Regulated Utilities

Implications of Potential Westinghouse Bankruptcy Filing

Media reports indicate nuclear contractor Westinghouse is taking exploratory steps around a possible bankruptcy filing. We see a number of risks for both SCG and SO if Westinghouse is unable to honor its obligations, with further downside in SCG shares.

Recent media reports, including Reuters, have indicated that Toshiba subsidiary Westinghouse (which is constructing nuclear plants for SO and SCG) is currently taking offers for a debtor-in-possession financing package to provide funds through a bankruptcy proceeding (article), and that the company has hired bankruptcy attorneys (article). Toshiba has said that no decision about a bankruptcy filing has been made, but we consider it an important exercise to consider the potential ramifications if Westinghouse is unable to honor its obligations to SO and SCG.

In the event of a bankruptcy filing for Westinghouse, SCANA and Southern would in our view face three issues: (1) the potential for nuclear contracts to be modified by a bankruptcy filing, potentially limiting liability of Westinghouse and Toshiba for current and/or future overruns, (2) the risk of protracted litigation regarding liability for cost overruns, and (3) potential for lack of assets at Toshiba with which to satisfy SCANA’s and Southern’s claims. As a result, we think the fixed price nuclear construction contracts could be at risk, and believe SO and SCG shareholders would have a greater likelihood of bearing nuclear cost overruns.

We see the potential for further cost overruns given the amount of construction remaining and lack of productivity improvements. Cost estimates for both nuclear projects are now 20-25% ($1.0-1.3b) above initial forecasts, before including Toshiba’s latest cost disclosure. Given the history of cost overruns for these projects, the ~3 years remaining for construction, historical precedent of nuclear construction cost overruns in the US, and the lack of productivity improvements thus far, we believe it is likely that further cost overruns and delays will emerge. We estimate $5.2b in additional construction and delay-related cost overruns for SCG and $3.3b for SO.

If SO and SCG were to abandon the projects, we believe there could still be some risk to earnings. There may be some discretion by the commissions as to the approach taken to allow a recovery of investments in plants that are abandoned, such as limiting the time horizon of recovery or lowering the rate of return. Based on our estimates, SCG will be collecting $2.00 in EPS in 2018 (45% of total 2018 EPS) from the investments made in its nuclear project; SO will be collecting about $0.25 (8%), and may face an incremental ~$0.03 drag due to a
related loan repayment. We believe these earnings could be at risk if the companies abandon the plants and were unable to fully earn a return on the investments made to date.

**What are the stocks pricing in?** By our estimates, SCG stock prices in a $1.8b cost overrun borne by shareholders, while SO prices in a $2.2b overrun. For SCG, cost overruns could reach $5.2b by our estimates, and we estimate $3.3b for SO. There are offsetting factors to these potential liabilities (such as the Toshiba letters of credit and parent guarantee, tax writeoffs, and regulatory recovery), but most are highly uncertain in our view. We give credit only for the letters of credit and tax writeoffs in our valuations, and apply a 50% probability to the construction cost overruns. For SCG we see further downside to shares, with our $65 PT implying -5% downside at current levels. For SO, our $52 PT implies a modest +2% upside to the current stock price.
Implications of a Potential Westinghouse Bankruptcy Filing

Recent media reports have indicated that Westinghouse is currently taking offers for a debtor-in-possession financing package to provide funds through a bankruptcy proceeding (article). Press reports have also indicated that the company had hired bankruptcy attorneys from law firm Weil, Gotshal & Manges (article). We note no decisions have been made about a bankruptcy filing according to these reports, and these steps were only exploratory in nature. Toshiba has noted that no decisions have yet been made regarding a potential bankruptcy filing for Westinghouse, and the company is currently trying to sell the business. However, we consider it an important exercise for investors to consider the potential ramifications if Westinghouse is unable to honor its obligations to SO's and SCG's nuclear projects.

In the event of a bankruptcy filing for Westinghouse, SCANA and Southern would in our view face three issues: (1) the potential for nuclear contracts to be modified in bankruptcy, potentially limiting liability for current and/or future overruns, (2) the risk of protracted litigation regarding liability for cost overruns, and (3) potential for lack of assets at Toshiba with which to satisfy SCANA's and Southern's claims. As a result, we think the fixed price nuclear construction contracts could be at risk, and believe SO and SCG shareholders would have a greater likelihood of bearing nuclear cost overruns in this scenario.

The path forward under a Westinghouse bankruptcy scenario is highly uncertain in our view. If the company is able to secure debtor-in-possession financing, construction could continue and payments may still be made by SO and SCG as long as Westinghouse is hitting construction milestones and is able to pay its subcontractors. However, we think the fixed price nuclear contracts could potentially be modified in a bankruptcy proceeding, and could remove the fixed price agreements that are in place for SO and SCG. If this is the case we think SO and SCG would likely seek damages from Westinghouse for breaking the original contract. In this scenario any recovery of damages from Westinghouse would be highly uncertain in our view, given the extensive litigation likely to be required and other financial obligations that would need to be settled by Westinghouse. To the extent Westinghouse were unable to honor its obligations to complete the nuclear projects or pay damages, SO and SCG could then seek payments from Toshiba. The companies could seek payments up to the maximum amount of Toshiba's parental guarantee, which Toshiba estimated to be $6.3b across the two nuclear projects. The ability of SCG and SO to receive payments from Toshiba, though, would also depend on Toshiba's financial health and might require litigation to secure. Given the financial uncertainty faced by Toshiba, including potential stock delisting, asset sales, and lender discussions underway, we think recovery of damages through this route is uncertain as well.

Impact of Potential Project Abandonment

In the event that Westinghouse is unable to complete the plants and a new contractor is required, we believe SO and SCG would reassess the costs of the projects to determine whether it is still prudent to continue with construction. Given the potential
for significant cost overruns we think there is a chance that the companies find the impact to consumers would be too great, or they are unable to come to an agreement with regulators to recover future costs, and decide to abandon the projects. At risk in this scenario in our view is the current stream of earnings from the capital that has already been spent on the units.

If SO and SCG were to abandon the projects, there is some legal protection for the utilities to recover their costs to date (including a return on their capital deployed to date), but we believe there is still some risk in terms of the duration over which there will be a return of and on capital, as well as the rate of return on capital. Both GA and SC have laws in place that define a utility's ability to recover costs made in a plant that is later abandoned. There may be some discretion, though, as to the approach under which the commissions allow a return on these investments. For example, if the return on and of capital is realized over a short time horizon, or if the rate of return allowed is relatively low (which we have seen in other situations involving stranded assets), the long-term earnings power of SO and SCG could in our view be materially impaired.

Based on our estimates, SCG is collecting $1.60 in EPS from the investments made in the VC Summer project in 2017 (38% of 2017 EPS) and $2.00 in 2018, and SO is collecting about $0.21 (7%) in 2017 and $0.25-0.26 in 2018. We believe these earnings could be at risk if the companies were unable to fully earn a return on the investments made to date in the plants over a long period of time.

Are SCG’s current nuclear earnings at risk? The Base Load Review Act (BLRA) allows SCG to collect a cash return on capital through customer rates while the plant is under construction. In 2017, we estimate that SCG will be collecting ~$230m in net income, or $1.60 in EPS, attributable to the VC Summer plant, and $290m or $2.00 in 2018. We believe these earnings would potentially be at risk in the event that the company abandons the project and is not allowed to recover its return on the capital spent to date. We have highlighted the abandonment language from the BLRA below. The language appears to allow SCG to recover costs approved under the BLRA as long as the decision to abandon the construction of the plant is deemed prudent. However, one portion of the language (bold text below) seems to indicate that recovery could be disallowed if the utility should have anticipated or avoided costs considering information available at the time. We believe this would be a difficult path for the commission to pursue since the Office of Regulatory Staff (ORS) and commission have been closely involved in assessing the project’s costs thus far, but it opens the door in our view for regulatory risk in this scenario. If the commission were to disallow SCG’s return on equity for the portion spent thus far, and only recover depreciation and debt financing costs through securitization of the plant, we believe the $1.60 in 2017 EPS (or $2.00 in 2018 EPS) related to nuclear construction would be at risk.

*Where a plant is abandoned after a base load review order approving rate recovery has been issued, the capital costs and AFUDC related to the plant shall nonetheless be recoverable under this article provided that the utility shall bear the burden of proving by a preponderance of the evidence that the decision to abandon construction of the plant was prudent. Without limiting the effect of Section 58-33-275(A), recovery of capital costs and the utility’s cost of capital associated with them may be disallowed only to the extent that the failure by the utility to anticipate or avoid the allegedly imprudent costs, or to minimize the magnitude of the costs, was imprudent considering the information available at the time that the utility could have acted to avoid or minimize the costs. The
commission shall order the amortization and recovery through rates of the investment in the abandoned plant as part of an order adjusting rates under this article."

Risk to Southern’s current nuclear earnings. In 2017, we estimate SO will be collecting ~$210m in net income, or $0.21 in EPS, attributable to the Vogtle plant, and about $0.25-0.26 in 2018. We believe these earnings would potentially be at risk in the event that the company abandons the project and is not allowed to recover its return on the capital spent to date, and have highlighted the abandonment language in GA below. The language appears to allow SO to recover costs as long as they were not deemed imprudent (among other considerations). If the commission were to disallow SO’s return on equity for the portion spent thus far, and only allow the recovery of depreciation and debt financing costs through securitization of the asset, we believe the $0.21 in 2017 EPS and $0.25-0.26 in 2018 related to nuclear construction would be at risk.

If the commission disapproves of all or part of the proposed revisions and the utility cancels construction of some or all of the facility as a result of the disapproval, the utility may recover through any rate-making vehicle over a reasonable period of time, absent fraud, concealment, failure to disclose a material fact, imprudence, or criminal misconduct, the amount of its actual investment, net of actual salvage value, in the partially completed portion of the facility along with the cost of carrying the unamortized balance of that investment to the extent such investment is verified as made pursuant to the certificate.

Another potential risk for SO: Repayment of debt backed by DOE loan guarantees. At the end of 2016, SO had borrowed $2.6b under a loan guarantee facility with the US Department of Energy. Borrowings established under the loan guarantee agreement have an interest rate of T+0.375% and maturity in 2044. According to SO’s 10-K, the company would be required to prepay the borrowings over a five year period if the Vogtle agreement is terminated:

In the event certain mandatory prepayment events occur, the FFB’s commitment to make further advances under the FFB Credit Facility will terminate and Georgia Power will be required to prepay the outstanding principal amount of all borrowings under the FFB Credit Facility over a period of five years (with level principal amortization). Among other things, these mandatory prepayment events include (i) the termination of the Vogtle 3 and 4 Agreement; (ii) cancellation of Plant Vogtle Units 3 and 4 by the Georgia PSC, or by Georgia Power if authorized by the Georgia PSC; and (iii) cost disallowances by the Georgia PSC that could have a material adverse effect on completion of Plant Vogtle Units 3 and 4 or Georgia Power’s ability to repay the outstanding borrowings under the FFB Credit Facility.

The weighted average interest rate on SO’s borrowings under the loan guarantee program is 3.3%. If SO were to refinance this debt at a rate similar to its current bonds due in the 2040 timeframe, which average roughly 5.0%, the difference in interest expense would amount to $45m or $0.03 in EPS.

Nuclear Construction Cost Estimates

VC Summer project. As of SCG’s latest Base Load Review Act (BLRA) filing for 4Q16, construction costs for the project (before financing costs) are estimated to total $7.3b for the portion of the plant owned by SCANA. This compares to the company’s original
2009 cost forecast of $6.05b, and represents an increase of $1.3b or 21% thus far. On top of this, SCG's portion of Toshiba's recently disclosed additional nuclear cost overruns, assuming an even split between the two US nuclear projects, totals another ~$1.7b. In our base case, we further assume that from today, costs increase proportionately with the overruns identified thus far. The project is about 60% complete based on the capital spent to date, while overruns have totaled ~$3b ($1.3b plus the assumed $1.7b cost increase announced by Toshiba). If cost overruns continue to be recognized proportionately, this would lead to an additional $2b of overruns. Finally, we also expect SCG to face increased costs due to potential delays in the project, with a 2-year delay leading to $1.5b in owner's costs, lost Production Tax Credits (PTCs), and financing cost by our estimates. Our total estimate for SCG's project cost is $12.6b, about $6.5b or 108% above the original construction cost estimate.

Vogtle project. As of SO's latest Vogtle Construction Monitoring (VCM) report for 2H16, construction costs for the project (before financing costs) are estimated to total $5.44b. This compares to the company's original 2009 cost forecast of $4.4b, and represents an increase of $1b or 23% thus far. On top of this, SO's portion of Toshiba's recently disclosed additional nuclear cost overruns, assuming an even split between the two US nuclear projects, totals another ~$1.4b. In our base case, we further assume that from today, costs increase proportionately with the overruns identified thus far. The project is about 70% complete based on the capital spent to date, while overruns have totaled ~$2.4b ($1b plus the assumed $1.4b cost increase announced by Toshiba). If cost overruns continue to be recognized proportionately with the completion of the project, this would lead to an additional $950m of overruns. Finally, we also expect SO to face increased costs due to potential delays in the project, with a 2-year delay leading to $940m in owner's costs, lost PTCs, and financing cost by our estimates. Our total estimate for SO's project cost is $8.7b, about $4.3b or ~100% above the original construction cost estimate.
What are the stocks pricing in?

**Exhibit 3: SCANA Valuation Analysis**

<table>
<thead>
<tr>
<th>Utility Valuation</th>
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</thead>
<tbody>
<tr>
<td>2018 Consensus EPS</td>
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<tr>
<td>Group average PE multiple</td>
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<td>Assumed premium/discount</td>
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<td>Utility valuation ($/shr)</td>
</tr>
<tr>
<td>Shares outstanding (m)</td>
</tr>
<tr>
<td>Utility market value ($m)</td>
</tr>
</tbody>
</table>

**Implied nuclear construction cost borne by shareholders**

- Current stock price: $68.27
- Current market cap: $9,757
- Implied nuclear construction cost borne by shareholders ($/shr): $13
- Implied nuclear construction cost borne by shareholders ($m): $1,845

**Potential incremental costs**

- Potential cost overrun - Toshiba disclosure: $1,678
- MSe further construction cost overrun: $2,055
- Delay costs (financing, owner’s costs, PTC) - 2yrs: $1,502
- Total: $5,235

Source: Morgan Stanley Research

**Exhibit 4: SO Valuation Analysis**

<table>
<thead>
<tr>
<th>Utility Valuation</th>
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<tbody>
<tr>
<td>2018 Consensus EPS</td>
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<tr>
<td>MSe Utility market value ($m)</td>
</tr>
</tbody>
</table>

**Implied nuclear construction cost borne by shareholders**

- Current stock price: $51
- Current market cap: $50,599
- Implied nuclear construction cost borne by shareholders ($/shr): $2.3
- Implied nuclear construction cost borne by shareholders ($m): $2,240

**Potential incremental costs**

- Potential cost overrun - Toshiba disclosure: $1,394
- MSe further construction cost overrun: $952
- Delay costs (financing, owner’s costs, PTC) - 2yrs: $941
- Total: $3,287

Source: Morgan Stanley Research

**SCG stock prices in $1.8b of cost overruns by our estimates.**

Using consensus 2018 EPS of $4.51 and the utility average PE multiple of 18.0x, we estimate the consensus utility value of $81/share for SCG. With the stock currently trading at $68, this implies $13/share or $1.8b of nuclear-related costs borne by shareholders. We believe the total cost overruns could be much higher: We estimate $1.7b of potential overruns from Toshiba’s recent disclosure, assume an incremental $2b of construction cost overruns are possible through the completion of the project, and estimate $1.5b of costs related to a 2-year delay in the project (including financing cost, owner's costs, and reimbursement of lost production tax credits). Potential offsets to these cost overruns would include Toshiba’s letter of credit (LOC, $55m), the rest of Toshiba’s parent guarantee of Westinghouse (we estimate $1.7b based on Toshiba's disclosures and assuming an even split between SO and SCG), the value of tax writeoffs from unrecovered costs, and potential regulatory recovery. We believe all but the letter of credit and potential tax writeoffs in this scenario are highly uncertain. We give credit only for the LOC and tax writeoffs in our valuation, and apply a 50% probability to the construction cost overruns.

**SO stock prices in $2.2b of cost overruns by our estimates.**

As an indicative analysis if we assume the core SO earnings are valued at a 5% PE discount due to below-average utility growth and greater risk at SO Power, using consensus 2018 EPS of $3.12 and an utility average PE multiple of 18.0x we estimate a core value of $53/share for SO. With the stock currently trading at $51, this implies ~$2/share or $2.2b of costs borne by shareholders (either attributable to nuclear cost overruns or Kemper disallowance, in our view). We believe the total cost overruns could $3.3b: We estimate $1.4b of potential overruns from Toshiba’s recent disclosure, assume an incremental $950m of construction cost overruns are possible through the completion of the project, and estimate $940m of costs related to a 2-year delay in the project (including financing cost, owner's costs, and reimbursement of lost production tax credits). Potential offsets to these cost overruns would include Toshiba’s letter of credit ($420m), the rest of Toshiba's parent guarantee of Westinghouse (we estimate $1.0b based on Toshiba's disclosures and assuming an even split between SO and SCG), tax writeoffs from unrecovered costs, and potential regulatory recovery (including $240m in contingency already approved by the commission). We believe all but the letter of credit and approved contingency are highly uncertain. We give credit for the LOC, contingency, and tax writeoffs in our valuation, and apply a 50% probability to the construction cost overruns.
Valuation Methodology and Risks

**Exhibit 5: Valuation Methodology and Risks**

<table>
<thead>
<tr>
<th>Company</th>
<th>P/E</th>
<th>Valuation Methodology</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCG. Corp.</td>
<td>5.00</td>
<td>We value the regulated utility by applying the regulated group P/E to our 2017 Utility EPS and separately deducting the estimated impact of assumed nuclear cost overruns or delays.</td>
<td>1) Nuclear cost overruns or delays, 2) Changes to nuclear regulations, 3) Weak load growth, 4) Supplier or contractor delays, defaults, or mistakes on new nuclear construction, 5) Competition in retail business</td>
</tr>
<tr>
<td>Southern Co.</td>
<td>6.00</td>
<td>We value the regulated utility by applying the regulated group P/E multiple to our 2017 Utility EPS and subtract our estimate of dilution due to nuclear cost overruns.</td>
<td>1) Nuclear / IGCC cost overruns or delays, 2) Changes to nuclear regulations, 3) Weak load growth, 4) Supplier or contractor delays, defaults, or mistakes on new nuclear construction</td>
</tr>
</tbody>
</table>

Source: Morgan Stanley Research

**SCG.N**

Valuation Methodology (PT $65):

- We value the regulated utility by applying the regulated group P/E to our 2017 Utility EPS.

Risks:

- Nuclear cost overruns or delays
- Changes to nuclear regulations
- Weak load growth
- Supplier or contractor delays, defaults, or mistakes on new nuclear construction
- Competition in retail business

**SO.N**

Valuation Methodology (PT $52):

- We value the regulated utility by applying the regulated group P/E multiple to our 2017 Utility EPS and subtract our estimate of dilution due to nuclear cost overruns.

Risks:

- Nuclear / IGCC cost overruns or delays
- Changes to nuclear regulations
- Weak load growth
- Supplier or contractor delays, defaults, or mistakes on new nuclear construction
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Global Stock Ratings Distribution

(as of February 28, 2017)

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Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflictpolicies.
Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months.

**Analyst Stock Ratings**

Overweight (O). The stock’s total return is expected to exceed the average total return of the analyst’s industry (or industry team’s) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock’s total return is expected to be in line with the average total return of the analyst’s industry (or industry team’s) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock’s total return relative to the average total return of the analyst’s industry (or industry team’s) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock’s total return is expected to be below the average total return of the analyst’s industry (or industry team’s) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

**Analyst Industry Views**

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

**Stock Price, Price Target and Rating History (See Rating Definitions)**


Source: Morgan Stanley Research
Date Format: MM/DD/YY
Price Target: No Price Target Assigned (NR)

Stock Price (Not Covered by Current Analyst) Stock Price (Covered by Current Analyst)
Stock and Industry Ratings (abbreviations below) appear as Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 15, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst’s industry (or industry team’s) coverage.

Effective January 15, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.
Southern Company (SO.N) - As of 3/21/17 in USD
Industry: Regulated Utilities

Stock Rating History: 3/1/14: E/I; 8/13/14: U/I; 1/12/15: U/C; 1/12/16: U/I

Price Target History: 2/19/14: 43; 3/6/14: 44; 4/7/14: 46; 5/7/14: 47; 6/18/14: 44; 7/7/14: 46;
12/14/15: 43; 1/12/16: 45; 2/9/16: 46; 3/11/16: 50; 4/12/16: 51; 5/12/16: 50; 6/10/16: 52; 6/15/16: 50;
7/13/16: 51; 9/9/16: 49; 10/16/16: 47; 1/9/17: 49; 3/9/17: 52

Source: Morgan Stanley Research
Date Format: MM/DD/YY
Price Target: No Price Target Assigned (NR)

Stock Price (Not Covered by Current Analyst) — Stock Price (Covered by Current Analyst) — Stock and Industry Ratings (abbreviations below) appear as: Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 15, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst’s industry (or industry team’s) coverage.

Effective January 15, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.
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### Regulated Utilities

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<th>COMPANY (TICKER)</th>
<th>RATING (AS OF)</th>
<th>PRICE (03/21/2017)</th>
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<tr>
<td>Devin McDermott</td>
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<tr>
<td>Consolidated Edison Inc (ED.N)</td>
<td>U (01/09/2017)</td>
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<td>Eversource Energy (ES.N)</td>
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* Historical prices are not split adjusted.

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