institutional investors—the great majority being pension funds. As such, all properties are held in a fiduciary environment.

(See Exhibit 17 for more property index returns from NCREIF.)

15. ECONOMIC OUTLOOK

Consensus Economics Inc., publisher of Consensus Forecasts—USA, reports that the consensus of U.S. forecasters believe that real GDP will increase at a seasonally adjusted annual rate of 2.1% in the first quarter of 2017 and 2.2% in the second quarter of 2017. Every month, Consensus Economics surveys a panel of 30 prominent U.S. economic and financial forecasters for their predictions on a range of variables, including future growth, inflation, current account and budget balances, and interest rates. The forecasters expect GDP to be 2.3% in both 2017 and 2018.

They forecast that consumer spending will increase at a rate of 2.3% in the first quarter of 2017 and 2.3% in the second quarter of 2017. They expect consumer spending to increase 2.5% in 2017.

The forecasters believe unemployment will average 4.7% in the first quarter of 2017 and 4.7% in the second quarter of 2017. They predict that unemployment will average 4.9% in 2016 and 4.6% in 2017.

The forecasters believe that the three-month Treasury bill rate will be 0.6% at the end of the first quarter of 2017 and 0.8% at the end of the second quarter of 2017. They estimate that the three-month Treasury bill rate will rise to 1.2% at the end of 2017. They predict the 10-year Treasury bond yield will be 2.3% at the end of the first quarter of 2017 and 2.5% at the end of the second quarter of 2017. They believe the 10-year Treasury bond yield will move up to 2.7% at the end of 2017.

They also believe consumer prices will rise at a rate of 2.1% in the first quarter of 2017 and 2.4% in the second quarter of 2017. They expect consumer prices to increase 1.2% in 2016 before rising to 2.3% in 2017. They expect producer prices to increase at a rate of 1.7% in the first quarter of 2017 and 2.1% in the second quarter of 2017. The forecasters anticipate producer prices will fall 0.9% in 2016 before rising 2.0% in 2017.

The forecasters believe real disposable personal income will rise at a rate of 2.3% in the first quarter of 2017 and 2.4% in the second quarter of 2017. They believe real disposable personal income will increase 2.7% in 2016 and 2.5% in 2017.

The forecasters expect industrial production to increase at a rate of 1.4% in the first quarter of 2017 and 2.0% in the second quarter of 2017. They forecast that industrial production will decrease 0.9% in 2016 before rising 1.5% in 2017.

Nominal pretax corporate profits are expected to decline 0.2% in 2016 before rising 4.0% in 2017. The forecasters also project housing starts will be 1,170,000 in 2016 and 1,260,000 in 2017.

The most recent release of The Livingston Survey (the Survey) predicts higher growth for the second half of 2016 than had been predicted in its prior survey. The Survey, conducted by the Federal Reserve Bank of Philadelphia, is the oldest continuous survey of economists' expectations. It summarizes the forecasts of economists from industry, government, banking, and academia. The participants project real GDP to grow at an annual rate of 2.7% in the second half of 2016 and 2.2% in the first half of 2017. They believe that GDP will grow 2.3% annually over the next 10 years.

The Survey forecasts the unemployment rate to be 4.9% in December 2016 and to fall and then remain at 4.7% into June 2017.

The forecasters in the Survey expect consumer price inflation (CPI) to be 1.3% in 2016 and 2.4% in 2017. The Survey expects CPI to average 2.3% over the next 10 years. The Survey also expects producer price inflation (PPI) to be -1.0% in 2016 and 2.7% in 2017.

The Survey predicts the interest rate on three-month Treasury bills will be 0.55% at the end of December 2016. From there, the forecasters expect that the rate will increase to 0.83% in June 2017, to 1.12% in December 2017, and to 2.00% in December 2018. They predict the interest rate on 10-year Treasury bonds will reach 2.30% at the end of December 2016. According to the Survey, the rate will then rise to 2.50% in June 2017, to 2.75% in December 2017, and to 3.35% in December 2018.

The forecasters have increased their previous projections for future S&P 500 index values. They expect the S&P 500 index will sit at 2,200.0 by the end of December 2016, 2,254.8 at the end of June 2017, 2,314.5 at the end of December 2017, and at 2,400.0 at the end of December 2018.

The Energy Information Administration predicts that the West Texas Intermediate crude oil spot price will average approximately $53.46 per barrel in 2017 before rising to $56.18 per barrel in 2018, compared with $43.33 per barrel in 2016. The EIA expects retail prices for regular-grade gas to average $2.39 per gallon in 2017 before increasing to $2.44 per gallon in 2018, compared with $2.15 per gallon in 2016.

The Energy Information Administration believes the Henry Hub natural gas spot price will average $3.43 per million Btu (MMBtu) in 2017 and $3.70 per MMBtu in 2018, compared with $2.51 per MMBtu in 2016. The cost of coal delivered to electric generating plants, which averaged $2.13 per MMBtu in 2016, is expected to average $2.17 per MMBtu in 2017 and $2.21 per MMBtu in 2018. Residential electric prices, which averaged 12.55 cents per kilowatt-hour (kWh) in 2016, are expected to average 12.93 cents per kWh in 2017 then rise to 13.24 cents per kWh in 2018. The airline ticket price index, which averaged 282.95 in 2016, is expected to be 294.40 in 2017 before rising to 308.10 in 2018.

The National Association of Realtors' Realtors Confidence Index for future conditions increased in December, remaining generally optimistic. The RCI for the outlook of single-family homes trended up 2.0 points in December, to 76.0, and remained up 4.0 points from one year ago (strong = 100; moderate = 50; weak = 0). The RCI for the outlook for townhomes increased 3.0 points in December, to a reading of 61.0, while the outlook for condos increased 2.0 points, to 56.0. The RCI is a key indicator of housing market strength based on a monthly survey of over 50,000 real estate practitioners. Practitioners are asked about their expectations for home sales, prices, and market conditions.

NAR recorded existing-home sales in 2016 at 5.42 million (+3.3%) compared to 5.52 million (+1.8%) in 2017. It believes that new single-family home sales will be 565,000 (+12.8%) in 2016, before increasing to 620,000 (+9.7%) in 2017. NAR believes the median existing-home price will be $234,200 (+5.3%) in 2016, before increasing to $243,300 (+3.9%) in 2017. NAR believes the median new-home price will increase to $306,600 (+3.4%) in 2016, before rising to $314,700 (+2.6%) in 2017. It expects housing starts to increase to 1,177,000 (+5.8%) in 2016, then to 1,311,000 (+11.4%) in 2017. NAR believes the 30-year fixed mortgage rate will average 3.6% in 2016, before rising to 4.4% in 2017, and the 5-1 hybrid adjustable rate mortgage will average 2.9% in 2016 and 3.2% in 2017.

The most recent three-year outlook from the Urban Land Institute (ULI) and Ernst & Young (EY) found that real estate economists and analysts believe the economy will continue to expand between 2016 and 2018, though at a somewhat slower pace than in the prior two years. The *ULI/EY Real Estate Consensus Forecast*, a semiannual publication, is based on a survey of 51 of the industry's top economists and analysts representing 37 of the country's leading real estate investment, advisory, and research firms and organizations. The forecast for each indicator is the median forecast from the 51 survey respondents. The key findings from the Real Estate Consensus Forecast include:

- Annual commercial property transaction volume is expected to decline over the three forecast years to $428 billion in 2018, ending six years of growth. However, forecast volume in 2016 and 2017 is only surpassed by that in 2007 and 2015, and forecast volume in 2018 is also surpassed by that in 2006 and 2014.
- The issuance of commercial mortgage-backed securities (CMBS), a key source of financing for commercial real estate, is expected to decline in 2016, to $70 billion, before resuming growth in 2017 and reaching $90 billion in 2018. Before 2016, CMBS issuances had been growing consistently from 2009 to 2015.
- Commercial real estate prices are projected to grow at slowing rates during the next three years, at 5.0% in 2016, 4.0% in 2017, and 2.5% in 2018. These are all below the long-term average growth rate of 5.7%.
- Institutional real estate assets are forecasted to provide total returns of 8.3% in 2016 before moderating to 7.0% in 2017 and 6.0% in 2018. By property type, 2016 returns are expected to range from 10.0% for industrial to 7.5% for office. Total returns in 2018 are expected to range from 7.0% for industrial to 5.6% for apartments.
- Both availability and vacancy rates for almost all property sectors are expected to continue to improve in 2016. The apartment vacancy rate, which is already near historic lows, is expected to remain stable in 2016 and, while staying below the long-term average, is expected to show the most change among the various sectors as it climbs in 2017 and 2018. The industrial and office sectors are expected to plateau in 2017 and 2018, while the retail sector is expected to continue improving in 2017 before hitting a plateau in 2018. The hotel sector is expected to reverse direction very slightly starting in 2017.
- Commercial property rent is expected to continue to increase in the next three years across all sectors, although at somewhat lower rates than in recent years. In 2016, rent increases are expected in the four major property types, which will range from 2.0% for retail to 4.7% for industrial. Rent increases in 2018 are forecasted to range from 1.3% for retail to 2.9% for apartments. Hotel RevPAR is expected to increase by 4.0% in 2016 and 3.0% in 2018.
- Single-family housing starts are projected to increase from 714,500 units in 2015 to 875,000 units in 2018, remaining below the 20-year annual average.

(See Exhibits 2A, 2B, 3, 14, and 15 for more forecasted figures.)

ECONOMIC OUTLOOK UPDATE DATA SOURCES

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FIRST RESEARCH

INDUSTRY PROFILE

Water & Sewer Utilities

3.6.2017
NAICS CODES: 2213
SIC CODES: 4941, 4952

Industry Overview

Companies in this industry operate water treatment and water supply systems; sewer systems and sewage treatment facilities; and steam and air-conditioning supply systems. Major companies include American Water Works, Aqua America, and California Water Service (all based in the US), along with France-based global giants SUEZ Environnement and Veolia Environnement, Brazil's SABESP, and the UK's Severn Trent.

The size of the global water utility market is estimated to be $185 billion, according to S-Network Global Water Indexes. Private-sector operators make up about 20% of that market. Though public utilities dominate, competition among private water management companies takes place in major markets in Europe, Asia, Australia, and North America.

The US commercial water and sewer utilities industry includes about 4,900 establishments (single-location companies and units of multi-location companies) with combined annual revenue of about $14 billion. The commercial industry is small compared to the water and sewer services operated by many regional and local governments in the US. Government-owned water and sewer utility services have annual revenue of about $110 billion.

Competitive Landscape

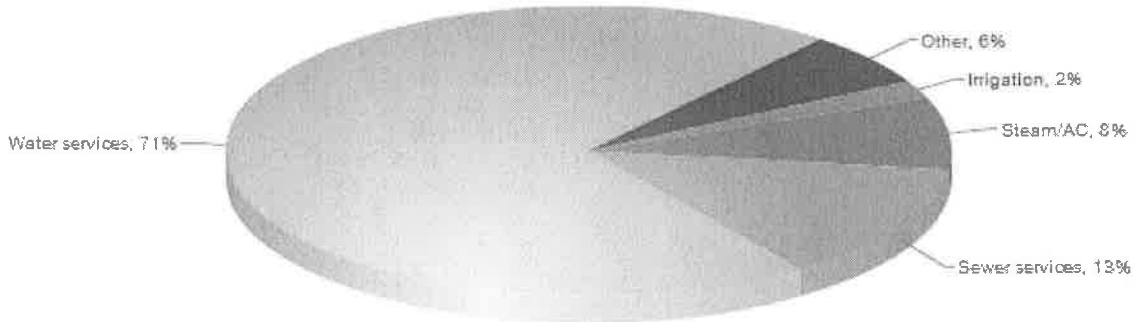
Demand depends on commercial and residential water needs, which are related to population growth and to the level of economic activity. The profitability of individual companies depends on **efficiency of operations**, because prices are fixed by public utility commissions (PUCs). Large companies have economies of scale in operations and the ability to **raise capital** for infrastructure improvements. Small companies can compete successfully through superior engineering or by serving desirable local markets. The US industry is **concentrated**: the 50 largest companies account for about 75% of industry revenue.

High barriers to entry, such as **capital investments**, make the industry somewhat resistant to competition; many companies operate as de facto monopolies.

Products, Operations & Technology

Water services account for about 70% of industry revenue, sewer services for about 15%. Steam supply, irrigation, and other services account for the rest.

Revenue by Service - US Census Bureau



The operations of small or large water and sewer systems and commercial or municipal utilities are similar. Water and sewer operations are local **monopolies**, mainly because of the large infrastructure of reservoirs, pipes, and treatment facilities needed. Competition exists only in determining who operates a system. Commercial companies may own a local system, or operate a system on behalf of a local government (**"contract operations"**), or may own parts of a system, such as water wells or a reservoir.

A **water system** consists of a **water source**, a system of storage **reservoirs** and pumping stations, a water **treatment** facility, and a pipe distribution system. The water source may be surface (lakes or rivers) or ground water (springs and wells). Washington, DC, for example, uses more than 100 million gallons of water per day from the Potomac River. While water from lakes or rivers is sometimes free, companies must often pay **wholesale fees** for water owned by private owners or local or regional public water authorities.

To ensure that water is available during periods of peak use (which often coincide with periods of low accumulation, like the summer months), utilities may operate various types of reservoirs, including tanks, artificial lakes, and covered ground reservoirs. **Water treatment** consists of various steps to remove contaminants. A coagulant like alum (aluminum sulfate) may be added to the water to attract and clump suspended particles, which settle to the bottom or top of sedimentation or flotation basins. Water is then filtered through sand and gravel beds, and disinfected with **chlorine** to kill bacteria and viruses. Fluoride is usually added (as hydrofluorosilicic acid) to help prevent tooth decay, and lime (calcium hydroxide) is added to adjust the water's acidity and prevent corrosion of distribution pipes. Treated water runs through meters before flowing through distribution pipes to final customers. Water is periodically **tested** for quality at various stages in the system.

A **sewer system** works much the same as a water system, but in reverse. Wastewater is collected through a system of pipes from residential and industrial customers and rain sewers, and is processed in a treatment plant before being discharged. **Primary treatment** consists of filtering and settling out solids from the waste stream and separating the sludge from the water. In **secondary treatment**, oxygen is added to encourage the growth of bacteria that consume much of the rest of the waste. The remaining water is then disinfected and discharged into rivers, lakes, or the ocean. **Sludge** is treated with heat to kill bacteria and may be dried for use as fertilizer or placed in landfills.

The operation of both water and sewer systems is **highly automated** and requires mainly monitoring. The average local water or sewer utility has fewer than a dozen employees. **Maintenance** and capital costs are often higher than operating costs, because of the large network of pipes, valves, pumps, reservoirs, and treatment facilities that make up a complete system. Pipe maintenance or replacement is especially expensive, as pipes are usually located under roadways.

Technology

Computer systems have become important to some water or sewer systems to monitor flow and quality at many points of the large networks of pipes and valves. Many older systems operate with only rudimentary monitoring. Some companies invest in updating antiquated technology to improve efficiency and customer service. New plant technologies use biological processes (instead of costly chemicals) to remove contaminants.

Wireless meter reading systems allow consumers to monitor daily use and compare usage to that of other area households and businesses. Utilities use smart meters to detect leaks and cut manual meter reading costs. As of mid-2015, smart meters accounted for less than 20% of installed water meters in the US but about half of North American meter shipments, according to *The Wall Street Journal*.

Companies are also exploring emerging **leak detection** technologies. American Water Works has piloted programs for acoustic monitoring, which uses sensors and signal analysis to detect leaks faster and generate precise leak location data, and advanced pressure management, which lowers pipe pressure to reduce leaks during periods of reduced customer use.

After September 11, 2001, the US government required companies to assess their vulnerability to a terrorist attack on water supplies. Companies have had to adopt and update technology to comply with those requirements. Changes in environmental regulations can also trigger system upgrades, and new federal standards for **cybersecurity** are also under discussion.

Sales & Marketing

Customers are individuals, businesses, and municipalities. Large commercial customers pay lower rates than residential customers, but residential customers provide stable and predictable income. Residential customers make up the majority of customers for commercial utilities. Rates are set by state **public utility commissions** (PUCs). The **rate setting** mechanism of most PUCs is complicated and slow, sometimes stretching out for years. Consequently, the managers of utilities are constantly involved in rate-setting procedures.

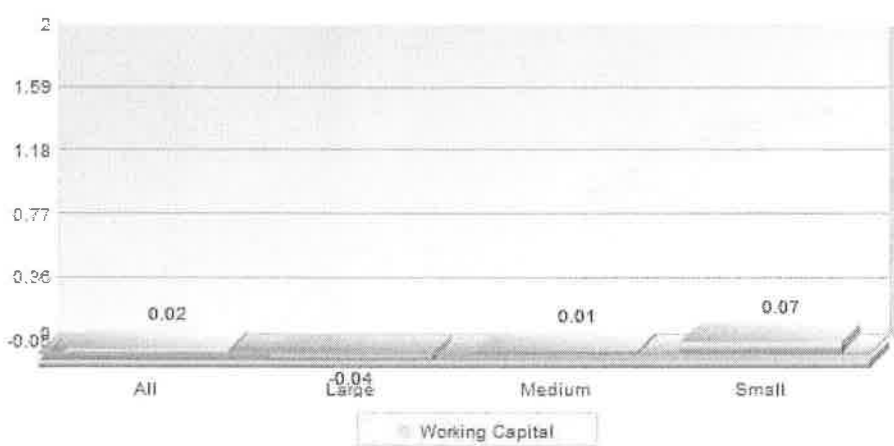
Finance & Regulation

The **cash flow** of water or sewer companies can be highly seasonal, as water demand may be higher in the summer but water availability lower. The US industry has a **working capital turnover ratio** of about 29%. Accounts receivable average about 80 days' sales. Companies typically keep an allowance for uncollectible customer accounts.

Many companies make large annual **capital investments** to maintain or expand their systems. Transmission and distribution infrastructure accounts for the majority of capital expenditures, other investments include treatment, storage, and water source rights.

Working Capital Turnover by Company Size

The working capital turnover ratio, also known as working capital to sales, is a measure of how efficiently a company uses its capital to generate sales. Companies should be compared to others in their industry.



Financial industry data provided by MicroBilt Corporation collected from 32 different data sources and represents financial performance of over 4.5 million privately held businesses and detailed industry financial benchmarks of companies in over 900 industries (SIC and NAICS). More data available at www.microbilt.com.

Regulation

Water and sewer utilities are regulated by federal, state, and local authorities. Rates charged by water and sewer companies typically are set by state public utility commissions (PUCs). Rates are generally set to allow a utility to earn a reasonable return on investment. State PUCs also set conditions and standards for services and often must approve long-term financing programs, capital expenditures, and reorganizations.

The EPA monitors state compliance with the **Safe Drinking Water Act** (SDWA), which sets regulations concerning contaminants in drinking water. All water system operators are required to post **"consumer confidence reports"** about the contaminants in their water. Under the Clean Water Act (CWA), the EPA also regulates the types of contaminants that may be discharged into public waters from sewage systems. Utilities are also subject to regulations regarding storage and disposal of hazardous substances, such as water treatment chemicals, and occupational safety laws.

International Insights

The size of the **global water utility market** is estimated to be $185 billion, according to S-Network Global Water Indexes. Private-sector operators make up about 20% of that market.

Though public utilities dominate, competition among private water management companies takes place in major markets in Europe, Asia, Australia, and North America. Worldwide, more than 60 countries have private participation in the water and sewerage market, and private-sector water project investments typically total between $2 billion and $4 billion annually, according to the World Bank. Major companies based outside the US include France-based global giants SUEZ Environnement and Veolia Environnement, Brazil's SABESP, and the UK's Severn Trent.

The **world's population** is expected to reach 9 billion by 2040, and water demand is growing at twice the rate of the global population. Agriculture accounts for about 70% of freshwater withdrawals worldwide. The United Nations and other organizations work to ensure safe drinking water and sanitation. Access to water resources can be a source of contention between countries, and treaties often govern resources shared by more than one nation.

Water scarcity impacts about 1.2 billion people in more than 40 countries, or about one-fifth of the world's population, and the UN estimates that between 3 billion and 4 billion people lack access to safe and reliable tap water. Some 2.5 billion people do not have access to improved sanitation.

Developing nations suffer from issues such as inefficient water use, pollution, bureaucratic policies, and overuse by agricultural and industrial businesses. In China and India, industrial, agricultural, and energy needs outpace clean water supply, and water treatment and conservation demands are increasing. In China, the food supply is threatened by the lack of clean water for agricultural use, which has led to contamination of grains and produce. In India, free electricity and water provided to farms have led to overproduction of grains and unsustainable use of resources.

Despite water scarcity due to desertification in some areas, rates in the US are among the lowest of developed nations, as water and wastewater bills make up about 1% of annual household budgets. Other developed nations with low water utility charges include Italy and Poland, while Germany and Denmark have among the highest water bills, according to an analysis of major cities from the International Water Association.

Regional Highlights

In the US, availability of water resources varies by region. Areas such as the West and the Southwest are marked by water scarcity and frequent droughts. Water is more plentiful and available in the northern and eastern parts of the US. Pricing for water is influenced not only by availability, but also by demand, infrastructure, **regional planning**, state and local government subsidies, and other factors.

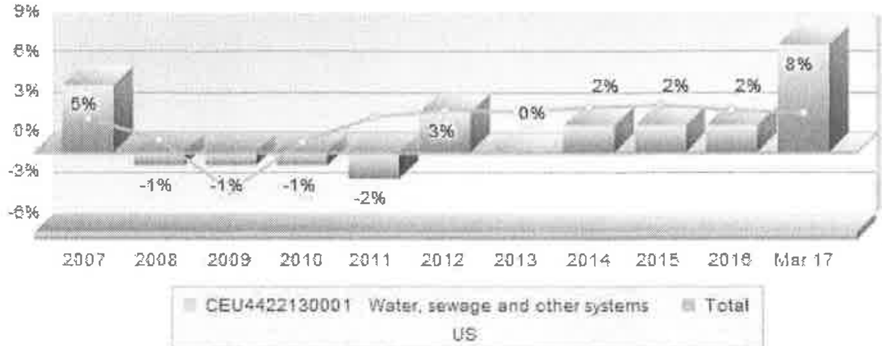
Water is cheapest in the Great Lakes region of the US, but that is not true for other water-rich areas, according to the Pacific Institute's research organization Circle of Blue. In a recent year, a family of four in Boston using 100 gallons per day paid about $78 per month. In desert Phoenix, a family of four paid around $39 per month. Similarly, Las Vegas residents paid about $42 per month; Atlanta residents, $92 monthly. Atlanta has about 10 times the annual rainfall of Las Vegas.

Water may come from rivers, aquifers, reservoirs, or natural lakes, depending upon the region. Companies are restricted by legislation to how they can access, treat, and deliver water to their customers. Local weather conditions, such as floods, hurricanes, or tornadoes, can impact water availability or cause contamination.

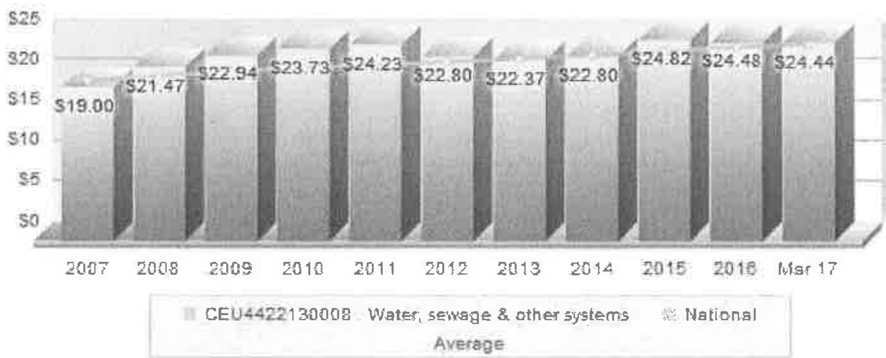
Human Resources

Some employees of commercial water and sewer utilities have special technical or engineering skills that command above-average pay. Overall, the average hourly industry wage in the US is moderately higher than the national average. Commercial companies generally have to pay about the same wages as their public sector counterparts. The industry injury rate in the US is significantly higher than the national average.

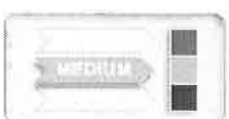
Industry Employment Growth
Bureau of Labor Statistics



Average Hourly Earnings & Annual Wage Increase
Bureau of Labor Statistics



Industry Growth Rating



Demand: Linked to population growth and economic activity
Need operational efficiency due to fixed prices
Risk: Greater regulation and capital investment

Quarterly Industry Update

3.6.2017

Challenge: Low-Income Households Struggle with Rising Water Bills - Water bills are rising in many areas across the US, and if the trend continues, more than one-third of US households could struggle to pay for water within the next five years, according to a new study from Michigan State University and the National Science Foundation. Many water utilities have had to increase rates in recent years as it becomes more expensive to repair and replace aging pipes and other water infrastructure. Shrinking customer bases have also required utilities in some urban districts to charge their remaining customers higher rates to make up the difference, *The Huffington Post* reports. Additionally, state funding for water projects has not made up for shortfalls in federal support. A household meets the EPA's benchmark for water poverty if monthly water and wastewater spending exceeds 4.5% of household income. The NSF/MSU study found that about 13.8 million US households (about 12% of all homes) meet that criterion, and if water bills continue to increase at their current pace, about 41 million households could be living in water poverty within five years. Areas with the highest rates of water poverty include Southern states such as Mississippi, Louisiana, Alabama, Kentucky and Arkansas, as well as downtown areas of cities including Detroit, Phoenix, and Philadelphia. Only about 30% of water utilities offer assistance programs to help low-income customers pay their water bills, according to a recent EPA survey.

Industry Impact - Water and wastewater service providers may seek to work with municipal and state governments to develop strategies for preventing bills from becoming unmanageable for large segments of the population. Without support from outside stakeholders, many utilities will be forced to pass higher costs onto ratepayers to cover the high fixed costs of water service.

11.28.2016

Challenge: Securing Government Funding for Water Infrastructure - Aging water infrastructure is a major concern for water and sewer utilities not only in major metropolitan areas, but also in smaller communities. The US Department of Agriculture in November 2016 announced plans to invest $331 million in 85 projects in rural areas to improve water and wastewater infrastructure, according to the National Rural Water Association. The program provides loans and grants to develop or modernize aging systems in communities with 10,000 or fewer residents. Meanwhile, the House and Senate are working to align their versions of the Water Resources Development Act (WRDA) passed earlier in 2016, according to *The Hill.* The WRDA would fund port, dam, levee, and drinking water system projects.

Industry Impact - New government grants and loans could provide a boost for water and sewer utilities, which typically must raise capital to upgrade delivery systems and ensure safe water supplies to customers.

8.29.2016

Challenge: Rio Olympics Highlight Water Supply Challenges - Water contamination problems plaguing the city of Rio de Janeiro -- and Brazil at large -- thrust sanitation challenges faced by developing nations into the global spotlight during the 2016 Summer Olympics. The city's water utility, CEDAE, failed to meet its goal to treat 80% of sewage before the Olympics began. The utility reports that about 51% of Rio's wastewater is being treated, up from 11% in 2007, though some critics believe the percentage is lower, according to Bloomberg. While the World Health Organization deemed Guanabara Bay and other waterways used for Olympic events to be acceptable for recreation, the organization noted that some areas failed to meet water quality standards and recommended caution to athletes and guests, according to Circle of Blue. Brazil is struggling to keep up with heavy water demand from agriculture, mining, and hydroelectric power industries, even as the country faces economic difficulties and emerges from a two-year drought.

Industry Insight - Utilities in developing nations with rapid industrial growth may struggle to meet water quality and wastewater treatment standards.

5.30.2016

Opportunity: Companies Modernize System Maps with GPS Technology - Water utilities are using mapping technologies to document more precise locational information for water mains, valves, and hydrants, reducing dependence on older paper maps and institutional knowledge to locate system assets. Investment in GPS technology allows utility employees to use in-vehicle computers and handheld devices to locate field assets, decreasing response time for main breaks and customer service requests. A current project by Illinois American Water (a subsidiary of American Water Works) not only improves efficiency, but addresses a workforce replenishment goal to capture knowledge as over half of the utility's employees are nearing retirement age. As GPS and GIS technologies become widely adopted and more advanced, utilities are able to integrate infrastructure data, automated meter reading data, worker safety data, and other elements into streamlined systems.

Industry Impact - More utilities may invest in digital mapping technologies to efficiently monitor assets and improve customer service.

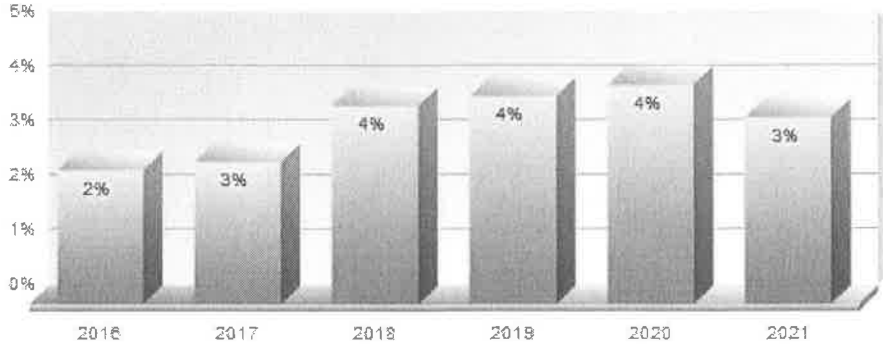
Industry Indicators

The value of US nonresidential construction spending, a demand indicator for water and sewer utilities services, rose 2.5% year-to-date in March 2017 compared to the same period in 2016.

The value of US residential construction spending, which impacts demand for water and sewer utilities services, rose 8.4% year-to-date in March 2017 compared to the same period in 2016.

Industry Forecast

Revenue (in current dollars) for US water, sewage and other systems is forecast to grow at an annual compounded rate of 4% between 2017 and 2021. Data Published: February 2017



First Research forecasts are based on INFORUM forecasts that are licensed from the Interindustry Economic Research Fund, Inc. (IERF) in College Park, MD. INFORUM's "interindustry-macro" approach to modeling the economy captures the links between industries and the aggregate economy. Forecast FAQs

Industry Drivers

Changes in the economic environment that may positively or negatively affect industry growth.

Data provided by First Research analysts and reviewed annually

Government Regulations Changes in federal, state, or local government regulations or business-related policies

Critical Issues

Deteriorating Infrastructure - The EPA estimates that about $380 billion is needed over the next 20 years to replace and update water treatment plants, storage tanks, and thousands of miles of pipe, as well as other drinking water supply infrastructure. Wastewater systems require another $390 billion. The American Water Works Association estimates the bill to be around $1 trillion by 2035. Most of the water infrastructure in the US is designed to last 60 to 80 years, and much of it is nearing or has passed that lifespan, according to the American Society of Civil Engineers. Spending requirements to meet federal standards in the commercial end of the industry are smaller but just as urgent.

Profitability Tied to Unpredictable Water Consumption - The revenue of water utilities depends on the volume of water consumed, which in turn depends on weather conditions. Residential water use increases in hot, dry weather and decreases during cool, rainy periods. During dry periods, municipalities may also restrict water use to conserve depleted supplies; consequently, profitability can vary highly throughout the year. Consumption is also impacted by shifting water use habits; indoor water use in the US has declined 22% since 1999 due to more efficient appliances and other conservation efforts, according to Circle of Blue.

Business Challenges

Vulnerability to "Condemnation" Proceedings - Most municipalities and other local governments have the legal authority to acquire commercially run utilities against their will ("condemnation") through eminent domain proceedings, compensating the owners. Municipal water systems may also seek to take over customers of adjacent commercial systems, leaving commercial systems underutilized. Commercial water and sewer utilities run the risk of being condemned if they're run ineffectively or if the rates they charge are perceived as being too high.

Increased Security - Utilities have tightened security around reservoirs and treatment plants, and increased the scope and frequency of water testing since the 9/11 terrorist attacks prompted greater concern that terrorists could poison a community's water system. Although wholesale poisoning of water reservoirs is technically very difficult, terrorists could more easily contaminate a neighborhood by "backflowing" poisons from a residential water tap into local distribution pipes. Cybersecurity is also becoming a key concern as water companies increase reliance on information technology systems.

Higher Costs to Process Contaminants - Although industrial wastewater must be treated before being discharged into a sewer system, water from commercial businesses and residences is unmonitored and may consequently contain pesticides, oils, paints, and other toxins. Some contaminants require special treatment to remove them from wastewater. High levels of some contaminants in sludge mean that it must be disposed of in hazardous landfills, at high cost. The EPA estimates that about 850 billion gallons of untreated sewage are released into the nation's waterways each year.

Dependence on Regulators - Because water and sewer companies are natural monopolies, their financial returns are set largely by public utility commissions (PUCs). Various other regulators, such as the EPA and state health officials, also can directly affect these companies' operations. For example, the EPA has proposed significant improvements in the operation and maintenance of the nation's sewer systems to reduce sewer overflows that can close beaches.

Business Trends

Consolidation - Larger utilities have easier access to capital, can apply "best practices" to all their local systems, and have greater resources to apply to the regulatory process for rate increases. Small systems are therefore often willing to be bought by large operators.

Water Infrastructure Financing - Many commercial water and sewer companies oppose suggestions that the federal government assume a large role in funding necessary and massive investments to upgrade the nation's water infrastructure. A large federal subsidy program, which would benefit only public water systems, would disadvantage commercial systems. Instead, the industry wants to remove volume caps on the use of Private Activity Bonds (municipal bonds that fund investments in privately owned assets to advance the public good).

Deteriorating Water Quality - The public is demanding more water testing and treatment, due to greater awareness about drinking water contamination by industrial and natural pollution. The list of possible contaminants has become very long, and includes chromium, arsenic, PCBs, and MTBE (a gasoline additive). Federal and state water quality and testing requirements have become more stringent.

New Repair Techniques - Because water and sewer pipes are usually located under city streets, repair and replacement are very expensive and disrupt traffic. Several methods that don't require excavation have become more widely used: trenchless pipe repair in which plastic sleeve liners can be installed in corroded pipes simply by pulling them through existing pipes, and the use of epoxy and resins to coat the interior of pipes, even for potable water pipelines.

Desalination Plants - Due to drought and water scarcity in some regions, interest in technologies such as desalination plants is blooming in some regions. Recent US projects include plants in California and Texas. Desalination efforts in Israel have helped the nation address water scarcity challenges. Other conservation methods gaining attention include rationing, wastewater recycling, and direct potable reuse systems. The costs associated with these projects are a concern for utilities.

Industry Opportunities

Municipal Outsourcing - Municipalities may sell their water and sewer systems to private companies, which are expected to operate them more effectively. Instead of outright privatization, more municipalities are contracting with companies to operate their water and sewer systems for a fee. Contracts typically last one to three years, although longer lease arrangements also exist.

Nonregulated Activities - Utilities often engage in nonregulated activities related to their core business. Besides contract services to municipalities, they may provide repair services to homeowners to fix broken or leaky pipes within the house. Some companies provide waste removal and other services. They may provide laboratory services for smaller operators, or, as owners of large amounts of land, they are often in a position to lease antenna sites to cell phone companies.

Chloramines - By combining chlorine and ammonia in water, treatment plants can create chloramines that disinfect the water and don't disperse as rapidly as standard chlorine treatment. Although chloramine allows utilities to better protect sectors of their system with low throughput, consumers are also more aware of the taste.

Oil and Gas Production - Hydraulic fracturing, or fracking, a technique for extracting oil and gas from shale formations, requires a significant amount of water. Besides providing water service to oil and gas companies, some water and wastewater companies treat water that has been used in fracking.

Executive Insight

Chief Executive Officer - CEO

Obtaining New Sources of Water Supply
To encourage investment in building industries, businesses, and homes, the local population needs assurances that a continuous water supply will be available to sustain them indefinitely. Utilities drill multiple wells to different aquifers, tap rivers and natural lakes, participate in regional water storage reservoir systems, and enter sharing agreements with other utilities.

Meeting Sewer and Wastewater Treatment Requirements
Sewage and wastewater systems must be designed to function under stressful conditions, such as earthquakes, tornadoes, and hurricanes, without dumping untreated sewage and waste into local streams. A local population depends on the utility to function under all conditions and will hold utility management responsible for spills and contamination. Private utilities, in particular, need to reassess vulnerabilities and raise the funds necessary to take remedial action, or risk condemnation proceedings in the event of preventable spillage.

Chief Financial Officer - CFO

Raising Capital for Infrastructure Improvements
Water, sewage, and wastewater systems require continuous maintenance, upgrades, and expansion. Since water is essential to support habitation and remove wastewater and sewage to prevent unsanitary conditions, the systems can't be inoperative for extended periods. Capital must be continuously available to replace failed components (pumps, broken pipelines), extend systems to serve population expansions, and upgrade to provide additional capacity. Maintenance and repair are sometimes funded from cash flow, sometimes accumulated through a special surcharge called a Distribution System Improvement charge. Upgrades and expansions may be funded by bond issues and, for private utilities, additional capital infusions.

Preparing Rate Increase Requests for PUCs
Rates for water and sewage are overseen by state public utility commissions (PUCs). To increase rates, utilities have to submit formal requests justifying the increases, which are reviewed by commission staff and subject to public hearings. The review and public hearing process may take years. Because of this long cycle, utilities may have staff whose primary function is to prepare rate increase requests. They frequently start preparing the next increase request while the current request is in review.

Chief Information Officer - CIO

Improving Water Quality Monitoring
The Safe Drinking Water Act (SDWA), passed in 1974 and amended in 1986 and 1996, sets levels of microorganisms, disinfectants, and disinfectant byproducts; organic and inorganic chemicals; and radionuclides permitted in public drinking water. The SDWA amendments tightened the definitions of contaminants and set requirements for increased monitoring of water systems.

Developing Construction Techniques that Avoid Excavations
Sewage, wastewater, and water distribution systems are buried, frequently under streets and roadways. Since repairing leaks and breakages can require digging up a section of roadway to get to the pipes, the repair frequently disrupts traffic and interrupts water and sewer service. To minimize the chaos associated with repairs, techniques are being developed to insert repair sheathing through existing pipes or use epoxy or resin to repair damage. While these techniques can be expensive, ultimate savings to the community in diminished disruption are substantial.

Human Resources - HR

Recruiting Registered Professional Engineers
Since water and sewer systems need continuous repair and expansion, registered professional engineers (PE) are required to authenticate plans and drawings prior to approval by local and state authorities. Becoming a registered PE requires a degree in an engineering field (usually civil engineering), professional work in the field, and passing a state-administered proficiency exam. Because of the limited number of registered PEs, recruiting is a challenge and can require wage and benefit packages well above the national average.

Recruiting Call Center Staff
Water and sewer utilities are either municipal departments or private companies regulated by local and state authorities. To minimize complaints by the public, utilities maintain call centers to accept calls and resolve issues. The call center staff must be able to clarify billing issues, dispatch repair crews, and route difficult calls to appropriate departments. While call center staff don't require much education, they must be personable, speak clearly, and be able to resolve issues within guidelines. Staff is recruited through the utility website, general employment websites like monster.com, and local job fairs.

VP Sales/Marketing - Sales

Selling Utility Management Services
Private companies operating utilities in multiple locations generally expand by acquiring other utilities - public and private - and bid on operating public utilities under contract. To explore opportunities, company sales staff call on utilities and municipalities, and provide solicited and unsolicited bids to provide outsourced management services.

Marketing to Residential Customers
Some utilities offer extended service protection programs to households. These service agreements cover some repairs to residential customers between the meter and the home, which is usually the homeowner's responsibility. Other service programs include water and sewer line protection insurance, internal plumbing protection insurance and more.

Call Prep Questions

Conversation Starters

How does the company plan to fund construction and repair of its water and sewer infrastructure?
The EPA estimates that about $380 billion is needed over the next 20 years to replace and update water treatment plants, storage tanks, and thousands of miles of pipe, as well as other drinking water supply infrastructure.

How does the company manage profits during periods of low water consumption?
The revenue of water utilities depends on the volume of water consumed, which in turn depends on weather conditions.

How likely is the system to be condemned in the near future and the company acquired by a municipality?
Most municipalities and other local governments have the legal authority to acquire commercially run utilities against their will ("condemnation") through eminent domain proceedings, compensating the owners.

If the company has management contracts, how long will they last, and what is the likelihood of renewal?
Municipalities may sell their water and sewer systems to private companies, which are expected to operate them more effectively.

What nonregulated income sources does the company benefit from?
Utilities often engage in nonregulated activities related to their core business.

What are some of the new technological developments that have increased the company's water quality?
By combining chlorine and ammonia in water, treatment plants can create chloramines that disinfect the water and don't disperse as rapidly as standard chlorine treatment.

Quarterly Industry Update

How much have the company's water rates increased in the last few years?
Water bills are rising in many areas across the US, and if the trend continues, more than one-third of US households could struggle to pay for water within the next five years, according to a new study from Michigan State University and the National Science Foundation.

Operations, Products, and Facilities

How many systems does the company operate?
Most companies operate one.

What is the main source of the company's water?
Groundwater, such as underground aquifers and surface water (lakes and rivers) are the most common water sources.

Does the company pay for its water? If so, how much?

Water companies often buy from local or regional water authorities.

If in the sewer business, how does the company dispose of sludge?
Clean sludge can be dried and sold as fertilizer. Contaminated sludge must be landfilled.

Does the company manage systems for others?
This is becoming more common, since commercial companies often have more expertise than municipalities.

If the company has management contracts, how long will they last?
Most contracts are for one to three years, but can be as long as 20 years.

Customers, Marketing, Pricing, Competition

Who are the company's primary customers?
Customers include individuals, businesses, and municipalities; large commercial customers pay lower rates than residential customers, but residential customers provide stable and predictable income.

Does the company bid on supplying water systems to newly developing communities in high-growth areas?
Commercial companies often bid to develop water systems for new communities in areas of the US that are growing rapidly.

Regulations, R&D, Imports and Exports

What steps has the company taken to comply with the Safe Drinking Water Act?
The act has progressively stricter water quality requirements.

How does the company fare in rate-setting proceedings?
Companies with multiple systems almost always have rate increase requests outstanding.

What processes does the company use to comply with all state and federal water quality requirements?
Water and wastewater services is a heavily regulated industry.

What steps has the company taken to increase security at its facilities?
Measures include installing new security gates, lighting, and access controls; increasing water quality testing and monitoring; conducting vulnerability assessments; and upgrading website and data system security.

Organization and Management

How does the company attract and retain workers?
Many employees need special technical or engineering training.

If the company operates several systems, is the management centralized or decentralized?
Large companies may operate decentralized management systems.

Financial Analysis

How does the company manage cash flow?
Water use is often higher in the summer.

How is the company funding maintenance and repairs to systems?
The EPA projects that by 2016, more than half of the country's sewer pipes will be in poor or very poor condition or broken.

Does the company have access to state revolving loan funds or Private Activity Bonds?
In some states, commercial utilities are excluded from state revolving funds.

Business and Technology Strategies

Does the company plan to expand in the near future through acquisitions?
Consolidation is a continuing trend in the highly fragmented industry.

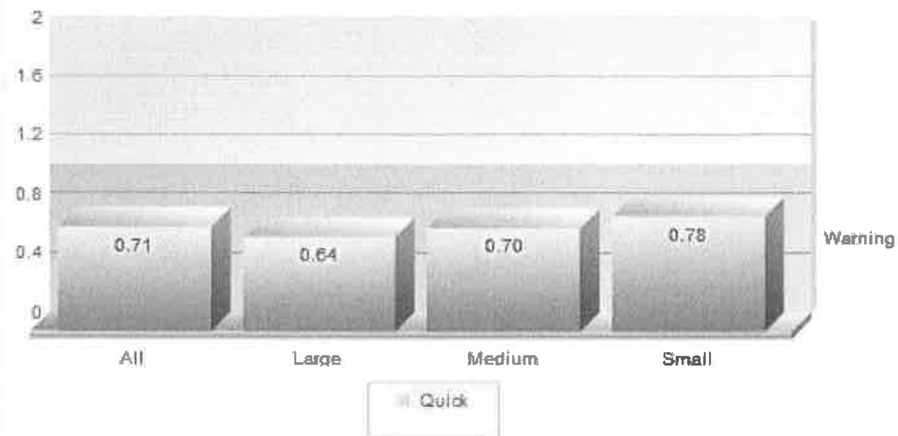
As water becomes more expensive, will pressure increase for municipalities to take over commercial operators?
Several municipalities have taken back their outsourced water and wastewater services after costs skyrocketed and citizens protested.

Financial Information

COMPANY BENCHMARK TRENDS

Quick Ratio by Company Size

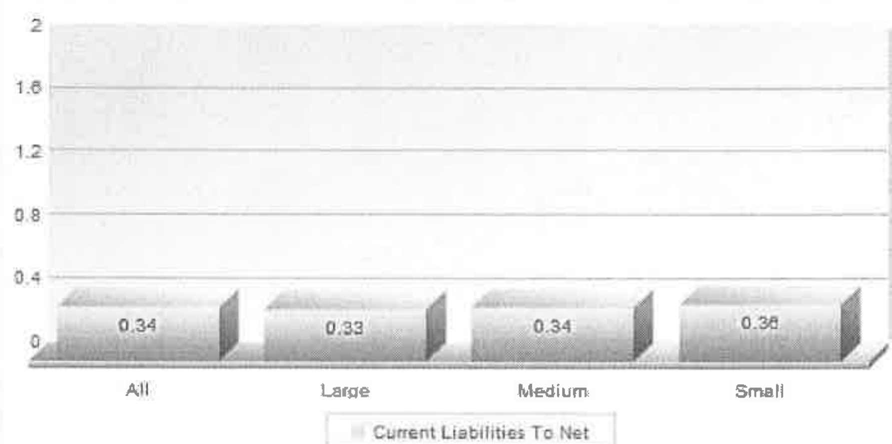
The quick ratio, also known as the acid test ratio, measures a company's ability to meet short-term obligations with liquid assets. The higher the ratio, the better; a number below 1 signals financial distress. Use the quick ratio to determine if companies in an industry are typically able to pay off their current liabilities.



Financial industry data provided by MicroBilt Corporation collected from 32 different data sources and represents financial performance of over 4.5 million privately held businesses and detailed industry financial benchmarks of companies in over 900 industries (SIC and NAICS). More data available at www.microbilt.com.

Current Liabilities to Net Worth by Company Size

The ratio of current liabilities to net worth, also called current liabilities to equity, indicates the amount due creditors within a year as a percentage of stockholders' equity in a company. A high ratio (above 80 percent) can indicate trouble.



Financial industry data provided by MicroBilt Corporation collected from 32 different data sources and represents financial performance of over 4.5 million privately held businesses and detailed industry financial benchmarks of companies in over 900 industries (SIC and NAICS). More data available at www.microbilt.com.

COMPANY BENCHMARK INFORMATION

NAICS: 2213

Data Period: 2015	Last Update February 2017
Table Data Format	Mean

Company Size	All	Large	Medium	Small
Size by Revenue		Over $50M	$5M - $50M	Under $5M
Company Count	5265	18	252	4995

Income Statement				
Net Sales	100%	100%	100%	100%
Gross Margin	75.4%	75.1%	75.6%	75.4%
Officer Compensation	3.6%	3.7%	3.6%	3.5%
Advertising & Sales	0.2%	0.2%	0.2%	0.2%
Other Operating Expenses	63.7%	63.0%	64.3%	63.7%
Operating Expenses	67.4%	66.8%	68.1%	67.3%
Operating Income	8.0%	8.3%	7.5%	8.1%
Net Income	3.1%	3.1%	2.8%	3.3%

Balance Sheet				
Cash	4.8%	4.2%	4.7%	5.5%
Accounts Receivable	4.4%	3.7%	4.2%	5.2%
Inventory	1.3%	1.2%	1.3%	1.3%
Total Current Assets	13.7%	12.1%	13.5%	15.4%
Property, Plant & Equipment	69.1%	70.4%	69.9%	67.2%
Other Non-Current Assets	17.2%	17.5%	16.6%	17.4%
Total Assets	100.0%	100.0%	100.0%	100.0%
Accounts Payable	2.5%	2.4%	2.4%	2.7%
Total Current Liabilities	13.4%	12.8%	13.2%	14.3%
Total Long Term Liabilities	47.3%	48.0%	47.7%	46.4%
Net Worth	39.2%	39.2%	39.1%	39.3%

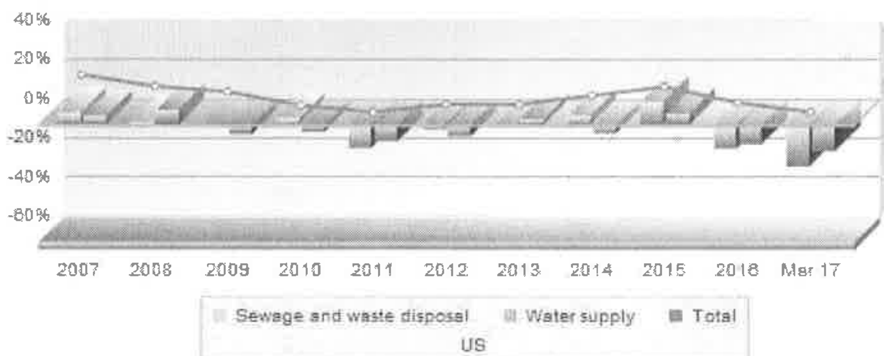
Financial Ratios				
Quick Ratio	0.71	0.64	0.70	0.78
Current Ratio	1.02	0.95	1.02	1.08
Current Liabilities to Net Worth	34.3%	32.5%	33.8%	36.3%
Current Liabilities to Inventory	x10.34	x10.29	x10.02	x10.72
Total Debt to Net Worth	x1.55	x1.55	x1.56	x1.54

Fixed Assets to Net Worth	x1.76	x1.80	x1.79	x1.71
Days Accounts Receivable	97	89	83	117
Inventory Turnover	x3.14	x3.11	x3.42	x2.96
Total Assets to Sales	610.1%	654.8%	546.4%	629.2%
Working Capital to Sales	1.6%	-4.3%	1.4%	7.0%
Accounts Payable to Sales	15.2%	15.3%	13.2%	16.9%
Pre-Tax Return on Sales	4.9%	4.9%	4.5%	5.3%
Pre-Tax Return on Assets	0.8%	0.8%	0.8%	0.8%
Pre-Tax Return on Net Worth	2.1%	1.9%	2.1%	2.1%
Interest Coverage	x2.29	x2.18	x2.12	x2.57
EBITDA to Sales	26.8%	28.5%	25.3%	26.5%
Capital Expenditures to Sales	40.5%	43.8%	37.4%	40.5%

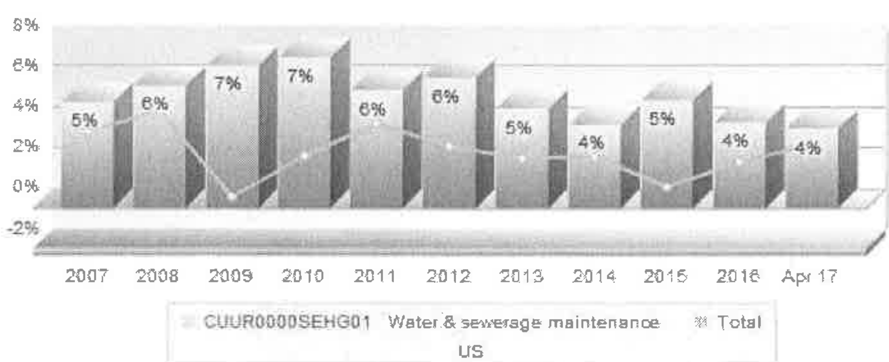
Financial industry data provided by MicroBilt Corporation collected from 32 different data sources and represents financial performance of over 4.5 million privately held businesses and detailed industry financial benchmarks of companies in over 900 industries (SIC and NAICS). More data available at www.microbilt.com.

ECONOMIC STATISTICS AND INFORMATION

Annual Construction Put into Place - Census Bureau



Change in Consumer Prices - Bureau of Labor Statistics



VALUATION MULTIPLES

No valuation multiples available for this industry.

Industry Websites

American Water Works Association
News. Listing and links to water utilities, public and private.

Association of California Water Agencies
News. Issues.

Canadian Water and Wastewater Association
News, events, policy, and resources.

Circle of Blue
Research and news regarding water policy.

National Association of Clean Water Agencies
News and information about clean water issues.

National Association of Water Companies
Political issues.

National Rural Water Association
Education and issues for state water associations.

Ontario Association of Sewage Industry Services
News, events, links, FAQ, and directories.

US EPA - Ground Water and Drinking Water
Facts and regulations.

US EPA - Office of Water
Good descriptions of municipal technologies.

Water and Wastewater Equipment Manufacturers Association
Issues, regulations, and legislation pertaining to the water and wastewater industry.

WaterWorld
Water and wastewater policy issues, industry trends, and technology news.

Glossary of Acronyms

CSO - combined sewage overflow

PUC - Public Utility Commission

SRF - state revolving fund

SDWA - Safe Drinking Water Act

WEF - Water Environment Federation

Southern Water & Sewer District
Water Utility Expense Accounts
1/1/2014 - 12/31/2014

	Original	DDAF Adjusted	Notes
Salaries and Wages - Employees (601)	$ 877,991	$ 732,930	Adjust to remove water plant employees
Salaries and Wages - Officers (603)	$ 12,200	$ 12,200	
Employee Pension and Benefits (604)	$ 295,415	$ 143,032	Adjusted by 42% as reported for 2018 by PSC Commission Report reduce by 16.52% of payroll for water plant employees
Purchased Water (610)	$ 515,356	$ -	Adjusted to $0 based on conversation with PCU
Purchased Power (615)	$ 383,076	$ -	Adjusted to $0 based on conversation with PCU
Fuel for Power Production (616)	$ -	$ -	
Chemicals (618)	$ 79,284	$ -	Adjusted to $0 based on conversation with PCU. Would have chemicals for Route 850
Materials and Supplies (620)	$ 278,394	$ 278,394	
Contractual Services - Eng. (631)	$ -	$ -	
Contractual Services - Acct. (632)	$ 42,927	$ 42,927	
Contractual Services - Legal (633)	$ 3,125	$ -	Adjusted to $0 as reported for 2018 by PSC Commission Report
Contractual Services - Water Testing	$ 35,415	$ 23,415	Adjust to remove $12,000 for water plant testing.
Contractual Services - Other (636)	$ 10,148	$ 10,148	
Rental of Bld./Real Property (641)	$ -	$ -	
Rental of Equipment (642)	$ 12,000	$ 12,000	
Transportation Expenses (650)	$ 237,743	$ 225,856	Adjust to remove 5% (associated with water plant)
Insurance - Vehicle (656)	$ -	$ -	
Insurance - General Liability (657)	$ 48,206	$ 31,652	Adjust to remove insurance expense for water plant and 5% of insurance for equipment and vehicles (see transportation)
Insurance - Worker's Compensation (658)	$ 54,598	$ 47,650	Adjust to remove water plant employees (4.79% x 145,061.02)
Insurance - Other (659)	$ 4,905	$ 4,905	
Advertising Expenses (660)	$ 1,114	$ 1,114	
Bad Debt (670)	$ 13,167	$ -	Adjusted to $0 as analysis is based on collections, not billings
Miscellaneous Expenses (675)	$ 58,208	$ 2,910	Adjusted by 95% as reported for 2018 by PSC Commission Report
Total	$ 2,963,272	$ 1,569,133	

Water Plant Expenses to Be Allocated:	
Salaries and Wages - Employees (601)	$ 145,061
Employee Pension and Benefits (604)	$ 28,309
Contractual Services - Water Testing	$ 12,000
Transportation Expenses (650)	$ 11,887
Insurance - General Liability (657)	$ 16,554
Insurance - Worker's Compensation (658)	$ 6,948
	$ 220,759

Southern Water & Sewer District
Water Utility Expense Accounts
1/1/2015 - 12/31/2015

	Original	DDAF Adjusted	Notes
Salaries and Wages - Employees (601)	$ 784,821	618,022	Adjust to remove water plant employees
Salaries and Wages - Officers (603)	$ 20,400	20,400	
Employee Pension and Benefits (604)	$ 244,770	111,799	Adjusted by 42% as reported for 2018 by PSC Commission Report / reduce by 21.25% of payroll for water plant employees
Purchased Water (610)	$ 438,084	-	Adjusted to $0 based on conversaton with PCU
Purchased Power (615)	$ 340,681	-	Adjusted to $0 based on conversaton with PCU
Fuel for Power Production (616)	$ -	-	
Chemicals (618)	$ 68,715	-	Adjusted to $0 based on conversaton with PCU
Materials and Supplies (620)	$ 298,701	298,701	
Contractual Services - Eng. (631)	$ 1,746	1,746	
Contractual Services - Acct. (632)	$ 42,854	42,854	
Contractual Services - Legal (633)	$ 4,625	-	Adjusted to $0 as reported for 2018 by PSC Commission Report
Contractual Services - Water Testing	$ 23,533	11,533	Adjust to remove $12,000 for water plant testing.
Contractual Services - Other (636)	$ 1,450	1,450	
Rental of Bld./Real Property (641)	$ -	-	
Rental of Equipment (642)	$ 8,802	8,802	
Transportation Expenses (650)	$ 117,486	111,612	Adjust to remove 5% (associated with water plant)
Insurance - Vehicle (656)	$ -	-	
Insurance - General Liability (657)	$ 132,727	116,173	Adjust to remove insurance expense for water plant and 5% of insurance for equipment and vehicles (see transportation)
Insurance - Worker's Compensation (658)	$ 77,615	69,625	Adjust to remove water plant employees (4.79% x 166,797)
Insurance - Other (659)	$ 5,878	5,878	
Advertising Expenses (660)	$ -	-	
Bad Debt (670)	$ 200,187	-	Adjusted to $0 as analysis is based on collections, not billings
Miscellaneous Expenses (675)	$ 44,561	2,228	Adjusted by 95% as reported for 2018 by PSC Commission Report
Total	$ 2,857,636	1,420,823	

Water Plant Expenses to Be Allocated:	
Salaries and Wages - Employees (601)	166,799
Employee Pension and Benefits (604)	30,168
Contractual Services - Water Testing	12,000
Transportation Expenses (650)	5,874
Insurance - General Liability (657)	16,554
Insurance - Worker's Compensation (658)	7,990
	239,385

Southern Water & Sewer District
Water Utility Expense Accounts
1/1/2016 - 12/31/2016

	Original	DDAF Adjusted	Notes
Salaries and Wages - Employees (601)	$ 882,672	$ 741,279	Adjust to remove water plant employees
Salaries and Wages - Officers (603)	$ 23,500	$ 23,500	
Employee Pension and Benefits (604)	$ 345,068	$ 168,080	Adjusted by 42% as reported for 2018 by PSC Commission Report reduce by 16.02% of payroll for water plant employees
Purchased Water (610)	$ 450,826	$ -	Adjusted to $0 based on conversaton with PCU
Purchased Power (615)	$ 450,099	$ -	Adjusted to $0 based on conversaton with PCU
Fuel for Power Production (616)	$ -	$ -	
Chemicals (618)	$ 85,893	$ -	Adjusted to $0 based on conversaton with PCU
Materials and Supplies (620)	$ 377,780	$ 377,780	
Contractual Services - Eng. (631)	$ -	$ -	
Contractual Services - Acct. (632)	$ 41,173	$ 41,173	
Contractual Services - Legal (633)	$ 6,000	$ -	Adjusted to $0 as reported for 2018 by PSC Commission Report
Contractual Services - Water Testing	$ 55,023	$ 43,023	Adjust to remove $12,000 for water plant testing.
Contractual Services - Other (636)	$ 10,773	$ 10,773	
Rental of Bld./Real Property (641)	$ -	$ -	
Rental of Equipment (642)	$ -	$ -	
Transportation Expenses (650)	$ 118,891	$ 112,946	Adjust to remove 5% (associated with water plant)
Insurance - Vehicle (656)	$ -	$ -	
Insurance - General Liability (657)	$ 158,357	$ 141,803	Adjust to remove insurance expense for water plant and 5% of insurance for equipment and vehicles (see transportation)
Insurance - Worker's Compensation (658)	$ 39,156	$ 32,383	Adjust to remove water plant employees (4.79% x 141393.35)
Insurance - Other (659)	$ -	$ -	
Advertising Expenses (660)	$ 507	$ 507	
Bad Debt (670)	$ 145,417	$ -	Adjusted to $0 as analysis is based on collections, not billings
Miscellaneous Expenses (675)	$ 35,693	$ 1,785	Adjusted by 95% as reported for 2018 by PSC Commission Report
Total	$ 3,226,828	$ 1,695,032	

Water Plant Expenses to Be Allocated:	
Salaries and Wages - Employees (601)	$ 141,393
Employee Pension and Benefits (604)	$ 32,060
Contractual Services - Water Testing	$ 12,000
Transportation Expenses (650)	$ 5,945
Insurance - General Liability (657)	$ 16,554
Insurance - Worker's Compensation (658)	$ 6,773
	$ 214,725

Certain Water Assets Acquired from Southern Water & Sewer District by PCUC
Allocation of Certain Operating Expenses for 2014 through 2016

	2014	2015	2016
Total Expenses to Allocate (1)	1,569,133	1,420,823	1,695,032
US 23 Customers (2)	994	994	994
KY 850 Customers (2)	130	130	130
Subtotal	1,124	1,124	1,124
Total Customers (3)	6,798	6,724	6,661
Percentage (4)	16.5%	16.7%	16.9%
Allocated Expenses (5)	259,445	237,508	286,025

(1) - Total expenses obtained from PSC annual filing of Southern Water & Sewer District.
Amounts have been normalized by Dean Dorton.
(2) - Obtained from billing records provided by PCUC - based on water meters in service in July 2017.
(3) - Obtained from PSC annual filing of Southern Water & Sewer District.
(4) - Calculated by dividing Subtotal of Customers from US 23 and KY 850 by Total Customers.
(5) - Calculated by multiplying total expenses by the percentage calculated in (4) above.

	2014	2015	2016
Water Plant Expenses to Allocate (A)	220,759	239,385	214,725
KY 850 Customers (B)	130	130	130
Total Customers (C)	6,798	6,724	6,661
Less: US 23 Customers (B)	994	994	994
Subtotal	5,804	5,730	5,667
Percentage (D)	2.2%	2.3%	2.3%
Allocated Expenses (E)	4,945	5,431	4,926

(A) - Total expenses obtained from supporting documentation provided by Southern Water & Sewer District.
See annual operating expense statements for detail.
(B) - Obtained from billing records provided by PCUC - based on water meters in service in July 2017.
(C) - Obtained from PSC annual filing of Southern Water & Sewer District.
(D) - Calculated by dividing KY 850 Customers by Subtotal of Total Customers less Customers from US 23.
(E) - Calculated by multiplying total expenses by the percentage calculated in (D) above.

Certain Water Assets Acquired from Southern Water & Sewer District by PCUC
Operating Results from 2014 through 2016

	2014	2015	2016
Billings - US 23 (1)	$561,147	$574,876	$551,656
Billings - KY 850 (1)	$57,093	$53,584	$53,629
Total Billings	$618,239	$628,460	$605,285
Collections - US 23 (1)	$539,436	$526,035	$443,684
Collections - KY 850 (1)	$50,786	$51,998	$45,872
Total Collections	$590,222	$578,033	$489,556
Allocated Expenses (2)	($259,445)	($237,508)	($286,025)
Allocated Chemical Expense (3)	($1,776)	($1,559)	($1,970)
Allocated Water Plant Expenses (3)	($4,945)	($5,431)	($4,926)
Direct Expense - Purchased Water (4)	($215,769)	($137,160)	($149,083)
Direct Expense - Purchased Power (5)	($3,000)	($3,000)	($3,000)
Total Expenses	($484,934)	($384,658)	($445,004)
Net Income	$105,287	$193,375	$44,552

(1) - Obtained from billing records provided by Southern Water & Sewer District.
(2) - Total expenses obtained from PSC annual filing of Southern Water & Sewer District. Amounts have been normalized by Dean Dorton and allocated based on customers served by these assets divided by total customers.
(3) - Same as (2), except that this relates solely to KY 850 customers.
(4) - Obtained from invoices for purchased water provided by Southern Water & Sewer District.
(5) - Estimated based on invoices for electricity provided by Southern Water & Sewer District.

Certain Water Assets Acquired from Southern Water & Sewer District by PCUC
Capitalization of Cash Flows

	Historical Financials			
	Year Ended Dec. 31, 2014	Year Ended Dec. 31, 2015	Year Ended Dec. 31, 2016	
Collections - US 23	539,436	526,035	517,550	
Collections - KY 850	50,786	51,998	49,873	
Total Collections	590,222	578,033	567,424	
Revenue Growth		*-2.1%*	*-1.8%*	
Allocated Expenses	259,445	237,508	286,025	
Allocated Chemical Expense	1,776	1,559	1,970	
Allocated Water Plant Expenses	4,945	5,431	4,926	
Direct Expense - Purchased Water	142,766	137,160	149,083	
Direct Expense - Purchased Power	3,000	3,000	3,000	
Total Expenses	411,932	384,658	445,004	
Operating Expense %	*69.8%*	*66.5%*	*78.4%*	
Operating Profit (EBIT) - No depreciation	178,290	193,375	122,420	
EBIT Margin	*30.2%*	*33.5%*	*21.6%*	
Selected EBIT				$ 164,695
Income Taxes (0%)				-
Net Income (Loss)				164,695
Less: Capital Expenditures				-
Free Cash Flow - Available to Equity Holders				164,695
Equity Discount Rate			12.9%	
Long-term Annual Growth Rate			2.0%	
Capitalization Rate			10.9%	
Equity Value (Controlling)				$ 1,510,963

EXHIBIT E

FIRST AMENDMENT
TO
ASSET PURCHASE AGREEMENT

This First Amendment to the Asset Purchase Agreement dated as of the 1st day of January, 2017 ("APA"), by and between the Southern Water and Sewer District, P.O. Box 610, McDowell, Kentucky 41647, hereinafter referred to as "Southern District"; and Prestonsburg City's Utilities Commission, 2560 South Lake Drive, Prestonsburg, Kentucky 41653, hereinafter referred to as "PCUC".

WITNESSETH:

WHEREAS, Southern District and PCUC entered into an Operating Agreement effective July 1, 2016 ("Initial O & M Agreement"), which provided that PCUC would commence the "... managing, operating, repairing, and maintaining Southern's Wastewater System while they negotiate the detailed terms of the Asset Purchase Agreement ..." in exchange for a monthly fee of $3,000.00. The Initial O & M Agreement was entered into by the parties to forestall enforcement action by the Division of Enforcement of the Kentucky Energy and Environment Cabinet for numerous violations of Kentucky water quality laws. The initial O & M Agreement was attached as Exhibit 1 to the Joint Application dated February 6, 2017;

WHEREAS, the term of the Initial O & M Agreement was due to expire on the closing of the Assets under an Asset Purchase Agreement yet to be negotiated, but not later than June 30, 2018;

WHEREAS, the parties entered into the Asset Purchase Agreement effective January 1, 2017 ("APA"), but executed on December 20, 2016 by PCUC, pursuant to which Southern

District agreed to convey and transfer to PCUC Southern District's wastewater system, and a portion of Southern District's potable water system (collectively, the "Assets");

WHEREAS, on May 2, 2017, the Public Service Commission (hereinafter the "Commission") entered an Order ("Order") approving the transfer of the Assets by Southern District to PCUC, which stated inter alia, that:

1. Approved the transfer of ownership and control of the Assets by Southern District to PCUC;

2. Within ten (10) days of the transfer of the Assets, Southern District and PCUC shall notify the Commission in writing of the occurrence of the asset transfer; and

3. Any material revisions of the proposed transaction must be approved by the Commission in order for the amendment to be effective.

WHEREAS, the parties entered into a second Operating & Maintenance Agreement effective July 1, 2017 ("Water O & M Agreement"), but executed after the date of the Commission's Order in December of 2017 to provide that PCUC would manage, operate, repair, and maintain Southern District's Designated Water Assets as described in paragraph 3 of the APA;

WHEREAS, on June 28, 2018, Southern District transferred only the wastewater assets to PCUC;

WHEREAS, by letter dated July 20, 2018, Damon Talley, joint counsel for Southern District and PCUC stated that "... the Closing of this transaction and the transfer of the District's Wastewater Assets to PCUC took place on June 28, 2018";

WHEREAS, none of the water distribution assets have been transferred to PCUC, nor has the consent and release from Rural Development been obtained;

WHEREAS, Southern District and PCUC have been unable to consummate the transfer of the Designated Water Assets and Southern District has retained ownership of the Designated Water Assets, while PCUC has been operating and maintaining the Designated Water Assets;

WHEREAS, the parties desire to modify certain provisions of the APA to obtain the consent and release for the water distribution assets from Rural Development ("RD").

NOW, THEREFORE, in consideration of the covenants and agreements set forth in this First Amendment, and for other good and reasonable consideration, the receipt and adequacy of which are hereby acknowledged, the parties agree as follows:

1. Southern District shall apply for the consent and release from USDA Rural Development's ("RD") lien against the portion of the water distribution assets that are scheduled to be transferred to PCUC. Upon receipt of RD's Agreement to consent to the transfer of water assets and release thereof, PCUC shall pay directly to RD an amount, not to exceed One Million Six Hundred Thousand Dollars ($1,600,000.00) (hereinafter the "Payoff") in exchange for the release.

2. Immediately prior to the payment of Payoff by PCUC, the duly authorized representative of Southern District shall execute such transfer documents, as PCUC's counsel deems necessary, appropriate or helpful, to perfect title to all water assets described, directly, or indirectly, in the APA.

3. Southern District acknowledges that it is indebted to PCUC in the sum of $275,000.00, for earned, but unpaid sewer service fees collected from Southern District's water

customers in the Wayland and Eastern service area that are sewer customers of PCUC, as of July 1, 2020.

4. PCUC will forgive the sum of One Hundred Thirty-Seven Thousand Five Hundred Dollars ($137,500.00) of the outstanding balance of the sewer user fees after the closing to transfer the foregoing water assets. Southern District shall pay the remaining unpaid balance in monthly installments on the tenth (10^{th}) day, without interest, of Two Thousand Five Hundred Dollars ($2,500.00) per month until said remaining balance is paid in full; PROVIDED, HOWEVER, if said sum is not paid in full by August 1, 2026, the remaining balance shall become immediately due and payable. The remaining unpaid balance as of August 1, 2026, shall bear interest at four percent (4%) per annum payable monthly. The monthly payment amount shall remain Two Thousand Five Hundred Dollars ($2,500.00), but the payment shall be applied to any accrued, but unpaid interest first. If any monthly payment is not made by the tenth (10^{th}) day of the month, a penalty of five percent (5%) shall be added to the payment for each month the payment is late.

5. Southern District acknowledges and states that it has already refunded all customer deposits provided to Southern District by water customers that will be transferred to PCUC. Therefore, PCUC has no obligation to make refunds to former customers that provided deposits to Southern District. Prior to the Closing for the water assets, Southern District shall furnish the PCUC a current list that shows the name, address, account number, and amount still on deposit for each of these customers.

6. Pursuant to Section 3 (F) and 3 (G) of the APA, certain water distribution assets were scheduled to be transferred to PCUC known as the "Pyramid Distribution System", but have not

been transferred. Therefore, PCUC hereby releases its claim or right to have the Pyramid Distribution System transferred to it.

7. RD agrees that on the Closing Date for the water distribution assets, it will deliver its consent and release for those water distribution assets described in Section 3 of the APA, except for the Pyramid Distribution System, in exchange for PCUC delivery of cash funds in the amount of $1,600,000.00, and for the other consideration delivered directly to Southern as provided herein. RD enters into this Agreement for the limited purpose to agree to release its lien on the transferred water assets in exchange for a cash payment by PCUC.

8. Southern District acknowledges the receipt from PCUC the consideration described in Section 4 of the APA totaling $2,140,000.00.

9. Southern District has caused this Contract to be executed in its name and on its behalf by the Chairman of its Commission, and has caused its seal to be affixed, attested by the Secretary of its Commission, and represents that due authority has been vested in the Chairman by a Resolution of the Commission of the District, now in full force and effect.

10. PCUC has caused this Contract to be executed in its name and on its behalf by its Superintendent, attested by the Chairman of its Commission, and represents that due authority has been vested in such Superintendent by a Resolution of its Commission, now in full force and effect.

11. RD has caused this Contract to be executed by its State Director, and represents that said State Director is vested with full authority in law to execute the same.

12. This First Amendment shall be filed by Southern District, and/or PCUC with the Public Service Commission ("PSC"), and shall become effective on the date of such approval.

13. The closing shall occur within thirty (30) days after PSC approval is received.

14. In all other respects, the parties hereto approve, confirm and ratify the terms and conditions of the APA, except as modified by a separate agreement for operation and billing for the water customers located in Wayland and Eastern served by the sewer facilities located there (the, "Financial Management Services Contract").

15. The Parties covenant and agree that, subsequent to the execution and delivery of this Agreement and without any additional consideration, each of the Parties will execute and deliver any further legal instruments and perform any acts which are or may become reasonably necessary to effectuate this Agreement.

This First Amendment is made as of the year and date first above written, and shall be effective as of that date without regard to the fact that execution hereof by the parties shall have been effected at the same or different times.

SOUTHERN WATER & SEWER DISTRICT
BY:______________________________
ITS: CHAIRMAN

ATTEST:

____
SECRETARY

PRESTONSBURG CITY'S UTILITIES COMMISSION
BY: ______________________________
BRIAN MUSIC, SUPERINTENDENT/CEO

ATTEST:

____
JIMMY A. CALHOUN, CHAIRMAN OF THE PRESTONSBURG CITY'S UTILITIES COMMISSION

UNITED STATES DEPARTMENT OF AGRICULTURE, ACTING BY AND TRHOUGH THE RURAL DEVELOPMENT
BY: ______________________________
STATE DIRECTOR FOR KENTUCKY

EXHIBIT F

FINANCIAL MANAGEMENT SERVICES CONTRACT
PRESTONSBURG CITY'S UTILITIES COMMISSION

THIS CONTRACT, made effective the 1st day of August, 2020, by and between Prestonsburg City's Utilities Commission (hereinafter referred to as the "Agency"), and the Southern Water & Sewer District (hereinafter referred to as the "District"), for and in the consideration of the mutual covenants and promises hereinafter enumerated hereby agree as follows:

I. Financial Services

1) The Agency has determined that it is more economical and efficient for the District to provide financial management services for the Agency's billing collection system for the Agency's waste-water customers that are also potable water customers of the District. The services are to consist of preparing and sending bills, collecting revenues, keeping financial records and making reports to the Agency (hereinafter the "Financial Services").

II. The District's Obligations

2) The District does not assume responsibility for any existing, contractual or financial obligations of the Agency, but will perform the desired Financial Services. The District shall contract for all supplies and services to be furnished by it pursuant to this contract in its own name and will not obligate the Agency for any such obligations. In instances where it is necessary to obtain services or supplies from an outside source, the District shall not obligate the Agency for any such obligations without prior approval of the Agency, except in the case of emergencies, and will in those instances make every attempt to obtain prior approval from the authorized agent of the Agency.

3) The District shall maintain separate records, but not separate bank accounts for the Agency. The District shall bill its residential water customers ("Residential Customer"), as designated on the District's records, residing in the District's service area and served by the Agency for the waste water fees due the Agency. New Residential Customers shall be billed by the District and a list of new Residential Customers shall be given to the Agency monthly.

4) The District shall maintain Financial Services accounts in a form where sound management practice can be readily ascertained. The District shall prepare a monthly statement of accounts, balance said accounts and prepare monthly reconciliations.

5) The District shall provide routine data to support periodic reports or other filings with Federal and state regulatory authorities, if necessary.

6) The District shall charge each Residential Customer in accordance with the tariff schedules established by the Agency, as amended from time to time. The Agency shall give the District notice of its initial, or amended tariff sheet at least thirty (30) days prior to the date of the District's billing date. The initial tariff sheet is attached hereto as Exhibit A and is hereby incorporated by reference as if fully set forth herein. The District shall perform the Financial Services in accordance with the District's established billing and collection procedures ("Residential Retail Billing Procedures"), as may be amended from time to time. The District will only terminate a customer's water service for non-payment in accordance with its Residential Retail Billing Procedure.

7) Any partial payments received from a customer shall be first applied to any amount due the District for utility services rendered and the remaining portion of the payment, if any, shall be applied to amounts charged by the Agency.

8) The District shall obtain insurance to protect itself against any error or omissions by its employees. The District shall also provide fidelity bond coverage by an insurance company on all employees handling the Agency's funds.

9) The District shall remit, by check, to the Agency all amounts collected during the preceding month, less the District's Basic Charge for the preceding month by the tenth day of the succeeding month. The District shall include a listing of customers having made payment.

III. Agency's Obligations

10) The Agency shall pay the District a Basic Charge of three percent (3.0%) of the Agency's tariff schedule for each customer based upon the customer classification established by the Agency ("Basic Charge") for the described Financial Services. The Basic Charge will be added to the Agency's applicable tariff and collected from the customer. On the customer statement the Basic Charge will be separately stated and separately identified as an "Administrative Fee".

11) The Agency shall pay the District for all other services rendered under this Contract or which may be agreed to in addition to the contract one month after such services are rendered.

12) The Agency shall reimburse the District for the expenses related to the preparation and filing of any forms, etc. required by Federal and state regulatory authorities.

13) For the purpose of computing cost under this contract for items not covered by the Basic Charge, the District shall maintain records of materials and supplies and employee and equipment time utilized in performing services under this contract.

Employee time shall include employee benefits, employer taxes and other costs directly related to the payment of wages. Equipment time shall include operating and maintenance cost, depreciation, finance charges and other charges directly related to the utilization of the equipment. Administration overhead, including supervisory salaries, rents, utilities, interest costs on inventory, office equipment and related charges may be allocated directly as a percentage of other charges, or on a per customer basis, using generally accepted principles of cost accounting.

14) The Agency hereby authorizes the District to act as its agent in carrying out the functions that the District agrees to perform.

15) The Agency shall receive, process and make payment for any refund claims submitted. In the event of a duplicate payment, the Agency shall be responsible for making all refunds.

IV. Termination and Renewal

16) The contract shall become effective and shall remain in effect for a period of one (1) year. It may be renewed for periods of one (1) year thereafter by mutual agreement of the parties and shall renew automatically unless written notice of termination is given as hereinafter provided. Either party may terminate this contract by giving a written notice to the other party thirty (30) days prior to the date of termination, or thirty (30) days following any decision of any regulatory agency having jurisdiction that, in either party's view, adversely affect the basis upon which this Contract was executed.

V. Miscellaneous

17) This contract may be reviewed and approved by a representative of bond holder of either party and the parties hereto agree to modify or amend the Contract to satisfy the requirements of such bond holder.

18) Each party shall indemnify the other party, its employees, and agents from all claims, demands, and liabilities of any kind relating to or arising out of this Agreement, except to the extent such claims, demands, or liabilities result from or arise out of the negligence of the party being indemnified.

19) All obligations of either party with respect to service hereunder shall be excused without liability during the pendency of any condition of force majeure. Force majeure shall include any act, event or condition beyond the reasonable control of the party claiming force majeure, and shall include, but not be limited to, any act of God, pandemic, fire, storm, earthquake, freezing condition, wind, flood, drought, snow, power surges and outages, environmental release, breakage of or delay in receiving parts, equipment or supplies, or shortage thereof, strike or lockout, or any act, event or requirement of any governmental law, regulation or entity. Force majeure shall not include financial inability to pay.

20) All notices and other communications provided hereunder shall be in writing and shall be delivered personally or transmitted by certified mail, return receipt requested or by a recognized overnight courier service. Such notice shall be deemed to have been given at the time of personally delivery or upon receipt thereof, as reflected on the signed certificate or delivery statement of the courier service. Notice must be delivered or sent to the party at the following address or to such other address as a party may have designated by notice:

TO AGENCY:	Brian Music, Superintendent Prestonsburg City's Utilities Commission 2560 South Lake Drive Prestonsburg, Kentucky 41653-1048
TO DISTRICT:	Chairman Southern Water & Sewer District 245 KY-680 McDowell, Kentucky 41647

21) This Agreement may be amended in writing only, duly signed by both parties, and will be governed by and construed in accordance with Kentucky law.

22) Upon execution, the Agreement will inure to the benefit of and be binding upon the parties hereto and their respective officers, successors and assigns.

23) The terms and provisions of this Agreement shall not be severable, and in the event that any term or provision hereof is held to be invalid or unenforceable, the remaining terms or provisions hereof shall be invalid and unenforceable, and the parties shall have no further obligation hereunder.

24) Either party's failure to exercise any of its rights hereunder at any time will not operate as a waiver of its right to exercise same at any other time(s).

25) This Agreement may be executed in several counterparts with the same effect as if the parties executing the several counterparts had all executed one counterpart.

26) Notwithstanding any other provision of the Agreement, either party may reduce the amount of any payment otherwise payable to or on behalf of the other party by the amount of any obligation due or payable to the other party and the applicable party shall be deemed to have consented to such reduction.

27) The District shall include the beginning balance of all amounts outstanding for the Agency's customers that are currently connected to the Agency's wastewater

collection system as of the initial billing cycle. In the event an amount is outstanding from a former customer that no longer occupies such address, whether as a tenant or owner, the District shall not be responsible for the collection of same.

28) This Agreement shall be filed by the District with the Public Service Commission ("Commission") and shall be subject to the Commission's jurisdiction, and is contingent upon the Commission's approval.

IN WITNESS WHEREOF, Prestonsburg City's Utilities Commission, by and through its authorized agent, has caused its signature to be affixed hereto and Southern Water & Sewer District, by and through its authorized agent has caused its signature to be affixed hereto.

Prestonsburg City's Utilities Commission

____
Brian Music, Superintendent
Prestonsburg City's Utilities Commission

ATTEST:

____
Jimmy A. Calhoun, Chairman

Southern Water & Sewer District

____
Jeff Prater, Chairman