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Indian Hills Utility Operating Company, Inc. Recommended Capital Structure and Cost Rates
for Ratemaking Purposes
Estimated at December 31, 2017

| Type Of Capital | Ratios (1) | Cost Rate | Weighted Cost <br> Rate |
| :---: | :---: | :---: | :---: |
| Long-Term Debt | 77.12\% | 14.00\% (1) | 10.80\% |
| Common Equity | 22.88\% | 15.20\% (2) | 3.48\% |
| Total | 100.00\% |  | 14.28\% |

Notes:
(1) Company-Provided.
(2) From page 2 of this Sub-Schedule.

Indian Hills Utility Operating Company, Inc. Brief Summary of Common Equity Cost Rate

| Line No. | Principal Methods | Proxy Group of Eight Water Companies |
| :---: | :---: | :---: |
| 1. | Discounted Cash Flow Model (DCF) (1) | 8.63 \% |
| 2. | Risk Premium Model (RPM) (2) | 10.75 |
| 3. | Capital Asset Pricing Model (CAPM) (3) | 10.21 |
| 4. | Market Models Applied to Comparable Risk, Non-Price Regulated Companies (4) | 11.38 |
| 5. | Indicated Common Equity Cost Rate before Adjustment for Business Risks | 10.35 \% |
| 6. | Financial Risk Adjustment (5) | 2.49 |
| 7. | Size Risk Adjustment (6) | 2.38 |
| 8. | Indicated Common Equity Cost Rate | 15.22 \% |
| 9. | Recommended Common Equity Cost Rate | 15.20 \% |

Notes: (1) From Sub-Schedule DWD-3.
(2) From page 1 of Sub-Schedule DWD-4.
(3) From page 1 of Sub-Schedule DWD-5.
(4) From page 1 of Sub-Schedule DWD-7.
(5) From Sub-Schedule DWD-8
(6) From Sub-Schedule DWD-9.

## Proxy Group of Eight Water Companies CAPITALIZATION AND FINANCIAL STATISTICS (1) 2012-2016, Inclusive

$\underline{2016} \underline{2015} \underline{2014} \underline{2013} \underline{2012}$

## CAPITALIZATION STATISTICS

| AMOUNT OF CAPITAL EMPLOYED |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TOTAL PERMANENT CAPITAL | \$2,399.854 | \$2,269.476 | \$2,156.407 | \$2,058.747 | \$1,998.358 |  |
| SHORT-TERM DEBT | \$137.724 | \$95.003 | \$72.459 | \$95.589 | \$60.594 |  |
| TOTAL CAPITAL EMPLOYED | \$2,537.578 | \$2,364.479 | \$2,228.866 | \$2,154.336 | \$2,058.952 |  |
| INDICATED AVERAGE CAPITAL COST RATES (2) |  |  |  |  |  |  |
| TOTAL DEBT | 4.73 \% | 4.89 \% | 5.01 \% | 5.19 \% | 5.36 \% |  |
| PREFERRED STOCK | 5.42 \% | 5.42 \% | 5.30 \% | 5.51 \% | 5.53 \% |  |
|  |  |  |  |  |  | 5 YEAR |
| CAPITAL STRUCTURE RATIOS |  |  |  |  |  | AVERAGE |
| BASED ON TOTAL PERMANENT CAPITAL: |  |  |  |  |  |  |
| LONG-TERM DEBT | 46.13 \% | 46.25 \% | 45.71 \% | 46.24 \% | 49.32 \% | 46.73 \% |
| PREFERRED STOCK | 0.12 | 0.12 | 0.13 | 0.16 | 0.18 | 0.14 |
| COMMON EQUITY | $\underline{53.75}$ | 53.63 | $\underline{54.16}$ | $\underline{53.60}$ | $\underline{50.50}$ | $\underline{53.13}$ |
| TOTAL | $\underline{\underline{100.00}}$ \% | $\underline{\underline{100.00}}$ \% | $\underline{\underline{100.00}}$ \% | $\underline{\underline{100.00}}$ \% | $\underline{\underline{100.00}}$ \% | $\underline{\underline{100.00}}$ \% |
| BASED ON TOTAL CAPITAL: |  |  |  |  |  |  |
| TOTAL DEBT, INCLUDING SHORT-TERM | 48.59 \% | 47.63 \% | 47.00 \% | 47.77 \% | 50.87 \% | 48.37 \% |
| PREFERRED STOCK | 0.11 | 0.12 | 0.13 | 0.15 | 0.17 | 0.14 |
| COMMON EQUITY | $\underline{51.30}$ | $\underline{52.25}$ | 52.87 | $\underline{52.08}$ | $\underline{48.96}$ | 51.49 |
| TOTAL | $\underline{\underline{100.00}}$ \% | $\underline{\underline{100.00}}$ \% | $\underline{\underline{100.00}}$ \% | $\underline{\underline{100.00}}$ \% | $\underline{\underline{100.00}}$ \% | $\underline{\underline{100.00}}$ \% |

FINANCIAL STATISTICS

| FINANCIAL RATIOS - MARKET BASED |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| EARNINGS / PRICE RATIO | 4.01 | \% | 4.72 | \% | 5.44 | \% | 4.84 | \% | 5.47 | \% | 4.90 | \% |
| MARKET / AVERAGE BOOK RATIO | 274.64 |  | 224.46 |  | 212.84 |  | 206.33 |  | 187.65 |  | 221.18 |  |
| DIVIDEND YIELD | 2.17 |  | 2.66 |  | 2.76 |  | 2.88 |  | 3.17 |  | 2.73 |  |
| DIVIDEND PAYOUT RATIO | 55.72 |  | 56.71 |  | 52.46 |  | 58.35 |  | 60.42 |  | 56.73 |  |
| RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY | 10.83 | \% | 10.40 | \% | 11.38 | \% | 10.08 | \% | 10.12 | \% | 10.56 | \% |
| TOTAL DEBT / EBITDA (3) | 3.63 | X | 3.64 | X | 3.40 | X | 3.65 | X | 3.83 | X | 3.63 | X |
| FUNDS FROM OPERATIONS / TOTAL DEBT (4) | 22.17 | \% | 24.05 | \% | 25.95 | \% | 22.85 | \% | 20.86 | \% | 23.18 | \% |
| TOTAL DEBT / TOTAL CAPITAL | 48.59 |  | 47.63 |  | 47.00 |  | 47.77 |  | 50.87 | \% | 48.37 |  |

Notes:
(1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group, and are based upon financial statements as originally reported in each year.
(2) Computed by relating actual total debt interest or preferred stock dividends booked to average of beginning and ending total debt or preferred stock reported to be outstanding.
(3) Total debt relative to EBITDA (Earnings before Interest, Income Taxes, Depreciation and Amortization).
(4) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges as a percentage of total debt.

Capital Structure Based upon Total Permanent Capital for the
Proxy Group of Eight Water Companies
2012-2016, Inclusive

|  | $\underline{2016}$ | $\underline{2015}$ | $\underline{2014}$ | $\underline{2013}$ | $\underline{2012}$ | 5 YEAR <br> AVERAGE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| American States Water Co. |  |  |  |  |  |  |
| Long-Term Debt | 39.40 \% | 41.15 \% | 39.15 \% | 40.30 \% | 42.49 \% | 40.50 \% |
| Preferred Stock | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Common Equity | 60.60 | 58.85 | 60.85 | 59.70 | 57.51 | 59.50 |
| Total Capital | $\underline{100.00}$ \% | $\underline{100.00}$ \% | 100.00 \% | 100.00 \% | 100.00 \% | 100.00 \% |
| American Water Works Company Inc |  |  |  |  |  |  |
| Long-Term Debt | 54.74 \% | 53.89 \% | 52.70 \% | 52.42 \% | 54.30 \% | 53.61 \% |
| Preferred Stock | 0.09 | 0.11 | 0.15 | 0.17 | 0.21 | 0.15 |
| Common Equity | 45.17 | 46.00 | 47.15 | 47.41 | 45.49 | 46.24 |
| Total Capital | $\underline{100.00}$ \% | $\underline{100.00}$ \% | 100.00 \% | 100.00 \% | $\underline{100.00}$ \% | 100.00 \% |
| Aqua America Inc |  |  |  |  |  |  |
| Long-Term Debt | 50.81 \% | 50.76 \% | 49.45 \% | 50.32 \% | 53.41 \% | 50.95 \% |
| Preferred Stock | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 |
| Common Equity | 49.19 | 49.24 | 50.55 | 49.67 | 46.58 | 49.05 |
| Total Capital | $\underline{100.00}$ \% | $\underline{100.00}$ \% | 100.00 \% | 100.00 \% | $\underline{100.00}$ \% | 100.00 \% |
| California Water Service Group |  |  |  |  |  |  |
| Long-Term Debt | 45.83 \% | 44.69 \% | 40.46 \% | 42.03 \% | 50.39 \% | 44.68 \% |
| Preferred Stock | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Common Equity | 54.17 | 55.31 | 59.54 | 57.97 | 49.61 | 55.32 |
| Total Capital | 100.00 \% | 100.00 \% | 100.00 \% | 100.00 \% | 100.00 \% | 100.00 \% |
| Connecticut Water Service Inc |  |  |  |  |  |  |
| Long-Term Debt | 46.02 \% | 44.54 \% | 45.91 \% | 47.34 \% | 49.03 \% | 46.57 \% |
| Preferred Stock | 0.18 | 0.19 | 0.20 | 0.20 | 0.21 | 0.20 |
| Common Equity | 53.80 | 55.27 | 53.89 | 52.46 | 50.76 | 53.23 |
| Total Capital | 100.00 \% | 100.00 \% | 100.00 \% | 100.00 \% | 100.00 \% | 100.00 \% |
| Middlesex Water Co. |  |  |  |  |  |  |
| Long-Term Debt | 38.91 \% | 40.44 \% | 41.55 \% | 41.36 \% | 43.53 \% | 41.16 \% |
| Preferred Stock | 0.67 | 0.69 | 0.71 | 0.88 | 1.02 | 0.79 |
| Common Equity | 60.42 | 58.87 | 57.74 | 57.76 | 55.45 | 58.05 |
| Total Capital | 100.00 \% | 100.00 \% | 100.00 \% | 100.00 \% | 100.00 \% | 100.00 \% |
| SJW Corp |  |  |  |  |  |  |
| Long-Term Debt | 50.69 \% | 50.03 \% | 51.66 \% | 51.09 \% | 55.39 \% | 51.77 \% |
| Preferred Stock | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Common Equity | 49.31 | 49.97 | 48.34 | 48.91 | 44.61 | 48.23 |
| Total Capital | $\underline{100.00}$ \% | $\underline{100.00}$ \% | 100.00 \% | 100.00 \% | $\underline{100.00}$ \% | 100.00 \% |
| York Water Co. |  |  |  |  |  |  |
| Long-Term Debt | 42.60 \% | 44.46 \% | 44.81 \% | 45.07 \% | 45.98 \% | 44.58 \% |
| Preferred Stock | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Common Equity | 57.40 | 55.54 | 55.19 | 54.93 | 54.02 | 55.42 |
| Total Capital | $\underline{100.00}$ \% | $\underline{100.00}$ \% | 100.00 \% | 100.00 \% | 100.00 \% | 100.00 \% |
| Proxy Group of Eight Water Companies |  |  |  |  |  |  |
| Long-Term Debt | 46.13 \% | 46.25 \% | 45.71 \% | 46.24 \% | 49.32 \% | 46.73 \% |
| Preferred Stock | 0.12 | 0.12 | 0.13 | 0.16 | 0.18 | 0.14 |
| Common Equity | 53.75 | 53.63 | 54.16 | 53.60 | 50.50 | 53.13 |
| Total Capital | 100.00 \% | $\underline{100.00}$ \% | 100.00 \% | 100.00 \% | $\underline{100.00}$ \% | 100.00 \% |

Source of Information
Annual Forms 10-K


$\Sigma$

$\stackrel{\square}{\square}$






$\xrightarrow{\text { Proxy Group of Eight Water Companies }}$
Proxy Group of Eight Water
American States Water Co. American Water Works Company Inc Aqua America Inc

California Water Service Group
Connecticut Water Service Inc Middlesex Water Co.

York Water Co.

NA= Not Available


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BUSINESS: American States Water Co. operates as a holding company. Through its principal subsidiary, Golden State Water Company, it supplies water to 261,002 customers in 75 cities and 10 counties. Service areas include the greater metropolitan areas of Los Angeles and Orange Counties. The company also provides electric utility services to 23,940 customers in the city of Big Bear
American States Water's profits are on the upswing. The company's pershare earnings have been stuck in a tight range close to $\$ 1.60$ over the past four years. A combination of rate relief and a greater contribution from the nonregulated business should enable share net to reach $\$ 1.70$ in 2017, and $\$ 1.80$ in 2018.
Finances will likely weaken but remain strong through early next decade. The company uses less leverage than any of its peers and is one of the two utilities in the group that carries an (A) Financial Strength rating. Capital spending will be meaningful, but not onerous, over the next five-year period. So, while certain financial metrics may decline, the balance sheet should remain sound.
The nonregulated sector offers the company additional upside potential. Through its ASUS subsidiary, American States has been an active bidder in the privatization of the water systems of U.S. military bases. The most recent win was for the Elgin Air Force Base. The 50-year contract was for a total of $\$ 510$ million. ASUS now services about 10 installations and will continue to bid on new contracts

Lake and in areas of San Bernardino County. Sold Chaparral City Water of Arizona (6/11). Has 736 employees. BlackRock, Inc. owns $11.7 \%$ of out. shares; Vanguard, $9.5 \%$;; off. \& dir. 1.5\%. (4/17 Proxy). Chairman: Lloyd Ross. President \& Chief Executive Officer: Robert J. Sprowls. Inc: CA. Address: 630 East Foothill Blvd., San Dimas, CA 91773. Tel: 909-394-3600. Internet: www.aswater.com.
as the process unfolds. This segment is now responsible for about $20 \%$ of American Water's net income, and we think this percentage will continue to rise in the coming years.
There is not too much activity on the regulatory front. Earlier this year, Golden State Water filed a cost of capital application with California regulators. A ruling, which will determine rates for 2018, is expected by yearend. A legal dispute regarding the Ojai Water System also seems to be nearing a resolution. To settle all legal claims, Golden State has agreed to sell the assets for $\$ 34.5$ million in cash. The sale would result in company taking an $\$ 8$ million pretax profit, which is excluded from our earnings presentation.
These timely shares have had a nice run, of late. Despite its defensive nature, AWR has risen $9 \%$ in value since our April report. By comparison, the S\&P 500 was up only $3 \%$ over the same time frame. The equity is now trading near the midpoint of our 2020-2022 Target Price Range, which means that it has limited long-term appeal. J ames A. Flood

J uly 14, 2017

## (A) Primary earnings. Excludes nonrecurring (B) Dividends historically paid in early March, (C) In millions, adjusted for split.



| CURRENT POSITIO (\$MILL.) |  | TION 2015 | 2016 | 3/31/17 |
| :---: | :---: | :---: | :---: | :---: |
| Cash Assets |  | - 45.0 | 75.0 | 78.0 |
| Accts Receivab |  | 255.0 | 269.0 | 250.0 |
| Other |  | 357.0 | 440.0 | 439.0 |
| Current Assets |  | 657.0 | 784.0 | 767.0 |
| Accts Payable |  | 126.0 | 154.0 | 108.0 |
|  |  | 682.0 | 423.0 | 1554.0 |
| Other |  | 725.0 | 815.0 | 756.0 |
| Current Liab. |  | 1533.0 | 2392.0 | 2418.0 |
| ANNUAL RATES |  | Past Pas <br> 10 Yrs. 5 Yrs |  |  |
| of change (per sh) |  | 3.0\% 3.5 | $\begin{array}{ll}\text { 3.5\% } & 4.5 \% \\ 8.5 \%\end{array}$ |  |
| Revenues |  | 23.0\% 8.5 |  |  |
| Earnings |  |  | .0\% | 8.5\% |
| Dividends |  |  | .0\% 10 | $\begin{gathered} 10.0 \% \\ 5.5 \% \end{gathered}$ |
|  |  | 1.5\% 4.0 | .0\% 5 |  |
| Calendar | QUARTERLY REVENUES (\$ mill.) <br> Mar. 31 Jun. 30 Sep. 30 Dec. 31 |  |  |  |
| $\begin{aligned} & 2014 \\ & 2015 \\ & 2016 \\ & 2017 \\ & 2018 \\ & \hline \end{aligned}$ | 679.0 | 754.8846 .1 | 731.4 | 3011.3 |
|  | 698.0 | 782.0896 .0 | 783.0 | 3159.0 |
|  | 743.0 | 827.0930 .0 | 802.0 | 3302.0 |
|  | 756.0 | 870985 | 854 | 3465 |
|  | 810 | 9201045 | 890 | 3665 |
| Calendar | EARNINGS PER SHARE A <br> Mar. 31 Jun. 30 Sep. 30 Dec. 31 |  |  | $\begin{array}{l\|l} \text { Full } \\ \text { Year } \end{array}$ |
| 2014 | . 39 | $62 \quad .86$ | . 52 | 2.39 |
| 2015 | . 44 | . 68 . 96 | . 56 | 2.64 |
| 2016 | . 46 | . 77 . 83 | . 57 | 2.62 |
| 2017 | . 52 | $\begin{array}{ll}.80 & 1.05\end{array}$ | . 68 | 3.05 |
| 2018 | . 57 | . 881.09 | . 71 | 3.25 |
| Calendar | QUARTERLY DIVIDENDS PAID Ba |  |  |  |
|  | Mar. 31 | Jun. 30 Sep. 30 | Dec. 31 | ar |
| 2014 | . 28 | .31 . 31 | .31 | 1.21 |
| 2015 | . 31 | . 34 . 34 | . 34 | 1.33 |
| 2016 | . 34 | . 375 . 375 | . 375 | 1.47 |
| 2017 | . 375 | . 415 |  |  |

BUSINESS: American Water Works Company, Inc. is the largest investor-owned water and wastewater utility in the U.S., providing services to over 15 million people in over 47 states and Canada. (Regulated presence in 16 states.) Nonregulated business assists municipalities and military bases with the maintenance and upkeep as well. Regulated operations made up $86.5 \%$ of 2016 revenues.
American Water Works' operating strategy continues to be quite successful. The U.S. water industry consists of thousands of small municipally run districts that operate independently. Due to an industry-wide deferral of capital expenditures, many of these systems do not have the required financial wherewithal to replace their aging pipelines and wastewater facilities. As the behemoth of the publicly traded entities (AWK's market capitalization is more than double that of the second largest water utility), the company is always buying up these smaller water authorities. Because of the huge amount of synergies prevalent in this industry, AWK can absorb new water authorities and make them much more efficient. By spending to improve the asset base and service to customers, it gets on regulators good side. This policy has enabled the company to increase externally by almost 2\% annually.
American Water has about the best earnings growth prospects in the water utility group. The acquisition and cost-cutting strategy has enabled the com-

New Jersey is its largest market accounting for $25.4 \%$ of regulated revenues. Has 6,800 employees. The Vanguard Group, owns 9.6\% of outstanding shares; BlackRock, Inc., 8.2\%; officers \& directors, less than $1.0 \%$. ( $3 / 17$ Proxy). President \& CEO: Susan N. Story. Chair.: George MacKenzie. Address: 1025 Laurel Oak Road, Voorhees, NJ 08043. Tel.: 856-346-8200. Internet: www.amwater.com.
dend growth since 2008. (Last year was an exception, as an unusual expense related to a chemical spill caused a negative year-over-year comparison.) All told, we expect American Water's share net to climb 16\% in 2017, to $\$ 3.05$, and $7 \%$ in 2018 , to $\$ 3.25$. What's more, we estimate that the company's bottom line will increase $8.5 \%$ yearly through early next decade.
The utility is spending heavily to upgrade its infrastructure. The capital budget for 2017 is about $\$ 1.2$ billion. Over the next three to five-year pull, this figure should be almost $\$ 6$ billion.
Despite all of the company's positive attributes, we think more attractive stock selections can be found elsewhere. Investors have been pouring large amounts of funds into the Water Utility Industry in the recent past. This has lead to the group turning in a solid performance, even though these are defensive stocks and we are currently in a bull market. I ndeed, the yield on this income stock is now only 20 basis points higher than the Value Line median. Moreover, long-term total return potential is now subpar.
J ames A. Flood


|  | 32 | 37 | 3/31/7 | $\begin{aligned} & 3.2 \% \\ & 67 \% \end{aligned}$ | $\begin{aligned} & 2.8 \% \\ & 70 \% \end{aligned}$ | $\begin{aligned} & 2.7 \% \\ & 72 \% \end{aligned}$ | $\begin{aligned} & 3.7 \% \\ & 65 \% \end{aligned}$ | $\begin{aligned} & 4.6 \% \\ & 60 \% \end{aligned}$ | $\begin{aligned} & 4.3 \% \\ & 61 \% \end{aligned}$ | $\begin{aligned} & 6.7 \% \\ & 50 \% \end{aligned}$ | $\text { 6.1\% } 52$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cash Assets | 3.2 99.1 | 37.7 |  | BUSINESS: Aqua America, Inc. is the holding company for water and wastewater utilities that serve approximately three million residents in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Florida, Indiana, and five other states. Has 1,551 employees. Acquired AquaSource, 7/13; North Maine Utilities, 7/15; and others. Water supply revenues '2016: residential, 59\%; commercial, |  |  |  |  |  |  |  |
| Receivables Inventory (AvgCst) | 99.1 12.4 | 97.4 13.0 | 89.4 14.0 |  |  |  |  |  |  |  |  |
| Other ( | 13.7 | 14.6 | 14.7 |  |  |  |  |  |  |  |  |
| Current Assets | 128.4 | 128.7 | 122.5 |  |  |  |  |  |  |  |  |
| Accts Payable | 56.5 | 59.9 | 50.2 |  |  |  |  |  |  |  |  |
| Debt Due | 52.3 84.4 | 157.2 84.4 | 147.0 80.4 |  |  |  |  |  |  |  |  |
| urrent Liab. | 193.2 | 301.5 |  |  |  |  |  |  |  |  |  |


| ANNUAL RATES <br> of change (per sh) <br> Revenues <br> "Cash Flow" <br> Earnings <br> Dividends <br> Book Value |  | Past P <br> 10 Yrs. 5 <br> $4.0 \%$  <br> $7.5 \%$  <br> $8.5 \%$ 1 <br> $8.0 \%$  <br> $7.0 \%$  <br>   |  | Past Est'd '14.'16 <br> 5 Yrs. to 20.22 <br> $2.0 \%$ $5.0 \%$ <br> $7.0 \%$ $6.0 \%$ <br> $11.0 \%$ $7.0 \%$ <br> $8.0 \%$ $9.0 \%$ <br> $7.5 \%$ $6.5 \%$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Calendar | $\begin{array}{\|c} \hline \text { QUAF } \\ \text { Mar. } 31 \end{array}$ | TERLY $R$ Jun. 30 | $\text { Sep. } 30$ | $\begin{aligned} & \hline \text { mill.) } \\ & \text { Dec. } 31 \end{aligned}$ | Full Year |
| 2014 | 182.7 | 195.3 | 210.5 | 191.4 | 779.9 |
| 2015 | 190.3 | 205.8 | 221.0 | 197.1 | 814.2 |
| 2016 | 192.6 | 203.9 | 226.6 | 196.8 | 819.9 |
| 2017 | 187.8 | 210 | 235 | 207.2 | 840 |
| 2018 | 200 | 225 | 250 | 215 | 890 |
| Calendar | $\begin{array}{r} \text { EA } \\ \text { Mar. } 31 \end{array}$ | $\begin{aligned} & \text { RNINGS PI } \\ & \text { Jun. } 30 \end{aligned}$ | $\begin{aligned} & \text { PER SHARE } \\ & \text { Sep. } 30 \end{aligned}$ | $\text { Dec. } 31$ | Full Year |
| 2014 | . 24 | . 31 | . 38 | . 27 | 1.20 |
| 2015 | . 27 | . 32 | . 38 | . 17 | 1.14 |
| 2016 | . 29 | . 34 | . 41 | . 28 | 1.32 |
| 2017 | . 28 | . 35 | . 44 | . 31 | 1.38 |
| 2018 | . 31 | . 36 | . 47 | . 31 | . 4 |
| Calendar | QUART <br> Mar. 31 | $\begin{aligned} & \text { ERLY DIVI } \\ & \text { Jun. } 30 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { VIDENDS P/ } \\ & \text { Sep. } 30 \end{aligned}$ | $\begin{aligned} & \text { AlD }^{\mathrm{B}} \mathbf{D}^{\text {Dec. } 31} \end{aligned}$ | Full Year |
| 2013 | . 14 | . 14 | . 152 | . 152 | 58 |
| 2014 | . 152 | . 152 | . 165 | . 165 | 63 |
| 2015 | . 165 | . 165 | . 178 | . 178 | 69 |
| 2016 | . 178 | . 178 | . 1913 | . 1913 | . 74 |
| 2017 | . 1913 | . 1913 |  |  |  |

Aqua America should enjoy decent near-term bottom line growth. We think the company's share earnings can rise almost $5 \%$ to $\$ 1.38$, in 2017. The gain is more impressive than it sounds due to a difficult 2016 comparison. In 2018, once again, share earnings will probably rise 5\% to \$1.45.
Capital spending will be greater than previously estimated. Last April, we thought the company's outlays for this year and next would be $\$ 365$ million and $\$ 400$ million, respectively. Management recently stated that $\$ 450$ million will be spent in 2017 and we are assuming the same amount will be required in 2018.
The balance sheet is capable of handling the greater outlays. As one of only two water utilities that carries an (A) Financial Strength rating, Aqua should be able to fund the increased outlays without taking on too much debt and weakening its strong financial position.

## Aqua should benefit from the con-

 solidation taking place in the industry. As the second biggest publicly traded water utility, we expect the company to make tuck-in acquisitions to help spur ex-$16 \%$; industrial, wastewater \& other, 25\%. Off. \& dir. own less than $1 \%$ of the common stock; Vangurad Group, 8.9\%; Blackrock, Inc, 8.1\%; State Street Capital, 6.0\% (3/17 Proxy). President \& Chief Executive Officer: Christopher Franklin. Incorporated: Pennsylvania. Address: 762 West Lancaster Avenue, Bryn Mawr, Pennsylvania 19010. Tel.: 610-525-1400. Internet: www.aquaamerica.com.
ternal growth. Since there are thousands of small municipal water districts that can't fund the large capital expenditures required, these entities have been selling themselves to bigger utilities. There is a tremendous amount of redundancies involved in this industry, and economies of scale can be substantial. Hence, this strategy, which has been the modus operandi of industry titan American Water Works (AWK), should help Aqua grow, as well.
Shares of Aqua America may appeal to accounts that must own a water utility. While we believe AWK is the best run company in the industry, WTR seems to offer more on a value basis. The dividend growth prospects are higher than the group average through 2020-2022. This usually means that investors must accept a yield that is below the group norm. That is not the case with WTR, however. It has a high yield and offers annual dividend increases of about 9\% through early next decade. Long-term total return potential might not stack up well against the Value Line median, but it is more attractive than most equities in this sector.
J ames A. Flood
J uly 14, 2017


| (\$MILL.) | 8 |  |  |
| :---: | :---: | :---: | :---: |
| Cash Assets | 8.8 | 25.5 | 12.0 |
| Other | 118.8 | 116.6 | 116.2 |
| Current Assets | 127.6 | 142.1 | 128.2 |
| Accts Payable | 66.4 | 77.8 | 69.3 |
| Debt Due | 40.2 | 123.3 | 166.2 |
| Other | 41.9 | 49.1 | 57.9 |
| Current Liab. | 148.5 | 250.2 | 293.4 |


| ANNUAL RATESPast <br> of change (per sh) 10 Yr |  |  | $\begin{gathered} \text { Past Est'd '14-'16 } \\ 5 \text { Yrs. to } 20.22 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| Revenues |  | 4.0\% | 2.0\% 3.50 |  |  |
|  |  | 5.0\% |  |  |  |
| Earnings |  | 4.0\% | 3.0\% 9.0\% |  |  |
| Dividend |  | 1.5\% | 2.0\% |  |  |
| Book Value |  | 5.0\% | \% |  | 3.0\% |
| Calendar | QUARTERLY REVENUES (\$ mill.)E |  |  |  | Full Year |
|  | Mar. 31 | Jun. 30 | Sep. 30 | Dec. 31 |  |
| 2014 | 110.5 | 158.4 | 191.2 | 137.4 | 597.5 |
| 2015 | 122.0 | 144.4 | 183.5 | 138.4 | 588.3 |
| 2016 | 121.7 | 152.4 | 184.3 | 151.0 | 609.4 |
| 2017 | 122.0 | 165 | 198 | 155 | 640 |
| 2018 | 140 | 170 | 205 | 160 | 675 |
| Calendar | EARNINGS PER SHARE A |  |  |  | FullYear |
|  | Mar. 31 | Jun. 30 | Sep. 30 | Dec. 31 |  |
| 2014 | d. 11 | 36 | . 70 | . 24 | 1.19 |
| 2015 | . 03 | . 21 | . 52 | . 18 | . 94 |
| 2016 | d. 02 | . 24 | . 48 | . 31 | 1.01 |
| 2017 | . 02 | . 35 | . 66 | . 32 | 1.351.45 |
| 2018 | . 07 | . 38 | . 67 | . 33 |  |
| Calendar | QUARTERLY DIVIDENDS PAID ${ }^{\text {■ }}$ |  |  |  | Full Year |
|  | Mar. 31 | Jun. 30 | Sep. 30 | Dec. 31 |  |
| 2013 | . 16 | . 16 | . 16 | . 16 | 64 |
| 2014 | . 1625 | . 1625 | . 1625 | . 1625 | . 65 |
| 2015 | . 1675 | . 1675 | . 1675 | . 1675 | . 67 |
| 2016 | . 1725 | . 1725 | . 1725 | . 1725 | . 69 |
| 2017 | . 18 | . 18 |  |  |  |

(A) Basic EPS. Excl. nonrecurring gain (loss): due late August
(B) Dividends historically paid in late Feb.,

BUSINESS: California Water Service Group provides regulated and quired Rio Grande Corp; West Hawaii Utilities (9/08). Revenue
nonregulated water service to 482,400 customers in 100 com-
breakdown, '16: residential, $72 \%$; business, 20\%; industrial, $4 \%$; munities in the state of California Accounts for over 94\% of total customers. Also operates in Washington, New Mexico, and Hawaii. Main service areas: San Francisco Bay area, Sacramento Valley, Salinas Valley, San Joaquin Valley \& parts of Los Angeles. Ac-
California Water Service Group was delivered lukewarm results to begin 2017. First-quarter share net of $\$ 0.02$ missed our mark by $\$ 0.03$, as positives from rate increases and lower operating expenses were partly offset by higher depreciation and interest costs, as well as a decrease in accrued unbilled revenues. To that end, the top line was essentially flat, year to year, at $\$ 122$ million. On a brighter note, drought conditions are starting to ease, and associated spending has noticeably declined. Once long-term water use regulations are set, we believe CWT will benefit from its recent rate hikes and increased water usage.
Decent top- and bottom-line expansion is on the horizon. Revenues are poised to advance at a $5 \%$ clip this year, while profit growth will likely be more
substantial, at about $33 \%$. Lower overall substantial, at about $33 \%$. Lower overall
costs, rate increases, and improved operating conditions are key inputs. For 2018, year-over-year growth will probably be
less pronounced, but still trending in the
unable to pick up where it left off. Capital spending ought to ramp up Subsequent to a stellar fourth-quarter per- considerably through late decade, acformance, the West Coast water provider companied by a greater potential for breakdown, '16: residential, $72 \%$; business, $20 \%$; industrial, $4 \%$; public authorities, $3 \%$; other $1 \%$. Off. and dir. own $1 \%$ of common stock (4/17 proxy). Has 1,163 employees. Pres. and CEO: Martin A. Kropelnicki Inc.: DE. Addr.: 1720 North First St., San Jose, CA 95112-4598. Tel.: 408-367-8200. Internet: www.calwatergroup.com.
right direction. acquisitions. Over the span of two to three years, CWT has more than $\$ 600$ million at its disposal to invest on infrastructure upgrades and system improvements. Management has also indicated a desire to strategically pursue bolt-on acquisitions, should the opportunity arise. Lastly, the company has entered into a long-term agreement with the Department of Defense to acquire water assets and provide service to Travis Air Force Base commencing in 2018.
Neutrally ranked CWT shares have treaded water since our April review. At recent levels, the valuation is still rather lofty, but the dividend yield is on par with the Value Line median. Although we think better days lie ahead and near-term earnings prospects are bright, we advise investors to exercise patience at this juncture. On top of that, capital gains potential over the 3- to 5-year stretch leaves much to be desired. Nicholas P. Patrikis

## (D) In millions, adjusted for splits.

(E) Excludes non-reg. rev.


| (\$MILL.) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Cash Assets Accounts Receivable |  |  | . 7 | 1.6 | 3.0 |
|  |  |  | 11.0 | 13.0 | 11.6 |
| Other |  |  | 15.3 | 14.8 | 16.5 |
| Current Assets |  |  | 27.0 | 29.4 | 31.1 |
| Accts Payable |  |  | 11.9 | 13.1 | 8.4 |
| Debt Due |  |  | 2.8 | 4.9 | 5.2 |
| Other |  |  | 22.2 | 37.1 | 40.2 |
| Current Liab. |  |  | 36.9 | 55.1 | 53.8 |
| ANNUAL RATES |  |  | Past Est'd '14-'16 |  |  |
| Revenues |  | 4.0\% | $5 \text { Yrs. }$ |  | \% |
| "Cash Flow" |  | 6.5\% | \% 3.0\% |  | 5\% |
|  |  | 8.0\% | 12.0\% |  | 5\% |
| Earnings |  | 2.5 | 3.0\% |  | 2.5\% |
| Book Value |  | 6.0\% |  |  |  |
| Calendar | QUARTERLY REVENUES (\$ mill.) |  |  |  | Full Year |
|  | $\text { Mar. } 31$ | Jun. 30 | Sep. 3 | $\text { Dec. } 31$ |  |
| 2014 | 20.3 | 25.4 | 27.6 | 20.7 | 94.0 |
| 2015 | 20.0 | 26.6 | 28.4 | 21.0 | 96.0 |
| 2016 | 21.6 | 26.1 | 29.5 | 21.5 | 98.7 |
| 2017 | 22.5 | 28.5 | 32.0 | 23.0 | 106 |
| 2018 | 25.0 | 30.0 | 35.0 | 25.0 | 115 |
| $\begin{array}{\|c\|} \hline \begin{array}{c} \text { Cal- } \\ \text { endar } \end{array} \\ \hline \end{array}$ | EARNINGS PER SHARE AMar. 31 Jun. 30 Sep. 30 Dec. 31 |  |  |  | Full |
|  |  |  |  |  | ear |
| 2014 | . 27 | . 67 | . 76 | . 22 | 1.92 |
| 2015 | . 28 | . 77 | . 79 | . 20 | 2.04 |
| 2016 | . 28 | . 89 | . 84 | . 07 | 2.08 |
| 2017 | . 36 | . 78 | . 86 | . 20 | 2.20 |
| 2018 | . 35 | . 80 | . 90 | . 30 | 2.35 |
| Calendar | QUARTERLY DIVIDENDS PAID Bı |  |  |  | Full |
|  | Mar. 31 | Jun. 30 | Sep. 30 | Dec. 31 | Year |
| 2013 | . 2425 | . 2425 | . 2475 | . 2475 | . 98 |
| 2014 | . 2475 | . 2475 | . 2575 | . 2575 | 1.01 |
| 2015 | . 2575 | . 2575 | . 2675 | . 2675 | 1.05 |
| 2016 | . 2675 | . 2825 | . 2825 | . 2825 | 1.12 |
| 2017 | . 2825 | . 2975 |  |  |  |

BUSINESS: Connecticut Water Service, Inc. is a non-operating holding company, whose income is derived from earnings of its wholly-owned subsidiary companies (regulated water utilities). In 2016, 95\% of net income was derived from these activities. Provides water services to 440,000 people in 79 municipalities throughout Connecticut and Maine. Acquired The Maine Water Company,
Connecticut Water Service completed its purchase of The Avon Water Company. The cash-and-stock deal reflects a total enterprise value of just over $\$ 40$ million. Approval by the Connecticut Public Utilities Regulatory Authority was received in April, and the deal is in effect as of July 1st. Avon serves about 4,800 water customers across several communities and will retain its name, service locations, and employees. This deal comes shortly after its addition of Heritage Village (February, 2017), a transaction that is already contributing to its financials.
Connecticut's first-quarter showing is encouraging. Revenues of $\$ 22.5$ million, while slightly below our call improved nicely, year over year. This result was aided by recovery costs for completed infrastructure upgrades (WICA), higher water surcharges (WISC), specifically in Maine, and the abovementioned benefit of Heritage Village. Meanwhile, operating costs declined 50 basis points compared to the previous year, thanks to lower pension and compensation expenses, as well as a continued overall focus on cost reduction. As a result, profitability rose sharply for

January, 2012; Biddeford and Saco Water, December, 2012; Heritage Village, February, 2017. Inc.: Conn.. Has 266 employees. Chairman/President/Chief Executive Officer: Eric W. Thornburg. Officers and directors own $2.5 \%$ of the common stock; BlackRock, Inc., $7.2 \%$ ( $4 / 17$ proxy). Address: 93 West Main Street, Clinton, CT 06413. Telephone: (860) 669-8636. Internet: www.ctwater.com.
the March period, to $\$ 0.36$ a share. For this year and next, we remain optimistic that a high single-digit rate of growth is achievable for both the top and bottom lines.

## Elevated capital spending and acqui-

 sitions are likely to be the main growth drivers through decade's end. Connecticut has guided an investment budget of more than $\$ 55$ million for 2017, and is poised to reap the rewards of qualifying infrastructure upgrades and replacements through WICA and WISC. Furthermore, we expect several small-tomidsize acquisitions to surface in the coming years, as CTWS' balance sheet is fundamentally sound and can support additional tuck-in purchases.Short-term-minded investors may find something to like here. The issue is now ranked to outperform the year-ahead broader market averages (Timeliness: 2). However, the recent valuation gives us pause. Shares of CTWS are already trading near the high end of our 3- to 5 -year Target Price Range, thus limiting their appeal over the pull to 2020-2022.
Nicholas P. Patrikis

[^1]

| CURRENT POSITION (\$MILL.) |  |  |  | $2016$ | 31/17 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Cash Assets |  |  | 3.5 | 3.9 | 5.6 |
|  |  |  | 20.9 | 22.8 | 21.4 |
| Current Assets |  |  | 24.4 | 26.7 | 27.0 |
| Accts Payable |  |  | 6.5 | 12.3 | 9.0 |
| Debt Due |  |  | 8.7 | 18.2 | 20.6 |
|  |  |  | 13.1 | 16.6 | 19.9 |
| Current Liab. |  |  | 28.3 | 47.1 | 49.5 |
| ANNUAL RATES <br> of change (per sh) <br> Revenues <br> "Cash Flow" <br> Earnings <br> Dividends <br> Book Value |  | Past P <br> 10 Yrs. 5 <br> $2.0 \%$  <br> $4.5 \%$  <br> $5.0 \%$  <br> $1.5 \%$  <br> $4.0 \%$  |  | Past Est'd '14.'16 <br> 5Yrs. to'20.22 <br> $3.0 \%$ $3.5 \%$ <br> $6.5 \%$ $7.5 \%$ <br> $8.0 \%$ $8.5 \%$ <br> $1.5 \%$ $4.5 \%$ <br> $3.0 \%$ $4.5 \%$ |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Cal-endar | QUARTERLY REVENUES (\$ mill.) Mar. 31 Jun. 30 Sep. 30 Dec. 31 |  |  |  |  |
|  |  |  |  |  |  |
| $\begin{aligned} & 2014 \\ & 2015 \\ & 2016 \\ & 2017 \\ & 2018 \end{aligned}$ | 27.1 | 29.2 | 32.7 | 28.1 | 117.1 |
|  | 28.8 | 31.7 | 34.7 | 30.8 | 126.0 |
|  | 30.6 | 32.7 | 37.8 | 31.8 | 132.9 |
|  | 30.1 | 34.0 | 39.0 | 34.9 | 88 |
|  | 33.0 | 37.0 | 40.0 | 35.0 | 45 |
| Calendar | $\begin{array}{\|c\|} \hline \text { EARNINGS PER SHARE A } \\ \text { Mar. } 31 \text { Jun. } 30 \text { Sep. } 30 \text { Dec. } 31 \end{array}$ |  |  |  | Full <br> Year |
| 2014 | 20 | . 29 | 42 | . 22 | 1.13 |
| 2015 | . 22 | . 31 | . 41 | . 28 | 1.22 |
| 2016 | 29 | . 36 | . 54 | . 19 | 1.38 |
| 2017 | 27 | . 37 | . 55 | . 31 | 1.50 |
| 2018 | . 33 | . 38 | . 57 | . 32 | 1.60 |
| Cal-endar | QUARTERLY DIVIDENDS PAID B. |  |  |  | Ful |
|  | Mar. 31 | Jun. 30 | Sep. 30 | Dec. 31 | Ye |
| 2013 | . 1875 | . 1875 | . 1875 | . 19 | 75 |
| 2014 | . 19 | . 19 | . 19 | . 1925 | . 76 |
| 2015 | . 1925 | . 1925 | . 1925 | . 19875 | . 78 |
| 2016 | . 19875 | . 19875 | . 19875 | . 21125 | 81 |
| 2017 | . 21125 | . 21125 |  |  |  |

(A) Diluted earnings. Next earnings report due early August.

BUSINESS: Middlesex Water Company engages in the ownership and operation of regulated water utility systems in New Jersey, Delaware, and Pennsylvania. It also operates water and wastewater systems under contract on behalf of municipal and private clients in NJ and DE. Its Middlesex System provides water services to 61,000 retail customers, primarily in Middlesex County, New Jersey. In
Middlesex Water Company posted weaker-than-anticipated financial results for the March quarter. Indeed, the first few months of the year historically leaves MSEX prone to lighter customer water usage due to the colder weather. Thus, unpredictable top-and bottom-line results are not uncommon early in the year, especially considering the company largely operates in the Northeast region of the U.S., an area that is no stranger to volatile temperatures and weather conditions. Year over year, first-quarter revenues contracted modestly, to $\$ 30.1$ million, owing to weaker consumption from New J ersey residents and commercial operators. However, its customer base expanded in its Delaware System. Earnings slipped on an annual basis, as well. Middlesex delivered share profits of $\$ 0.27$ for the period, two pennies less than the previous year.
We are tempering our 2017 top-line expectation, while keeping intact our bottom-line forecast. While comparisons through yearend will likely be decent, its weaker first-quarter showing has spurred us to shave $\$ 2$ million from our full-year

2016, the Middlesex System accounted for 60\% of operating revenues. At 12/31/16, the company had 309 employees. Incorporated: NJ. President, CEO, and Chairman: Dennis W. Doll. Officers \& directors own $3.5 \%$ of the common stock; BlackRock Institutional Trust Co., 7.2\% (4/17 proxy). Add.: 1500 Ronson Road, Iselin, NJ 08830. Tel.: 732-634-1500. Internet: www.middlesexwater.com.
revenue outlook, to $\$ 138$ million. At this time, our $\$ 1.50$ per share earnings estimate remains.
Infrastructure upgrades ought to be the priority going forward. Under its recently established RENEW program (part of its overall spending initiatives), the company plans to allocate nearly $\$ 12$ million in each of the next three years to bolster its water transmission capabilities by replacing old water mains, valves, and services lines throughout New Jersey. Moreover, total capital spending is poised to exceed $\$ 200$ million by the end of the decade, as upgrades to its distribution and production systems, along with some information technology updates are necessary for the long haul.
The dividend yield is about average at the recent quotation. Middlesex shares have increased sharply in price since early 2016, pulling its annual dividend yield closer to that of the Value Line median.
Investors would be better served looking elsewhere. This issue is unfavorably ranked (4) for the year-ahead, and offers limited upside out to 2020-2022.
Nicholas P. Patrikis uly 14, 2017

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| $S J$ | $\sqrt{G}$ | $\\|$ | NYS | SJW |  |  |  | $\begin{aligned} & \text { CENT } \\ & \text { ICE } \end{aligned}$ | $49.9$ |  | $22$ | $\begin{aligned} & \text { Trailin } \\ & \text { Medial } \end{aligned}$ | $\begin{aligned} & \text { ng: } 19.3 \\ & \text { an: } 23.0 \end{aligned}$ | RELATIVE P/E RATIO | $1.1$ | $\begin{array}{\|l\|l\|} \hline \text { YIV'D } \\ \text { YLD } \end{array}$ |  |  | $\begin{aligned} & \text { ALUE } \\ & \text { INE } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TIMELIN | ESS 3 | Raised 6/3 |  | High: Low: | 45.3 21.2 | $\begin{aligned} & 43.0 \\ & 27.7 \end{aligned}$ | 35.1 20.0 | $\begin{aligned} & \hline 30.4 \\ & 18.2 \end{aligned}$ | $\begin{aligned} & 28.2 \\ & 21.6 \end{aligned}$ | $\begin{aligned} & 26.8 \\ & 20.9 \end{aligned}$ | $\begin{aligned} & 26.9 \\ & 22.6 \end{aligned}$ | $\begin{aligned} & 30.1 \\ & 24.5 \end{aligned}$ | $\begin{aligned} & 33.7 \\ & 25.5 \end{aligned}$ | $\begin{aligned} & 35.7 \\ & 27.5 \end{aligned}$ | $\begin{aligned} & 56.9 \\ & 28.6 \end{aligned}$ | $\begin{aligned} & 56.4 \\ & 45.4 \end{aligned}$ |  |  | Target P <br> 2020 | Range 12022 |
| SAFETY | 3 | New 4/22 |  | LEGEN | IDS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | ded by | ds p sh |  |  |  |  |  |  |  |  |  |  |  |  |  | 120 |
| TECH | CAL | Lowered 6 |  |  | Hed by be | Strength |  |  |  |  |  |  |  |  |  |  |  |  |  | 80 |
| BETA | 0 (1.00 = | Market) |  | 3-for-1 | 3104 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 80 |
|  | 0-22 PR | ECTIO |  | 2 2-for | 06 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 48 |
|  |  | A | n'I Total | Shaded | ea indi | recessi |  |  |  |  |  |  |  |  |  |  |  |  |  | 48 |
| High | Price | $\begin{aligned} & \text { Gain } \\ & 50 \% \text { ) } \end{aligned}$ | Return 12\% |  |  | , |  |  |  |  |  |  |  |  | $\mathrm{IIIN}^{\text {IV }}$ |  |  |  |  | 32 |
| $\begin{array}{\|l\|l} \text { Hign } \\ \text { Low } \end{array}$ | $50$ | (Nil) |  |  |  | , |  |  |  |  |  | \||III! | $\Pi_{1, \ldots 1}$ | ! |  |  |  |  |  | 24 |
| Insider | Decisi | ns |  |  |  | \% ${ }^{2}$ |  |  |  | ITII |  |  |  |  |  |  |  |  |  | 20 |
|  | S O N | J | m A m |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 16 |
| to Buy | 000 | 00 | $\begin{array}{ll}0 & 0\end{array} 0$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 12 |
| $\begin{aligned} & \text { Options } \\ & \text { to Sell } \end{aligned}$ | $\begin{array}{lll}0 & 0 & 0 \\ 2 & 1 & 1\end{array}$ | 0 8 0 <br> 1 1 1 | $\begin{array}{llll}6 & 8 & 0 \\ 0 & 0 & 0 \\ \\ & \end{array}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | RETURN |  |
| Institut | tional D | ecision |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | RETUR |  |
|  | 302016 | 402016 | 102017 | Percent |  |  |  |  |  |  |  |  |  |  |  |  |  |  | STock |  |
| to Buy | 50 | 81 59 |  | shares |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 27.2 18. <br> 93.7 20.3 |  |
| tor ${ }^{\text {to Sld }}$ (000) | 70 9513 | 9218 |  | traded |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 132.1 |  |
| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | $\bigcirc$ © VAL | E LINE PUB. L | 2-22 |
| 7.45 | 7.97 | 8.20 | 9.14 | 9.86 | 10.35 | 11.25 | 12.12 | 11.68 | 11.62 | 12.85 | 14.01 | 13.73 | 15.76 | 14.97 | 16.61 | 16.45 | 15.90 | Revenue | per sh | 19.55 |
| 1.49 | 1.55 | 1.75 | 1.89 | 2.21 | 2.38 | 2.30 | 2.44 | 2.21 | 2.38 | 2.80 | 2.97 | 2.90 | 4.42 | 3.86 | 4.76 | 4.40 | 4.40 | "Cash Flo | w" per sh | 4.90 |
| . 77 | . 78 | . 91 | . 87 | 1.12 | 1.19 | 1.04 | 1.08 | . 81 | . 84 | 1.11 | 1.18 | 1.12 | 2.54 | 1.85 | 2.57 | 2.20 | 2.35 | Earnings | per sh ${ }^{\text {A }}$ | 2.75 |
| 43 | 46 | . 49 | . 51 | . 53 | . 57 | . 61 | . 65 | . 66 | . 68 | 69 | . 71 | . 73 | . 75 | . 78 | . 81 | . 87 | . 93 | Div'd De | l'd per sh ${ }^{\text {Br }}$ | 1.12 |
| 2.63 | 2.06 | 3.41 | 2.31 | 2.83 | 3.87 | 6.62 | 3.79 | 3.17 | 5.65 | 3.75 | 5.67 | 4.68 | 5.02 | 5.24 | 6.95 | 6.00 | 5.50 | Cap'I Sp | nding per sh | 5.00 |
| 8.17 | 8.40 | 9.11 | 10.11 | 10.72 | 12.48 | 12.90 | 13.99 | 13.66 | 13.75 | 14.20 | 14.71 | 15.92 | 17.75 | 18.83 | 20.61 | 21.20 | 21.60 | Book Val | ue per sh | 23.90 |
| 18.27 | 18.27 | 18.27 | 18.27 | 18.27 | 18.28 | 18.36 | 18.18 | 18.50 | 18.55 | 18.59 | 18.67 | 20.17 | 20.29 | 20.38 | 20.46 | 21.00 | 22.00 | Common | Shs Outst'g | 23.00 |
| 18.5 | 17.3 | 15.4 | 19.6 | 19.7 | 23.5 | 33.4 | 26.2 | 28.7 | 29.1 | 21.2 | 20.4 | 24.3 | 11.2 | 16.6 | 15.7 | Bold figu | res are | Avg An | P/E Ratio | 22.0 |
| . 95 | . 94 | . 88 | 1.04 | 1.05 | 1.27 | 1.77 | 1.58 | 1.91 | 1.85 | 1.33 | 1.30 | 1.37 | . 59 | . 84 | . 83 |  |  | Relativ | P/E Ratio | 1.40 |
| 3.0\% | 3.4\% | 3.5\% | 3.0\% | 2.4\% | 2.0\% | 1.7\% | 2.3\% | 2.8\% | 2.8\% | 2.9\% | 3.0\% | 2.7\% | 2.6\% | 2.5\% | 2.0\% |  |  | Avg Ann | I Div'd Yield | 1.8\% |
| CAPITAL STRUCTURE as of $3 / 31 / 17$ <br> Total Debt $\$ 433.5$ mill. Due in 5 Yrs $\$ 14.3$ mill. <br> LT Debt $\$ 433.4$ mill. LT Interest $\$ 20.0$ mill. <br> ( $51 \%$ of Cap'l) |  |  |  |  |  | 206.6 | 220.3 | 216.1 | 215.6 | 239.0 | 261.5 | 276.9 | 319.7 | 305.1 | 339.7 | 345 | 350 | Revenue | (\$mill) | 450 |
|  |  |  |  |  |  | 19.3 | 20.2 | 15.2 | 15.8 | 20.9 | 22.3 | 23.5 | 51.8 | 37.9 | 52.8 | 46.0 | 52.0 | Net Profi | (\$mill) | 63.0 |
|  |  |  |  |  |  | 39.4\% | 39.5\% | 40.4\% | 38.8\% | 41.1\% | 41.1\% | 38.7\% | 32.5\% | 38.1\% | 38.8\% | 39.0\% | 39.0\% | Income | ax Rate | 39.0\% |
|  |  |  |  |  |  | 2.7\% | 2.3\% | 2.0\% |  |  |  | .- |  | 2.0\% | 1.0\% | 1.5\% | 1.5\% | AFUDC | to Net Profit | 1.5\% |
| Leases, Uncapitalized: Annual rentals $\$ 6.6$ mill. |  |  |  |  |  | 47.7\% | 46.0\% | 49.4\% | 53.7\% | 56.6\% | 55.0\% | 51.1\% | 51.6\% | 49.8\% | 50.7\% | 49.0\% | 48.5\% | Long-Ter | $m$ Debt Ratio | 49.0\% |
|  |  |  |  |  |  | 52.3\% | 54.0\% | 50.6\% | 46.3\% | 43.4\% | 45.0\% | 48.9\% | 48.4\% | 50.2\% | 49.3\% | 51.0\% | 51.5\% | Common | Equity Ratio | 51.0\% |
| Pension Assets-12/16 \$113.9 mill. Oblig. $\$ 174.1$ mill. |  |  |  |  |  | 453.2 | 470.9 | 499.6 | 550.7 | 607.9 | 610.2 | 656.2 | 744.5 | 764.6 | 855.0 | 870 | 925 | Total Cap | ital (\$mill) | 1075 |
|  |  |  |  |  |  | 645.5 | 684.2 | 718.5 | 785.5 | 756.2 | 831.6 | 898.7 | 963.0 | 1036.8 | 1146.4 | 1200 | 1250 | Net Plan | (\$mill) | 1325 |
| Pfd Stock None. |  |  |  |  |  | 5.7\% | 5.8\% | 4.4\% | 4.3\% | 4.9\% | 5.0\% | 5.0\% | 8.3\% | 6.3\% | 7.4\% | 6.5\% | 6.5\% | Return o | Total Cap'I | 7.0\% |
| Common Stock 20,498,733 shs. |  |  |  |  |  | 8.2\% | 8.0\% | 6.0\% | 6.2\% | 7.9\% | 8.1\% | 7.3\% | 14.4\% | 9.9\% | 12.5\% | 10.5\% | 11.0\% | Return 0 | Shr. Equity | 11.5\% |
|  |  |  |  |  |  | 8.2\% | 8.0\% | 6.0\% | 6.2\% | 7.9\% | 8.1\% | 7.3\% | 14.4\% | 9.9\% | 12.5\% | 10.5\% | 11.0\% | Return 0 | Com Equity | 11.5\% |
| MARKET CAP: 11.0 billion (Mid Cap) |  |  |  |  |  | $\begin{gathered} 3.5 \% \\ 57 \% \end{gathered}$ | $\begin{gathered} 3.3 \% \\ 59 \% \end{gathered}$ | $\begin{aligned} & 1.2 \% \\ & 80 \% \end{aligned}$ | $\begin{aligned} & 1.2 \% \\ & 80 \% \end{aligned}$ | $\begin{aligned} & 3.1 \% \\ & 61 \% \end{aligned}$ | $\begin{gathered} 3.3 \% \\ 59 \% \end{gathered}$ | $\begin{aligned} & 2.8 \% \\ & 62 \% \end{aligned}$ | $\begin{array}{r} 10.2 \% \\ 29 \% \end{array}$ | $\begin{aligned} & \hline 5.7 \% \\ & 42 \% \end{aligned}$ | 8.6\%$31 \%$ | $\begin{aligned} & 6.5 \% \\ & 40 \% \end{aligned}$ | $\begin{aligned} & 6.5 \% \\ & 40 \% \end{aligned}$ | Retained to Com Eq All Div'ds to Net Prof |  | 7.0\% |
| CURRE | NT POSI | TION | $2015$ | 2016 | 3/31/17 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 41\% |


offers nonregulated water-related services and owns and operates commercial real estate investments. Has about 406 employees. Officers and directors (including Nancy O. Moss) own $26.9 \%$ of outstanding shares ( $3 / 17$ proxy). Chairman \& C.E.O.: Richard Roth. Inc.: California. Address: 110 West Taylor Street, San Jose, CA 95110. Telephone: (408) 279-7800. Internet: www.sjwater.com.
net came in at $\$ 0.18$, drastically lower than our expectation, spurring us to shave a nickel from our 2017 bottom-line estimate, to $\$ 2.20$ a share.
Nevertheless, we are maintaining our sanguine long-term outlook. In our view, some of the abovementioned operational headwinds should dissipate in the coming years. Meanwhile, we think a pickup in West Coast water consumption is probable. Lastly, the company's robust capital spending initiatives (approximately \$300 million to upgrade infrastructure and water systems) ought to help boost operating margins through decade's end.
SJ W shares have been raised one notch for Timeliness, to $\mathbf{3}$ (Average). However, the stock's recent valuation leaves much to be desired. The dividend yield (1.7\%) is 30 basis points below that of the broader market average, and among the lower returners in its peer group. Furthermore, much of the gains we envision over the pull to 2020-2022 appear to already be reflected in the stock price. Thus, investors would be wise to wait for a more attractive entry point.
Nicholas P. Patrikis
J uly 14, 2017

## (A) Diluted earnings. Excludes nonrecurring August. Quarterly earnings may not add due to $v$ vestment plan available.

losses: '03, \$1.97; '04, \$3.78; '05, \$1.09; '06, rounding.


| CURRENT POSITION | 2015 | $\mathbf{2 0 1 6}$ | $\mathbf{3 / 3 1 / 1 7}$ |
| :--- | ---: | ---: | ---: |
| (\$MILL.) |  |  |  |
| Cash Assets | 2.9 | 4.2 | .4 |
| Accounts Receivable | 3.5 | 4.3 | 4.0 |
| Inventory (Avg. Cost) | .8 | .7 | .9 |
| Other | 4.6 | 3.4 | 3.7 |
|  | 11.8 | 12.6 | 9.0 |
| Current Assets | 1.8 | 3.7 | 3.4 |
| Accts Payable | -- | .- |  |
| Debt Due | 4.4 | 4.5 | 4.7 |
| Other | 6.2 | 8.2 | 8.1 |


| ANNUAL RATES | Past | Past | Est'd '14-'16 |
| :--- | ---: | :---: | :---: |
| of change (per sh) | 10 Yrs. | 5 Yrs. | to '20.'22 |
| Revenues | $4.0 \%$ | $3.5 \%$ | $7.5 \%$ |
| "Cash Flow" | $6.5 \%$ | $6.5 \%$ | $6.5 \%$ |
| Earnings | $5.5 \%$ | $6.0 \%$ | $7.0 \%$ |
| Dividends | $3.5 \%$ | $3.0 \%$ | $7.0 \%$ |
| Book Value | $5.0 \%$ | $3.5 \%$ | $4.5 \%$ |


| Calendar | QUARTERLY REVENUES (\$ mill.) Mar. 31 Jun. 30 Sep. 30 Dec. 31 |  |  |  | Full Year |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| 2014 | 10.6 | 11.8 | 12.0 | 11.5 | 45.9 |
| 2015 | 11.2 | 11.9 | 12.4 | 11.6 | 47.1 |
| 2016 | 11.3 | 11.8 | 12.6 | 11.9 | 47.6 |
| 2017 | 11.3 | 12.2 | 13.5 | 13.0 | 50.0 |
| 2018 | 12.5 | 13.0 | 14.0 | 13.5 | 53.0 |
| Calendar | EARNINGS PER SHARE A <br> Mar. 31 Jun. 30 Sep. 30 Dec. 31 |  |  |  | Full Year |
| 2014 | . 16 | . 22 | . 23 | . 28 | . 89 |
| 2015 | . 20 | . 22 | . 28 | . 27 | . 97 |
| 2016 | . 19 | . 23 | . 27 | . 23 | . 92 |
| 2017 | . 20 | . 25 | . 30 | . 28 | 1.03 |
| 2018 | . 23 | . 26 | . 32 | . 29 | 1.10 |
| Cal- | QUARTERLY DIVIDENDS PAID ${ }^{\text {B }}$ |  |  |  | Full |
| endar | Mar. 31 | Jun. 30 | Sep. 30 | Dec. 31 | Year |
| 2013 | . 138 | . 138 | . 138 | . 138 | . 552 |
| 2014 | . 1431 | . 1431 | . 1431 | . 1431 | . 572 |
| 2015 | . 1495 | . 1495 | . 1495 | . 1555 | . 604 |
| 2016 | . 1555 | . 1555 | . 1555 | . 1602 | . 627 |
| 2017 | . 1602 | . 1602 |  |  |  |

BUSINESS: The York Water Company is the oldest investor-owned regulated water utility in the United States. It has operated continuously since 1816. As of December 31, 2016, the company's average daily availability was 35.4 million gallons and its service territory had an estimated population of 196,000. Has more than 67,000 customers. Residential customers accounted for $63 \%$ of 2016 reve-
York Water was unable to generate any meaningful growth in the first quarter. Year over year, its top- and bottom-line figures of $\$ 11.3$ million and $\$ 0.20$ a share, respectively, were relatively flattish. March-period revenues were likely held back due to lower consumption (seasonality), more than offsetting positive contributions from its recent acquisition of West York Borough sewer. Meanwhile, its penny improvement on the bottom line can largely be attributed to a lower effective tax rate (discussed below), as operating costs in the first quarter were nearly $40 \%$ of total revenues.
We still think the company is on track to post solid gains this year. However, we are lowering our estimates. We now look for revenues of $\$ 50$ million, or a $5 \%$ annual advance, and earnings of $\$ 1.03$ a share, representing a $12 \%$ improvement over the prior-year tally.
Higher capital expenditures should trigger favorable tax deductions under the IRS tangible property rules. We are beginning to see this bear fruit, as York's effective tax rate in the first
quarter declined significantly thanks to
nues; commercial and industrial (29\%); other (8\%). It also provides sewer billing services. Incorporated: PA. York had 105 full-time employees at 12/31/16. President/CEO: Jeffrey R. Hines. Officers/directors own $1.1 \%$ of the common stock ( $3 / 17$ proxy). Address: 130 East Market Street, York, Pennsylvania 17401. Telephone: (717) 845-3601. Internet: www.yorkwater.com.
greater qualifying expenditures (firstquarter capex rose three times, year over year.) Looking forward, the company's plan to ramp up spending to approximately $\$ 23$ million this year remains in reach, with next year's investment allocation slowing slightly, to $\$ 16$ million. Moreover, capital spending on pipes, facilities, and pumping stations ought to help lift operating margins this year and next.
At this juncture, the issue does not fit the needs of income-seekers quite like it has in the past. As a result of the stock's year-and-a-half-long run-up in price, YORW shares presently offer a yield that is below the broader market average, even though the company has raised its annual payout, year after year.
Based on our Timeliness Ranking System, York stock is an unfavorable selection for relative year-ahead price performance (4). What's more, appreciation potential three to five years hence is unenticing, as much of the gains we foresee over that time frame have already been factored into the price. Thus, we advise investors to take a pass, for now.
Nicholas P. Patrikis

Ean $\quad 95$

Indian Hills Utility Operating Company, Inc. Summary of Risk Premium Models for the Proxy Group of Eight Water Companies

> | Proxy Group of |
| :---: |
| Eight Water |
| Companies |

Predictive Risk
Premium Model
(PRPM) (1)
11.81 \%

Risk Premium Using
an Adjusted Total
Market Approach (2)

Average | 9.68 $\%$ |
| :---: |

Notes:
(1) From page 2 of this Sub-Schedule.
(2) From page 3 of this Sub-Schedule.




๓


Average

## Median

Average of Mean and Median

$$
\begin{array}{ll} 
& \text { NMF = Not Meaningful Figure } \\
\text { Notes: } & \\
(1) & \text { The Predictive Risk Premium Model uses historical data to generate a predicted variance and a GARCH } \\
& \text { coefficient. The historical data used are the equity risk premiums for the first available trading month as } \\
& \text { reported by Bloomberg Professional Service. } \\
(2) & \left(1+\left(\text { Column }[3]{ }^{*} \text { Column }[4]\right)^{\wedge 12}\right)-1 . \\
(3) & \text { From note } 2 \text { on page } 2 \text { of Sub-Schedule DWD-5. } \\
(4) & \text { Column }[5]+\text { Column }[6] .
\end{array}
$$

# Indian Hills Utility Operating Company, Inc. Indicated Common Equity Cost Rate Through Use of a Risk Premium Model Using an Adjusted Total Market Approach 

| Line No. |  | Proxy Group of Eight Water Companies |
| :---: | :---: | :---: |
| 1. | Prospective Yield on Aaa Rated Corporate Bonds (1) | 4.57 \% |
| 2. | Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A Rated Public Utility Bonds | 0.26 (2) |
| 3. | Adjusted Prospective Yield on A Rated Public Utility Bonds | 4.83 \% |
| 4. | Adjustment to Reflect Bond Rating Difference of Proxy Group | 0.06 (3) |
| 5. | Adjusted Prospective Bond Yield | 4.89 \% |
| 6. | Equity Risk Premium (4) | 4.79 |
| 7. | Risk Premium Derived Common Equity Cost Rate | 9.68 \% |

Notes: (1) Consensus forecast of Moody's Aaa Rated Corporate bonds from Blue Chip Financial Forecasts (see pages 10-11 of this Sub-Schedule).
(2) The average yield spread of A rated public utility bonds over Aaa rated corporate bonds of $0.26 \%$ from page 4 of this Sub-Schedule.
(3) Adjustment to reflect the A2 / A3 Moody's LT issuer rating of the proxy group of eight water companies as shown on page 5 of this SubSchedule. The $0.06 \%$ upward adjustment is derived by taking $1 / 6$ of the spread between A2 and A3 Public Utility Bonds (1/6 * 0.37\% = $0.06 \%$ ) as derived from page 4 of this Sub-Schedule.
(4) From page 7 of this Sub-Schedule.

Indian Hills Utility Operating Company, Inc. Interest Rates and Bond Spreads for Moody's Corporate and Public Utility Bonds

Selected Bond Yields
[1]
[2]
[3]
$\left.\begin{array}{ccccc} & \begin{array}{c}\text { Aaa Rated } \\ \text { Corporate Bond }\end{array} & & \begin{array}{c}\text { A Rated Public } \\ \text { Utility Bond }\end{array} & \end{array} \begin{array}{c}\text { Baa Rated Public } \\ \text { Utility Bond }\end{array}\right]$

Selected Bond Spreads
A Rated Public Utility Bonds Over Aaa Rated Corporate Bonds:
$0.26 \%(1)$
Baa Rated Public Utility Bonds Over A Rated Public Utility Bonds:

$$
0.37 \%(2)
$$

Notes:
(1) Column [2] - Column [1].
(2) Column [3] - Column [2].

Source of Information:
Bloomberg Professional Service

Indian Hills Utility Operating Company, Inc. Comparison of Long-Term Issuer Ratings for Proxy Group of Eight Water Companies

|  | Moody's |  | Standard \& Poor's |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Long-Term Issuer Rating |  | Long-Term Issuer Rating |  |
|  | August 2017 |  | August 2017 |  |
|  | Long-Term <br> Issuer <br> Rating | $\begin{gathered} \text { Numerical } \\ \text { Weighting(1) } \\ \hline \end{gathered}$ | Long-Term Issuer Rating | Numerical <br> Weighting(1) |
| American States Water Co. (2) | A2 | 6.0 | A+ | 5.0 |
| American Water Works Company Inc (3) | A3 | 7.0 | A | 6.0 |
| Aqua America Inc (4) | NR | -- | A+ | 5.0 |
| California Water Service Group (5) | NR | -- | A+ | 5.0 |
| Connecticut Water Service Inc (6) | NR | -- | A | 6.0 |
| Middlesex Water Co. | NR | -- | A | 6.0 |
| SJW Corp (7) | NR | -- | A | 6.0 |
| York Water Co. | NR | -- | A- | 7.0 |
| Average | A2/A3 | 6.5 | A | 5.8 |

Notes:
(1) From page 6 of this Sub-Schedule.
(2) Ratings that of Golden State Water Company.
(3) Ratings that of New Jersey and Pennsylvania American Water Companies.
(4) Ratings that of Aqua Pennsylvania, Inc.
(5) Ratings that of California Water Service Company.
(6) Ratings that of Connecticut Water Company.
(7) Ratings that of San Jose Water Company

Source Information: Moody's Investors Service
Standard \& Poor's Global Utilities Rating Service

| Numerical Assignment for Moody's and Standard \& Poor's Bond Ratings |  |  |
| :---: | :---: | :---: |
| Moody's Bond Rating | Numerical Bond Weighting | Standard \& Poor's Bond Rating |
| Aaa | 1 | AAA |
| Aa1 | 2 | AA+ |
| Aa2 | 3 | AA |
| Aa3 | 4 | AA- |
| A1 | 5 | A+ |
| A2 | 6 | A |
| A3 | 7 | A- |
| Baa1 | 8 | BBB+ |
| Baa2 | 9 | BBB |
| Baa3 | 10 | BBB- |
| Ba1 | 11 | BB+ |
| Ba2 | 12 | BB |
| Ba3 | 13 | BB- |
| B1 | 14 | B+ |
| B2 | 15 | B |
| B3 | 16 | B- |

Indian Hills Utility Operating Company, Inc.
Judgment of Equity Risk Premium for Proxy Group of Eight Water Companies

| Line |
| :---: |
| No. |

Proxy Group of Eight
Water Companies

1. Calculated equity risk premium based on the total market using the beta approach (1)
2. Mean equity risk premium based on a study using the holding period returns of public utilities with A rated bonds (2)
3. 

Average equity risk premium
5.60 \% 3.98
$4.79 \%$

Notes: (1) From page 8 of this Sub-Schedule.
(2) From page 12 of this Sub-Schedule.

Indian Hills Utility Operating Company, Inc.
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Proxy Group of Eight Water Companies

| Line No. | Equity Risk Premium Measure | Proxy Group of Eight Water Companies |
| :---: | :---: | :---: |
| Ibbotson-Based Equity Risk Premiums: |  |  |
| 1. | Ibbotson Equity Risk Premium (1) | 5.56 \% |
| 2. | Regression on Ibbotson Risk Premium Data (2) | 7.41 |
| 3. | Ibbotson Equity Risk Premium based on PRPM (3) | 5.96 |
| 4. | Average Ibbotson Equity Risk Premium | 6.31 |
| Value Line-Based Equity Risk Premiums: |  |  |
| 5. | Equity Risk Premium Based on Value Line Summary and Index (4) | 5.07 |
| 6. | Equity Risk Premium Based on Value Line S\&P 500 Companies (5) | 9.56 |
| 7. | Average Value Line Equity Risk Premium | 7.32 |
| Bloomberg-Based Equity Risk Premium: |  |  |
| 8. | Equity Risk Premium Based on Bloomberg S\&P 500 Companies (6) | 9.08 |
| 9. | Conclusion of Equity Risk Premium (7) | 7.57 \% |
| 10. | Adjusted Beta (8) | 0.74 |
| 11. | Forecasted Equity Risk Premium | 5.60 \% |

Notes provided on page 9 of this Sub-Schedule.

## Indian Hills Utility Operating Company, Inc.

Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Proxy Group of Eight Water Companies

Notes:
(1) Based on the arithmetic mean historical monthly returns on large company common stocks from Ibbotson® SBBI® 2017 Market Report minus the arithmetic mean monthly yield of Moody's average Aaa and Aa corporate bonds from 1926-2016.
(2) This equity risk premium is based on a regression of the monthly equity risk premiums of large company common stocks relative to Moody's average Aaa and Aa rated corporate bond yields from 1928-2016 referenced in Note 1 above.
(3) The Predictive Risk Premium Model (PRPM) is discussed in the accompanying direct testimony. The Ibbotson equity risk premium based on the PRPM is derived by applying the PRPM to the monthly risk premiums between Ibbotson large company common stock monthly returns and average Aaa and Aa corporate monthly bond yields, from January 1928 through August 2017.
(4) The equity risk premium based on the Value Line Summary and Index is derived by subtracting the average consensus forecast of Aaa corporate bonds of 4.57\% (from page 3 of this Sub-Schedule) from the projected 3-5 year total annual market return of 9.64\% (described fully in note 1 on page 2 of Sub-Schedule DWD-5).
(5) Using data from Value Line for the S\&P 500, an expected total return of $14.13 \%$ was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of $4.57 \%$ results in an expected equity risk premium of $9.56 \%$.
(6) Using data from the Bloomberg Professional Service for the S\&P 500, an expected total return of $13.65 \%$ was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of $4.57 \%$ results in an expected equity risk premium of $9.08 \%$.
(7) Average of lines 4, 7, and 8.
(8) Average of mean and median beta from Sub-Schedule DWD-5.

Sources of Information:
Stocks, Bonds, Bills, and Inflation - 2017 SBBI Yearbook, John Wiley \& Sons, Inc.
Industrial Manual and Mergent Bond Record Monthly Update.
Value Line Summary and Index
Blue Chip Financial Forecasts, June 1, 2017 and September 1, 2017
Bloomberg Professional Services

Consensus Forecasts Of U.S. Interest Rates And Key Assumptions ${ }^{1}$

Interest Rates
Federal Funds Rate
Prime Rate
LIBOR, 3-mo.
Commercial Paper, 1-mo.
Treasury bill, 3-mo.
Treasury bill, 6-mo.
Treasury bill, 1 yr.
Treasury note, 2 yr.
Treasury note, 5 yr.
Treasury note, 10 yr .
Treasury note, 30 yr .
Corporate Aaa bond
Corporate Baa bond
State \& Local bonds
Home mortgage rate

Key Assumptions
Major Currency Index
Real GDP
GDP Price Index
Consumer Price Index

| -------Average For Week Ending------ ----Average For Month--- Latest Qtr |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aug 18 | Aug 11 | Aug 4 | Jul 28 | Jul | Jun | May | 2Q 2017 |
| 1.16 | 1.16 | 1.15 | 1.16 | 1.15 | 1.03 | 0.90 | 0.94 |
| 4.25 | 4.25 | 4.25 | 4.25 | 4.25 | 4.13 | 4.00 | 4.04 |
| 1.32 | 1.31 | 1.31 | 1.31 | 1.31 | 1.26 | 1.18 | 1.20 |
| 1.09 | 1.11 | 1.10 | 1.11 | 1.10 | 1.00 | 0.84 | 0.89 |
| 1.02 | 1.04 | 1.08 | 1.13 | 1.09 | 1.00 | 0.90 | 0.90 |
| 1.13 | 1.15 | 1.14 | 1.13 | 1.13 | 1.11 | 1.03 | 1.03 |
| 1.24 | 1.22 | 1.23 | 1.23 | 1.23 | 1.20 | 1.12 | 1.12 |
| 1.33 | 1.34 | 1.35 | 1.37 | 1.38 | 1.33 | 1.31 | 1.29 |
| 1.78 | 1.80 | 1.81 | 1.85 | 1.88 | 1.77 | 1.85 | 1.82 |
| 2.22 | 2.24 | 2.27 | 2.30 | 2.32 | 2.19 | 2.31 | 2.27 |
| 2.80 | 2.82 | 2.85 | 2.89 | 2.89 | 2.81 | 2.97 | 2.91 |
| 3.77 | 3.77 | 3.77 | 3.79 | 3.81 | 3.81 | 3.99 | 3.93 |
| 4.36 | 4.35 | 4.34 | 4.36 | 4.39 | 4.39 | 4.57 | 4.52 |
| 3.33 | 3.35 | 3.39 | 3.38 | 3.43 | 3.37 | 3.51 | 3.48 |
| 3.89 | 3.90 | 3.93 | 3.92 | 3.97 | 3.90 | 4.01 | 3.99 |
|  |  |  | Histo |  |  |  |  |
| 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q |
| $\underline{2015}$ | $\underline{2015}$ | $\underline{2016}$ | $\underline{2016}$ | $\underline{2016}$ | $\underline{2016}$ | $\underline{2017}$ | $\underline{2017}$ |
| 91.8 | 93.1 | 93.3 | 89.6 | 90.3 | 93.7 | 94.4 | 93.0 |
| 1.6 | 0.5 | 0.6 | 2.2 | 2.8 | 1.8 | 1.2 | 2.6 |
| 1.4 | 0.8 | 0.3 | 2.4 | 1.4 | 2.0 | 2.0 | 1.0 |
| 1.5 | 0.4 | 0.1 | 2.3 | 1.8 | 3.0 | 3.1 | -0.3 |


| onsensus Forecasts-Quarterly Avg. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3Q | 4Q | 1Q | 2Q | 30 | 4 Q |
| 2017 | $\underline{2017}$ | 2018 | $\underline{2018}$ | $\underline{2018}$ | $\underline{2018}$ |
| 15 | 1.25 | 1.46 | 1.63 | 1.8 | 2.03 |
| 4.25 | 4.34 | 4.5 | 4.70 | 4.9 | 5.09 |
| 1.33 | 1.47 | 1.68 | 1.86 | 2.06 | 2.27 |
| 1.15 | 1.27 | 1.48 | 1.67 | 1.89 | 2.11 |
| 1.06 | 1.18 | 1.38 | 1.56 | 1.76 | . 95 |
| 1.15 | 1.30 | 1.51 | 1.68 | 1.90 | 2.09 |
| 1.26 | 1.44 | 1.65 | 1.83 | 2.03 | 2.20 |
| 1.41 | 1.60 | 1.79 | 1.96 | 2.16 | 2.31 |
| 1.90 | 2.09 | 2.26 | 2.40 | 2.57 | 2.70 |
| 2.34 | 2.52 | 2.69 | 2.83 | 2.98 | . 08 |
| 2.91 | 3.06 | 3.24 | 3.36 | 3.50 | 3.59 |
| 3.81 | 4.00 | 4.22 | 4.41 | 4.57 | 4.66 |
| 4.49 | 4.70 | 4.93 | 5.12 | 5.29 | . 4 |
| 3.51 | 3.69 | 3.92 | 4.08 | 4.22 | 4.3 |
| 3.99 | 4.14 | 4.34 | 4.48 | 4.64 | 4.7 |
| Consensus Forecasts-Quarterly |  |  |  |  |  |
| 3Q | 4Q | 1Q | 2Q | 3Q | 4Q |
| $\underline{2017}$ | 2017 | 2018 | 2018 | 2018 | $\underline{2018}$ |
| 89.6 | 89.5 | 89.7 | 89.8 | 89.8 | 89.8 |
| 2.7 | 2.4 | 2.3 | 2.4 | 2.3 | 2.2 |
| 1.7 | 2.0 | 2.1 | 2.0 | 2.1 | 2.1 |
| 1.5 | 2.2 | 2.2 | 2.1 | 2.2 |  |

Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9 . Historical data: Treasury rates from the Federal Reserve Board's H.15; AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years, yield to maturity; State and local bond yields from Bank of America-Merrill Lynch, A-rated, yield to maturity; Mortgage rates from Freddie Mac, 30-year, fixed; LIBOR quotes from Intercontinental Exchange. All interest rate data is sourced from Haver Analytics. Historical data for Fed’s Major Currency Index is from FRSR H.10. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS).
U.S. Treasury Yield Curve

Week ended August 18, 2017 and Year Ago vs.
3Q 2017 and 4Q 2018 Consensus Forecasts


Corporate Bond Spreads
As of week ended August 18, 2017

U.S. 3-Mo. T-Bills \& 10-Yr. T-Note Yield
(Quarterly Average)
Forecast


## U.S. Treasury Yield Curve

As of week August 18, 2017


## Long-Range Survey:

The table below contains the results of our twice-annual long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are consensus estimates for the years 2019 through 2023 and averages for the five-year periods 2019-2023 and 2024-2028. Apply these projections cautiously. Few if any economic, demographic and political forces can be evaluated accurately over such long time spans.

|  |  | -----------Average For The Year------------ |  |  |  |  | Five-Year Averages |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest Rates |  | 2019 | 2020 | 2021 | 2022 | 2023 | 2019-2023 | 2024-2028 |
| 1. Federal Funds Rate | CONSENSUS | 2.6 | 2.9 | 2.9 | 2.9 | 2.9 | 2.8 | 3.0 |
|  | Top 10 Average | 3.1 | 3.5 | 3.4 | 3.5 | 3.5 | 3.4 | 3.5 |
|  | Bottom 10 Average | 2.0 | 2.3 | 2.3 | 2.3 | 2.4 | 2.3 | 2.4 |
| 2. Prime Rate | CONSENSUS | 5.6 | 5.9 | 5.9 | 5.9 | 5.9 | 5.8 | 6.0 |
|  | Top 10 Average | 6.1 | 6.5 | 6.5 | 6.5 | 6.5 | 6.4 | 6.5 |
|  | Bottom 10 Average | 5.0 | 5.3 | 5.3 | 5.2 | 5.3 | 5.2 | 5.4 |
| 3. LIBOR, 3-Mo. | CONSENSUS | 2.9 | 3.1 | 3.2 | 3.1 | 3.2 | 3.1 | 3.2 |
|  | Top 10 Average | 3.4 | 3.7 | 3.7 | 3.7 | 3.8 | 3.7 | 3.8 |
|  | Bottom 10 Average | 2.4 | 2.6 | 2.6 | 2.5 | 2.6 | 2.5 | 2.6 |
| 4. Commercial Paper, 1-Mo. | CONSENSUS | 2.7 | 3.0 | 3.0 | 3.0 | 3.1 | 3.0 | 3.1 |
|  | Top 10 Average | 3.2 | 3.5 | 3.5 | 3.6 | 3.6 | 3.5 | 3.6 |
|  | Bottom 10 Average | 2.2 | 2.5 | 2.5 | 2.4 | 2.5 | 2.4 | 2.6 |
| 5. Treasury Bill Yield, 3-Mo. | CONSENSUS | 2.5 | 2.8 | 2.8 | 2.8 | 2.9 | 2.8 | 2.9 |
|  | Top 10 Average | 3.1 | 3.4 | 3.4 | 3.4 | 3.5 | 3.3 | 3.5 |
|  | Bottom 10 Average | 1.9 | 2.2 | 2.3 | 2.2 | 2.3 | 2.2 | 2.3 |
| 6. Treasury Bill Yield, 6-Mo. | CONSENSUS | 2.6 | 2.9 | 3.0 | 3.0 | 3.0 | 2.9 | 3.0 |
|  | Top 10 Average | 3.2 | 3.6 | 3.5 | 3.6 | 3.6 | 3.5 | 3.6 |
|  | Bottom 10 Average | 2.0 | 2.4 | 2.4 | 2.4 | 2.4 | 2.3 | 2.4 |
| 7. Treasury Bill Yield, 1-Yr. | CONSENSUS | 2.8 | 3.1 | 3.1 | 3.1 | 3.1 | 3.0 | 3.2 |
|  | Top 10 Average | 3.4 | 3.7 | 3.7 | 3.7 | 3.7 | 3.6 | 3.7 |
|  | Bottom 10 Average | 2.1 | 2.5 | 2.5 | 2.5 | 2.5 | 2.4 | 2.5 |
| 8. Treasury Note Yield, 2-Yr. | CONSENSUS | 2.9 | 3.2 | 3.3 | 3.3 | 3.3 | 3.2 | 3.3 |
|  | Top 10 Average | 3.5 | 3.9 | 3.9 | 3.9 | 3.9 | 3.8 | 4.0 |
|  | Bottom 10 Average | 2.3 | 2.6 | 2.7 | 2.6 | 2.6 | 2.6 | 2.7 |
| 10. Treasury Note Yield, 5-Yr. | CONSENSUS | 3.3 | 3.5 | 3.5 | 3.6 | 3.6 | 3.5 | 3.6 |
|  | Top 10 Average | 3.9 | 4.2 | 4.2 | 4.2 | 4.2 | 4.1 | 4.3 |
|  | Bottom 10 Average | 2.7 | 2.9 | 2.9 | 3.0 | 3.0 | 2.9 | 3.0 |
| 11. Treasury Note Yield, 10-Yr. | CONSENSUS | 3.6 | 3.8 | 3.8 | 3.9 | 3.9 | 3.8 | 3.9 |
|  | Top 10 Average | 4.2 | 4.5 | 4.4 | 4.5 | 4.5 | 4.4 | 4.6 |
|  | Bottom 10 Average | 2.9 | 3.1 | 3.1 | 3.2 | 3.3 | 3.1 | 3.3 |
| 12. Treasury Bond Yield, 30-Yr. | CONSENSUS | 4.2 | 4.3 | 4.4 | 4.4 | 4.4 | 4.3 | 4.5 |
|  | Top 10 Average | 4.9 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.1 |
|  | Bottom 10 Average | 3.5 | 3.7 | 3.7 | 3.8 | 3.8 | 3.7 | 3.8 |
| 13. Corporate Aaa Bond Yield | CONSENSUS | 5.2 | 5.4 | 5.4 | 5.4 | 5.5 | 5.4 | 5.5 |
|  | Top 10 Average | 5.7 | 5.9 | 5.9 | 6.0 | 5.9 | 5.9 | 6.0 |
|  | Bottom 10 Average | 4.7 | 4.9 | 4.9 | 4.9 | 5.0 | 4.9 | 5.1 |
| 13. Corporate Baa Bond Yield | CONSENSUS | 6.1 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.4 |
|  | Top 10 Average | 6.8 | 7.0 | 6.9 | 7.0 | 6.9 | 6.9 | 7.0 |
|  | Bottom 10 Average | 5.5 | 5.6 | 5.7 | 5.6 | 5.8 | 5.6 | 5.7 |
| 14. State \& Local Bonds Yield | CONSENSUS | 4.6 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.8 |
|  | Top 10 Average | 5.1 | 5.3 | 5.2 | 5.3 | 5.3 | 5.2 | 5.3 |
|  | Bottom 10 Average | 4.2 | 4.2 | 4.2 | 4.1 | 4.1 | 4.2 | 4.2 |
| 15. Home Mortgage Rate | CONSENSUS | 5.3 | 5.5 | 5.5 | 5.5 | 5.5 | 5.4 | 5.6 |
|  | Top 10 Average | 5.9 | 6.2 | 6.1 | 6.2 | 6.1 | 6.1 | 6.2 |
|  | Bottom 10 Average | 4.6 | 4.8 | 4.8 | 4.7 | 4.9 | 4.8 | 4.9 |
| A. FRB - Major Currency Index | CONSENSUS | 93.8 | 93.2 | 93.1 | 93.0 | 92.7 | 93.2 | 92.5 |
|  | Top 10 Average | 96.5 | 96.6 | 96.9 | 97.1 | 97.2 | 96.9 | 97.1 |
|  | Bottom 10 Average | 91.0 | 89.7 | 89.2 | 88.7 | 88.1 | 89.3 | 88.1 |
|  |  |  | Year-O | -Year, | Chang | ----- | Five-Ye | verages |
|  |  | 2019 | 2020 | 2021 | 2022 | 2023 | 2019-2023 | 2024-2028 |
| B. Real GDP | CONSENSUS | 2.2 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 |
|  | Top 10 Average | 2.6 | 2.4 | 2.4 | 2.4 | 2.3 | 2.4 | 2.3 |
|  | Bottom 10 Average | 1.7 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.8 |
| C. GDP Chained Price Index | CONSENSUS | 2.2 | 2.1 | 2.1 | 2.0 | 2.0 | 2.1 | 2.0 |
|  | Top 10 Average | 2.5 | 2.3 | 2.3 | 2.2 | 2.2 | 2.3 | 2.3 |
|  | Bottom 10 Average | 1.9 | 1.9 | 1.9 | 1.9 | 1.7 | 1.8 | 1.9 |
| D. Consumer Price Index | CONSENSUS | 2.3 | 2.3 | 2.3 | 2.3 | 2.2 | 2.2 | 2.2 |
|  | Top 10 Average | 2.6 | 2.6 | 2.5 | 2.5 | 2.4 | 2.5 | 2.4 |
|  | Bottom 10 Average | 1.9 | 2.0 | 2.0 | 2.1 | 1.8 | 2.0 | 2.0 |


| $\underline{\text { Line No. }}$ |  | Implied Equity Risk Premium |
| :---: | :---: | :---: |
|  | Equity Risk Premium based on S\&P Utility Index Holding Period Returns (1): |  |
| 1. | Historical Equity Risk Premium | 3.96 \% |
| 2. | Regression of Historical Equity Risk Premium <br> (2) | 5.62 |
| 3. | Forecasted Equity Risk Premium Based on PRPM (3) | 4.03 |
| 4. | Average Equity Risk Premium Using S\&P Holding Period Returns | 4.53 \% |

Equity Risk Premium based on Projected Market
Appreciation of the S\&P Utility Index
Forecasted Equity Risk Premium based on Projected Total Return on the S\&P Utilities Index (Value Line Data) (4)

Forecasted Equity Risk Premium based on
Projected Total Return on the S\&P Utilities Index (Bloomberg Data) (5)
7.

Average Equity Risk Premium (6)

Notes: (1) Based on S\&P Public Utility Index monthly total returns and Moody's Public Utility Bond average monthly yields from 1928-2016. Holding period returns are calculated based upon income received (dividends and interest) plus the relative change in the market value of a security over a one-year holding period.
(2) This equity risk premium is based on a regression of the monthly equity risk premiums of the S\&P Utility Index relative to Moody's A rated public utility bond yields from 1928-2016 referenced in note 1 above.
(3) The Predictive Risk Premium Model (PRPM) is applied to the risk premium of the monthly total returns of the S\&P Utility Index and the monthly yields on Moody's A rated public utility bonds from January 1928 - August 2017.
(4) Using data from Value Line for the S\&P Utilities Index, an expected return of 8.98\% was derived based on expected dividend yields and long-term growth estimates as a proxy for market appreciation. Subtracting the expected A rated public utility bond yield of $4.83 \%$, calculated on line 3 of page 3 of this Sub-Schedule results in an equity risk premium of $4.15 \%$. $(8.98 \%-4.83 \%=4.15 \%)$
(5) Using data from Bloomberg Professional Service for the S\&P Utilities Index, an expected return of $8.10 \%$ was derived based on expected dividend yields and longterm growth estimates as a proxy for market appreciation. Subtracting the expected A rated public utility bond yield of $4.83 \%$, calculated on line 3 of page 3 of this SubSchedule results in an equity risk premium of $3.27 \%$. ( $8.10 \%-4.83 \%=3.27 \%$ )
(6) Average of Lines 4 through 6.

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$\stackrel{9}{9}$
$\stackrel{1}{2}$ Indicated Common Equity Cost Rate Through Use

Indian Hills Utility Operating Company, Inc.
Notes to Accompany the Application of the CAPM and ECAPM
Notes:
(1) The market risk premium (MRP) is derived by using six different measures from three sources: Ibbotson, Value Line, and Bloomberg as illustrated below:

Historical Data MRP Estimates:
Measure 1: Ibbotson Arithmetic Mean MRP (1926-2016)


Value Line MRP Estimates:
Measure 4: Value Line Projected MRP (Thirteen weeks ending September 01, 2017)

| Total projected return on the market 3-5 years hence*: | $9.64 \%$ |
| :--- | :--- |
| Projected Risk-Free Rate (see note 2): | 3.56 |
| MRP based on Value Line Summary \& Index: | $6.08 \%$ | MRP based on Value Line Summary \& Index: 6.08 \%

*Forcasted 3-5 year capital appreciation plus expected dividend yield
Measure 5: Value Line Projected Return on the Market based on the S\&P 500

| Total return on the Market based on the S\&P 500: | $14.13 \%$ |
| :--- | ---: |
| Projected Risk-Free Rate (see note 2): | 3.56 |
| MRP based on Value Line data | Average Value Line MRP: |
|  |  |

Measure 6: Bloomberg Projected MRP
Total return on the Market based on the S\&P 500: $\quad 13.65$ o Projected Risk-Free Rate (see note 2):

MRP based on Bloomberg data
3.56

$\%$

Average of Value Line, Ibbotson, and Bloomberg MRP: $\quad 8.60 \%$
(2) For reasons explained in the direct testimony, the appropriate risk-free rate for cost of capital purposes is the average forecast of 30 year Treasury Bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts. (See pages 10-11 of Sub-Schedule DWD-4.) The projection of the risk-free rate is illustrated below:

| Third Quarter 2017 | $2.91 \%$ |
| ---: | ---: |
| Fourth Quarter 2017 | 3.06 |
| First Quarter 2018 | 3.24 |
| Second Quarter 2018 | 3.36 |
| Third Quarter 2018 | 3.50 |
| Fourth Quarter 2018 | 3.59 |
| $2019-2023$ | 4.30 |
| $2024-2028$ | 4.50 |

## (3) Average of Column 6 and Column 7.

Sources of Information:
Value Line Summary and Index
Blue Chip Financial Forecasts, June 1, 2017 and September 1, 2017
Stocks, Bonds, Bills, and Inflation - 2017 SBBI Yearbook, John Wiley \& Sons, Inc.
Bloomberg Professional Services

Indian Hills Operating Company, Inc.

The criteria for selection of the proxy group of seventeen non-price regulated companies was that the non-price regulated companies be domestic and reported in Value Line Investment Survey (Standard Edition).

The proxy group of seventeen non-price regulated companies were then selected based on the unadjusted beta range of $0.34-0.70$ and residual standard error of the regression range of $2.3533-2.8069$ of the water proxy group.

These ranges are based upon plus or minus two standard deviations of the unadjusted beta and standard error of the regression. Plus or minus two standard deviations captures $95.50 \%$ of the distribution of unadjusted betas and residual standard errors of the regression.

The standard deviation of the water industry's residual standard error of the regression is 0.1134. The standard deviation of the standard error of the regression is calculated as follows:

Standard Deviation of the Std. Err. of the Regr. = Standard Error of the Regression $\sqrt{2 N}$
where: $\mathrm{N}=$ number of observations. Since Value Line betas are derived from weekly price change observations over a period of five years, $\mathrm{N}=259$

$$
\text { Thus, } 0.1134=\frac{2.5801}{\sqrt{518}}=\frac{2.5801}{22.7596}
$$

Source of Information: Value Line, Inc., June 2017
Value Line Investment Survey (Standard Edition)

Indian Hills Utility Operating Company, Inc.
Basis of Selection of Comparable Risk
Domestic Non-Price Regulated Companies

|  | [1] | [2] | [3] | [4] |
| :---: | :---: | :---: | :---: | :---: |
| Proxy Group of Eight Water Companies | Value Line <br> Adjusted <br> Beta | $\begin{gathered} \text { Unadjusted } \\ \text { Beta } \\ \hline \end{gathered}$ | Residual <br> Standard <br> Error of the <br> Regression | Standard <br> Deviation of Beta |
| American States Water Co. | 0.75 | 0.58 | 2.7924 | 0.0973 |
| American Water Works Company Inc | 0.60 | 0.39 | 1.9839 | 0.0691 |
| Aqua America Inc | 0.70 | 0.47 | 2.2248 | 0.0775 |
| California Water Service Group | 0.75 | 0.56 | 2.5374 | 0.0884 |
| Connecticut Water Service Inc | 0.65 | 0.41 | 2.3746 | 0.0827 |
| Middlesex Water Co. | 0.75 | 0.57 | 2.8058 | 0.0978 |
| SJW Corp | 0.70 | 0.53 | 2.9297 | 0.1021 |
| York Water Co. | 0.80 | 0.62 | 2.9920 | 0.1042 |
| Average | 0.71 | 0.52 | 2.5801 | 0.0899 |
| Beta Range ( $+/-2$ std. Devs. of Beta) | 0.34 | 0.70 |  |  |
| 2 std. Devs. of Beta | 0.18 |  |  |  |
| Residual Std. Err. Range (+/- 2 std. <br> Devs. of the Residual Std. Err.) | 2.3533 | 2.8069 |  |  |
| Std. dev. of the Res. Std. Err. | 0.1134 |  |  |  |
| 2 std. devs. of the Res. Std. Err. | 0.2268 |  |  |  |

Indian Hills Utility Operating Company, Inc. Proxy Group of Non-Price Regulated Companies

Comparable in Total Risk to the
Proxy Group of Eight Water Companies

|  | [1] | [2] | [3] | [4] |
| :---: | :---: | :---: | :---: | :---: |
| Proxy Group of Seventeen Non-Price Regulated Companies | $\begin{gathered} \text { VL Adjusted } \\ \text { Beta } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Unadjusted } \\ \text { Beta } \\ \hline \end{gathered}$ | Residual <br> Standard <br> Error of the <br> Regression | Standard Deviation of Beta |
| ABM Industries Inc. | 0.80 | 0.65 | 2.4419 | 0.0851 |
| Bright Horizons Fami | 0.85 | 0.70 | 2.4641 | 0.0949 |
| Cheesecake Factory | 0.85 | 0.70 | 2.5709 | 0.0896 |
| CBOE Holdings | 0.70 | 0.50 | 2.5345 | 0.0883 |
| Chemed Corp. | 0.85 | 0.70 | 2.8000 | 0.0976 |
| CME Group | 0.75 | 0.60 | 2.4401 | 0.0850 |
| Forrester Research | 0.70 | 0.53 | 2.7803 | 0.0969 |
| Genpact Limited | 0.75 | 0.57 | 2.7009 | 0.0941 |
| Hormel Foods | 0.75 | 0.58 | 2.4245 | 0.0845 |
| Intercontinental Exc | 0.80 | 0.63 | 2.3619 | 0.0823 |
| Lancaster Colony | 0.80 | 0.65 | 2.3708 | 0.0826 |
| Lilly (Eli) | 0.75 | 0.60 | 2.5343 | 0.0883 |
| Mercury General | 0.70 | 0.53 | 2.5576 | 0.0891 |
| O'Reilly Automotive | 0.80 | 0.69 | 2.6083 | 0.0909 |
| Pinnacle Foods | 0.80 | 0.67 | 2.5855 | 0.1007 |
| Target Corp. | 0.80 | 0.67 | 2.5354 | 0.0883 |
| WD-40 Co. | 0.80 | 0.64 | 2.4838 | 0.0865 |
| Average | 0.78 | 0.62 | 2.5400 | 0.0900 |
| Proxy Group of Eight Water |  |  |  |  |
| Companies | 0.71 | 0.52 | 2.5801 | 0.0899 |

> Indian Hills Utility Operating Company, Inc.
> Summary of Cost of Equity Models Applied to Proxy Group of Seventeen Non-Price Regulated Companies
> Comparable in Total Risk to the
> Proxy Group of Eight Water Companies

| $\underline{\text { Principal Methods }}$ |  | Proxy Group of Seventeen NonPrice Regulated Companies |
| :---: | :---: | :---: |
| Discounted Cash Flow Model (DCF) (1) |  | 12.73 \% |
| Risk Premium Model (RPM) (2) |  | 11.18 |
| Capital Asset Pricing Model (CAPM) (3) |  | 10.79 |
|  | Mean | 11.57 \% |
|  | Median | 11.18 \% |
|  | Average of Mean and Median | 11.38 \% |

## Notes:

(1) From page 2 of this Sub-Schedule.
(2) From page 3 of this Sub-Schedule.
(3) From page 6 of this Sub-Schedule.
NA $=$ Not Available
NMF $=$ Not Meaningful Figure
(1) The application of the DCF model to the domestic, non-price regluated comparable risk companies is identical to the application of the DCF to the utility proxy group. The dividend yield is derived by using the 60 day average price and the spot indicated dividend as of August 31,2017 . The dividend yield is then adjusted by $1 / 2$ the average
projected growth rate in EPS, which is calculated by averaging the 5 year projected growth in EPS provided by Value Line, www.reuters.com, www.zacks.com, and www.yahoo.com (excluding any negative growth rates) and then adding that growth rate to the adjusted dividend yield.
Indian Hills Utility Operating Company, Inc.
DCF Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Eight Water Companies
${ }^{\circ}$
$\underset{\sim}{\infty}$

| [1] | [2] [3] |  | [4] | [5] | [6] | [7] | [8] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average Dividend Yield | Value Line Projected Five Year Growth in EPS | Reuters Mean Consensus Projected Five Year Growth Rate in EPS | Zack's Five Year Projected Growth Rate in EPS | Yahoo! Finance Projected Five Year Growth in EPS | Average Projected Five Year Growth Rate in EPS | Adjusted Dividend Yield | Indicated Common Equity Cost Rate (1) |
| 1.58 \% | 14.50 \% | NA \% | NA \% | 5.10 \% | 9.80 \% | 1.66 \% | 11.46 \% |
| - | 19.50 | 17.19 | 20.00 | NA | 18.90 | - | NA |
| 1.77 | 8.50 | 10.55 | 14.30 | 10.55 | 10.98 | 1.87 | 12.85 |
| 1.15 | 12.50 | NA | 16.80 | 18.28 | 15.86 | 1.24 | 17.10 |
| 0.56 | 13.50 | NA | 10.00 | NA | 11.75 | 0.59 | 12.34 |
| 2.12 | 8.50 | 8.90 | 10.60 | 8.90 | 9.23 | 2.22 | 11.45 |
| 1.90 | 10.00 | 12.00 | 12.00 | 12.00 | 11.50 | 2.01 | 13.51 |
| 0.85 | 13.00 | 11.12 | 10.00 | 11.12 | 11.31 | 0.90 | 12.21 |
| 2.02 | 10.50 | 3.94 | 9.30 | 3.95 | 6.92 | 2.09 | 9.01 |
| 1.22 | 12.00 | 13.45 | 11.00 | 13.45 | 12.48 | 1.30 | 13.78 |
| 1.79 | 7.00 | NA | NA | 3.00 | 5.00 | 1.83 | 6.83 |
| 2.54 | 11.00 | 11.25 | 10.60 | 11.25 | 11.03 | 2.68 | 13.71 |
| 4.43 | 14.00 | 26.50 | 26.50 | 26.50 | 23.38 | 4.95 | 28.33 |
| - | 13.00 | 14.14 | 13.80 | 14.14 | 13.77 | - | NA |
| 2.16 | NA | 11.03 | 9.30 | 11.03 | 10.45 | 2.27 | 12.72 |
| 4.56 | 4.50 | (3.33) | 4.70 | (3.33) | 4.60 | 4.66 | 9.26 |
| 1.81 | 8.00 | NA | 10.00 | 13.00 | 10.33 | 1.90 | 12.23 |
|  |  |  |  |  |  | Mean | 13.12 \% |
|  |  |  |  |  |  | Median | 12.34 \% |
|  |  |  |  |  | Average of Mean and Median |  | 12.73 \% |

[7]

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ar
$-$ Proxy Group of Seventeen
Non-Price Regulated
ABM Industries Inc. Bright Horizons Fami
Cheesecake Factory Cheesecake Factory
CBOE Holdings
Chemed Corp. CME Group Forrester Research Genpact Limited Intercontinental Exc Lancaster Colony Mercury General Pinnacle Foods Target Corp.

[^2]
# Source of Information: 

```
Indian Hills Utility Operating Company, Inc.
            Indicated Common Equity Cost Rate
            Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach
```

| Line No. |  | Proxy Group of Seventeen NonPrice Regulated Companies |
| :---: | :---: | :---: |
| 1. | Prospective Yield on Baa Rated Corporate Bonds (1) | 5.33 \% |
| 2. | Adjustment to Reflect Bond rating Difference of Non-Price Regulated Companies (2) | (0.36) |
| 3. | Adjusted Prospective Bond Yield | 4.97 |
| 4. | Equity Risk Premium (3) | 6.21 |
| 5. | Risk Premium Derived Common Equity Cost Rate | 11.18 \% |

Notes: (1) Average forecast of Baa corporate bonds based upon the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated June 1, 2017 and September 1, 2017 (see pages 10 and 11 of SubSchedule DWD-4). The estimates are detailed below.

| Third Quarter 2017 | $4.49 \%$ |
| ---: | :--- |
| Fourth Quarter 2017 | 4.70 |
| First Quarter 2018 | 4.93 |
| Second Quarter 2018 | 5.12 |
| Third Quarter 2018 | 5.29 |
| Fourth Quarter 2018 | 5.44 |
| 2019-2023 | 6.30 |
| 2024-2028 | 6.40 |
| Average |  |

(2) The average yield spread of Baa rated corporate bonds over A corporate bonds for the three months ending August 2017. To reflect the A2/A3 average rating of the non-utility proxy group, the prosepctive yield on Baa corporate bonds must be adjusted by $5 / 6$ of the spread between A and Baa corporate bond yields as shown below:

|  | A Corp. <br> Bond Yield | Baa Corp. <br> Bond Yield | Spread |  |
| ---: | ---: | ---: | ---: | ---: |
| Aug-2017 | 3.88 | $\%$ | 4.31 | 0.43 |
| Jul-2017 | 3.98 | 4.39 | 0.41 |  |
| Jun-2017 | 3.93 | 4.37 | 0.44 |  |
|  | Average yield spread |  | 0.43 |  |
|  |  | $5 / 6$ of spread | $=0.36$ |  |

(3) From page 5 of this Sub-Schedule.

Indian Hills Utility Operating Company, Inc.
Comparison of Long-Term Issuer Ratings for the
Proxy Group of Seventeen Non-Price Regulated Companies of Comparable risk to the Proxy Group of Eight Water Companies

| Proxy Group of Seventeen NonPrice Regulated Companies | Long- <br> Term <br> Issuer <br> Rating | Numerical Weighting <br> (1) | Long- <br> Term <br> Issuer <br> Rating | Numerical Weighting <br> (1) |
| :---: | :---: | :---: | :---: | :---: |
| ABM Industries Inc. | NR | -- | NR | -- |
| Bright Horizons Fami | NR | -- | NR | -- |
| Cheesecake Factory | NR | -- | NR | -- |
| CBOE Holdings | Baa1 | 8.0 | BBB+ | 8.0 |
| Chemed Corp. | WR | -- | NR | -- |
| CME Group | Aa3 | 4.0 | AA- | 4.0 |
| Forrester Research | NR | -- | NR | -- |
| Genpact Limited | NR | -- | BBB- | 10.0 |
| Hormel Foods | A1 | 5.0 | A | 6.0 |
| Intercontinental Exc | A2 | 6.0 | A | 6.0 |
| Lancaster Colony | NR | -- | NR | -- |
| Lilly (Eli) | A2 | 6.0 | AA- | 4.0 |
| Mercury General | Baa2 | 9.0 | NR | -- |
| O'Reilly Automotive | Baa1 | 8.0 | BBB+ | 8.0 |
| Pinnacle Foods | NR | -- | BB- | 13.0 |
| Target Corp. | A2 | 6.0 | A | 6.0 |
| WD-40 Co. | NR | -- | NR | -- |
| Average | A2/A3 | 6.5 | A- | 7.2 |


| Proxy Group of Seventeen NonPrice Regulated Companies | Long- <br> Term <br> Issuer <br> Rating | Numerical Weighting <br> (1) | Long- <br> Term <br> Issuer <br> Rating | Numerical Weighting <br> (1) |
| :---: | :---: | :---: | :---: | :---: |
| ABM Industries Inc. | NR | -- | NR | -- |
| Bright Horizons Fami | NR | -- | NR | -- |
| Cheesecake Factory | NR | -- | NR | -- |
| CBOE Holdings | Baa1 | 8.0 | BBB+ | 8.0 |
| Chemed Corp. | WR | -- | NR | -- |
| CME Group | Aa3 | 4.0 | AA- | 4.0 |
| Forrester Research | NR | -- | NR | -- |
| Genpact Limited | NR | -- | BBB- | 10.0 |
| Hormel Foods | A1 | 5.0 | A | 6.0 |
| Intercontinental Exc | A2 | 6.0 | A | 6.0 |
| Lancaster Colony | NR | -- | NR | -- |
| Lilly (Eli) | A2 | 6.0 | AA- | 4.0 |
| Mercury General | Baa2 | 9.0 | NR | -- |
| O'Reilly Automotive | Baa1 | 8.0 | BBB+ | 8.0 |
| Pinnacle Foods | NR | -- | BB- | 13.0 |
| Target Corp. | A2 | 6.0 | A | 6.0 |
| WD-40 Co. | NR | -- | NR | -- |
| Average | A2/A3 | 6.5 | A- | 7.2 |


| Proxy Group of Seventeen NonPrice Regulated Companies | Long- <br> Term <br> Issuer <br> Rating | Numerical Weighting <br> (1) | Long- <br> Term <br> Issuer <br> Rating | Numerical Weighting <br> (1) |
| :---: | :---: | :---: | :---: | :---: |
| ABM Industries Inc. | NR | -- | NR | -- |
| Bright Horizons Fami | NR | -- | NR | -- |
| Cheesecake Factory | NR | -- | NR | -- |
| CBOE Holdings | Baa1 | 8.0 | BBB+ | 8.0 |
| Chemed Corp. | WR | -- | NR | -- |
| CME Group | Aa3 | 4.0 | AA- | 4.0 |
| Forrester Research | NR | -- | NR | -- |
| Genpact Limited | NR | -- | BBB- | 10.0 |
| Hormel Foods | A1 | 5.0 | A | 6.0 |
| Intercontinental Exc | A2 | 6.0 | A | 6.0 |
| Lancaster Colony | NR | -- | NR | -- |
| Lilly (Eli) | A2 | 6.0 | AA- | 4.0 |
| Mercury General | Baa2 | 9.0 | NR | -- |
| O'Reilly Automotive | Baa1 | 8.0 | BBB+ | 8.0 |
| Pinnacle Foods | NR | -- | BB- | 13.0 |
| Target Corp. | A2 | 6.0 | A | 6.0 |
| WD-40 Co. | NR | -- | NR | -- |
| Average | A2/A3 | 6.5 | A- | 7.2 |

Moody's
Long-Term Issuer Rating
August 2017

ABM Industries Inc.
Bright Horizons Fami
Cheesecake Factory

CME Group
Forrester Research
Genpact Limited
Hormel Foods A1
Intercontinental Exc A2
Lancaster Colony
Lilly (Eli)
Mercury General
O'Reilly Automotive
Pinnacle Foods
Target Corp.
WD-40 Co.

Average

| Proxy Group of Seventeen NonPrice Regulated Companies | Long- <br> Term <br> Issuer <br> Rating | Numerical Weighting <br> (1) | Long- <br> Term <br> Issuer <br> Rating | Numerical Weighting <br> (1) |
| :---: | :---: | :---: | :---: | :---: |
| ABM Industries Inc. | NR | -- | NR | -- |
| Bright Horizons Fami | NR | -- | NR | -- |
| Cheesecake Factory | NR | -- | NR | -- |
| CBOE Holdings | Baa1 | 8.0 | BBB+ | 8.0 |
| Chemed Corp. | WR | -- | NR | -- |
| CME Group | Aa3 | 4.0 | AA- | 4.0 |
| Forrester Research | NR | -- | NR | -- |
| Genpact Limited | NR | -- | BBB- | 10.0 |
| Hormel Foods | A1 | 5.0 | A | 6.0 |
| Intercontinental Exc | A2 | 6.0 | A | 6.0 |
| Lancaster Colony | NR | -- | NR | -- |
| Lilly (Eli) | A2 | 6.0 | AA- | 4.0 |
| Mercury General | Baa2 | 9.0 | NR | -- |
| O'Reilly Automotive | Baa1 | 8.0 | BBB+ | 8.0 |
| Pinnacle Foods | NR | -- | BB- | 13.0 |
| Target Corp. | A2 | 6.0 | A | 6.0 |
| WD-40 Co. | NR | -- | NR | -- |
| Average | A2/A3 | 6.5 | A- | 7.2 |

Standard \& Poor's
Long-Term Issuer Rating August 2017

Notes:
(1) From page 6 of Sub-Schedule DWD-4.

Source of Information:
Bloomberg Professional Services

## Indian Hills Utility Operating Company, Inc.

Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for
Proxy Group of Seventeen Non-Price Regulated Companies of Comparable risk to the Proxy Group of Eight Water Companies

| Line No. | Equity Risk Premium Measure | Proxy Group of Seventeen NonPrice Regulated Companies |
| :---: | :---: | :---: |
| Ibbotson-Based Equity Risk Premiums: |  |  |
| 1. | Ibbotson Equity Risk Premium (1) | 5.56 \% |
| 2. | Regression on Ibbotson Risk Premium Data (2) | 7.41 |
| 3. | Ibbotson Equity Risk Premium based on PRPM (3) | 5.96 |
| 4. | Average Ibbotson Equity Risk Premium | 6.31 |
| Value Line-Based Equity Risk Premiums: |  |  |
| 5. | Equity Risk Premium Based on Value Line Summary and Index (4) | 5.07 |
| 6. | Equity Risk Premium Based on Value Line S\&P 500 Companies (5) | 9.56 |
| 7. | Average Value Line Equity Risk Premium | 7.32 |
| Bloomberg-Based Equity Risk Premium: |  |  |
| 8. | Equity Risk Premium Based on Bloomberg S\&P 500 Companies (6) | 9.08 |
| 9. | Conclusion of Equity Risk Premium (7) | 7.57 \% |
| 10. | Adjusted Beta (8) | 0.82 |
| 11. | Forecasted Equity Risk Premium | 6.21 \% |

Notes:
(1) From note 1 of page 9 of Sub-Schedule DWD-4.
(2) From note 2 of page 9 of Sub-Schedule DWD-4.
(3) From note 3 of page 9 of Sub-Schedule DWD-4.
(4) From note 4 of page 9 of Sub-Schedule DWD-4.
(5) From note 5 of page 9 of Sub-Schedule DWD-4.
(6) From note 6 of page 9 of Sub-Schedule DWD-4.
(7) Average of lines 4,7 , and 8 .
(8) Average of mean and median beta from page 6 of this Sub-Schedule.

Sources of Information:
Stocks, Bonds, Bills, and Inflation - 2017 SBBI Yearbook, John Wiley \& Sons, Inc.
Value Line Summary and Index
Blue Chip Financial Forecasts, June 1, 2017 and September 1, 2017
Bloomberg Professional Services

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 Proxy Group of Eight Water Companies

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> [1]

| Proxy Group of Seventeen Non- |
| :--- |
| Price Regulated Companies |


Mean
Median
Average of Mean and Median
Notes:
(2) From Sub-Schedule DWD-5, note 2 .
(3) Average of CAPM and ECAPM cost rates.

Company Cost of Capital Calculation<br>Indicated Return on Common Equity based on<br>Differences in Leverage<br>and Weighted Average Cost of Capital



Notes: (1) Average capital structure maintained by the Proxy Group of Eqight Water Utilities used to derive the indicated cost of common equity.
(2) Column $[\mathrm{B}] *$ Column [C].
(3) Actual cost of long-term debt of Indian Hills.
(4) Indicated common equity cost rate derived from the market data of the Proxy Group of Eight Water Companies from page 2 of Sub-Schedule DWD-1.
(5) Assuming a composite Federal and State income tax rate of $39.06 \%$, the pre-tax weighted cost of common equity based on the recommended common equity cost rate of $10.35 \%$ and average proxy group capital structure is: $9.16 \% .9 .16 \%=5.58 \% /(1-$ 0.3906).
(6) From page 1 of Sub-Schedule DWD-1
(7) Pre-tax weighted cost rate of common equity equals the pre-tax overall weighted cost rate ( $15.62 \%$ ) minus the weighted cost rate of debt ( $10.80 \%$ ). $15.62 \%-10.80 \%=4.82 \%$.
(8) Pre-tax weighted overall cost of capital multiplied by (1-effective tax rate). $4.82 \% \times(1-39.06 \%)=2.94 \%$
(9) Weighted cost of common equity calculated as the pre-tax weighted cost of common equity, $2.94 \%$, divided by the Company's actual equity ratio, $22.88 \% .12 .84 \%=2.94 \% / 22.88 \%$.
Indian Hills Utility Operating Company．Inc．
Portfolio Ranks by Size and Risk Premiums over CAPM Results
as Compiled by Duff and Phelps 2017 Guide to Cost of Capital
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3.41 \%
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[^0]:    American States Water Co., $2.09 \% \times(1+(1 / 2 \times 5.10 \%))=2.14 \%$.
    (5) Column $6+$ column 7 .
    (1) Indicated dividend at 08/31/2017 divided by the average closing price of the last 60 trading days ending $08 / 31 / 2017$ for
    each company.
    (2) From pages 2 through 9 of this Sub-Schedule.
    (3) Average of columns 2 through 5 excluding negative growth rates.
    (4) This reflects a growth rate component equal to one-half the conclu
    (4) This reflects a growth rate component equal to one-half the conclusion of growth rate (from column 6) $\times$ column
    1 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus, for
    American States Water Co., $2.09 \% \times(1+(1 / 2 \times 5.10 \%))=2.14 \%$.
    

    Value Line Investment Survey
    www.reuters.com Downloaded on 08/31/201
    www.zacks.com Downloaded on 08/31/2017
    www.yahoo.com Downloaded on 08/31/2017

[^1]:    (A) Diluted earnings. Next earnings report due
    late August. $\begin{aligned} & \text { vestment plan available. } \\ & \text { (C) In millions }\end{aligned}$

[^2]:    Value Line Investment Survey:
    www.reuters.com Downloaded on 08/31/2017
    www.zacks.com Downloaded on 08/31/2017 www.yahoo.com Downloaded on 08/31/2017

