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APPLICATION OF EL PASO ELECTRIC COMPANY TO CHANGE RATES	§ § §	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

REBUTTAL TESTIMONY

OF

JENNIFER E. NELSON

OF

CONCENTRIC ENERGY ADVISORS, INC.

FOR

EL PASO ELECTRIC COMPANY

NOVEMBER 19, 2021

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EXHIBITS

I. Introduction and Purpose

Q. PLEASE STATE YOUR NAME, AFFILIATION, AND BUSINESS ADDRESS.

A. My name is Jennifer E. Nelson. I am an Assistant Vice President at Concentric Energy Advisors, Inc. My business address is 293 Boston Post Road West, Suite 500, Marlborough, Massachusetts 01752.

Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS TESTIMONY?

A. I am submitting this rebuttal testimony ("Rebuttal Testimony") before the Public Utility Commission of Texas ("Commission") on behalf of El Paso Electric Company ("EPE" or the "Company").

Q. ARE YOU THE SAME JENNIFER E. NELSON WHO SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my Rebuttal Testimony is to respond to the following witnesses (collectively, "Opposing Witnesses") as their testimonies relate to the Company's Return on Equity ("ROE") and capital structure:

- Ms. Emily Sears, who testifies on behalf of Commission Staff ("Staff");
- Mr. Michael P. Gorman, who testifies on behalf of Texas Industrial Energy Consumers ("TIEC");
- Mr. Daniel J. Lawton, who testifies on behalf of the City of El Paso ("CEP");
- Ms. Billie S. LaConte, who testifies on behalf of Freeport-McMoRan, Inc. ("FMI");
- Ms. Maureen L. Reno, who testifies on behalf of the U.S. Department of Defense and Federal Executive Agencies ("DOD/FEA"); and
- Mr. Alex J. Kronauer, who testifies on behalf of Walmart, Inc. ("Walmart").

Additionally, I respond to the Office of the Public Utility Counsel's ("OPUC") witness Ms. Constance T. Cannady's recommendation to include short-term debt in the ratemaking capital structure. I note that my silence on a particular issue should not be construed as agreement with respect to that issue.

II. Summary and Overview of Testimony

Q. PLEASE SUMMARIZE THE RECOMMENDATIONS AND CONCLUSIONS CONTAINED IN YOUR DIRECT TESTIMONY REGARDING THE APPROPRIATE COST OF EQUITY AND CAPITAL STRUCTURE FOR EPE.

A. In my Direct Testimony, I concluded that the Company's Cost of Equity is 10.30 percent, within a range of 9.75 percent to 10.75 percent.[1] As my Direct Testimony discussed, my recommendation considers the results of three widely accepted methodologies in light of the current capital market environment and certain risks faced by the Company. With respect to the Company's capital structure, I concluded that an overall capital structure consisting of 51.00 percent common equity and 49.00 percent long-term debt was reasonable and should be approved for ratemaking purposes.[2]

The Cost of Equity cannot be precisely quantified, nor is it the result of a defined mathematical formula. As explained in my Direct Testimony, the Cost of Equity is not directly observable, and no single model is more reliable than all others in all market conditions.[3] Ms. Sears agrees, noting, "there is no single infallible approach that is appropriate in all circumstances."[4] That is, one model's results may be appropriate in one market environment but inappropriate in another market environment. Each model's results, therefore, must be viewed within the context of the current market environment and other relevant benchmarks.

Consistent with investor practice, it is important to consider a variety of methodologies and data points, as it puts into context both the quantitative and qualitative analyses and the associated recommendations. As such, I have updated many of the analyses contained in my Direct Testimony and provide additional analyses in response to issues raised by the Opposing Witnesses. While the results of my updated analyses have generally remained the same or even increased since I filed my Direct Testimony (*see* Table 1 below), I continue to recommend an ROE of 10.30 percent, within a range of 9.75 percent to 10.75 percent. Although my recommendation is not the result of a

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1 Direct Testimony of Jennifer E. Nelson, at 2.
2 Direct Testimony of Jennifer E. Nelson, at 2.
3 Direct Testimony of Jennifer E. Nelson, at 4-5.
4 Direct Testimony of Emily Sears, at 9.

specific formula, if each of the individual updated results presented in Table 13 in Section VI are given equal weight – including the low and high estimates – the average is 10.65 percent.[5] The median of my updated results is 9.91 percent, and the average of the mean and median is 10.28 percent. From that perspective, my recommended ROE recommendation of 10.30 is reasonable.

Lastly, the Company's requested capital structure of 51.00 percent common equity and 49.00 percent long-term debt remains consistent with, albeit somewhat more leveraged than, the capital structures in place at the regulated electric operating companies of the proxy group. Therefore, I conclude the Company's proposed capital structure is reasonable and should be approved.

Q. DO ANY INTERVENOR PARTIES SUPPORT YOUR ROE RECOMMENDATION?

A. Yes. International Brotherhood of Electrical Workers Local 960, AFL-CIO ("IBEW") witness David K. Bazar supports my 10.30 percent ROE recommendation.[6]

Q. PLEASE PROVIDE AN OVERVIEW OF YOUR RESPONSE TO THE ROE AND CAPITAL STRUCTURE RECOMMENDATIONS MADE BY THE OPPOSING WITNESSES.

A. Quite simply, the Opposing Witnesses' recommendations, as summarized in Table 1 below, are below any reasonable measure of EPE's Cost of Equity. The fact that their recommendations are within a narrow range does not make their conclusions more sound or their recommendations more reasonable. Moreover, their recommendations are particularly unreasonable when viewed in the context of: (1) the current capital market environment; (2) the Company's specific risk factors relative to the proxy group,[7] and (3) returns currently available to other electric utilities.

[5] Direct Testimony of Jennifer E. Nelson, at 6.

[6] Direct Testimony of David K. Bazar, at 6.

[7] Direct Testimony of Jennifer E. Nelson, at 33, 50-61. Additionally, as shown in Table 7 of my Direct Testimony and Mr. Gorman's Exhibit MPG-3, EPE's credit rating from Moody's is lower than the proxy group on average, indicating higher overall risk for EPE.

Table 1: Summary of Opposing Witnesses' ROE Ranges and Recommendations

	DCF Results	CAPM Results	Risk Premium Results	Comparable Earnings Results	ROE Recommendation (Range)
Ms. Sears (Staff)	6.75% - 12.12%	-	8.97%	-	9.20% (8.87% - 9.16%)
Mr. Gorman (TIEC)	8.06% - 9.44%	8.96% - 10.43%	8.96% - 9.11%	-	9.20% (9.00% - 9.40%)
Mr. Lawton (CEP)	9.42% - 9.49%	8.77% - 9.06%	9.06% - 9.12%	-	9.00% (8.80% - 9.20%)
Ms. Reno (DOD/FEA)	7.87% - 9.35%	7.28% - 8.59%	-	9.59% - 10.76%	9.35% (8.61% - 9.35%)
Ms. LaConte (FMI)	Recommends an ROE of no higher than 9.56%				
Mr. Kronauer (Walmart)	No specific ROE recommendation				
Ms. Nelson - Direct (EPE)	8.67% - 10.23%	12.42% - 13.14%	9.81%	-	10.30% (9.75% - 10.75%)
Ms. Nelson - Rebuttal (EPE)	8.40% - 10.25%	13.64% - 14.18%	9.82% - 9.87%	-	10.30% (9.75% - 10.75%)

Ms. LaConte does not perform her own independent ROE analyses; instead, she adjusts my analyses for her preferred inputs, concluding that the ROE "should not exceed 9.56 percent."[8] Mr. Kronauer does not make a specific recommendation regarding the appropriate ROE or capital structure. Instead, he expresses "concern" about the reasonableness of the proposed ROE and recommends the Commission "closely examine" it in light of (1) the customer impact of the resulting revenue requirement increase, (2) ROEs recently authorized by the Commission, (3) ROEs recently authorized by other utility commissions, and (4) the Company's current authorized ROE.[9] Mr. Kronauer's suggestion to reduce the Company's ROE by an unspecified amount is not based on market data of risk comparable companies applied to financial models and therefore does not consider the effect of his recommendation on EPE's financial profile. In the end, the only credible and sound method for determining the Cost of Capital is through the application of rigorous analysis using financial models and market data from reliable sources, coupled with a comprehensive risk assessment of the regulated utility.

[8] Direct Testimony of Billie S. LaConte, at 22.

[9] Direct Testimony of Alex Kronauer, at 7-8.

Because Mr. Kronauer does not undertake an independent, market-based analysis of the Company's Cost of Equity, much of my testimony responds to the other ROE witnesses.

As to the capital structure and cost of debt, the Opposing Witnesses each accept the Company's proposed capital structure and cost of debt. Only Ms. Cannady recommends a different capital structure be used for ratemaking purposes.

Q. WHAT ARE THE KEY ISSUES IN WHICH YOU DISAGREE WITH THE OPPOSING WITNESSES' METHODS AND CONCLUSIONS REGARDING THE COMPANY'S COST OF EQUITY AND CAPITAL STRUCTURE?

A. Although there are several areas in which I disagree with the Opposing Witnesses' methods and conclusions, the key issues are:

- *Flawed application of their ROE analytical models*. While the Opposing Witnesses perform multiple Cost of Equity analyses, the Opposing Witnesses give significant weight to unduly low Discounted Cash Flow ("DCF")-based ROE estimates. Further, many of their inputs and assumptions bias their results downward. For example, even though academic studies indicate that analysts' projected earnings growth rates are the best measure of growth in the DCF analyses, certain of the Opposing Witnesses apply alternative measures of growth. As a result, their DCF-based ROE estimates are unreasonably low. Additionally, many of the Opposing Witnesses' analyses rely on historical data, even though the Cost of Equity is forward-looking. Correcting for the flaws in the Opposing Witnesses' analyses produces more reasonable ROE estimates.
- *Failure to reflect EPE's higher risk relative to the proxy group*. None of the Opposing Witnesses consider EPE's higher risk relative to the proxy group. For example, Mr. Lawton's 9.00 percent ROE recommendation includes a 38-basis point downward adjustment based on his flawed conclusion that EPE's proposed capital structure is less leveraged and contains less financial risk than the proxy group.[10] Despite the fact that the Opposing Witnesses acknowledge EPE's credit rating is below the proxy group average, their ROE recommendations do not appropriately

[10] Direct Testimony of Daniel J. Lawton, at 3-4.

reflect the Company's higher risk, as their recommendations are at the very low end of returns available for other vertically integrated electric utilities. Because EPE has higher business and financial risk than the proxy companies, the authorized ROE should reflect the higher return investors require to compensate them for the Company's higher risk.

- *Disregard of the current capital market environment, including expectations for higher inflation and interest rates*. The Opposing Witnesses generally disregard current market data that point to expectations for higher inflation and interest rates, which indicate higher costs of capital going forward. As such, they reach the misguided conclusion the Cost of Capital is low and will remain as such.

Q. WHAT ARE YOUR CONCERNS WITH MR. LAWTON'S 38-BASIS POINT DOWNWARD ADJUSTMENT BASED ON HIS REVIEW OF EPE'S PROPOSED CAPITAL STRUCTURE?

A. Mr. Lawton's "financial risk" adjustment is based on a flawed analysis. Simply, his adjustment is based on a comparison of EPE's proposed capital structure with the capital structures in place at the proxy group consolidated holding company level. Because capital at the consolidated holding company level may finance unregulated operations, comparisons to the consolidated parent company capital structure may lead to flawed and misleading conclusions. My capital structure analysis presented in Exhibit JEN-8 (and updated in Exhibit JEN-6R), however, calculates the capital structures in place at the proxy companies' *regulated* electric utility operations; therefore, it provides an apples-to-apples comparison of EPE's financial risk relative to the proxy group. As shown in Exhibit JEN-8 and Exhibit JEN-6R, the Company's requested equity ratio of 51.00 percent is more than 200 basis points below the proxy group regulated electric utility average and median equity ratios over the last eight quarters. Properly applying Mr. Lawton's financial risk adjustment of 10.7 basis points for every 100-basis point increase in capital structure debt percentages,[11] therefore, would result in an *upward*

[11] Direct Testimony of Daniel J. Lawton, at 37-38.

financial risk adjustment of 21.4 basis points or more, not a 38-basis point decrease as Mr. Lawton suggests.

Q. DO THE OPPOSING WITNESSES' RECOMMENDATIONS REFLECT EPE'S HIGHER RISK PROFILE RELATIVE TO THE PROXY GROUP?

A. No, they do not. While the Opposing Witnesses develop their recommendations based on analyses applied to a proxy group of electric utilities, none have reconciled their analytical results with EPE's higher risk profile relative to the proxy group. As Ms. Reno correctly notes, "the fundamental comparison here is to the sample group".[12] However, she and the other Opposing Witnesses dismiss clear evidence of EPE's higher risk profile, most notably its lower credit rating relative to the proxy group. As Mr. Gorman acknowledges, EPE's long-term rating from Moody's is one notch lower than the proxy group average.[13] Additionally, as noted above, EPE's proposed capital structure is more leveraged (*i.e.*, contains more debt) than the capital structures in place at the proxy group regulated electric utility companies. Moreover, Moody's notes the Company's small size and high capital expenditure plan as "credit challenges". Lastly, as discussed in my Direct Testimony, the Company relies more heavily on nuclear generation, exposing it to greater risk than the proxy group.[14]

Although the Opposing Witnesses dismiss risk factors that support EPE's higher risk, they cite to EPE's cost recovery mechanisms to support their lower ROE recommendations. Their positions, however, fail to compare EPE's cost recovery mechanisms with those in place at the proxy group regulated electric utility companies. As shown in Exhibit JEN-14R, similar mechanisms are in place at the proxy group regulated electric utility companies; as such, EPE's risk associated with its cost recovery and rate structures is comparable to the proxy group. On balance, it is clear EPE's total risk profile is higher than the proxy group.

[12] Direct Testimony of Maureen L. Reno, at 20.

[13] Direct Testimony of Michael P. Gorman, at 23; Exhibit MPG-3.

[14] Direct Testimony of Jennifer E. Nelson, at 54-55.

Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

A. The remainder of my Rebuttal Testimony is organized as follows:

- Section III – Responds to the Opposing Witnesses' positions regarding trends in authorized ROEs and the current capital market environment;
- Section IV - Responds to the Opposing Witnesses' positions regarding each of the ROE analytical approaches, Mr. Gorman and Mr. Lawton's financial integrity analyses, and the Company's relative risk factors;
- Section V – Responds Ms. Cannady's recommendation to include short-term debt in the ratemaking capital structure;
- Section VI – Presents the results of my updated ROE analyses; and
- Section VII – Summarizes my conclusions and recommendations.

III. Trends in Authorized ROEs and the Current Capital Market Environment

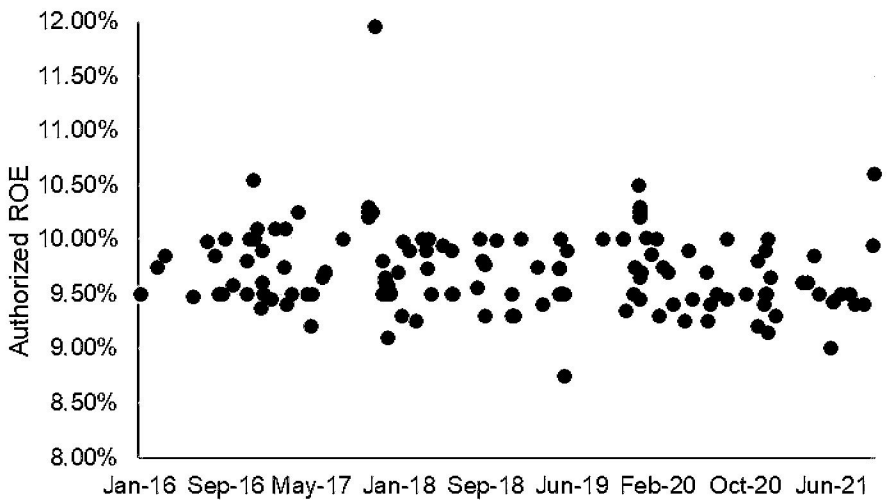
Q. THE OPPOSING WITNESSES REFERENCE AUTHORIZED ROES FOR UTILITIES IN OTHER JURISDICTIONS.[15] DO YOU AGREE WITH THEIR CHARACTERIZATIONS OF THE TREND IN AUTHORIZED ROES AND THE RELEVANCE OF THE TREND ON EPE'S COST OF EQUITY?

A. No, I do not. National average authorized ROEs must be considered in the proper context in order to be useful. While I agree that investors consider ROEs authorized in other states when assessing the adequacy of returns available to utilities, I have several concerns with the nationwide average authorized ROE data presented by the Opposing Witnesses. First, annual average data obscures variations in returns and does not address the number of cases nor the jurisdictions issuing orders within a given year. For example, one year may have fewer cases decided, and a relatively large portion of those cases decided by a single jurisdiction. Mr. Gorman's Figure 1 shows, however, that the average authorized ROE for both electric and natural gas utilities has been relatively stable since 2014. As shown in Chart 1 (below), there has been no discernible downward

[15] Direct Testimony of Michael P. Gorman, at 6-7; Direct Testimony of Daniel J. Lawton, at 18-19; Direct Testimony of Maureen L. Reno, at 45; Billie S. LaConte, at 2; Direct Testimony of Alex J. Kronauer, at 9-12.

trend in authorized ROEs for vertically integrated electric utilities over the last five years. As such, I disagree with the Opposing Witnesses' characterizations of a downward trend.

Chart 1: Authorized ROE for Vertically Integrated Electric Utilities (2016 – 2021)[16]



Further, certain of the data the Opposing Witnesses refer to are not limited to ROEs authorized for vertically integrated electric utilities and include ROEs authorized for transmission- and distribution-only electric utilities, as well as ROEs authorized calculated by a formula tied to changes in Treasury bond yields.[17] As such they may not be a reasonable basis of comparison to EPE.

Lastly, authorized ROEs must be viewed within the context of the economic and capital market environment in which they were decided. Market conditions at the time the authorized returns were established may be very different than conditions going forward. For example, ROEs authorized when interest rates were very low in 2020 are not a reasonable basis of comparison for evaluating the authorized ROE when bond yields have increased and are projected to continue increasing as the economy recovers and the Federal Reserve moves to a less accommodative monetary policy.

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[16] Source: Regulatory Research Associates. Authorized ROEs for vertically integrated electric utilities from January 1, 2016, through October 29, 2021. Excludes ROEs authorized in limited issue rate rider proceedings. Excludes ROEs authorized for Vermont utility Green Mountain Power ("GMP") decided in 2019 or later as GMP is regulated under an alternative ratemaking framework in which the ROE is calculated based solely on changes in U.S. Treasury bond yields.

[17] *See, e.g.*, Direct Testimony of Michael P. Gorman, at 7, Figure 1 and Exhibit MPG-12 and Exhibit MPG-13; Direct Testimony of Daniel J. Lawton, at 18.

Q. ARE THE OPPOSING WITNESSES' RECOMMENDATIONS CONSISTENT WITH THOSE RECENTLY AUTHORIZED FOR VERTICALLY INTEGRATED UTILITIES ELSEWHERE IN THE U.S.?

A. No, they are not. As noted above, the Opposing Witnesses' ROE recommendations range from 9.00 percent to 9.56 percent. These recommendations rank in the lower half of ROEs authorized for vertically integrated electric utilities, as shown in Table 2 below.

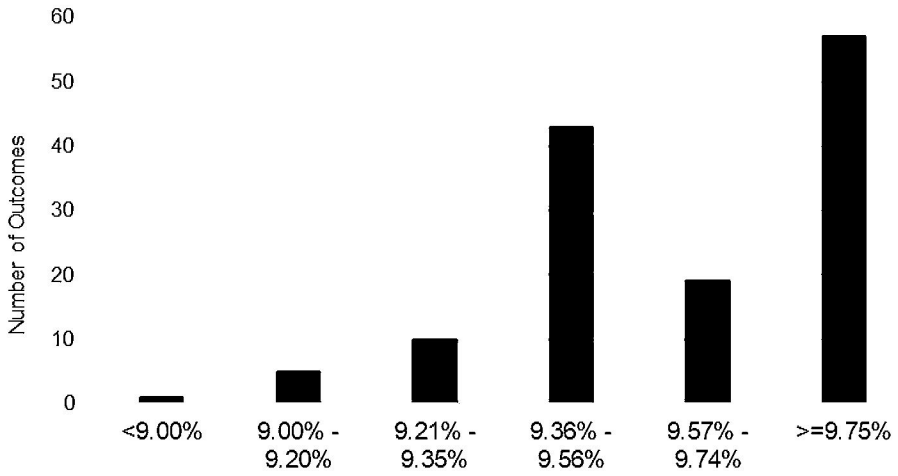
Table 2: Percentile Ranking of Opposing Witness Recommendations' Relative to Vertically Integrated Electric Authorized ROEs 2016-2021

Witness	ROE Recommendation	Percentile Rank
Mr. Lawton (CEP)	9.00%	0.70%
Ms. Sears (Staff)	9.20%	2.90%
Mr. Gorman (TIEC)	9.20%	2.90%
Ms. Reno (DOD/FEA)	9.35%	11.10%
Ms. LaConte (FMI)	≤ 9.56%	≤ 43.20%

In other words, approximately 56.00 percent to 99.00 percent of ROEs authorized for vertically integrated utilities over the last five years were above the Opposing Witnesses' ROE recommendations. Given EPE's higher risk relative to the proxy group as indicated by its lower credit rating, the Opposing Witnesses' recommendations would not provide a risk comparable return.

To gain a different perspective on the reasonableness of my and the Opposing Witnesses' recommendations relative to recent authorized returns, I developed a histogram of the frequency of authorized returns for vertically integrated electric utilities in various ranges. As Chart 2 below shows, regulators have authorized ROEs of 9.75 percent (*i.e.*, the low end of my recommended range) or greater in 57 of 136 (*i.e.*, 42.00 percent) rate case outcomes for vertically integrated electric utilities decided between 2016 and 2020. During that same period, only 17 of 136 rate cases (*i.e.*, 12.50 percent) included an authorized ROE of Ms. Reno's 9.35 percent recommendation or lower.

Chart 2: Frequency of Authorized ROEs for Vertically Integrated Electric Utilities (2016-2020)[18]



Q. WHAT IS THE PRACTICAL IMPLICATION FOR EPE OF A RETURN THAT IS FAR BELOW THOSE AUTHORIZED FOR OTHER VERTICALLY INTEGRATED ELECTRIC UTILITIES?

A. The significant difference between the Opposing Witnesses' ROE recommendations and those available to other vertically integrated electric utilities raises a very practical concern. EPE must compete with other companies, including utilities, for the long-term capital needed to provide utility service. Given the choice between two similarly situated utilities, one with a return that falls far below industry levels, and another whose authorized return more closely aligns with those available to other utilities, investors will choose the latter.

Q. HAVE RECENT EVENTS EMPHASIZED THE IMPORTANCE FOR A UTILITY TO MAINTAIN A STRONG FINANCIAL PROFILE?

A. Yes. Certain of the Opposing Witnesses justify their ROE recommendation, in part, on their premise that EPE is a "low risk" utility.[19] While utilities are generally considered to be less risky than other sectors, that does not mean they are risk-free. As the COVID-19

[18] Source: Regulatory Research Associates. Excludes limited issue rate riders. Excludes ROEs by the Vermont PUC for GMP decided in 2019 or later, as GMP's ROE is set by a formula tied to Treasury bond yields.

[19] Direct Testimony of Michael P. Gorman, at 26-27; Direct Testimony of Daniel J. Lawton, at 49.

pandemic and Winter Storm Uri and the financial implications stemming from those events show, high impact adverse events can and do happen. A utility with a strong financial profile has a higher likelihood of withstanding adverse events and accessing capital at reasonable terms when needed to the benefit of customers. Financial strength is especially critical during periods of market dislocation, as experienced in 2020 and during the Great Recession of 2008-2009 for example. S&P noted that the utility sector's credit ratings weakened sharply in 2020:

> the utility industry performed poorly from a credit quality perspective. *The negative outlooks or CreditWatch negative listings doubled and downgrades outpaced upgrades for the first time in a decade by about 7 to 1.*[20]

The depth and duration of the COVID-19 pandemic could have been more severe, and utilities must be prepared for unexpected adverse events with a margin of safety. Doing so enables utilities to provide safe, reliable service at a reasonable cost in all market environments.

Lastly, as a relatively small company, EPE's exposure to risk associated with unexpected adverse events is more acute as these events may have a greater effect on its revenues or expenses.[21]

Q. MR. GORMAN ASSERTS THAT "ROBUST VALUATIONS" ARE "EVIDENCE" THAT UTILITIES CAN ACCESS CAPITAL "AT RELATIVELY LOW COST."[22] WHAT IS YOUR RESPONSE?

A. Mr. Gorman's position fails to acknowledge that because utilities are capital intensive enterprises, their "robust" valuations are strongly related to the interest rate environment. As shown in Chart 3 below, between 2000 and 2008, utility valuations as measured by Mr. Gorman's proxy group were within a relatively confined range. However, as the Federal Reserve deliberately reduced interest rates to provide extraordinary support for the U.S. economy in the wake of the Great Recession in 2008 and the COVID-19

[20] S&P Global Ratings, *North American Regulated Utilities' Negative Outlook Could See Modest Improvement*, at 1 (January 20, 2021).

[21] Direct Testimony of Jennifer E. Nelson, at 57.

[22] Direct Testimony of Michael P. Gorman, at 9.

pandemic in 2020, utility valuations increased by more than 2.5x over the valuation levels seen immediately prior to the 2008 Great Recession.

Chart 3: Equity Valuation of Mr. Gorman's Proxy Group (2000-2021)[23]

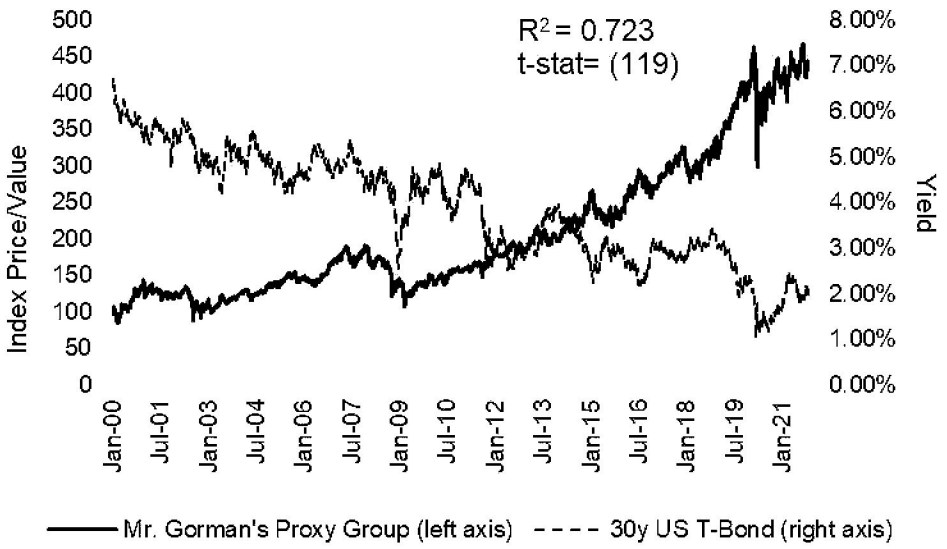
As Chart 4 below shows, there is a strong, statistically significant inverse relationship between the 30-year Treasury yield and electric utility valuations. A simple linear regression of the two variables indicates that the 30-year Treasury yield explains approximately 72.00 percent of the variation in electric utility valuations (as measured by Mr. Gorman's proxy group). Because the currently low level of interest rates has been significantly influenced by federal monetary policy put in place to support the U.S. economy during volatile, crisis-induced market environments, it is difficult to conclude that utilities' "robust" valuations reflect investors' perceptions that utilities' cost of equity is low. As explained in my Direct Testimony, low interest rates are often associated with higher market volatility, which suggests an *increase* in the cost of equity, not a decrease.[24]

[23] Source: S&P Capital IQ; Price level of Mr. Gorman's proxy group is calculated as an Index.

[24] Direct Testimony of Jennifer E. Nelson, at 18-19.

Chart 4: Equity Valuation of Mr. Gorman's Proxy Group

vs. 30-Year Treasury Yields (2000-2021)[25]



Q. WHAT IS YOUR RESPONSE TO MR. GORMAN'S AND MS. LACONTE'S ASSERTION THAT HIGHER LEVELS OF VOLATILITY IN THE OVERALL MARKET DO NOT INDICATE A SIMILAR INCREASED LEVEL OF RISK FOR UTILITIES?[26]

A. Mr. Gorman and Ms. LaConte conflate my discussion of increased market volatility (and therefore increased risk in the market as a whole) with the presumption that utilities are "defensive" stocks and are therefore less risky. As explained in my Direct Testimony, however, both the utility sector and the S&P 500 lost approximately 34.00 percent of its value at the onset of the COVID-19 pandemic.[27] Additionally, the returns from the companies in my proxy group have been more volatile (*i.e.*, riskier) than the S&P 500. As shown in Chart 5 in my Direct Testimony, the proxy group's relative volatility ratio has been above 1.0 and has been increasing. As that chart also demonstrates, the proxy companies' returns have been more correlated with returns of the S&P 500 Index. That

[25] Source: S&P Capital IQ; Price level of Mr. Gorman's proxy group is calculated as an Index.

[26] Direct Testimony of Michael P. Gorman, at 80; Direct Testimony of Billie S. LaConte, at 27.

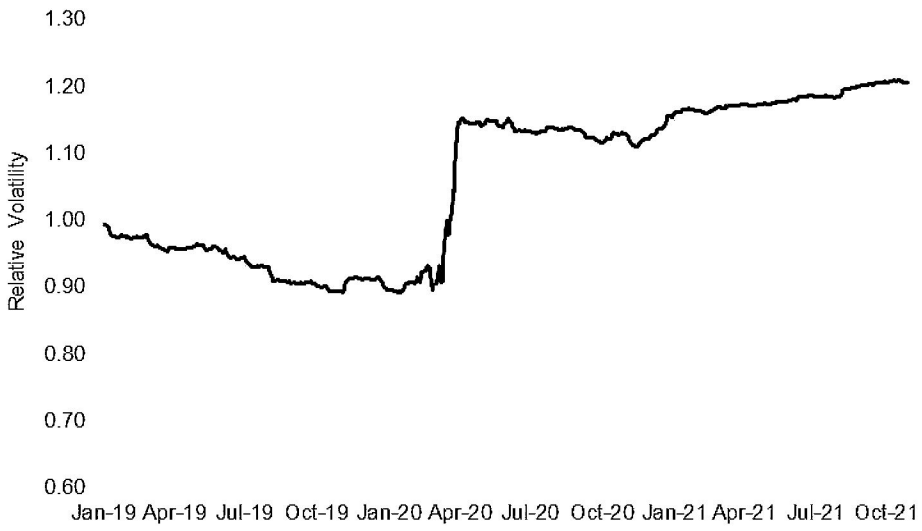
[27] Direct Testimony of Jennifer E. Nelson, at 18.

is, the proxy companies have been trading in a more similar pattern as the S&P 500 Index. Whereas Mr. Gorman's and Ms. LaConte's position may be based on past conventional wisdom that utilities are always defensive stocks, current market data does not support their conclusion. Simply, utilities have been more volatile, and therefore riskier, than the broad market since at least February 2020. That data supports an increase in the Cost of Equity.

Q. DOES CURRENT MARKET DATA CONTINUE TO SUPPORT YOUR POSITION THAT UTILITY STOCKS HAVE BEEN MORE VOLATILE THAN THE BROAD MARKET?

A. Yes, it does. I updated the relative volatility data in Chart 5 from my Direct Testimony with data through October 29, 2021. As shown in Chart 5 below, the relative volatility of returns for my proxy group (calculated as an index) to the S&P 500 Index has continued to increase and remains above 1.0. This is a clear indication that the market continues to perceive the proxy group as riskier than the overall market.

Chart 5: Relative Volatility of Ms. Nelson's Proxy Group to the S&P 500 Index (2019-2021)[28]



[28] Source: S&P Capital IQ.

Q. CERTAIN OF THE OPPOSING WITNESSES REFER TO STATEMENTS BY THE FEDERAL RESERVE BOARD TO SUPPORT THEIR POSITIONS REGARDING EXPECTATIONS FOR LOW CAPITAL COSTS.[29] WHAT IS YOUR RESPONSE?

A. Mr. Gorman's and Mr. Lawton's positions are based on the Federal Reserve's statements from this summer and early fall. As such, they do not reflect the Federal Reserve's most recent announcement on November 3, 2021 that it would begin reducing the monthly pace of its net asset purchases in November, noting the "substantial further progress the economy has made toward the Committee's goals since last December"[30] This indicates that the FOMC expects the U.S. economic recovery to continue in support of the Federal Reserve's employment and inflation targets.

Moreover, the FOMC's Summary of Economic Projections released in September 2021 show that the FOMC participants expect the Federal Funds rate to increase from its current 0.25 percent level in 2021 to a range of 2.00 percent to 3.00 percent in the long run.[31] However, if inflation data continues to remain elevated, it will likely put additional pressure on the Federal Reserve to accelerate its timeline for reducing asset purchases and raise the Federal Funds rate sooner rather than later.[32] As shown in Table 3 below, market price data reported by the CME Group[33] as of November 11, 2021 indicates that investors see a 71.50 percent probability of an increase in the Federal Funds rate by June 2022, about the time the Federal Reserve is expected to conclude its asset purchase program. Just one month prior, investors were expecting only a 28.50 percent probability of a rate increase by June 2022. Notably, the probability of a rate increase before June 2022 increased significantly between October and November as well. It is

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[29] Direct Testimony of Michael P. Gorman, at 12-13; Direct Testimony of Daniel J. Lawton, at 13-14.

[30] Federal Reserve Board of Governors Press Release November 3, 2021.
https://www.federalreserve.gov/newsevents/pressreleases/monetary20211103a.htm

[31] Federal Reserve Board, FOMC Summary of Economic Projections, Figure 2, at 4 (September 22, 2021).
https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20210922.pdf

[32] *See, e.g.,* Bloomberg News, "Worst is Yet to Come for U.S. Inflation as Fed, Biden Feel Heat," November 10, 2021.

[33] The CME Group's "FedWatch Tool" presents probabilities of target Federal Funds rates decided in future FOMC meetings based on contract prices of Federal Funds futures.
https://www.cmegroup.com/education/demos-and-tutorials/fed-funds-futures-probability-tree-calculator.html

clear, therefore, that the October inflation data announced on November 10 has affected investors' expectations regarding future rate increases by the Federal Reserve.

Table 3: Probability of Federal Funds Rate Increase[34]

FOMC Meeting	As of 10/11/2021	As of 11/11/2021
12/15/2021	0%	0%
1/26/2022	2.48%	4.96%
3/16/2022	2.48%	19.69%
5/4/2022	8.96%	35.70%
6/15/2022	28.47%	71.52%
7/27/2022	42.11%	80.35%
9/21/2022	59.48%	89.78%
11/2/2022	66.19%	92.53%
12/14/2022	83.93%	97.52%
2/1/2023	86.50%	98.11%

Q. CERTAIN OF THE OPPOSING WITNESSES APPEAR TO DOWNPLAY THE INFLATION RISK IN FINANCIAL MARKETS.[35] WHAT IS YOUR RESPONSE?

A. Expectations for rising inflation discussed in my Direct Testimony has persisted as reported inflation has continued to rise each month. The U.S. Bureau of Labor Statistics released its October 2021 inflation data on November 10, 2021, reporting that the Consumer Price Index for All Urban Consumers increased at a 6.20 percent annual rate in October over the last 12 months, the highest annual rate since 1990.[36] The 6.20 percent rate in October followed rates of 5.40 percent in September, 5.30 percent in August, and 5.40 percent in both July and June.

As noted earlier, the Federal Reserve has announced a less accommodative monetary policy going forward by beginning to taper its asset purchases. Following a recent sell-off in equity markets in September ("the sharpest pullback since May"), *The Wall Street Journal* summarized:

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[34] CME Group, CME FedWatch Tool, Countdown to FOMC accessed November 11, 2021: https://www.cmegroup.com/trading/interest-rates/countdown-to-fomc.html#

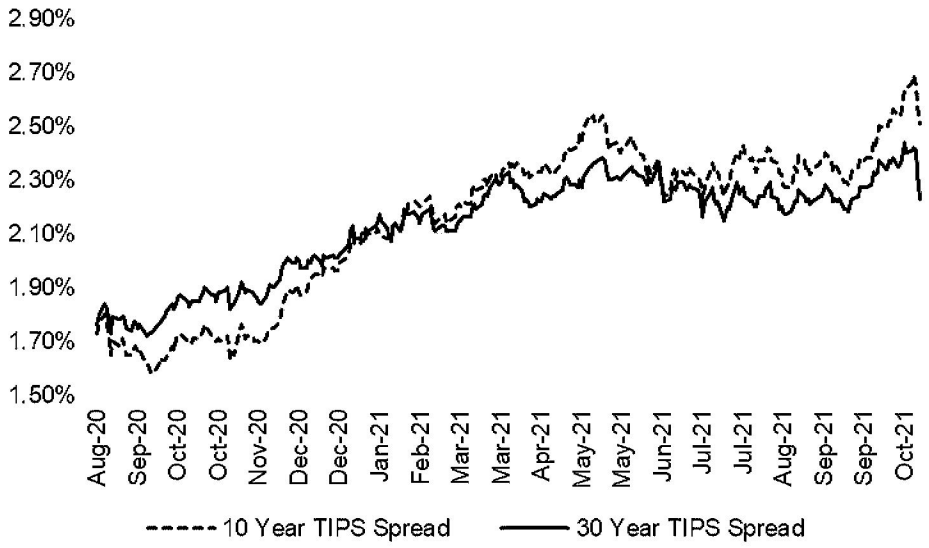
[35] Direct Testimony of Michael P. Gorman, at 13; Direct Testimony of Maureen L. Reno, at 7, 9-11.

[36] U.S. Bureau of Labor Statistics, Consumer Price Index – October 2021 Economic News Release, November 10, 2021. https://www.bls.gov/news.release/cpi.nr0.htm

> Investors agree the economic outlook has improved significantly since 2020. But many wonder how well the market will be able to stand on its own once the Fed begins to taper its monthly asset purchases—especially since they credit much of the market's rebound from its pandemic low to extraordinary levels of monetary and fiscal support from Washington. Some investors have also expressed concerns about the economic outlook. Inflation has made a surprising comeback this year, something some worry will start to cut into companies' profit margins.[37]

As shown in Chart 6 below (which updates Chart 7 in my Direct Testimony), the breakeven inflation rate of 10-year and 30-year Treasury securities[38] remains above the Federal Reserve's 2.00 percent inflation target and within a narrow range since I filed my Direct Testimony.

Chart 6: Breakeven Inflation Rate[39]



Given these market-based indications of continued higher inflation expectations in the future, combined with the Federal Reserve beginning to tighten its monetary

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[37] "Stocks Close Sharply Lower as Bond Yields Hit Three-Month High," *The Wall Street Journal*, September 28, 2021.

[38] The 10-year breakeven inflation rate represents a measure of expected inflation derived from 10-Year Treasury Constant Maturity Securities and 10-Year Treasury Inflation-Indexed Constant Maturity Securities. The latest value implies what market participants expect inflation to be in the next 10 years, on average. The 30-year breakeven inflation rate represents a measure of expected inflation derived from 30-Year Treasury Constant Maturity Securities and 30-Year Treasury Inflation-Indexed Constant Maturity Securities. The latest value implies what market participants expect inflation to be in the next 30 years, on average. Source: Federal Reserve Bank of St. Louis FRED Economic Data.

[39] Source: Federal Reserve Board of Governors H.15 interest rates, as of October 29, 2021.

policy, it is reasonable to expect long-term Treasury yields to also increase. An increase in both inflation and interest rates suggest a higher Cost of Capital going forward. Additionally, expectations for higher inflation support the use of projected interest rates in the ROE analytical models.

IV. Response to the Opposing Witnesses Regarding the ROE Analyses

A. Proxy Group Composition

Q. DO THE OPPOSING WITNESSES ACCEPT YOUR PROXY GROUP?

A. Mr. Lawton, Ms. LaConte, and Ms. Reno accept my proxy group.[40] Mr. Gorman accepts my proxy group with the exception of Duke Energy Corporation ("Duke Energy").[41] Ms. Sears develops a proxy group of 18 companies that differs but overlaps with mine.[42]

Q. DO YOU AGREE WITH MR. GORMAN'S EXCLUSION OF DUKE ENERGY?

A. No, I do not. Mr. Gorman states that he "excluded Duke Energy Corporation because at the beginning of the year the company reached an agreement to sell one of its major regulated subsidiaries – Duke Indiana."[43] Although I agree it is reasonable to exclude companies involved in a significant merger or financial transaction, Mr. Gorman's understanding of the transaction related to Duke Energy's Indiana utility is incorrect. Duke Energy is not selling its Indiana utility; it has agreed to sell *a minority stake* (19.90 percent) in Duke Energy Indiana.[44] Duke Energy will continue to own more than 80.00 percent of Duke Energy Indiana. Therefore, I disagree with Mr. Gorman's decision to exclude Duke Energy and continue to include it in my proxy group.

Q. DO YOU HAVE ANY CONCERNS WITH MS. SEARS' PROXY GROUP?

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[40] Direct Testimony of Daniel J. Lawton, at 20-21; Direct Testimony of Billie S. LaConte, at 9; Direct Testimony of Maureen L. Reno, at 24-25.

[41] Direct Testimony of Michael P. Gorman, at 22.

[42] Direct Testimony of Emily Sears, at 12-13.

[43] Direct Testimony of Michael P. Gorman, at 22.

[44] Duke Energy Press Release, "Duke Energy partners with GIC to secure minority investment in Duke Energy Indiana, increases long-term EPS growth rate," January 28, 2021.

A. Yes, I do. My primary concern is that several of her companies are not sufficiently comparable to EPE, a 100.00 percent rate regulated, vertically integrated electric utility. First, Ms. Sears does not include a screening criterion that ensures a proxy company has primarily regulated electric operations. For example, in 2020, Black Hills Corporation's adjusted operating income consisted of approximately $216 million from its regulated natural gas utility segment, relative to $156 million from its regulated electric utility segment.[45] In other words, approximately 58.00 percent of its regulated adjusted operating income in 2020 was from its regulated natural gas utility operations.

Additionally, Ms. Sears does not include a screening criterion to exclude companies that do not own regulated generation assets (*i.e.*, are not vertically integrated). In particular, Consolidated Edison, Inc. and Eversource Energy are transmission- and distribution-only utilities that do not have significant generation assets in rate base.

Excluding Black Hills, Consolidated Edison, and Eversource Energy from Ms. Sears' Constant Growth DCF analysis produces mean and median results of 9.31 percent and 9.45 percent, respectively.

Q. HAVE YOU MADE ANY ADJUSTMENTS TO YOUR PROXY GROUP?

A. Yes, I have. As explained in Section VI below, I removed DTE Energy Company as it recently cut its dividend after the spinoff of its midstream assets. As such, it now fails my screening criteria. In my experience, however, differences in proxy group composition are not generally the primary driver of the differences in analysts' model results; rather, the primary driver is the selection of inputs and assumptions into the quantitative models.

B. Discounted Cash Flow Analysis

Q. CERTAIN OF THE OPPOSING WITNESSES EXPRESS PREFERENCE FOR THE DCF METHOD AND CRITICIZE YOUR POSITION THAT THE DCF METHOD PRODUCES UNRELIABLE ROE ESTIMATES.[46] DO YOU AGREE THAT IT IS

[45] Black Hills Corporation, SEC Form 10-K, at 122 (December 31, 2020).

[46] *See, e.g.,* Direct Testimony of Michael P. Gorman, at 61-62; Direct Testimony of Daniel J. Lawton, at 12; Direct Testimony of Billie S. LaConte, at 10-13; Direct Testimony of Marueen L. Reno, at 26.

APPROPRIATE TO RELY PRIMARILY ON THE DCF MODEL IN THE CURRENT MARKET ENVIRONMENT?

A. No, I do not. As explained in my Direct Testimony, the DCF model's underlying structure is not compatible with recent capital market environment, producing DCF results for the proxy group that understate the forward-looking Cost of Equity.[47] Mr. Gorman acknowledges the current abnormally high valuations for the electric utility industry[48] but does not reconcile the effect of these high Price/Earnings ("P/E") ratios with his reliance on the DCF model. As shown in Exhibit JEN-7R, *Value Line* (the source of Mr. Gorman's valuation metrics in Exhibit MPG-2) projects P/E ratios for all but three of my proxy companies to fall over the next five years. On average, the Proxy Group's P/E ratios are projected to fall by 13.83 percent. Relatedly, *Value Line* expects the dividend yields of my proxy companies to rise from approximately 3.34 percent on average to 3.63 percent on average over that same period.[49] Setting an authorized ROE based on historically high average stock prices and low dividend yields that are not expected to persist understates the forward-looking Cost of Equity estimated by the DCF model, all else equal.

Q. IS IT YOUR POSITION THAT REGULATORY COMMISSIONS DO NOT CONSIDER THE DCF MODEL?[50]

A. No, that is not my position. I recognize the DCF model is widely used in regulatory proceedings and is often considered by regulatory commissions, among other methodologies. In my experience, most regulatory commissions consider ROE estimates from a variety of financial models in determining the authorized ROE. In other words, few commissions place sole reliance on the DCF model, and even those that have historically preferred the DCF model recognize they are not bound by it. Moreover, other commissions such as the FERC have moved away from placing sole reliance on the DCF

[47] Direct Testimony of Jennifer E. Nelson, at 7-8.

[48] Direct Testimony of Michael P. Gorman, at 9.

[49] *See* Exhibit JEN-7R.

[50] *See*, Direct Testimony of Billie S. LaConte, at 12-13.

Model. Ms. LaConte acknowledges this, observing "[c]ommissions often rely on multiple methodologies when determining the appropriate ROE for a utility".[51]

Q. IS IT YOUR POSITION THAT THE DCF MODEL RESULTS SHOULD BE GIVEN NO WEIGHT?

A. No, that is not my position and I do not ignore the DCF results. The low end of my recommended ROE range overlaps with my DCF results. As explained in my Direct Testimony, the range of results of each of the models should be weighed within the context of the current capital market environment and other benchmarks.[52] In light of (1) the current capital market environment and expectations for rising interest rates, (2) lower expected P/E ratios and higher expected dividend yields, (3) higher Beta coefficients that indicate greater risk for electric utilities, and (4) EPE's higher business and financial risk relative to the proxy group, I conclude more weight should be given to the higher end of the DCF-based ROE estimates.

Q. TURNING NOW TO THE OPPOSING WITNESSES' DCF ANALYSES, PLEASE SUMMARIZE THE OPPOSING WITNESSES' DCF-BASED ROE ESTIMATES.

A. Table 4 below summarizes the Opposing Witnesses' DCF-based ROE estimates.

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[51] Direct Testimony of Billie S. LaConte, at 12.

[52] Direct Testimony of Jennifer E. Nelson, at 4-5.

Table 4: Opposing Witnesses' DCF Estimates, As Filed

Witness	DCF Range	DCF-based ROE Estimate
Ms. Sears (Staff)[53]	CGDCF: 6.75% - 12.12% MSDCF: 7.62% - 9.77%	CGDCF: 9.16% MSDCF: 8.62%
Mr. Gorman (TIEC)[54]	CGDCF: 8.52% -9.44% MSDCF: 8.06% - 8.12%	9.00%
Mr. Lawton (CEP)[55]	CGDCF: 9.46% -9.49% TSDCF: 9.42% - 9.44%	CGDCF: 9.48% MSDCF: 9.43%
Ms. Reno (DOD/FEA)[56]	7.87% - 9.35%	9.35%

Q. ARE THERE AREAS OF THE DCF ANALYSIS WITH WHICH YOU AND THE OPPOSING WITNESSES AGREE?

A. Yes. In particular, I agree with Ms. Sears that analysts' projected earnings per share ("EPS") growth rates are the appropriate measure of long-term growth to apply in the DCF analysis.[57] Mr. Lawton ultimately relies on analysts' projected EPS growth rates in his DCF analysis.[58] Ms. Reno's 9.35 percent ROE recommendation reflects the highest of her DCF results, which is the median of her proxy group using 30-day average stock prices and analysts' EPS growth rates.[59] However, Mr. Gorman, Mr. Lawton, and Ms. Reno also consider additional measures of growth.[60] As explained below, I disagree with the use of dividend growth rates, book value growth rates, and sustainable growth rates.

[53] Sources: Attachment ES-7 and Attachment ES-8.

[54] Sources: Direct Testimony of Michael P. Gorman, at 37, Table 5; Exhibit MPG-5, Exhibit MPG-8, and Exhibit MPG-10.

[55] Sources: Direct Testimony of Daniel J. Lawton, at 3, Table 1; Schedule DJL-7 and Schedule DJL-8. Reflects Mr. Lawton's Adjusted DCF results excluding outliers.

[56] Direct Testimony of Maureen L. Reno, at 47.

[57] Direct Testimony of Emily Sears, at 18-19.

[58] Schedule DJL-6, page 1 and Schedule DJL-7.

[59] Direct Testimony of Maureen L. Reno, at 31-32, Exhibit MLR-5a.

[60] *See* Direct Testimony of Michael P. Gorman, at 26-29; Direct Testimony of Daniel J. Lawton, at 25-26; Direct Testimony of Maureen L. Reno, at 28-30.

Q. MS. RENO CRITICIZES YOUR RELIANCE ON ANALYSTS' PROJECTED EPS GROWTH RATES IN THE DCF ANALYSIS.[61] WHY ARE ANALYSTS' PROJECTED EPS GROWTH RATES THE APPROPRIATE MEASURE OF GROWTH IN THE DCF ANALYSIS?

A. As explained in my Direct Testimony and as Ms. Sears observes, over the long term, dividend growth can only be sustained by earnings growth.[62] Additionally, as Ms. Sears notes, the appropriate growth rate applied in the DCF model is investors' growth expectation embodied in the valuation of the firm (*i.e.*, the stock price).[63] Similarly, Mr. Gorman acknowledges that the "growth component of the DCF return relates to earnings and stock growth over time."[64] As Ms. Sears explains, academic research has shown that analysts' consensus earnings forecasts are better at predicting the valuation of common stocks.[65]

Importantly, when providing guidance to investors regarding the overall total return targets in their investor presentations, companies define the total return as the dividend yield plus *earnings* growth, not dividend, book value, or sustainable growth.[66] Academic studies suggest that investors base their investment decisions on analysts' expectations of growth in earnings.[67] I am not aware of any similar findings regarding dividend- or book value-based growth estimates. In addition, the only forward-looking growth rates that are available on a consensus basis are analysts' EPS growth rate projections. The fact that earnings growth projections are the only widely reported and

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[61] Direct Testimony of Maureen L. Reno, at 33.

[62] Direct Testimony of Jennifer E. Nelson, at 35-37; Direct Testimony of Emily Sears, at 17.

[63] Direct Testimony of Emily Sears, at 17.

[64] Direct Testimony of Michael P. Gorman, at 62.

[65] Direct Testimony of Emily Sears, at 19; *see also*, Direct Testimony of Jennifer E. Nelson, at 36-37.

[66] *See e.g.,* ALLETE Inc., March 16, 2021, Investor Presentation, at 14; Alliant Energy, June 1, 2021, Investor Presentation, at 3; American Electric Power Company, Inc., August 12, 2021, Investor Presentation at 7; Duke Energy Corporation, May 10, 2021, Earnings Review and Business Update, at 13; Xcel Energy, September 10, 2021, Investor Presentation, at 2.

[67] *See*, *e.g.*, Harris and Marston, *Estimating Shareholder Risk Premia Using Analysts Growth Forecasts,* Financial Management, Summer 1992, at 65; and Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management, Spring 1988, at 81. Please note that while the original study was published in 1988, it was updated in 2004 under the direction of Dr. Vander Weide. The results of that updated study are consistent with Vander Weide and Carleton's original conclusions.

accepted estimates of growth further supports the finding that earnings growth is the most meaningful measure of growth among the investment community.

In the end, Ms. Reno's 9.35 percent ROE recommendation relies solely on her DCF estimate based on analysts' EPS growth rate projections. Consequently, her criticism is without merit.

Q. DO YOU AGREE WITH MR. GORMAN'S POSITION THAT THE GROWTH RATES APPLIED IN THE DCF MODEL ARE LIMITED BY FORECASTED GROSS DOMESTIC PRODUCT ("GDP") GROWTH?

A. No, I disagree with Mr. Gorman's sustainable growth rate that is derived from a projected GDP growth rate, and his assumption that a utility stock cannot grow at a faster pace than the growth in the overall economy.[68] GDP is the sum of all private industry and government output in the United States, and its growth rate is an approximate average of the value of those industries. As such, some sectors will grow faster than the average, and some will grow slower. As shown in Exhibit JEN-8R, since 1947, the utility sector as a component of GDP has grown at a faster compound annual average rate (6.48 percent) than the overall GDP growth rate (6.25 percent). Consequently, I disagree with the premise that GDP growth is an upper limit on an individual utility company's growth or the utility sector's growth expectations. Notably, the EPS growth rate projections included in my and the Opposing Witnesses' DCF analyses are below the long-term historical compound annual GDP growth rate for the utility sector. From that perspective, the projected EPS growth rates in our respective Constant Growth DCF analyses are not excessive.

Moreover, Mr. Gorman's position is based on his presumption that utility growth is linked to sales growth as utilities invest capital to meet demand, which depends ultimately on economic growth.[69] While this assumption may have been true decades ago, it does not currently hold as utilities are investing more capital in non-revenue

[68] Direct Testimony of Michael P. Gorman, at 27-29.

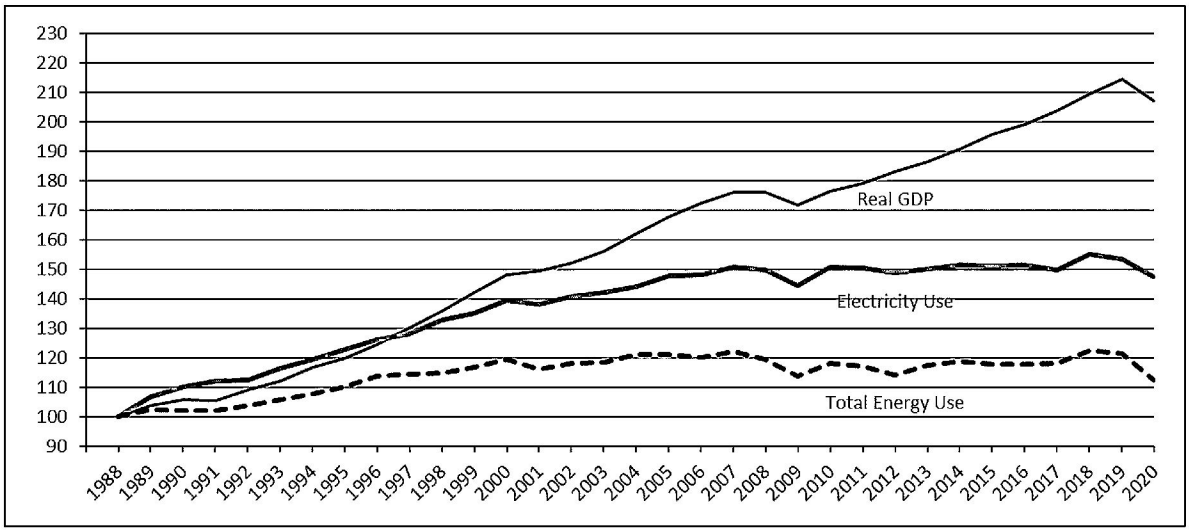
[69] Direct Testimony of Michael P. Gorman, at 31.

producing investment, such as infrastructure replacement and grid modernization. As the U.S. Energy Information Administration ("EIA") noted in a recent article:

> Distribution spending has outpaced growth in both the number of electric customers and in retail electricity sales because much of the increased distribution spending in the last 20 years has been on projects that are not directly related to customer growth or increased sales. These investments are not driven by an increase in the number of customers or sales. These projects include replacing aging equipment, modernizing and upgrading maintenance and billing technology, and fortifying distribution structures against weather-related damage.[70]

Furthermore, states are placing more emphasis on energy efficiency and conservation programs, which have resulted in flat or declining electricity sales. Contrary to his position, Mr. Gorman's Exhibit MPG-9 supports the EIA's finding that over approximately the last 20 years, electricity sales have *not* been linked to U.S. economic growth. In fact, Mr. Gorman's Exhibit MPG-9 shows electricity use has been flat since approximately 2006, while real GDP has climbed (reproduced as Chart 6 below).

Chart 6: Exhibit MPG-9 - Electricity Use and Real GDP (1988 – 2020)



[70] U.S. Energy Information Administration, "Major Utilities' spending on the electric distribution system continues to increase," *Today in Energy*, May 27, 2021. https://www.eia.gov/todayinenergy/detail.php?id=48136

Consequently, Mr. Gorman's sustainable growth DCF estimates and his Multi-Stage DCF estimates should be rejected as his own data does not support the premise of his methodologies that electric utility growth is linked to sales and is limited by GDP growth.

Q. DO YOU HAVE ANY OTHER OBSERVATIONS REGARDING THE OPPOSING WITNESSES' DCF ANALYSES?

A. Yes. In particular, I note that Mr. Lawton's DCF analyses contain incorrect 3-month average stock prices for Portland General Electric Company and Southern Company. Correcting these values increases his average Constant Growth DCF results from 9.46 percent to 9.54 percent, which raises his midpoint DCF-based ROE estimate from 9.48 percent to 9.51 percent (*see* Exhibit JEN-9R).

Q. DO YOU AGREE WITH MS. SEARS', MR. GORMAN'S, AND MR. LAWTON'S APPLICATION OF THEIR MULTI-STAGE DCF MODELS?

A. While I agree a Multi-Stage DCF model may be appropriate in some circumstances, I disagree with certain assumptions and inputs applied in their Multi-Stage DCF analyses in this proceeding. Notably, Mr. Gorman appears to give his Multi-Stage DCF results very little weight, if any, as they fall well below his DCF-based recommended range of 8.60 percent to 9.40 percent.[71]

Ms. Sears and Mr. Gorman both apply a three-stage DCF analysis in which the first stage applies analysts' projected EPS growth rates, the terminal stage applies an estimate of projected GDP growth (4.35 percent and 5.13 percent for Mr. Gorman and Ms. Sears, respectively), and a middle stage that transitions growth from the first stage to the terminal stage. As explained above, the position that projected EPS growth rates are "unsustainable" simply because they are higher than projections of GDP growth is unsupported by the evidence. Similarly, Mr. Gorman's "adjustment" of my Constant

[71] Direct Testimony of Michael P. Gorman, at 37, Table 5.

Growth DCF analysis to reflect a Multi-Stage DCF analysis applying his projected GDP growth rate should also be rejected.[72]

Further, the Multi-Stage DCF models applied by Ms. Sears and Mr. Gorman, as well as Mr. Lawton's Two-Stage DCF model, each assume dividends are received at year end. Fundamental to the DCF method, is the principle that cash flow has time value.[73] Because utility dividends are paid on a quarterly basis, assuming all dividends are received at year-end (rather than over the course of the year) defers the timing of those cash flows and reduces the DCF result. A reasonable method of reflecting the timing of quarterly dividend payments is to assume cash flows are received in the middle of each year (*i.e.*, the "mid-year convention"). As Duff & Phelps notes:

> Common practice in business valuation is to assume that the net cash flows are received on average continuously throughout the year (approximately equivalent to receiving the net cash flows in the middle of the year), in which case the present value factor is generally based on a mid-year convention (e.g., (1+k)0.5).[74]

As Exhibit JEN-10R demonstrates, changing the dividend timing to reflect the mid-year convention, increases Mr. Lawton's mean Two-Stage DCF results by approximately 17 basis points, from a mean and median of 9.51 percent and 9.42 percent, respectively, to 9.68 percent and 9.59 percent, respectively.[75]

Q. MR. LAWTON CRITIQUES YOUR DCF ANALYSES BECAUSE YOU DO NOT EXCLUDE OUTLIER RESULTS.[76] WHAT IS YOUR RESPONSE ON THAT POINT?

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[72] Direct Testimony of Michael P. Gorman, at 63, Exhibit MPG-20.

[73] For example, The Chartered Financial Analyst ("CFA") Institute's program curriculum notes: "Money has time value in that individuals value a given amount of money more highly the earlier it is received. Therefore, a smaller amount of money now may be equivalent in value to a larger amount received at a future date. The time value of money as a topic of investment mathematics deals with equivalence relationships between cash flows with different dates. Mastery of time value of money concepts and techniques is essential for investment analysts." 2011 CFA Curriculum Level I, Volume 1, at 255-256.

[74] Duff & Phelps, 2016 Valuation Handbook, Guide to Cost of Capital, at 1-4.

[75] Includes the correction of the three-month stock prices for Portland General Electric and Southern Company noted earlier. As filed, Mr. Lawton's Two-Stage DCF mean and median results were 9.44 percent and 9.42 percent, respectively.

[76] Direct Testimony of Daniel J. Lawton, at 43-45.

A. While I generally agree with Mr. Lawton that ROE estimates should be evaluated for reasonableness, doing so requires subjective and perhaps arbitrary judgment regarding the appropriate outlier thresholds. Mr. Lawton excludes ROE estimates lower than 7.50 percent and higher than 12.50 percent,[77] which is his subjective opinion regarding a range of "reasonable" DCF estimates. As shown above in Chart 1, there have been only two instances in the last five years in which a vertically integrated electric utility has been authorized an ROE of 9.00 percent (Mr. Lawton's ROE recommendation) or lower. From that perspective, ROE estimates between 7.50 percent and 9.00 percent are unlikely to be acceptable to investors for an investment in a vertically integrated electric utility like EPE. In my opinion, Mr. Lawton's subjective determination that 7.50 percent represents an appropriate low outlier threshold (not to mention his overall 9.00 percent ROE recommendation) is incongruous with recent data regarding returns available to other vertically integrated electric utilities.

My approach, however, relies on the average of the mean and median DCF values, which reasonably considers the range of individual ROE estimates, but does not give undue weight to outliers.

Lastly, Mr. Lawton's removal of my DCF results outside his outlier thresholds continues to support my recommended ROE range, as the low end of my range (*i.e.*, 9.75 percent) overlaps with the mean and high end of his "adjusted" DCF estimates, as summarized in Table 5 below.

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[77] Direct Testimony of Daniel J. Lawton, at 44.

Table 5: Mr. Lawton's Adjustments to Ms. Nelson's DCF Results vs. Exhibits JEN-1 and JEN-2 (Mean and High)[78]

	Proxy Group Mean		Proxy Group Median		Average of the Proxy Group Mean and Median		Average of the Proxy Group Mean and Median (As Filed)	
Constant Growth DCF	*Mean*	*High*	*Mean*	*High*	*Mean*	*High*	*Mean*	*High*
30-Day Average	9.59%	9.87%	9.43%	9.66%	9.51%	9.77%	9.43%	10.01%
90-Day Average	9.61%	9.90%	9.38%	9.64%	9.50%	9.77%	9.43%	10.01%
180-Day Average	9.64%	9.92%	9.52%	9.65%	9.58%	9.79%	9.52%	10.07%
Quarterly Growth DCF	*Mean*	*High*	*Mean*	*High*	*Mean*	*High*	*Mean*	*High*
30-Day Average	9.72%	10.17%	9.61%	9.87%	9.66%	10.02%	9.57%	10.17%
90-Day Average	9.74%	10.05%	9.63%	9.78%	9.68%	9.91%	9.62%	10.17%
180-Day Average	9.77%	10.07%	9.74%	9.86%	9.76%	9.97%	9.69%	10.23%

Q. MR. GORMAN CRITICIZES YOUR QUARTERLY GROWTH DCF ANALYSIS ASSERTING IT "OVERSTATES" THE FAIR RATE OF RETURN.[79] WHAT IS YOUR RESPONSE?

A. Mr. Gorman is incorrect. Mr. Gorman's position appears to be that the return earned from quarterly compounding of dividends is separate and incremental to investors' required return and that "the return available to investors from reinvesting dividends is not a cost to the utility."[80] However, since dividends are paid quarterly, investors unquestionably consider the cash flow effects of such quarterly payments when determining their required returns.

The Quarterly DCF model simply is a refinement of the Constant Growth DCF model relied upon by the ROE witnesses in this proceeding. As noted in my Direct Testimony, rather than assuming annual cash flows, the model incorporates investors' expectations of quarterly dividends, reinvested at the investor-required ROE.[81] In that regard, the Quarterly DCF model is not fundamentally different than the annual form of the model (on which Mr. Gorman relies); both assume that cash flows are reinvested at

[78] Source: Schedule DJL-12; Exhibit JEN-1 and Exhibit JEN-2.

[79] Direct Testimony of Michael P. Gorman, at 63-64.

[80] Direct Testimony of Michael P. Gorman, at 63.

[81] Direct Testimony of Jennifer E. Nelson, at 38-39.

the required rate of return. The only difference, then, relates to the timing of the cash flows.

Since utilities pay dividends on a quarterly basis, it is more precise and consistent with the DCF model's fundamental structure to use the Quarterly DCF model to estimate the market-required Cost of Equity.[82] The stock prices paid by investors (an input in both the Constant Growth and Quarterly Growth DCF models) assume the quarterly timing of dividend payments; therefore, an accurate DCF-based Cost of Equity estimate must also reflect the actual timing of quarterly dividends. As Dr. Roger Morin explains:

> Clearly, given that dividends are paid quarterly and that the observed stock price reflects the quarterly nature of dividend payments, the market-required return must recognize quarterly compounding, for the investor receives dividend checks and reinvests the proceeds on a quarterly schedule... The annual DCF model inherently understates the investors' true return because it assumes all cash flows received by investors are paid annually.[83]

As explained in my Direct Testimony, although the half-year dividend growth adjustment applied in the Constant Growth DCF analysis is meant to approximate the payment of quarterly dividends; it is a conservative, simplifying assumption that does not fully reflect the quarterly receipt and reinvestment of dividends.[84] As such, it underestimates the Cost of Equity for quarterly dividend paying companies such as utilities. In other words, the Quarterly Growth DCF model does not add an "incremental" cost as Mr. Gorman suggests; it is a more precise estimate of the investor-required return Cost of Equity. As such, Mr. Gorman's criticism should be rejected.

Q. PLEASE SUMMARIZE THE OPPOSING WITNESSES' DCF RESULTS WITH YOUR RECOMMENDED ADJUSTMENTS DISCUSSED ABOVE.

A. As explained above, reasonable adjustments to the Opposing Witnesses' DCF results produce results above their ROE recommendations, as shown in Table 6 below.

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[82] Direct Testimony of Jennifer E. Nelson, at 38-39.

[83] Roger A. Morin, Ph.D., New Regulatory Finance, Public Utility Reports, Inc., at 344 (2006).

[84] Direct Testimony of Jennifer E. Nelson, at 38.

- Ms. Sears' adjusted Constant Growth DCF results exclude Black Hills, Consolidated Edison, and Eversource Energy. Additionally, her Multi-Stage DCF results should be rejected as her assumption that projected GDP growth is an appropriate terminal growth rate is unsupported.
- Mr. Gorman's adjusted results exclude his Sustainable Growth DCF results and Multi-Stage DCF results, as his assumption that electric utility growth in both models is limited by projected GDP growth is unsupported.[85]
- Mr. Lawton's Constant Growth DCF and Two-Stage DCF results were corrected for calculation errors in the average stock price for Portland General Electric and Southern Company; additionally, his Two-Stage DCF results were adjusted to reflect the mid-year convention.
- Because Ms. Reno's ROE recommendation reflects her Constant Growth DCF results using analysts' EPS growth rates, I did not make any adjustments to her analysis.

Table 6: Opposing Witnesses' Adjusted DCF Results

Witness	Adjusted DCF Range	Adjusted DCF-based ROE Estimate	Initial Recommended ROE
Ms. Sears (Staff)	CGDCF: 6.75% - 12.12%	CGDCF: 9.32%	9.20%
Mr. Gorman (TIEC)	CGDCF: 9.07% -9.44%	CGDCF: 9.30%	9.20%
Mr. Lawton (CEP)	CGDCF: 9.49% -9.54% TSDCF: 9.59% - 9.68%	CGDCF: 9.51% TSDCF: 9.63%	9.0%
Ms. Reno (DOD/FEA)	7.87% - 9.35%	9.35%	9.35%

C. CAPM and ECAPM Analyses

Q. BEFORE RESPONDING TO THE OPPOSING WITNESSES' CRITICISMS OF YOUR CAPM ANALYSIS, ARE THERE AREAS OF AGREEMENT WITH RESPECT TO THE CAPM ANALYSES?

A. Yes, there are. Mr. Gorman, Mr. Lawton, and Ms. Reno each perform CAPM analyses, while Ms. LaConte adjusts certain of the inputs in my CAPM analysis. These witnesses and I agree that the 30-year Treasury bond yield is the appropriate measure of the

[85] As noted earlier, it appears Mr. Gorman placed very little weight, if any, on his Multi-Stage DCF results as they fall well below his DCF-based recommended range of 8.60 percent to 9.40 percent. *See*, Direct Testimony of Michael P. Gorman, at 37, Table 5.

risk-free rate for use in the CAPM analyses.[86] Further, we each apply Beta coefficients reported by *Value Line*.[87] The primary driver of the differences in our CAPM-based ROE estimates is the estimate of the Market Risk Premium.

Q. DO YOU AGREE WITH CERTAIN OF THE OPPOSING WITNESSES' APPLICATION OF AN HISTORICAL AVERAGE MARKET RISK PREMIUM?

A. No, I do not. Mr. Lawton, Ms. Reno, and Ms. LaConte each apply historical measures of the Market Risk Premium.[88] Ms. LaConte suggests I did not "properly" apply the CAPM analyses because I did not also consider the historical average Market Risk Premium.[89] As explained below, the use of the long-term historical average Market Risk Premium runs counter to the forward-looking nature of the Cost of Equity and does not reflect the inverse relationship between the risk-free rate and the Market Risk Premium in the current low interest rate environment.

The Market Risk Premium represents the additional return required by equity investors to assume the risks of owning the "market portfolio" of equity relative to long-term Treasury securities. As with other elements of Cost of Equity analyses, the Market Risk Premium is a forward-looking parameter. Relying on a Market Risk Premium calculated using historical average returns and risk-free rates may produce results that are inconsistent with investor sentiment and current capital market conditions. The fundamental analytical issue in applying the CAPM is to ensure that all three components of the model (*i.e.*, the risk-free rate, Beta coefficient, and the Market Risk Premium) are consistent with market conditions and investor expectations. As Morningstar observes:

> It is important to note that the expected equity risk premium, as it is used in discount rates and cost of capital analysis, is a forward-looking concept. That is, the equity risk premium that is used in the discount rate should be

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[86] *See*, Direct Testimony of Michael P. Gorman, at 45; Direct Testimony of Daniel J. Lawton, at 31; Direct Testimony of Maureen L. Reno, at 36. Ms. LaConte does not appear to take issue with the risk-free rates applied in my Direct Testimony. *See* Direct Testimony of Billie S. LaConte, at 18.

[87] *See*, Direct Testimony of Michael P. Gorman, at 46; Direct Testimony of Daniel J. Lawton, at 31; Direct Testimony of Maureen L. Reno, at 38. Ms. LaConte does not appear to take issue with the Beta coefficients applied in my Direct Testimony. *See* Direct Testimony of Billie S. LaConte, at 18.

[88] *See*, Direct Testimony of Daniel J. Lawton, at 32; Direct Testimony of Maureen L. Reno, at 37; Direct Testimony of Billie S. LaConte, at 23.

[89] Direct Testimony of Billie S. LaConte, at 21-22.

reflective of what investors think the risk premium will be going forward.[90]

Longstanding financial research has shown the Market Risk Premium to vary over time and with market conditions. Using forward-looking measures of the expected market return, Harris and Marston found "...strong evidence...that market risk premia change over time and, as a result, use of a constant historical average risk premium is not likely to mirror changes in investor return requirements."[91] Among their findings is that the Market Risk Premium is inversely related to government bond yields. That is, as interest rates fall, the Market Risk Premium increases. Consequently, the use of the long-term average historical Market Risk Premium is not appropriate under current market conditions because it does not reflect the inverse relationship between interest rates and the Market Risk Premium.

The long-term arithmetic average historical Market Risk Premium of approximately 7.20 percent is calculated as the difference between the long-term average total return on large company stocks from 1926-2020 of approximately 12.20 percent and the long-term average income-only return on long-term government bonds of approximately 4.90 percent over the same period.[92] It is therefore not reasonable to apply the historical average Market Risk Premium when the current 30-year Treasury bond yield is approximately 300 basis points *lower* than the long-term average historical risk-free rate used to calculate the historical Market Risk Premium. At current interest rate levels, the forward-looking Market Risk Premium should be *higher* than 7.20 percent. Consequently, the long-term average historical Market Risk Premium would be appropriate only if the expected risk-free rate was consistent with the long-term historical average risk-free rate, which it currently is not. For these reasons, CAPM and ECAPM results relying on the long-term average historical average Market Risk Premium should be rejected.

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[90] Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills and Inflation Valuation Yearbook, at 53.

[91] Robert S. Harris, Felicia C. Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts,* Financial Management, Summer 1992, at 69.

[92] Duff & Phelps, 2021 SBBI Yearbook, at 6-17. Numbers may not add due to rounding.

Q. PLEASE SUMMARIZE THE CONCERNS OF CERTAIN OF THE OPPOSING WITNESSES REGARDING YOUR FORWARD-LOOKING MARKET RISK PREMIUM ESTIMATE.

A. Mr. Gorman asserts that my forward-looking Market Risk Premium estimates are "unreasonable" relative to measures of GDP and historical geometric average growth in the stock market.[93] Mr. Lawton suggests my analysis "produces illogical results" as it includes expected returns for individual companies that are negative or above a threshold he deems to be unreasonable.[94] Lastly, as with her criticism of my DCF analyses, Ms. Reno disagrees with the reliance on projected earnings growth rates in my DCF-based expected market return estimate.[95]

Q. AS A PRELIMINARY MATTER, IS IT REASONABLE IN THE CURRENT MARKET ENVIRONMENT TO RELY SOLELY ON FORWARD-LOOKING MARKET RISK PREMIUM ESTIMATES?

A. Yes, it is. The use of a forward-looking or projected Market Risk Premium is appropriate because, as noted earlier, the Market Risk Premium is meant to be a forward-looking parameter. Additionally, given the inverse relationship between interest rates and the Market Risk Premium, an expected Market Risk Premium well above historical levels is logical and reasonable in the current abnormally low interest rate environment.

Q. WHAT IS YOUR RESPONSE TO THE POSITION THAT YOUR MARKET RISK PREMIUM ESTIMATES ARE "TOO HIGH"?[96]

A. I disagree with that position. First, as discussed in my Direct Testimony, Market Risk Premia in the range of my forward-looking MRP estimates have occurred quite frequently.[97]

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93 Direct Testimony of Michael P. Gorman, at 66.

94 Direct Testimony of Daniel J. Lawton, at 47-48.

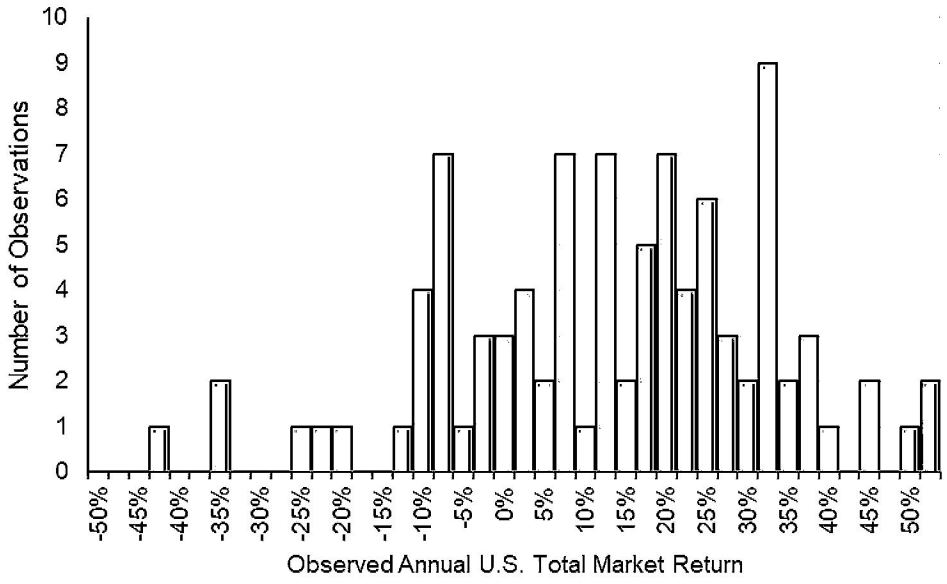
95 Direct Testimony of Maureen L. Reno, at 41.

96 Direct Testimony of Maureen L. Reno, at 41-42.

97 Direct Testimony of Jennifer E. Nelson, at 44.

For an additional perspective, I also reviewed the frequency of my expected market return estimates. The expected total market return estimates presented in my Direct and Rebuttal Testimonies are consistent with actual annual returns on the market over the last 95 years. As shown in Chart 7 below, the actual annual return on the S&P 500 Index has exceeded 15.00 percent[98] in nearly half (47 out of 95 years) of the time between 1926 and 2020. From that perspective, an expected total market return for the broad market greater than 15.00 percent is not unrealistic and the Market Risk Premium estimates produced from them are not "inflated."[99]

Chart 7: Frequency of Total Returns on the S&P 500 Index – 1926-2020[100]



Moreover, because market returns historically have been volatile, my market return estimates are statistically indistinguishable from the long-term historical arithmetic average market data on which Mr. Lawton, Ms. Reno, and Ms. LaConte rely.[101] As such,

[98] The *Value Line*-based Market Return estimate in Exhibit JEN-4, page 7, is 14.21 percent; in Exhibit JEN-3R, page 1, my updated *Value Line*-based Market Return estimate is 15.08 percent.

[99] Direct Testimony of Michael P. Gorman, at 58.

[100] Source: Duff & Phelps, 2021 SBBI Yearbook, Appendix A-1.

[101] The standard deviation is approximately 19.70 percent. Source: Duff & Phelps, 2021 SBBI Yearbook, Appendix A-1, page 6-17. Even if we were to look at the standard error, my *Value Line* market return estimate is within two standard errors of the long-term average.

my projected market return estimates are reasonable and consistent with historically observed market returns.

Q. WHAT IS YOUR RESPONSE TO MR. LAWTON'S POSITION THAT YOUR EXPECTED MARKET RETURN IS "ILLOGICAL" BECAUSE THE ANALYSIS INCLUDES COMPANIES WITH NEGATIVE ROE ESTIMATES AND ESTIMATES THAT ARE "ON THE HIGH END"?[102]

A. Mr. Lawton's position violates several fundamental principles of the CAPM theory. The purpose of the analysis is to estimate the return investors expect for the market as a whole, including high and low-growth companies, not to estimate the aggregate return for companies that Mr. Lawton believes have proper growth rates or return estimates. At any time, the market as a whole includes companies with negative and positive returns, even companies with very high returns. Any credible estimate of the return on the market as a whole must include all companies.

Moreover, removing companies that Mr. Lawton believes are unreasonable creates an internal inconsistency in the CAPM. A fundamental assumption of the CAPM is that the required return is proportional to the risk of the investment. Under the CAPM, the Beta coefficient is the measure of risk, and is calculated by comparing the subject security's returns to the overall market returns. Because the Beta coefficient is calculated relative to the overall market (*e.g.*, the S&P 500 Index or the New York Stock Exchange), it is important that the expected market return also reflect the overall market. Therefore, it is inconsistent to combine Beta coefficients calculated relative to the entire market with a Market Risk Premium estimate calculated using only a subset of the market.

Lastly, Mr. Lawton observes the differences between the Bloomberg-derived expected market return estimates and the *Value Line*-derived expected market return estimates.[103] To be clear, my CAPM and ECAPM analyses in this proceeding rely only on the *Value Line*-derived expected market return estimate.[104] Therefore, Mr. Lawton's

[102] Direct Testimony of Daniel J. Lawton, at 47-48.

[103] Direct Testimony of Daniel J. Lawton, at 47-48.

[104] Direct Testimony of Jennifer E. Nelson, at 43. *See also*, Exhibit JEN-5 and Exhibit JEN-4R.

position regarding the differences between the Bloomberg-derived and *Value Line*-derived expected market return estimates is moot.

Q. WHAT IS YOUR RESPONSE TO MS. RENO'S POSITION THAT YOUR EXPECTED MARKET RETURN ESTIMATE IS TOO HIGH BECAUSE IT RELIES ON ANALYSTS' PROJECTED EARNINGS GROWTH RATES?[105]

A. Ms. Reno's position is without merit. First, as discussed earlier in my response regarding the DCF analyses, analysts' earnings growth rate projections are the appropriate measure of growth in the DCF analysis, on which my expected market return estimate is based. Second, as explained earlier, my expected market return estimate is reasonable when viewed in the context of actual observed annual market returns over the last 95 years as reported by Duff & Phelps.

Q. DO YOU HAVE ANY CONCERNS WITH MR. LAWTON'S "FORWARD-LOOKING" MARKET RISK PREMIUM ESTIMATE?

A. Yes, I do. Mr. Lawton's 7.70 percent Market Risk Premium estimate is calculated as the average of Duff & Phelps' long-term average Market Risk Premium of 7.15 percent from 1926 to 2019 and his "forward-looking" Market Risk Premium estimate of 8.22 percent.[106] His forward-looking Market Risk Premium estimate of 8.22 percent is the difference between *Value Line's* projected ROE for the proxy group companies (10.15 percent) and the current yield on 30-year Treasury bonds (1.93 percent).[107] He then multiplies this "blended" 7.70 percent Market Risk Premium estimate by the Beta coefficient for each proxy company and adds the risk-free rate of 1.93 percent to calculate a CAPM and ECAPM estimate for each proxy company. As discussed below, both of Mr. Lawton's Market Risk Premium estimates are flawed.

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[105] Direct Testimony of Maureen L. Reno, at 41.

[106] Direct Testimony of Daniel J. Lawton, at 32. Mr. Lawton notes his historical Market Risk Premium estimate of 7.15 percent is from Duff & Phelps' 2020 SBBI Yearbook, which reported historical return data for the years 1926 to 2019. The long-term historical Market Risk Premium reported in Duff & Phelps' 2021 SBBI Yearbook for the years 1926 to 2020 was 7.25 percent.

[107] Direct Testimony of Daniel J. Lawton, at 32.

First, as explained above, the use of the historical long-term average Market Risk Premium estimate from Duff & Phelps is inappropriate in the current low interest rate market environment and should be rejected.

As to his "forward-looking" Market Risk Premium estimate, it is important to remember that in the CAPM formula, applying the Beta coefficient to the Market Risk Premium produces a "risk-adjusted" risk premium for the subject company or proxy group relative to the expected market return. However, Mr. Lawton's "forward-looking" Market Risk Premium estimate is based on the expected return on equity for the proxy group. As such, it is not an estimate of an expected return on the overall market. Therefore, it is inappropriate to apply the Beta coefficient to a return estimate that already reflects the proxy group, as doing so effectively "double counts" the risk adjustment for the proxy group.

Q. DO YOU AGREE WITH MR. GORMAN'S "NORMALIZED" HISTORICAL AVERAGE BETA COEFFICIENT?

A. No, I do not. Mr. Gorman asserts that *Value Line's* current Beta coefficients are "outliers"; therefore, he also considers a "normalized" proxy group average historical Beta coefficient of 0.71.[108] While I do not disagree with his use of Beta coefficients reported by *Value Line*, Mr. Gorman's conclusion that *Value Line's* current Beta coefficients are "outliers" is based on his review of quarterly Beta coefficients since the third quarter of 2014.[109] In my opinion, it is inappropriate to draw conclusions regarding the current level of Beta coefficients based on data from a small sample size that reflects a period in which Beta coefficients for utilities were at historically low levels.

Importantly, Mr. Gorman acknowledges that the Beta coefficient represents "stock-specific risk".[110] He further acknowledges that the recent "increase in betas suggests that utility companies' investment risk are increasing relative to the overall general marketplace."[111] However, he dismisses this clear evidence, in part due to

[108] Direct Testimony of Michael P. Gorman, at 46.

[109] Exhibit MPG-16, page 2.

[110] Direct Testimony of Michael P. Gorman, at 44.

[111] Direct Testimony of Michael P. Gorman, at 46.

"robust" utility valuation levels and "sustained investment grade bond ratings for utility companies".[112] What Mr. Gorman's position fails to recognize is that risk as measured by the Beta coefficient relates to volatility in returns, not the overall level of stock prices. Two stocks could have the same valuation level, but the stock with the more volatile returns is riskier than the stock with less volatility. Moreover, as discussed earlier, "robust" equity valuations are strongly related to the current low interest rate environment, particularly for highly capital intense sectors such as utilities.

Lastly, to the extent Mr. Gorman is concerned with data aligning "with the time rates are in effect",[113] current *Value Line* Beta coefficients are calculated over five years of weekly return data; therefore, the effect of the COVID-19 pandemic on the market data underlying *Value Line's* Beta coefficients will be present for at least the next four years when rates set in this proceeding will be in effect. *Value Line* Beta coefficients from 2014 that reflect market data between 2009 and 2014 may not be reasonable representations of utility market risk in 2021 and going forward, despite his contention that his "normalized" Beta coefficients are "forward-looking".[114]

For these reasons, I conclude current *Value Line* Beta coefficients reasonably reflect the market's current assessment of utility risk and should be applied in the CAPM. Applying Mr. Gorman's current *Value Line* Beta coefficient in each of his CAPM analyses produce a range of ROE estimates of 10.43 percent to 10.50 percent.[115]

Q. MR. GORMAN AND MS. RENO ASSERT YOU RELY PRIMARILY ON FORECASTED TREASURY BOND YIELDS IN YOUR CAPM ANALYSES.[116] WHAT IS YOUR RESPONSE?

A. They are mistaken. I do not place "primary reliance" on the CAPM results using projected Treasury bond yields. Rather I consider both current and projected Treasury bond yields, as do both Mr. Gorman and Ms. Reno. Notably, Mr. Gorman's projected

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[112] Direct Testimony of Michael P. Gorman, at 46.

[113] *See, e.g.*, Direct Testimony of Michael P. Gorman, at 65, 67-68.

[114] Direct Testimony of Michael P. Gorman, at 50.

[115] Source: Exhibit MPG-17; 10.43% = 1.96% + (0.89 x 9.54%); 10.50% = 2.60% + (0.89 x 8.90%).

[116] Direct Testimony of Michael P. Gorman, at 67; Direct Testimony of Maureen L. Reno, at 36.

30-year Treasury bond yield is from the same source (*Blue Chip Financial Forecasts, "Blue Chip"*) as my projected risk-free rate.[117]

While Mr. Gorman appears to malign *Blue Chip's* long-term 30-year Treasury bond yield forecast, his 4.35 percent projected GDP growth rate on which his "sustainable growth" and Multi-Stage DCF analyses substantially rely are *Blue Chip's* forecasts regarding GDP and inflation over the same period as *Blue Chip's* long-term projected 30-year Treasury bond yields I consider. Therefore, it is unclear why the use of *Blue Chip's* forecasted interest rates is "highly problematic"[118] but its GDP and inflation forecasts over the same period by the same group of 50 economists are reliable.

Mr. Gorman suggests the "accuracy of forecasted interest rates is highly problematic",[119] arguing that over the last several years, "observable current interest rates have been a more accurate predictor of future interest rates than economists' consensus projections."[120] Nonetheless, he relies on a projected 2.60 percent Treasury bond yield from *Blue Chip* in his CAPM and Risk Premium analyses.

Estimating the Cost of Equity is a forward-looking exercise, which is based on investor expectations. The relevant issue is not whether projected interest rates are accurate in hindsight, it is whether investors rely on them. Stated differently, the Cost of Equity is based on what investors expect, not on what actually happens.[121]

Mr. Gorman presents near-term projections of 30-year Treasury yields from *Blue Chip* in Table 2 of his direct testimony.[122] That table shows that as actual Treasury yields increased, so did *Blue Chip's* projected Treasury yields, albeit sometimes with a slight lag. That is, it appears analysts' forecasts incorporate, at least to some degree, current and recent historical yields. Consequently, Mr. Gorman's concerns regarding the appropriateness of analysts' projected interest rates are misplaced.

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[117] Direct Testimony of Michael P. Gorman, at 45, 50.

[118] Direct Testimony of Michael P. Gorman, at 68.

[119] Direct Testimony of Michael P. Gorman, at 68.

[120] Direct Testimony of Michael P. Gorman, at 68.

[121] *See*, 147 FERC ¶ 61,234, Docket No. EL11-66-001, Opinion No. 531 Order on Initial Decision, at para 88 (June 19, 2014).

[122] Direct Testimony of Michael P. Gorman, at 16.

Because the projected interest rates from *Blue Chip* are widely used (including by Mr. Gorman and me in this proceeding) and are investor influencing, I continue to believe it is appropriate to apply them in my analytical models.

Q. PLEASE SUMMARIZE THE CONCERNS WITH YOUR EMPIRICAL CAPM ("ECAPM") ANALYSIS.

A. Mr. Gorman's and Ms. LaConte's primary concerns are with the application of adjusted Beta coefficients published by *Value Line* in the ECAPM analysis.[123] Mr. Gorman further asserts that the ECAPM is not widely accepted "in the regulatory arena".[124]

Q. ARE MR. GORMAN AND MS. LACONTE CORRECT?

A. No, they are not. As explained in my Direct Testimony, the ECAPM reflects published research that companies with lower Beta coefficients tend to have higher returns than those predicted by the CAPM, and those with higher Beta coefficients tend to have lower returns than expected.[125] Beta coefficient adjustments such as those used by *Value Line* on the other hand, address the tendency of "raw" Beta coefficients to regress toward the market mean of 1.00 over time. As explained below, the ECAPM is not an adjustment to the Beta coefficient; the two are different issues and are addressed with different methods.[126]

The relationship between expected returns from the CAPM and ECAPM can be seen in Chart 8, below. Chart 8 reflects Mr. Gorman's projected risk-free rate and high-end Market Risk Premium and illustrates the extent to which the CAPM under-states the expected return relative to the ECAPM when Beta coefficients, whether adjusted or unadjusted, are less than 1.00.

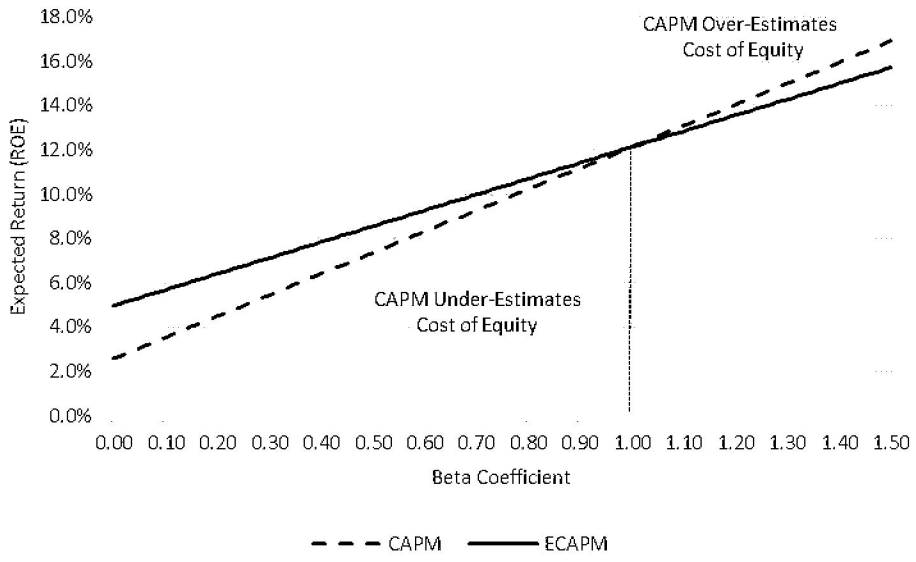
[123] Direct Testimony of Michael P. Gorman, at 70-73; Direct Testimony of Billie S. LaConte, at 24-25.

[124] Direct Testimony of Michael P. Gorman, at 73.

[125] Direct Testimony of Jennifer E. Nelson, at 45-46. *See also*, Roger A. Morin, PhD., New Regulatory Finance, Public Utility Reports, Inc., at 175-176 (2006).

[126] Roger A. Morin, PhD., New Regulatory Finance, Public Utility Reports, Inc., at 191 (2006).

Chart 8: CAPM and ECAPM Expected Returns[127]



The ECAPM is an adjustment to the risk/return line which, as shown in Chart 8 above, is flatter than the CAPM assumes. That adjustment is required even with the use of adjusted Beta coefficients, such as those provide by *Value Line*. As Dr. Morin observes (emphasis added):

> Fundamentally, *the ECAPM is not an adjustment, increase or decrease, in beta*. This is obvious from the fact that the expected return on high beta securities is actually lower than that produced by the CAPM estimate. The ECAPM is a formal recognition that the observed risk-return tradeoff is flatter than predicted by the CAPM based on myriad empirical evidence. *The ECAPM and the use of adjusted betas comprised two separate features of asset pricing…Both adjustments are necessary.*[128]

Q. PLEASE EXPLAIN WHY VALUE LINE ADJUSTS ITS BETA COEFFICIENTS.

A. *Value Line's* adjustment is based on the research of Marshall Blume, who found that "[n]o economic variable including the beta coefficient is constant over time."[129]

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[127] Exhibit JEN-11R, based on Mr. Gorman's high Market Risk Premium and projected risk-free rate. The finding that the ECAPM is not an adjustment to the Beta coefficient also is clear in the ECAPM equation ($k_e = R_f + \alpha + \beta(MRP - \alpha)$), in which the alpha coefficient increases the intercept (the expected return when the Beta coefficient equals zero), and reduces the Market Risk Premium.

[128] Roger A. Morin, PhD., New Regulatory Finance, Public Utility Reports, Inc., at 191 (2006) [emphasis added].

[129] Marshall E. Blume, *On the Assessment of Risk*, The Journal of Finance, Vol. XXVI, No. 1, March 1971.

Consistent with that finding, Blume observed a tendency of raw Beta coefficients to change gradually over time:

> …there is obviously some tendency for the estimated values of the risk parameter [beta] to change gradually over time. This tendency is most pronounced in the lowest risk portfolios, for which the estimated risk in the second period is invariably higher than that estimated in the first period. There is some tendency for the high risk portfolios to have lower estimated risk coefficients in the second period than in those estimated in the first. Therefore, the estimated values of the risk coefficients in one period are biased assessments of the *future values*, and furthermore the values of the risk coefficients as measured by the estimates of β_1 tend to regress towards the means with this tendency stronger for the lower risk portfolios than the higher risk portfolios. (emphasis added)

Blume proposed a correction for that "regression bias" to provide more accurate assessments of risk and, therefore, the Cost of Equity:

> For individual securities as well as portfolios of two or more securities, the assessments adjusted for the historical rate of regression are more accurate than the unadjusted or naïve assessments. Thus, an improvement in the accuracy of one's assessments of risk can be obtained by adjusting for the historical rate of regression even though the rate of regression over time is not strictly stationary.[130]

Based on Blume's results, *Value Line* adjusts its "raw" Beta coefficients according to the following formula:

$$\beta_{adjusted} = 0.35 + (0.67 \times \beta_{raw}) \quad [1]$$

Q. ARE YOU AWARE OF ANY ACADEMIC STUDIES THAT SUPPORT THE USE OF ADJUSTED BETA COEFFICIENTS IN THE ECAPM FOR UTILITY COMPANIES?

A. Yes, in my Direct Testimony, I referenced a 2011 study by Stéphane Chrétien and Frank Coggins[131] in which the authors studied the CAPM and its ability to estimate the risk premium for the utility industry in particular subgroups of utilities. The study considered the traditional CAPM approach, the Fama-French three-factor model, and a model similar to the ECAPM I apply. In the study, the ECAPM relied on adjusted Beta coefficients similar to the approach applied by *Value Line*. As Chrétien and Coggins found, the

[130] Marshall E. Blume, *On the Assessment of Risk*, The Journal of Finance, Vol. XXVI, No. 1, March 1971.

[131] Stéphane Chrétien and Frank Coggins. *Cost Of Equity For Energy Utilities: Beyond The CAPM.* Energy Studies Review, vol. 18, no. 2 (2011).

ECAPM significantly outperformed the traditional CAPM model at predicting the observed risk premium for the various utility subgroups.

Q. IS THE ECAPM AN ACCEPTED METHODOLOGY?

A. Yes, it is. First, I note that Mr. Lawton and Ms. Reno also perform ECAPM analyses in this proceeding. Further, I am aware that the ECAPM (sometimes referred to as the "Zero Beta CAPM") has been accepted by regulatory commissions in Alaska, Maryland, Mississippi, New York, and North Carolina.[132] Additionally, I am aware the ECAPM has been presented by state regulatory commission staff in Maryland, Nevada, and by the Department of Commerce in Minnesota.[133] Consequently, I believe the ECAPM is a reasonable approach and should be considered by the Commission.

D. Risk Premium Analyses

Q. PLEASE SUMMARIZE THE RISK PREMIUM ANALYSES PERFORMED BY CERTAIN OF THE OPPOSING WITNESSES.

A. Ms. Sears, Mr. Gorman, Mr. Lawton, and Ms. LaConte each perform Risk Premium analyses in which the Equity Risk Premium is defined as the difference between authorized ROEs for electric utilities and bond yields.[134] My primary concerns with their Risk Premium analyses are (1) certain of their analyses do not apply projected bond yields and therefore are not forward-looking, and (2) certain of their analyses do not

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[132] *See,* Regulatory Commission of Alaska, Docket No. P-97-4, Order No. 151, at 146; Maryland Public Service Commission, Case No. 9311, Order No. 85724, at 105; Mississippi Public Service Commission, Docket No. 01-UN-0548, *Notice of Intent of Mississippi Power Company to Change Rates for Electric Service in its Certificated Areas in the Twenty-Three Counties of Southeast Mississippi*, Final Order, December 3, 2001, at 19; New York Public Service Commission, Case 16-G-0058, P*roceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of KeySpan Gas East Corporation d/b/a National Grid for Gas Service*, Order Adopting Terms of Joint Proposal and Establishing Gas Rate Plans, December 16, 2016, at 32; *In the Matter of Application of Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina*, Docket No. E-22, Sub 562 Order Accepting Public Staff Stipulation in Part, Accepting CIGFUR Stipulation, Deciding Contested Issues, and Granting Partial Rate Increase, February 24, 2020, at 40.

[133] *See,* Maryland Public Service Commission, Case No. 9311, Order No. 85724, at 88; Minnesota Public Utilities Commission, MPUC Docket No. G011/GR-15-736, *Findings of Fact, Conclusions of Law, and Recommendation*, August 19, 2016, at 29; Public Utilities Commission of Nevada, Docket No. 12-02019, Second Modified Final Order, at 36.

[134] *See* Attachment ES-9; Exhibit MPG-12 and Exhibit MPG-13; Schedule DJL-10; Direct Testimony of Billie S. LaConte, at 22.

adequately reflect the inverse relationship between the Equity Risk Premium and bond yields. I discuss each of these in turn and respond to their criticisms of my Bond Yield Plus Risk Premium analysis below.

Q. WHAT ARE YOUR CONCERNS WITH MS. SEARS' 8.97 PERCENT ROE ESTIMATE DERIVED FROM HER "CONVENTIONAL" RISK PREMIUM MODEL?

A. As a preliminary matter, Ms. Sears and I agree there is a statistically significant inverse relationship between the Equity Risk Premium and interest rates.[135] Ms. Sears and I also agree that the Cost of Equity is forward-looking.[136] As such, it is appropriate to apply projected Baa-rated corporate bond yields in the Risk Premium analysis. *Blue Chip*, which provides consensus estimates from 50 business economists, projects Baa-rated corporate bond yields[137] to steadily rise from 3.16 percent in the third quarter of 2021 to 4.30 percent by the first quarter of 2023,[138] and to 5.80 percent by 2032.[139]

I applied two measures of a forward-looking Baa-rated corporate bond yield to Ms. Sears' Risk Premium analysis. The first measure of 4.00 percent is *Blue Chip's* average near-term forecast of the Baa-rated corporate bond yield over next six quarters (Q4 2021 through Q1 2023). Applying a 4.00 percent projected bond yield to Ms. Sears' Risk Premium analysis produces a Risk Premium-based ROE estimate of 9.29 percent, compared to her Risk Premium estimate of 8.97 percent[140]

The second measure of 5.55 percent is *Blue Chip's* average long-term forecast of the Baa-rated corporate bond yield over the years 2023-2027 (5.30 percent) and 2028-2032 (5.80 percent). Applying a 5.55 percent projected bond yield to Ms. Sears' Risk Premium analysis produces a Risk Premium-based ROE estimate of

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[135] Direct Testimony of Emily Sears, at 20-21; Direct Testimony of Jennifer E. Nelson, at 48.

[136] Direct Testimony of Emily Sears, at 18.

[137] Ms. Sears applies Baa-rated corporate bond yields in her Risk Premium analysis. *See*, Direct Testimony of Emily Sears, at 21.

[138] Blue Chip Financial Forecasts, Vol. 40, No. 10, October 1, 2021, at 2.

[139] Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14.

[140] 4.00% + (-0.4457) x (4.00% - 8.24%) + 3.40% = 9.29%. *See* Attachment ES-9 for Ms. Sears' Risk Premium method.

10.15 percent.[141] The forward-looking Risk Premium estimates, therefore, produce a range of 9.29 percent to 10.15 percent, with a midpoint of 9.72 percent.

Q. DOES MR. LAWTON'S BOND YIELD EQUITY RISK PREMIUM ANALYSIS CONSIDER PROJECTED BOND YIELDS?

A. No, it does not. Mr. Lawton's Bond Yield Equity Risk Premium analysis applies a historical three-month average 30-year Treasury bond yield of 1.93 percent and a spot yield of 2.04 percent as of September 2021 to produce ROE estimates of 9.06 percent to 9.12 percent.[142]

Q. DID YOU CORRECT MR. LAWTON'S BOND YIELD EQUITY RISK PREMIUM ANALYSIS TO APPLY PROJECTED TREASURY BOND YIELDS?

A. Yes, I did. As a preliminary matter, I note that Mr. Lawton's calculations did not include all the annual bond yield and risk premium data points in his sample.[143] Correcting this error increases his Risk Premium-based ROE estimates to 9.08 percent to 9.15 percent. As with my approach described above for Ms. Sears' Risk Premium analysis, I then applied *Blue Chip's* near-term and long-term projections of the 30-year Treasury bond yield of 2.45 percent[144] and 3.70 percent,[145] respectively, to Mr. Lawton's corrected Risk Premium analysis. Applying these projected Treasury bond yields produces forward-looking ROE estimates of 9.38 percent[146] and 10.11 percent,[147] with a midpoint of 9.75 percent.

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[141] 5.55% + (-0.4457) x (5.55% - 8.24%) + 3.40% = 10.15%. *See* Attachment ES-9 for Ms. Sears' Risk Premium method.

[142] Direct Testimony of Daniel J. Lawton, at 30; Schedule DJL-10.

[143] In Schedule DJL-10, his average Treasury bond yield in study period of 6.40 percent and average basic risk premium per study of 5.27 percent exclude 2019 and 2020 data.

[144] Blue Chip Financial Forecasts, Vol. 40, No. 10, October 1, 2021, at 2.

[145] Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14.

[146] 2.45% + (-0.4160) x (2.45% - 6.19%) + 5.38% = 9.38%. *See* Schedule DJL-10 for Mr. Lawton's Risk Premium method.

[147] 3.70% + (-0.4160) x (3.70% - 6.19%) + 5.38% = 10.11%. *See* Schedule DJL-10 for Mr. Lawton's Risk Premium method.

Q. WHAT ARE YOUR SPECIFIC CONCERNS WITH MR. GORMAN'S RISK PREMIUM ANALYSIS?

A. I have two concerns with his analysis. First, Mr. Gorman's method understates the required risk premium in the current market because it fails to adequately reflect the inverse relationship between the Equity Risk Premium and interest rates (whether measured by Treasury or utility bond yields). Second, he does not apply a projected utility bond yield even though he applies a projected 30-year Treasury bond yield. Because the Cost of Equity is forward-looking, projected utility bond yields should be applied in the Risk Premium analysis.

Q. PLEASE BRIEFLY DESCRIBE MR. GORMAN'S RISK PREMIUM ANALYSES.

A. Mr. Gorman defines the risk premium as the difference between the average annual authorized equity returns for electric utilities and a measure of long-term interest rates each year from 1986 through June 2021.[148] His first risk premium estimate calculates the annual risk premium by reference to the 30-year Treasury yield, and his second estimate considers the average A-rated utility bond yield.[149] In developing his risk premium estimates, Mr. Gorman reviews risk premiums over five-year and ten-year rolling averages. Based on this review, Mr. Gorman calculates a range of risk premium estimates of 4.25 percent to 7.08 percent using his Treasury bond yields, and 2.88 percent to 5.89 percent using his A-rated utility bond yields.[150]

For his Treasury bond-based analysis, Mr. Gorman utilizes a risk premium of 6.36 percent, which he states reflects a "high-end" risk premium at the 75th percentile of his range of risk premium estimates.[151] He combines his 6.36 percent risk premium with a projected 30-year Treasury bond yield of 2.60 percent from *Blue Chip* to produce a Risk Premium-based ROE estimate of 8.96 percent.[152] For his utility bond yield analysis, Mr. Gorman adds the highest of his five-year average utility bond yield risk premia

[148] Direct Testimony of Michael P. Gorman, at 38; Exhibit MPG-12 and MPG-13.

[149] Direct Testimony of Michael P. Gorman, at 38, Exhibit MPG-12 and MPG-13.

[150] Exhibit MPG-12 and MPG-13.

[151] Direct Testimony of Michael P. Gorman, at 43.

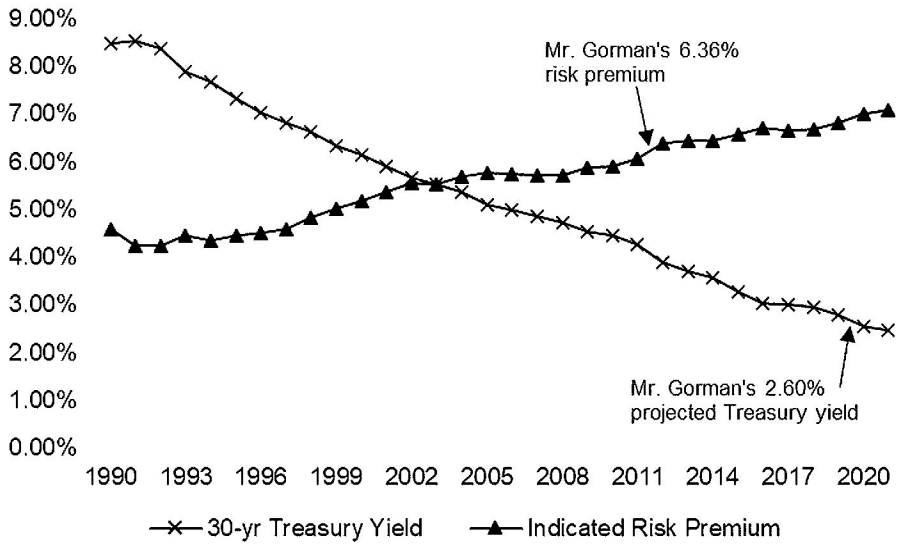
[152] 6.36% + 2.60% = 8.96%

(5.89 percent) to the current 13-week historical Baa-rated utility bond yield (3.22 percent) to produce a second Risk Premium-based ROE estimate of 9.11 percent.[153] He then concludes that the midpoint of his range (approximately 9.00 percent) is an appropriate Risk Premium-based ROE estimate.[154]

Q. PLEASE ELABORATE HOW MR. GORMAN'S RISK PREMIUM ANALYSIS FAILS TO FULLY REFLECT THE INVERSE RELATIONSHIP BETWEEN HIS RISK PREMIUM AND BOND YIELDS.

A. Because Mr. Gorman did not reasonably reflect the inverse relationship between interest rates and the Equity Risk Premium, his Risk Premium-based ROE estimates are biased downward. As shown in Chart 9 below, Mr. Gorman's data demonstrates a clear inverse relationship between the two variables. Chart 9 also indicates where Mr. Gorman's risk premium and projected Treasury bond yield approximately appear within his data.

Chart 9: Mr. Gorman's Treasury Yield-Based Risk Premium Data[155]



Turning first to his analysis using Treasury bond yields, Mr. Gorman's risk premium does not align with his projected Treasury bond yield, understating the ROE. Mr. Gorman selects a risk premium of 6.36 percent "to recognize the clear, observable

[153] 5.89% + 3.22% = 9.11%; Direct Testimony of Michael P. Gorman, at 43.

[154] Direct Testimony of Michael P. Gorman, at 43.

[155] Exhibit MPG-12; based on five-year rolling averages.

evidence that risk premiums are at abnormally high levels right now, but to also recognize that projected Treasury bond yield is considerably higher than current observable bond yields."[156] He determines arbitrarily that a risk premium at the 75th percentile[157] of his range of historical risk premia is appropriate. However, his projected Treasury bond yield of 2.60 percent reflects only the 2nd percentile of the range of his rolling five-year average Treasury bond yields.[158] Therefore, a more accurate reflection of the inverse relationship between the Treasury bond yield and risk premium would be to apply a risk premium at the 98th percentile (*i.e.*, 100 percent - 2 percent), not the 75th percentile. A risk premium of 7.02 percent reflects a risk premium at the 98th percentile of his five-year rolling average risk premium data.[159] Adding 7.02 percent to his 2.60 percent projected 30-year Treasury bond yield produces an ROE estimate of 9.62 percent, 66 basis points above his 8.96 percent ROE estimate.

Looking to his risk premium analysis based on utility bond yields, his 5.89 percent risk premium estimate reflects a five year average utility bond yield of 3.65 percent (*i.e.*, the average utility bond yield for the years 2017 to 2021).[160] Given that Mr. Gorman's 13-week average utility bond yield of 3.22 percent is below the five-year average of 3.65 percent, and the fact that the risk premium is inversely related to interest rates, it would be more accurate to apply his 2021 risk premium estimate of 6.25 percent, which aligns with his 2021 utility bond yield of 3.20 percent.[161] Applying the 2021 risk premium estimate more closely aligns the timing of the risk premium estimate with the utility bond yield applied in his analyses. Adding a risk premium of 6.25 percent with his 3.22 percent utility bond yield produces a Risk Premium-based ROE estimate of 9.47 percent.

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[156] Direct Testimony of Michael P. Gorman, at 43.

[157] 6.37% = 75% x (7.08% - 4.25%) + 4.25%). I note that 6.36 percent actually reflects the 71st percentile of his five-year rolling average annual risk premium data.

[158] 2.60% = 2.3% x (8.55% - 2.46%) + 2.46%. 8.55% is the highest of the five-year average Treasury bond yields (average of the years 1987-1991) and 2.46% is the lowest of the five-year average Treasury bond yields (average of the years 2017-2021).

[159] 7.02% = 98% x (7.08% - 4.25%) + 4.25%

[160] Exhibit MPG-13.

[161] Exhibit MPG-13.

Q. HAVE YOU UPDATED MR. GORMAN'S RISK PREMIUM ANALYSIS TO INCORPORATE A PROJECTED BAA-RATED UTILITY BOND YIELD?

A. Yes, I have. As noted earlier, while Mr. Gorman applies a projected Treasury bond yield in his Risk Premium analysis, he does not apply a projected Baa-rated utility bond yield. *Blue Chip* reports an average near-term projected Corporate Baa-rated bond yield of 3.88 percent in its September 1, 2021, report (the source of Mr. Gorman's 2.60 percent projected Treasury yield). Applying Mr. Gorman's 2021 Baa-rated utility-to-corporate bond yield spread of -0.04 percent[162] to the *Blue Chip* Baa-rated corporate bond yield estimate results in a projected Baa-rated utility bond yield of 3.84 percent.[163] Correcting Mr. Gorman's utility bond-based Risk Premium estimate to reflect forward-looking utility bond yields, and his five-year average utility bond yield risk premium of 5.89 percent, produces a forward-looking Risk Premium-based estimate of 9.77 percent.

Q. PLEASE SUMMARIZE THE UPDATED RESULTS TO MR. GORMAN'S RISK PREMIUM ANALYSES.

A. Correcting Mr. Gorman's risk premium analyses to better reflect the inverse relationship between bond yields and the risk premium, as well as to reflect projected utility bond yields, produces ROE estimates of 9.47 percent, 9.62 percent, and 9.77 percent, relative to his original estimates of 8.96 percent and 9.11 percent.

Q. MR. GORMAN AND MS. LACONTE CONTEND THE "SIMPLISTIC" RELATIONSHIP WITHIN YOUR BOND YIELD PLUS RISK PREMIUM ANALYSIS IS MORE COMPLEX, SUGGESTING OTHER FACTORS AFFECT CHANGES IN THE RISK PREMIUM.[164] WHAT IS YOUR RESPONSE TO MR. GORMAN AND MS. LACONTE ON THAT POINT?

A. I have several responses. First, as shown in Chart 9 above, Mr. Gorman's own data demonstrates a clear, "simplistic inverse relationship". Further, I do not contend that interest rates are the *only* variable that explains changes in the Equity Risk Premium. As

[162] Exhibit MPG-14.

[163] Projected Baa-rated utility bond yield: 3.84% = 3.88% - 0.04%.

[164] Direct Testimony of Michael P. Gorman, at 74-76; Direct Testimony of Billie S. LaConte, at 21.

shown in Chart 10 of my Direct Testimony, changes in the 30-year Treasury yield explains more than 76 percent of the changes in the Equity Risk Premium.[165] The inverse relationship is also highly statistically significant, consistent with academic studies supporting that finding.[166] That is, changes in interest rates explain a large majority, though not 100 percent, of the change in the Equity Risk Premium. Second, including more than 1,600 rate cases over a 40-year period reflects the unique circumstances of each rate case, but mitigates the effect of any one case on the analysis, addressing Ms. LaConte's concern that unique aspects of each case must be accounted for.[167]

Despite the position that more variables are at play, however, Mr. Gorman's Risk Premium analysis is based solely on the difference between annual average authorized ROEs and the 30-year Treasury yield. As such, Mr. Gorman's Risk Premium analysis also "ignores" the market factors he believes are relevant.

Q. DID YOU PERFORM AN ADDITIONAL ANALYSIS TO ADDRESS MR. GORMAN'S AND MS. LACONTE'S CONCERN REGARDING THE EFFECT OF ADDITIONAL VARIABLES ON YOUR BOND YIELD PLUS RISK PREMIUM RESULTS?

A. Yes, I did. Although I continue to believe the Bond Yield Plus Risk Premium analysis is properly specified, I performed an additional analysis to specifically include the effect of equity market volatility and credit spreads (*see* Exhibit JEN-12R). As with my original Bond Yield Plus Risk Premium analysis, I defined the Risk Premium as the dependent variable and the prevailing 30-year Treasury yield as an explanatory (or independent) variable. I then included two additional explanatory variables: (1) the VIX (the Chicago Board Options Exchange's one-month volatility index, which is a common measure of

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[165] The explanation value of the regression analysis is found in the coefficient of determination, or the R-squared (R^2) statistic. As shown in Exhibit JEN-5R, the R-squared of my updated analysis is 0.766.

[166] *See, e.g.*, Robert S. Harris and Felicia C. Marston, *The Market Risk Premium: Expectational Estimates Using Analysts' Forecasts*, Journal of Applied Finance, Vol. 11, No. 1, 2001, at 11-12; Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management, Spring 1985, at 33-45; and Farris M. Maddox, Donna T. Pippert, and Rodney N. Sullivan, *An Empirical Study of Ex Ante Risk Premiums for the Electric Utility Industry*, Financial Management, Autumn 1995, at 89-95.

[167] Direct Testimony of Billie S. LaConte, at 21.

market volatility); and (2) the credit spread between the 30-year Treasury yield and the Moody's Baa Utility Index (as a measure of incremental risk).[168] In both instances, the statistically significant inverse relationship between Treasury yields and the Equity Risk Premium remains, and the resulting ROE estimates are generally consistent with those of my original and updated Bond Yield Plus Risk Premium analysis.[169]

Lastly, applying Mr. Gorman's 2.60 percent projected 30-year Treasury yield to my alternative Bond Yield Plus Risk Premium Analysis described above produces an ROE estimate of 9.61 percent relative to Mr. Gorman's 9.00 percent Risk Premium-based recommendation (*see* Exhibit JEN-12R).[170]

Q. WHAT IS YOUR RESPONSE TO MR. LAWTON'S POSITION THAT YOUR BOND YIELD PLUS RISK PREMIUM ANALYSIS IS "COUNTERINTUITIVE"?[171]

A. Mr. Lawton fails to understand that the relationship between the Equity Risk Premium and the 30-year Treasury bond yield has been modeled as a semi-log relationship, and not a linear relationship. The Cost of Equity and Treasury yields do not necessarily move in lock-step. Further, as explained in my Direct Testimony, decreases in Treasury bond yields do not always reflect a reduction in the investor-required return. During volatile markets, the decline in Treasury yields reflects an increase in risk aversion and, therefore, an increase in required equity returns as investors favor the relative security of lower risk government bonds.[172] Very low levels interest rates in recent years have occurred during severe market crises (*e.g.*, the Great Recession and the COVID-19 pandemic); therefore, it is reasonable to expect the equity risk premium to be exponentially higher during times of market crisis as investors require higher returns to compensate them for greater risk during volatile markets. Consequently, I disagree with Mr. Lawton that interest rates and the Cost of Equity always move in the same direction.

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[168] Mr. Gorman notes on page 23 of his testimony that his proxy group has an average Moody's credit rating of Baa1.

[169] Exhibit JEN-6 and Exhibit JEN-5R.

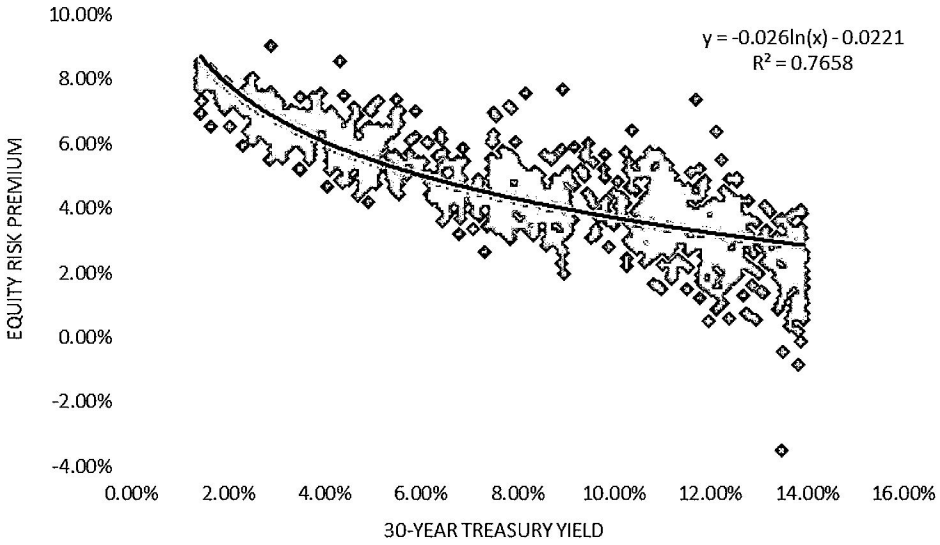
[170] Mr. Gorman assumes a 2.60 percent projected Treasury yield in his Risk Premium analysis; Direct Testimony of Michael P. Gorman, at 43.

[171] Direct Testimony of Daniel J. Lawton, at 45-46.

[172] Direct Testimony of Jennifer E. Nelson, at 18-19.

As shown in Chart 10 below, at the extreme low end of the interest rate spectrum, the relationship between interest rates and authorized returns is not linear, it is asymptotic.

Chart 10: Equity Risk Premium and 30-Year Treasury Yield[173]



Therefore, the semi-log regression analysis more appropriately describes the relationship between interest rates and returns than does a linear regression under the current abnormally low interest rate environment. As such, Mr. Lawton's concerns are misplaced.

Q. WHAT IS YOUR RESPONSE TO MS. LACONTE'S ADJUSTMENT TO YOUR BOND YIELD PLUS RISK PREMIUM ANALYSIS?

A. Ms. LaConte adds my current and projected 30-year Treasury bond yields of 2.31 percent and 2.88 percent, respectively, to the long-term historical average Equity Risk Premium of 4.78 percent calculated from the data provided in my Exhibit JEN-6 to produce her ROE estimates of 7.09 percent and 7.66 percent.[174] Ms. LaConte's adjustment to my Bond Yield Plus Risk Premium analysis suffers from the same problem as applying the

[173] Source: Exhibit JEN-5R. Includes data as of September 30, 2021.

[174] Direct Testimony of Billie S. LaConte, at 22.

long-term average historical Market Risk Premium in the CAPM described earlier as it does not account for the inverse relationship between the Equity Risk Premium and the 30-year Treasury bond yield. Her long-term historical average Equity Risk Premium is based on a long-term historical 30-year Treasury yield of 7.65 percent. Because the Treasury bond yields she applies are well *below* the long-term historical average, the Equity Risk Premium applied in the analysis should be well *above* the long-term average of 4.78 percent. Therefore, Ms. LaConte's adjustment to my Bond Yield Plus Risk Premium analysis is improper and should be rejected.

Q. PLEASE SUMMARIZE THE OPPOSING WITNESSES' RISK PREMIUM RESULTS WITH YOUR RECOMMENDED ADJUSTMENTS DISCUSSED ABOVE.

A. Based on the adjustments recommended above:

- Ms. Sears' Risk Premium results would increase from 8.97 percent to a range of 9.29 percent to 10.15 percent;
- Mr. Gorman's Risk Premium results would increase from a range of 8.96 percent to 9.11 percent to a range of 9.47 percent to 9.77 percent; and
- Mr. Lawton's Risk Premium results would increase from a range of 9.06 percent to 9.12 percent to a range of 9.38 percent to 10.11 percent.

E. Comparable Earnings Model

Q. PLEASE SUMMARIZE MS. RENO'S COMPARABLE EARNINGS MODEL ("CEM").

A. Ms. Reno reviews each proxy company's market-to-book ratio and earned ROE for the years 2011 to 2020, to determine "investor acceptance of these returns via corresponding market-to-book ('M/B') ratios."[175] If a company's M/B ratio is greater than 1.00, Ms. Reno concludes that "a company can attract new equity capital without dilution".[176] Table 7 below presents Ms. Reno's CEM-based ROE results.

[175] Direct Testimony of Maureen L. Reno, at 43.

[176] Direct Testimony of Maureen L. Reno, at 43.

Table 7: Ms. Reno's CEM-based ROE Estimates[177]

	Historical Average Earned ROE (2011-2020)	Adjusted ROE (*Value Line* 2024-2026 EPS/BVPS)	*Value Line's* Return on Common Equity (2024-2026)
Proxy Group Average	9.82%	10.96%	10.79%
Proxy Group Median	9.59%	10.76%	10.50%

Q. DOES MS. RENO GIVE HER CEM RESULTS ANY WEIGHT?

A. No, she does not. Ms. Reno states that her recommended ROE of 9.35 percent is derived from the maximum of her DCF estimates.[178]

Q. WHAT ARE YOUR CONCERNS WITH MS. RENO'S CEM?

A. First, I disagree with Ms. Reno's decision to disregard the results of her Comparable Earnings analysis in favor of solely relying on her DCF analysis. Second, I disagree with Ms. Reno's conclusion that M/B ratios are an appropriate benchmark of a reasonable ROE. For example, in 2011, Otter Tail Corporation had a M/B ratio of 1.35 but reported an earned ROE of 2.70 percent.[179] If Ms. Reno's position is that an authorized ROE of 2.70 percent would be acceptable to investors simply because the M/B ratio was greater than 1.00, I strongly disagree with that conclusion.

Lastly, Ms. Reno's decision to reject her CEM-based ROE results contradicts her consideration of those same *Value Line* estimates as an input in her sustainable growth DCF estimates. Ms. Reno's sustainable growth rates rely on *Value Line's* return on book equity estimates for the proxy group companies,[180] which are the same estimates relied upon in her Comparable Earnings analysis. Although her ultimate 9.35 percent ROE recommendation does not rely substantially on her sustainable growth DCF estimates, her CEM-based ROE estimates are substantially higher than her DCF estimates using

[177] Exhibit MLR-8e.

[178] Direct Testimony of Maureen L. Reno, at 44.

[179] *See* Exhibit MLR-8c and Exhibit MLR-8d.

[180] I note that Mr. Lawton also calculates sustainable growth rate estimates based on data from *Value Line* (*see* Exhibit DJL-6, pages 2-3), however, he ultimately relies solely on analysts' consensus EPS growth rate projections. Direct Testimony of Daniel J. Lawton, at 26-27; Schedule DJL-7.

sustainable growth and suggest investors expect higher earned returns for the proxy group than what is produced by the DCF model using sustainable growth rates.

F. Financial Integrity Analyses

Q. PLEASE SUMMARIZE MR. GORMAN'S AND MR. LAWTON'S ASSESSMENTS OF THEIR RECOMMENDATIONS AS THEY AFFECT MEASURES OF EPE'S FINANCIAL INTEGRITY.

A. Mr. Gorman and Mr. Lawton evaluate the reasonableness of their ROE recommendations by calculating *pro forma* ratios, including Debt to EBITDA[181] and FFO[182] to Total Debt, to determine whether they would fall within S&P's guideline ranges for an investment grade rating.[183] Mr. Lawton also considers two additional ratios from Fitch Ratings: FFO Interest Coverage and Debt to FFO.[184] Mr. Gorman and Mr. Lawton calculate those ratios based on EPE's retail cost of service for the test year to determine whether their recommended ROEs and the Company's proposed capital structure will produce ratios within the rating agencies' ranges. Based on their *pro forma* analyses, Mr. Gorman and Mr. Lawton argue their recommendations are "sufficient"[185] to support EPE's investment grade bond rating.[186] An important consideration is that Mr. Gorman's and Mr. Lawton's analyses fundamentally assume EPE will actually earn the entirety of its authorized ROE on a going-forward basis and that cash flow will not be diluted by regulatory lag, additional capital spending, or any of the other factors that dilute earnings and cash flow.

Q. ARE CREDIT RATINGS DETERMINED PRINCIPALLY BY THE TYPES OF *PRO FORMA* METRICS MR. GORMAN AND MR. LAWTON CALCULATE?

A. No. As an initial matter, EPE is not rated by S&P. Therefore, I agree with Mr. Gorman that metrics calculated based on S&P's methodology cannot be applied to EPE.[187] As

[181] Earnings Before Interest, Taxes, Depreciation, and Amortization.

[182] Funds From Operations.

[183] Direct Testimony of Michael P. Gorman, at 55-57; Direct Testimony of Daniel J. Lawton, at 39-40.

[184] Schedule DJL-11.

[185] Direct Testimony of Daniel J. Lawton, at 39.

[186] Direct Testimony of Michael P. Gorman, at 52.

[187] Direct Testimony of Michael P. Gorman, at 52.

such, Mr. Gorman's and Mr. Lawton's analyses are of no value and the Commission should not give them any weight.

Even if EPE had a rating from S&P, it is important to note that S&P's and Fitch's ratings processes consider a range of both quantitative and qualitative data. Cash Flow/Leverage considerations are one element of a broad set of criteria.[188] Unlike Mr. Gorman's and Mr. Lawton's *pro forma* analyses, S&P's assessment does not look to a single period or assume static relationships among variables. Rather, S&P reviews credit ratios "on a time series basis with a clear forward-looking bias."[189] S&P explains that the time series length depends on a number of qualitative factors, but generally includes two years of historical data, and three years of projections, whereas Mr. Gorman's and Mr. Lawton's analyses reflect only the historical test year data. Further, the ratios depend on "base case" projections considering "current and near-term economic conditions, industry assumptions, and financial policies."[190] Consequently, even if we assume credit determinations fundamentally are driven by *pro forma* metrics, the actual assessment of those metrics is far more complex than Mr. Gorman's and Mr. Lawton's analyses suggest.

Q. DO YOU AGREE WITH THE PREMISE OF MR. GORMAN'S AND MR. LAWTON'S ANALYSES AND THE CONCLUSIONS THEY DRAW FROM THEM?

A. No, I do not. Simply maintaining an "investment grade" rating as Mr. Gorman suggests is an inappropriate standard. According to S&P, only 18 of 245 utilities currently have below investment grade long-term issuer ratings.[191] Because the Company must compete for capital within the utility sector in the first instance, and with companies beyond utilities in the second, the Company must have a strong financial profile. Such a profile enables the Company to acquire capital even during constrained markets.

Further, relying on *pro forma* credit metrics to assess the credit implications of any specific ROE or equity ratio is a partial analysis that may lead to incorrect

[188] Standard & Poor's Ratings Services, *Corporate Methodology*, at 5 (November 19, 2013).

[189] Standard & Poor's Ratings Services, *Corporate Methodology*, at 33 (November 19, 2013).

[190] Standard & Poor's Ratings Services, *Corporate Methodology*, at 33 (November 19, 2013).

[191] S&P Global Ratings, Issuer Ranking: North American Electric, Gas, And Water Regulated Utilities – Strongest to Weakest, December 10, 2020; *See* also Exhibit MPG-18.

conclusions. That concern arises not only because the credit rating process is complex, but also because a wide range of assumed ROEs and equity ratios produce *pro forma* metrics within the benchmark ranges for a given credit rating.[192] Using Mr. Gorman's analysis as an example, as shown in Table 8 below (*see also* Exhibit JEN-13R), Mr. Gorman's *pro forma* analysis suggests an ROE as low as 7.50 percent, and as high as 13.00 percent (combined with the Company's proposed capital structure), would produce *pro forma* Debt to EBITDA and FFO to Total Debt ratios in the same ranges produced by Mr. Gorman's recommendations in Exhibit MPG-19.

Table 8: Mr. Gorman's Financial Integrity Analysis Using Alternate Assumptions[193]

	Debt / EBITDA	**FFO/ Debt**	
	3.5x – 4.5x	13% - 23%	
S&P Benchmark Ranges	Significant	Significant	
Scenario	**Debt / EBITDA**	**FFO/ Debt**	**Implied Financial Risk Rating**
Mr. Gorman as filed (9.20% ROE, 49% Long-Term Debt)	4.13x	17%	Significant
7.50% ROE and 49% Long-Term Debt	4.50x	15%	Significant
13.00% ROE and 49% Long-Term Debt	3.50x	20%	Significant
10.30% ROE and 49% Long-Term Debt	3.93x	18%	Significant

That is, even if we assume an unreasonably low ROE in Mr. Gorman's analysis, the *pro forma* Debt to EBITDA ratio and FFO to Total Debt ratio remain in the "Significant" financial risk range. Clearly, a return as low as 7.50 percent, which is 195 basis points below the average authorized ROE in 2021 of 9.45 percent for all electric utilities cited by Mr. Gorman, is an unrealistic estimate of the Company's Cost of Equity.[194] Similarly, an ROE of 13.00 percent combined with Mr. Gorman's capital

[192] I note that Mr. Lawton's analysis presented in Schedule DJL-11 does not compare the financial ratios produced from his analysis to any benchmark, therefore, we cannot draw any conclusions from his analysis even if the credit rating methodologies were a strict quantitative analysis (which they are not).

[193] Analysis based on Mr. Gorman's workpaper supporting Exhibit MPG-19, page 1 of 4 and 2 of 4. *See* Exhibit JEN-13R.

[194] Direct Testimony of Michael P. Gorman, at 7, Figure 1; Exhibit MPG-12.

structure recommendation produces coverage ratios also within the "Significant" financial risk range.

Table 8 also demonstrates that my recommended ROE of 10.30 percent and the Company's requested capital structure would produce Debt to EBITDA and FFO to Total Debt ratios that fall within the "Significant" financial risk range. Those results are a clear example of why S&P's assessment goes far beyond the review of two static *pro forma* metrics. As such, Mr. Gorman's and Mr. Lawton's Financial Integrity analyses and their conclusions that their recommendations will produce credit metrics to maintain EPE's financial integrity should be rejected.

G. Business Risks and Other Considerations

1. Small Size

Q. CERTAIN OF THE OPPOSING WITNESSES DISAGREE THAT THE COMPANY'S SIGNIFICANTLY SMALLER SIZE RELATIVE TO THE PROXY GROUP SHOULD BE CONSIDERED IN THE DETERMINATION OF ITS ROE.[195] WHAT IS YOUR RESPONSE?

A. I disagree. As Ms. Reno correctly notes, "the fundamental comparison here is to the sample group".[196] As shown in Exhibit JEN-7, EPE is significantly smaller than the proxy group, whether viewed based on its Texas-jurisdictional operations or on a total company basis.

Mr. Gorman and Ms. Reno assert that the Company's size risk is reflected in its credit rating.[197] While true, their conclusion that EPE's risk is "similar" to the proxy group[198] discounts the fact that EPE's credit rating is one notch lower (*i.e.*, riskier) than the proxy group. As such, an ROE above the proxy group average and median compensates for EPE's higher risk profile.

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[195] Direct Testimony of Emily Sears, at 25-28; Direct Testimony of Michael P. Gorman, at 78-79; Direct Testimony of Maureen L. Reno, at 21-22; Direct Testimony of Billie S. LaConte, at 25-26.

[196] Direct Testimony of Maureen L. Reno, at 20.

[197] Direct Testimony of Michael P. Gorman, at 77; Direct Testimony of Maureen L. Reno, at 20.

[198] Direct Testimony of Michael P. Gorman, at 77; Direct Testimony of Maureen L. Reno, at 20.

Mr. Gorman further asserts that a small size premium is not appropriate because EPE is a subsidiary of Sun Jupiter Holding LLC ("Sun Jupiter").[199] Ms. Reno does not believe EPE's size is a source of risk because "it has access to the parent company's revolving loan fund or credit facilities."[200] As explained in my Direct Testimony, those positions runs counter to the widely accepted "stand-alone" regulatory principle, which treats each utility subsidiary as its own company.[201] The rates set for EPE in this proceeding will apply to the Company on a stand-alone basis; therefore, its Cost of Equity – and the authorized ROE – must reflect its stand-alone risk profile. As Mr. Gorman acknowledges, investors value companies on a stand-alone basis.[202] As discussed in my Direct Testimony, parent entities, like other investors, have capital constraints and must look at the attractiveness of the expected risk-adjusted return of each investment alternative in their capital budgeting process.[203] The authorized ROE, therefore, must reflect the risks and prospects of the utility's operations and supports the utility's financial integrity from a stand-alone perspective. Simply, EPE's ownership structure, and therefore its source of capital, has no bearing on its Cost of Equity.

Q. CERTAIN OF THE OPPOSING WITNESSES CITE TO STUDIES FROM 1993 TO REFUTE THE SMALL SIZE PREMIUM.[204] WHAT IS YOUR RESPONSE?

A. First, in my Direct Testimony, I cited to two studies that supported the existence of the small size premium for utility companies, one of which directly responded to the 1993 study by Annie Wong.[205]

Second, Duff & Phelps, a source on which Mr. Gorman, Mr. Lawton, Ms. Reno, and Ms. LaConte rely, reports a clear relationship over time between size and risk. In its 2021 SBBI Yearbook, Duff & Phelps reported the following summary statistics of annual returns over the 1926 to 2020 period shown in Table 9 below.

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[199] Direct Testimony of Michael P. Gorman, at 77.

[200] Direct Testimony of Maureen L. Reno, at 21.

[201] Direct Testimony of Jennifer E. Nelson, at 59.

[202] Direct Testimony of Michael P. Gorman, at 22.

[203] Direct Testimony of Jennifer E. Nelson, at 59.

[204] Direct Testimony of Emily Sears, at 26-27; Direct Testimony of Billie S. LaConte, at 25-26.

[205] Direct Testimony of Jennifer E. Nelson, at 58-59.

Table 9: Summary Statistics of Annual Returns, 1926-2020[206]

	Total Return (Geometric Mean)	Total Return (Arithmetic Mean)	Standard Deviation
Large Capitalization Stocks	10.3%	12.2%	19.7%
Small Capitalizations Stocks	11.9%	16.2%	31.3%

The standard deviation of returns measures the variation, or volatility, in annual returns, with a higher standard deviation indicating greater volatility. As Table 9 above shows, over the long-term, the standard deviation in returns for small capitalization stocks has been higher (*i.e.*, more volatile) than those for large capitalization stocks. Additionally, average total returns have been higher for small capitalization stocks, which is consistent with the fundamental risk-return relationship.

Further, Duff & Phelps breaks down the data shown in Table 9 above into deciles based on market capitalization. As Table 10 below shows, the long-term geometric and arithmetic mean returns from 1926 to 2020, as well as the standard deviation of returns over that same period, generally increase as size decreases.

Table 10: Duff & Phelps' Annual Average Returns and Standard Deviation of Returns by Decile[207]

Size Decile	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns
1st	11.39%	9.67%	18.77%
2nd	12.93%	10.73%	21.22%
3rd	13.65%	11.18%	23.06%
4th	13.85%	10.99%	25.19%
5th	14.48%	11.44%	25.79%
6th	14.84%	11.49%	26.72%
7th	15.53%	11.82%	28.62%
8th	15.84%	11.43%	32.37%
9th	16.91%	11.67%	36.50%
10th	20.04%	13.30%	41.69%

[206] Duff & Phelps, 2021 SBBI Yearbook, Exhibit 6.8, at page 6-17.

[207] Source: Duff & Phelps 2021 CRSP Deciles Size Study, Cost of Capital Navigator as of December 31, 2020. The 1st decile consists of the largest companies based on market capitalization and the 10th decile consists of the smallest companies based on market capitalization.

Additionally, Duff & Phelps' decile study shows that as companies decrease in market capitalization (*i.e.*, size), the Beta coefficient increases, which supports the principle that risk increases as size decreases. Table 11 below reproduces Duff & Phelps' Beta coefficients for each size decile.

Table 11: Duff & Phelps' Beta Coefficients by Size Decile[208]

Size Decile	OLS Beta Coefficient	Sum Beta
1st	0.92	0.92
2nd	1.04	1.06
3rd	1.11	1.14
4th	1.13	1.20
5th	1.17	1.25
6th	1.18	1.28
7th	1.25	1.39
8th	1.31	1.48
9th	1.34	1.54
10th	1.40	1.68

Tables 10 and 11 above demonstrate that, as company size decreases, (1) the annual average long-term historical return (on both an arithmetic and geometric basis) increases, and (2) the volatility of those returns (*i.e.*, risk), as measured by the standard deviation and the Beta coefficients, increases. In other words, the smaller the company, the greater the volatility in returns and the higher the average annual return over the long-term, which is consistent with the basic financial principle of risk and return. Consequently, actual data regarding historical returns and volatility of those returns support the existence of the return premium for small companies.

Q. DOES THE DUFF & PHELPS DECILE STUDY INCLUDE UTILITY COMPANIES?

A. Yes. Duff & Phelps' decile size study includes all companies on the New York Stock Exchange ("NYSE"), NYSE American ("NYSE MKT", a market for small capitalization stocks), and the NASDAQ. It excludes close-ended mutual funds, preferred stocks, real

[208] Source: Duff & Phelps 2021 CRSP Deciles Size Study, Cost of Capital Navigator as of December 31, 2020. The 1st decile consists of the largest companies based on market capitalization and the 10th decile consists of the smallest companies based on market capitalization.

estate investment trusts, foreign stocks, American Depositary Receipts, unit investment trusts, and Americus trusts.[209]

2. Nuclear Generation

Q. MS. LACONTE SUGGESTS THAT THE RELATIVE PROPORTION OF NUCLEAR GENERATION A COMPANY OWNS DOES NOT AFFECT A COMPANY'S RISK PROFILE.[210] IS SHE CORRECT?

A. No, she is not, and her position should be rejected. Ms. LaConte observes that ten of the 21 proxy companies own nuclear generation.[211] This means that over half (*i.e.*, 11 of 21) do not own generation and are not exposed to any nuclear generation risk. As shown in Table 7 of my Direct Testimony, EPE has more than double the proportion of nuclear generation capacity in megawatts as the proxy companies that own generation have on average. On a net generation basis, output from EPE's Palo Verde nuclear facility represented more than 49.00 percent of its total net generation in megawatt-hours, versus approximately 25.00 percent of the ten proxy companies that own generation.[212] As such, EPE is more exposed to operating and business risks associated with nuclear generation than the other proxy companies. For example, consider two utilities, in which a nuclear facility represents 50 percent of total generation for the first utility, but only ten percent of total generation for the second utility. If there was a dislocation in the market for procuring uranium fuel or an unplanned outage, there is no doubt that dislocation would have a significantly greater effect on the first utility in which nuclear represents 50 percent of its total generation than it would for the second utility.

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[209] Duff & Phelps CSRP Deciles Size Study Methodology, Cost of Capital Navigator, pages 1-2.

[210] Direct Testimony of Billie S. LaConte, at 25.

[211] Direct Testimony of Billie S. LaConte, at 25.

[212] Direct Testimony of Jennifer E. Nelson, at 55; Source: S&P Capital IQ.

3. Cost Recovery Mechanisms

Q. THE OPPOSING WITNESSES SUGGEST THAT EPE'S COST RECOVERY MECHANISMS REDUCE ITS RISK.[213] WHAT IS YOUR RESPONSE?

A. First, while EPE's capital cost recovery mechanisms may mitigate risk associated with regulatory lag, they do not eliminate it. Second, developing the Cost of Equity necessarily is a comparative assessment, as the analytical models are applied to a proxy group of comparable companies. As such, even if it were the case that the Company's rate mechanisms mitigate "risk," they only would affect the Cost of Equity if: (1) the effect of the mechanism was to reduce risk below the levels faced by the subject company's peers in the proxy group; and (2) investors knowingly reduced their return requirements for the Company as a direct consequence of the mechanisms. The first step, therefore, is to understand whether cost recovery mechanisms are in place at the proxy companies.

Table 12 below summarizes the rate mechanism categories and the percentage of the electric operating companies within my proxy group that currently have those mechanisms in place (*see also* Exhibit JEN-14R). Notably, whereas approximately 58.00 percent of the proxy group operating companies have a mechanism to address volumetric risk (*e.g.,* decoupling), EPE does not have such a mechanism.

Table 12: Proxy Group Rate Mechanisms vs. EPE[214]

	Proxy Group	EPE
Fuel/Purchased Power	100%	✓
Decoupling (Full or Partial)	57.75%	
Capital Investment	60.56%	✓
Energy Efficiency	81.69%	✓
Renewables/RPS[215] programs	46.48%	
Environmental Compliance	63.38%	
Other	100%	✓

[213] Direct Testimony of Emily Sears, at 28; Direct Testimony of Michael P. Gorman, at 18; Direct Testimony of Daniel J. Lawton, at 19; Direct Testimony of Maureen L. Reno, at 22-23; Direct Testimony of Billie S. LaConte, at 26.

[214] Exhibit JEN-14R.

[215] Renewable Portfolio Standards.

On balance the Company's rate mechanisms simply render it more comparable to its peers. Because the Cost of Equity is a comparative exercise, to the extent capital cost recovery mechanisms reduce a utility's risk and because such mechanisms are common among the proxy group, any risk-reducing effects are reflected in the proxy group and, therefore, in the analytical results that underlie my recommended ROE range.

V. Capital Structure

Q. PLEASE SUMMARIZE THE CAPITAL STRUCTURE RECOMMENDATIONS FROM THE OPPOSING WITNESSES.

A. Ms. Sears, Mr. Gorman, Mr. Lawton, and Ms. Reno each accept the Company's proposed capital structure.[216] Ms. LaConte and Mr. Kronauer do not comment on EPE's proposed capital structure. OPUC Witness Ms. Cannady, however, recommends a ratemaking capital structure consisting of 49.88 percent common equity, 45.11 percent long-term debt, and 5.01 percent short-term debt.[217] In the alternative, Ms. Cannady recommends adjusting "the cost of debt to reflect the weighted average cost for long-term and short-term debt."[218]

Q. PLEASE SUMMARIZE MS. CANNADY'S POSITION REGARDING THE INCLUSION OF SHORT-TERM DEBT IN THE RATEMAKING CAPITAL STRUCTURE.

A. Ms. Cannady's position is that short-term debt "should be considered" in a utility's ratemaking capital structure "to the extent a utility regularly uses short-term debt to finance any of its operations".[219] Based on Ms. Budtke's direct testimony that EPE's Revolving Credit Facility ("RCF") is used to meet short-term funding requirements, Ms. Cannady infers that general funding requirements "are potential uses" of short-term debt.[220]

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[216] *See* Direct Testimony of Emily Sears, at 24; Direct Testimony of Michael P. Gorman, at 20; Direct Testimony of Daniel J. Lawton, at 38; Direct Testimony of Maureen L. Reno, at 16.

[217] Schedule CTC-11.

[218] Direct Testimony of Constance T. Cannady, at 39; *see also* Schedule CTC-11.

[219] Direct Testimony of Constance T. Cannady, at 36.

[220] Direct Testimony of Constance T. Cannady, at 37.

Q. DO YOU AGREE WITH MS. CANNADY'S RECOMMENDATION TO INCLUDE SHORT-TERM DEBT IN EPE'S RATEMAKING CAPITAL STRUCTURE?

A. No, I do not. As explained below, the ratemaking capital structure should be based on the long-term capital used to finance a utility's long-term assets, or rate base, to which the ratemaking capital structure is applied. The Company's RCF is not used to finance rate base;[221] therefore, it should not be included in the ratemaking capital structure.

Prudent financing practice calls for long-term assets (such as rate base items) to be financed with long-term securities. That is, utilities generally follow the financing practice commonly referred to as "maturity matching," which matches the lives of assets being financed with the maturity of the securities issued to finance those assets. Under that practice, the overall term structure of the utility's long-term liabilities — including both debt and equity — correspond to the life of its long-term assets. As noted by Brigham and Houston:

> In practice, firms don't finance each specific asset with a type of capital that has a maturity equal to the asset's life. However, academic studies do show that most firms tend to finance short-term assets from short-term sources and long-term assets from long-term sources.[222]

It would be unusual, therefore, for a utility such as the Company to fund its long-lived assets with short-term debt more commonly used for working capital requirements that tend to be seasonal or non-permanent in nature. As Ms. Cannady acknowledges,[223] the Company's RCF is needed to "maintain liquidity as well as to meet short-term funding requirements".[224] In her Rebuttal Testimony, Ms. Budtke confirms that the RCF borrowings are temporary in nature, demonstrating that the Company adheres to the prudent financing principles noted above.[225] Although short-term debt may be used as an interim source of financing (that is, until a sufficiently large balance has been

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[221] Rebuttal Testimony of Lisa D. Budtke, at 3.

[222] Brigham, Eugene F. and Joel F. Houston, Fundamentals of Financial Management, Concise 4th Ed., Thomson South-Western, 2004, p. 574.

[223] Direct Testimony of Constance T. Cannady, at 37.

[224] Direct Testimony of Lisa D. Budtke, at 17.

[225] Rebuttal Testimony of Lisa D. Budtke, at 3.

accumulated to be efficiently financed by long-term securities), in my opinion, it should not be seen as a permanent source of capital.

Q. HAS THE COMMISSION PREVIOUSLY FOUND IT INAPPROPRIATE TO INCLUDE SHORT-TERM DEBT IN THE RATEMAKING CAPITAL STRUCTURE?

A. Yes. In Docket No. 43695, the Commission found including short-term debt in Southwestern Public Service Company's ratemaking capital structure was "unreasonable and inconsistent with Commission precedent."[226]

Q. DOES THE FACT THAT EPE IS PRIVATELY OWNED BY SUN JUPITER MEAN THAT IT DOES NOT COMPETE FOR EQUITY CAPITAL, AS MS. CANNADY SUGGESTS?[227]

A. No, it does not. As explained earlier and in my Direct Testimony, when funding is provided by a parent entity, the return still must be sufficient to provide an incentive to allocate equity capital to the subsidiary or business unit rather than other internal or external investment opportunities. That is, the regulated subsidiary must compete for capital with all the parent company's affiliates, as well as with other similarly situated utility companies.[228] Therefore, EPE's corporate ownership has no bearing on EPE's Cost of Capital (including the capital structure).

VI. Updated ROE Analytical Results

Q. HAVE YOU UPDATED THE ANALYSES CONTAINED IN YOUR DIRECT TESTIMONY?

A. Yes. I have updated the Constant Growth DCF, Quarterly Growth DCF, CAPM, ECAPM, Bond Yield Risk Premium, and capital structure analyses based on data through September 30, 2021, and applied them to the same proxy group of companies filed in my Direct Testimony, with the exception of DTE Energy Company ("DTE"). DTE cut its

[226] Docket No. 43695, *Application of Southwestern Public Service Company for Authority to Change Rates*, Final Order, Finding of Fact No. 71 (December 18, 2015); upheld in Order on Rehearing (February 23, 2016).

[227] Direct Testimony of Constance T. Cannady, at 38.

[228] Direct Testimony of Jennifer E. Nelson, at 59.

dividend as part of the spinoff of its midstream business that was completed on July 1, 2021. As such, it now fails my proxy group screening criteria and I have removed DTE from my updated analyses. Table 13 below summarizes my updated results.

Table 13: Summary of Updated Results[229]

Constant Growth DCF	**Low**	**Mean**	**High**
30-Day Average	8.40%	9.16%	10.00%
90-Day Average	8.40%	9.15%	9.96%
180-Day Average	8.46%	9.21%	10.03%
Quarterly Growth DCF	**Low**	**Mean**	**High**
30-Day Average	8.55%	9.32%	10.23%
90-Day Average	8.55%	9.33%	10.18%
180-Day Average	8.62%	9.41%	10.25%
CAPM (*Value Line*-derived)		**Current 30-Year Treasury Yield (1.93%)**	**Projected 30-Year Treasury Yield (3.08%)**
Proxy Group Average		13.60%	13.73%
Proxy Group Median		13.77%	13.88%
Empirical CAPM (*Value Line*-derived)		**Current 30-Year Treasury Yield (1.93%)**	**Projected 30-Year Treasury Yield (3.08%)**
Proxy Group Average		13.97%	14.07%
Proxy Group Median		14.09%	14.18%
Bond Yield Plus Risk Premium			
Current 30-Year Treasury Yield (1.93%)		9.87%	
Projected 30-Year Treasury Yield (3.08%)		9.82%	

VII. Conclusion

Q. WHAT IS YOUR CONCLUSION REGARDING THE COMPANY'S COST OF EQUITY AND CAPITAL STRUCTURE?

[229] *See*, Exhibits JEN-1R, JEN-2R, JEN-4R, JEN-5R. DCF results are the average of the mean and median proxy group results.

A. As discussed in my Direct and Rebuttal Testimonies, it is critical that the Company maintain its financial profile in order to provide safe, reliable service to the benefit of customers. The Opposing Witnesses' recommendations are unduly low and would not provide a risk-comparable return, impeding EPE's ability to maintain a strong financial profile. Based on the analyses discussed throughout my Rebuttal Testimony, I continue to find that the reasonable range of ROE estimates is from 9.75 percent to 10.75 percent, and within that range, 10.30 percent remains a reasonable and appropriate estimate of EPE's Cost of Equity. The results of the updated DCF, CAPM, ECAPM, and Bond Yield Plus Risk Premium analyses, along with my analyses of capital market data and the Company's higher risk profile, continue to support the reasonableness of my range of ROE estimates and my recommendation. As to the capital structure, I continue to find that the Company's proposed capital structure of 51.00 percent common equity and 49.00 percent long-term debt is consistent with, albeit somewhat more leveraged than, the proxy group and is therefore reasonable and should be approved.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

Constant Growth Discounted Cash Flow Model with Half Year Growth Adjustment
30 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] Yahoo! Earnings Growth	[7] Value Line Earnings Growth	[8] Average Earnings Growth	[9] Low ROE	[10] Mean ROE	[11] High ROE
ALLETE, Inc.	ALE	$2.52	$64.39	3.91%	4.02%	6.00%	5.67%	5.00%	5.56%	9.01%	9.58%	10.03%
Alliant Energy Corporation	LNT	$1.61	$59.39	2.71%	2.79%	5.90%	5.80%	5.50%	5.73%	8.29%	8.52%	8.69%
Ameren Corporation	AEE	$2.20	$85.94	2.56%	2.65%	7.30%	7.70%	6.50%	7.17%	9.14%	9.82%	10.36%
American Electric Power Company, Inc.	AEP	$2.96	$87.05	3.40%	3.50%	5.70%	6.03%	6.50%	6.08%	9.20%	9.58%	10.01%
Avista Corporation	AVA	$1.69	$40.93	4.13%	4.23%	5.10%	6.20%	3.00%	4.77%	7.19%	8.99%	10.46%
CMS Energy Corporation	CMS	$1.74	$62.87	2.77%	2.85%	6.90%	5.72%	6.00%	6.21%	8.57%	9.06%	9.76%
Duke Energy Corporation	DUK	$3.94	$102.54	3.84%	3.96%	5.30%	5.45%	7.00%	5.92%	9.24%	9.87%	10.98%
Entergy Corporation	ETR	$3.80	$109.82	3.46%	3.51%	1.40%	3.50%	3.00%	2.63%	4.88%	6.14%	7.02%
Evergy, Inc	EVRG	$2.14	$66.29	3.23%	3.33%	6.10%	5.70%	8.00%	6.60%	9.02%	9.93%	11.36%
Hawaiian Electric Industries, Inc.	HE	$1.36	$42.42	3.21%	3.28%	7.30%	1.30%	5.00%	4.53%	4.53%	7.81%	10.62%
IDACORP, Inc.	IDA	$2.84	$105.32	2.70%	2.75%	3.90%	3.20%	4.00%	3.70%	5.94%	6.45%	6.75%
NextEra Energy, Inc.	NEE	$1.54	$83.29	1.85%	1.93%	8.30%	7.85%	10.50%	8.88%	9.77%	10.81%	12.45%
NorthWestern Corporation	NWE	$2.48	$62.04	4.00%	4.08%	4.80%	4.50%	3.00%	4.10%	7.06%	8.18%	8.89%
OGE Energy Corp.	OGE	$1.64	$34.72	4.72%	4.82%	4.50%	3.90%	4.00%	4.13%	8.72%	8.95%	9.33%
Otter Tail Corporation	OTTR	$1.56	$55.36	2.82%	2.92%	4.70%	9.00%	7.00%	6.90%	7.58%	9.82%	11.94%
Pinnacle West Capital Corporation	PNW	$3.32	$75.39	4.40%	4.48%	5.00%	0.10%	5.00%	3.37%	4.51%	7.84%	9.51%
Portland General Electric Company	POR	$1.72	$50.02	3.44%	3.58%	8.60%	7.10%	8.50%	8.07%	10.66%	11.64%	12.19%
The Southern Company	SO	$2.64	$65.23	4.05%	4.16%	4.90%	6.50%	6.00%	5.80%	9.05%	9.96%	10.68%
WEC Energy Group, Inc.	WEC	$2.71	$93.22	2.91%	3.00%	6.30%	6.50%	6.50%	6.43%	9.30%	9.43%	9.50%
Xcel Energy Inc.	XEL	$1.83	$66.59	2.75%	2.83%	6.10%	6.30%	6.00%	6.13%	8.83%	8.97%	9.13%
Proxy Group Mean				3.34%	3.43%	5.71%	5.40%	5.80%	5.64%	8.02%	9.07%	9.98%
Proxy Group Median				3.31%	3.42%	5.80%	5.76%	6.00%	5.86%	8.77%	9.25%	10.02%
Average of the Proxy Group Mean and Median										8.40%	9.16%	10.00%

Notes:
[1] Source: Bloomberg Professional Service
[2] Source: Bloomberg Professional Service, equals indicated number of trading day average as of 09/30/2021
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [8])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Exhibit JEN-1R
Page 1 of 3

Constant Growth Discounted Cash Flow Model with Half Year Growth Adjustment
90 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] Yahoo! Earnings Growth	[7] Value Line Earnings Growth	[8] Average Earnings Growth	[9] Low ROE	[10] Mean ROE	[11] High ROE
ALLETE, Inc.	ALE	$2.52	$68.09	3.70%	3.80%	6.00%	5.67%	5.00%	5.56%	8.79%	9.36%	9.81%
Alliant Energy Corporation	LNT	$1.61	$58.62	2.75%	2.83%	5.90%	5.80%	5.50%	5.73%	8.32%	8.56%	8.73%
Ameren Corporation	AEE	$2.20	$84.88	2.59%	2.68%	7.30%	7.70%	6.50%	7.17%	9.18%	9.85%	10.39%
American Electric Power Company, Inc.	AEP	$2.96	$86.52	3.42%	3.53%	5.70%	6.03%	6.50%	6.08%	9.22%	9.60%	10.03%
Avista Corporation	AVA	$1.69	$42.64	3.96%	4.06%	5.10%	6.20%	3.00%	4.77%	7.02%	8.82%	10.29%
CMS Energy Corporation	CMS	$1.74	$61.89	2.81%	2.90%	6.90%	5.72%	6.00%	6.21%	8.61%	9.11%	9.81%
Duke Energy Corporation	DUK	$3.94	$102.73	3.84%	3.95%	5.30%	5.45%	7.00%	5.92%	9.24%	9.87%	10.97%
Entergy Corporation	ETR	$3.80	$106.46	3.57%	3.62%	1.40%	3.50%	3.00%	2.63%	4.99%	6.25%	7.13%
Evergy, Inc	EVRG	$2.14	$64.67	3.31%	3.42%	6.10%	5.70%	8.00%	6.60%	9.10%	10.02%	11.44%
Hawaiian Electric Industries, Inc.	HE	$1.36	$42.98	3.16%	3.24%	7.30%	1.30%	5.00%	4.53%	4.48%	7.77%	10.58%
IDACORP, Inc.	IDA	$2.84	$102.95	2.76%	2.81%	3.90%	3.20%	4.00%	3.70%	6.00%	6.51%	6.81%
NextEra Energy, Inc.	NEE	$1.54	$78.52	1.96%	2.05%	8.30%	7.85%	10.50%	8.88%	9.89%	10.93%	12.56%
NorthWestern Corporation	NWE	$2.48	$62.33	3.98%	4.06%	4.80%	4.50%	3.00%	4.10%	7.04%	8.16%	8.87%
OGE Energy Corp.	OGE	$1.64	$34.47	4.76%	4.86%	4.50%	3.90%	4.00%	4.13%	8.75%	8.99%	9.37%
Otter Tail Corporation	OTTR	$1.56	$51.74	3.01%	3.12%	4.70%	9.00%	7.00%	6.90%	7.79%	10.02%	12.15%
Pinnacle West Capital Corporation	PNW	$3.32	$80.87	4.11%	4.17%	5.00%	0.10%	5.00%	3.37%	4.21%	7.54%	9.21%
Portland General Electric Company	POR	$1.72	$48.96	3.51%	3.65%	8.60%	7.10%	8.50%	8.07%	10.74%	11.72%	12.26%
The Southern Company	SO	$2.64	$63.98	4.13%	4.25%	4.90%	6.50%	6.00%	5.80%	9.13%	10.05%	10.76%
WEC Energy Group, Inc.	WEC	$2.71	$93.25	2.91%	3.00%	6.30%	6.50%	6.50%	6.43%	9.30%	9.43%	9.50%
Xcel Energy Inc.	XEL	$1.83	$67.87	2.70%	2.78%	6.10%	6.30%	6.00%	6.13%	8.78%	8.91%	9.08%
Proxy Group Mean				3.35%	3.44%	5.71%	5.40%	5.80%	5.64%	8.03%	9.07%	9.99%
Proxy Group Median				3.37%	3.47%	5.80%	5.76%	6.00%	5.86%	8.76%	9.23%	9.92%
Average of the Proxy Group Mean and Median										8.40%	9.15%	9.96%

Notes:
[1] Source: Bloomberg Professional Service
[2] Source: Bloomberg Professional Service, equals indicated number of trading day average as of 09/30/2021
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [8])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

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Constant Growth Discounted Cash Flow Model with Half Year Growth Adjustment
180 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] Yahoo! Earnings Growth	[7] Value Line Earnings Growth	[8] Average Earnings Growth	[9] Low ROE	[10] Mean ROE	[11] High ROE
ALLETE, Inc.	ALE	$2.52	$67.78	3.72%	3.82%	6.00%	5.67%	5.00%	5.56%	8.81%	9.38%	9.83%
Alliant Energy Corporation	LNT	$1.61	$55.51	2.90%	2.98%	5.90%	5.80%	5.50%	5.73%	8.48%	8.72%	8.89%
Ameren Corporation	AEE	$2.20	$81.67	2.69%	2.79%	7.30%	7.70%	6.50%	7.17%	9.28%	9.96%	10.50%
American Electric Power Company, Inc.	AEP	$2.96	$84.94	3.48%	3.59%	5.70%	6.03%	6.50%	6.08%	9.28%	9.67%	10.10%
Avista Corporation	AVA	$1.69	$43.11	3.92%	4.01%	5.10%	6.20%	3.00%	4.77%	6.98%	8.78%	10.24%
CMS Energy Corporation	CMS	$1.74	$60.85	2.86%	2.95%	6.90%	5.72%	6.00%	6.21%	8.66%	9.15%	9.86%
Duke Energy Corporation	DUK	$3.94	$98.90	3.98%	4.10%	5.30%	5.45%	7.00%	5.92%	9.39%	10.02%	11.12%
Entergy Corporation	ETR	$3.80	$102.73	3.70%	3.75%	1.40%	3.50%	3.00%	2.63%	5.12%	6.38%	7.26%
Evergy, Inc	EVRG	$2.14	$61.59	3.47%	3.59%	6.10%	5.70%	8.00%	6.60%	9.27%	10.19%	11.61%
Hawaiian Electric Industries, Inc.	HE	$1.36	$41.30	3.29%	3.37%	7.30%	1.30%	5.00%	4.53%	4.61%	7.90%	10.71%
IDACORP, Inc.	IDA	$2.84	$99.22	2.86%	2.92%	3.90%	3.20%	4.00%	3.70%	6.11%	6.62%	6.92%
NextEra Energy, Inc.	NEE	$1.54	$77.90	1.98%	2.06%	8.30%	7.85%	10.50%	8.88%	9.90%	10.95%	12.58%
NorthWestern Corporation	NWE	$2.48	$62.36	3.98%	4.06%	4.80%	4.50%	3.00%	4.10%	7.04%	8.16%	8.87%
OGE Energy Corp.	OGE	$1.64	$33.34	4.92%	5.02%	4.50%	3.90%	4.00%	4.13%	8.91%	9.15%	9.53%
Otter Tail Corporation	OTTR	$1.56	$48.20	3.24%	3.35%	4.70%	9.00%	7.00%	6.90%	8.01%	10.25%	12.38%
Pinnacle West Capital Corporation	PNW	$3.32	$80.51	4.12%	4.19%	5.00%	0.10%	5.00%	3.37%	4.23%	7.56%	9.23%
Portland General Electric Company	POR	$1.72	$47.63	3.61%	3.76%	8.60%	7.10%	8.50%	8.07%	10.84%	11.82%	12.37%
The Southern Company	SO	$2.64	$62.88	4.20%	4.32%	4.90%	6.50%	6.00%	5.80%	9.20%	10.12%	10.83%
WEC Energy Group, Inc.	WEC	$2.71	$91.92	2.95%	3.04%	6.30%	6.50%	6.50%	6.43%	9.34%	9.48%	9.54%
Xcel Energy Inc.	XEL	$1.83	$66.91	2.73%	2.82%	6.10%	6.30%	6.00%	6.13%	8.82%	8.95%	9.12%
Proxy Group Mean				3.43%	3.52%	5.71%	5.40%	5.80%	5.64%	8.11%	9.16%	10.08%
Proxy Group Median				3.48%	3.59%	5.80%	5.76%	6.00%	5.86%	8.81%	9.27%	9.98%
Average of the Proxy Group Mean and Median										8.46%	9.21%	10.03%

Notes:
[1] Source: Bloomberg Professional Service
[2] Source: Bloomberg Professional Service, equals indicated number of trading day average as of 09/30/2021
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [8])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

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Quarterly Discounted Cash Flow Model
30 Day Average Stock Price

Company	Ticker	[1] Dividend 1	[2] Dividend 2	[3] Dividend 3	[4] Dividend 4	[5] Expected Dividend 1	[6] Expected Dividend 2	[7] Expected Dividend 3	[8] Expected Dividend 4	[9] Stock Price	[10] Zacks Earnings Growth	[11] Yahoo! Earnings Growth	[12] Value Line Earnings Growth	[13] Average Earnings Growth	[14] Low ROE	[15] Mean ROE	[16] High ROE
ALLETE, Inc.	ALE	$0.63	$0.63	$0.63	$0.62	$0.67	$0.67	$0.67	$0.65	$64.39	6.00%	5.67%	5.00%	5.56%	9.23%	9.82%	10.28%
Alliant Energy Corporation	LNT	$0.40	$0.40	$0.40	$0.38	$0.43	$0.43	$0.43	$0.40	$59.39	5.90%	5.80%	5.50%	5.73%	8.41%	8.65%	8.82%
Ameren Corporation	AEE	$0.55	$0.55	$0.55	$0.52	$0.59	$0.59	$0.59	$0.55	$85.94	7.30%	7.70%	6.50%	7.17%	9.28%	9.97%	10.52%
American Electric Power Company, Inc.	AEP	$0.74	$0.74	$0.74	$0.74	$0.78	$0.78	$0.78	$0.78	$87.05	5.70%	6.03%	6.50%	6.08%	9.42%	9.81%	10.26%
Avista Corporation	AVA	$0.42	$0.42	$0.42	$0.41	$0.44	$0.44	$0.44	$0.42	$40.93	5.10%	6.20%	3.00%	4.77%	7.32%	9.19%	10.71%
CMS Energy Corporation	CMS	$0.44	$0.44	$0.44	$0.41	$0.46	$0.46	$0.46	$0.43	$62.87	6.90%	5.72%	6.00%	6.21%	8.69%	9.20%	9.92%
Duke Energy Corporation	DUK	$0.99	$0.97	$0.97	$0.97	$1.04	$1.02	$1.02	$1.02	$102.54	5.30%	5.45%	7.00%	5.92%	9.42%	10.07%	11.22%
Entergy Corporation	ETR	$0.95	$0.95	$0.95	$0.95	$0.98	$0.98	$0.98	$0.98	$109.82	1.40%	3.50%	3.00%	2.63%	4.97%	6.27%	7.18%
Evergy, Inc	EVRG	$0.54	$0.54	$0.54	$0.54	$0.57	$0.57	$0.57	$0.57	$66.29	6.10%	5.70%	8.00%	6.60%	9.23%	10.17%	11.64%
Hawaiian Electric Industries, Inc.	HE	$0.34	$0.34	$0.34	$0.33	$0.36	$0.36	$0.36	$0.34	$42.42	7.30%	1.30%	5.00%	4.53%	4.58%	7.96%	10.85%
IDACORP, Inc.	IDA	$0.71	$0.71	$0.71	$0.71	$0.74	$0.74	$0.74	$0.74	$105.32	3.90%	3.20%	4.00%	3.70%	6.05%	6.56%	6.88%
NextEra Energy, Inc.	NEE	$0.39	$0.39	$0.39	$0.35	$0.42	$0.42	$0.42	$0.38	$83.29	8.30%	7.85%	10.50%	8.88%	9.87%	10.93%	12.59%
NorthWestern Corporation	NWE	$0.62	$0.62	$0.62	$0.60	$0.65	$0.65	$0.65	$0.62	$62.04	4.80%	4.50%	3.00%	4.10%	7.19%	8.36%	9.10%
OGE Energy Corp.	OGE	$0.41	$0.40	$0.40	$0.40	$0.43	$0.42	$0.42	$0.42	$34.72	4.50%	3.90%	4.00%	4.13%	8.90%	9.15%	9.54%
Otter Tail Corporation	OTTR	$0.39	$0.39	$0.39	$0.37	$0.42	$0.42	$0.42	$0.40	$55.36	4.70%	9.00%	7.00%	6.90%	7.70%	9.98%	12.17%
Pinnacle West Capital Corporation	PNW	$0.83	$0.83	$0.83	$0.83	$0.86	$0.86	$0.86	$0.86	$75.39	5.00%	0.10%	5.00%	3.37%	4.58%	8.05%	9.79%
Portland General Electric Company	POR	$0.43	$0.43	$0.41	$0.41	$0.46	$0.46	$0.44	$0.44	$50.02	8.60%	7.10%	8.50%	8.07%	10.83%	11.85%	12.40%
The Southern Company	SO	$0.66	$0.66	$0.64	$0.64	$0.70	$0.70	$0.68	$0.68	$65.23	4.90%	6.50%	6.00%	5.80%	9.22%	10.18%	10.92%
WEC Energy Group, Inc.	WEC	$0.68	$0.68	$0.68	$0.63	$0.72	$0.72	$0.72	$0.67	$93.22	6.30%	6.50%	6.50%	6.43%	9.45%	9.59%	9.65%
Xcel Energy Inc.	XEL	$0.46	$0.46	$0.46	$0.43	$0.49	$0.49	$0.49	$0.46	$66.59	6.10%	6.30%	6.00%	6.13%	8.97%	9.10%	9.28%
Proxy Group Mean											5.71%	5.40%	5.80%	5.64%	8.17%	9.24%	10.19%
Proxy Group Median											5.80%	5.76%	6.00%	5.86%	8.93%	9.39%	10.27%
Average of the Proxy Group Mean and Median															8.55%	9.32%	10.23%

Notes:
[1] Source: Bloomberg Professional Service
[2] Source: Bloomberg Professional Service
[3] Source: Bloomberg Professional Service
[4] Source: Bloomberg Professional Service
[5] Equals Col. [1] x (1 + Col. [13])
[6] Equals Col. [2] x (1 + Col. [13])
[7] Equals Col. [3] x (1 + Col. [13])
[8] Equals Col. [4] x (1 + Col. [13])
[9] Source: Bloomberg Professional Service, equals indicated number of trading day average as of 09/30/2021
[10] Source: Zacks
[11] Source: Yahoo! Finance
[12] Source: Value Line
[13] Equals Average (Cols. [10], [11], [12])
[14] Implied Low DCF
[15] Implied Mean DCF
[16] Implied High DCF

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Quarterly Discounted Cash Flow Model
90 Day Average Stock Price

Company	Ticker	[1] Dividend 1	[2] Dividend 2	[3] Dividend 3	[4] Dividend 4	[5] Expected Dividend 1	[6] Expected Dividend 2	[7] Expected Dividend 3	[8] Expected Dividend 4	[9] Stock Price	[10] Zacks Earnings Growth	[11] Yahoo! Earnings Growth	[12] Value Line Earnings Growth	[13] Average Earnings Growth	[14] Low ROE	[15] Mean ROE	[16] High ROE
ALLETE, Inc.	ALE	$0.63	$0.63	$0.63	$0.62	$0.67	$0.67	$0.67	$0.65	$68.09	6.00%	5.67%	5.00%	5.56%	9.00%	9.58%	10.05%
Alliant Energy Corporation	LNT	$0.40	$0.40	$0.40	$0.38	$0.43	$0.43	$0.43	$0.40	$58.62	5.90%	5.80%	5.50%	5.73%	8.45%	8.69%	8.86%
Ameren Corporation	AEE	$0.55	$0.55	$0.55	$0.52	$0.59	$0.59	$0.59	$0.55	$84.88	7.30%	7.70%	6.50%	7.17%	9.31%	10.00%	10.56%
American Electric Power Company, Inc.	AEP	$0.74	$0.74	$0.74	$0.74	$0.78	$0.78	$0.78	$0.78	$86.52	5.70%	6.03%	6.50%	6.08%	9.44%	9.84%	10.28%
Avista Corporation	AVA	$0.42	$0.42	$0.42	$0.41	$0.44	$0.44	$0.44	$0.42	$42.64	5.10%	6.20%	3.00%	4.77%	7.15%	9.01%	10.53%
CMS Energy Corporation	CMS	$0.44	$0.44	$0.44	$0.41	$0.46	$0.46	$0.46	$0.43	$61.89	6.90%	5.72%	6.00%	6.21%	8.74%	9.25%	9.97%
Duke Energy Corporation	DUK	$0.99	$0.97	$0.97	$0.97	$1.04	$1.02	$1.02	$1.02	$102.73	5.30%	5.45%	7.00%	5.92%	9.42%	10.07%	11.21%
Entergy Corporation	ETR	$0.95	$0.95	$0.95	$0.95	$0.98	$0.98	$0.98	$0.98	$106.46	1.40%	3.50%	3.00%	2.63%	5.09%	6.38%	7.29%
Evergy, Inc	EVRG	$0.54	$0.54	$0.54	$0.54	$0.57	$0.57	$0.57	$0.57	$64.67	6.10%	5.70%	8.00%	6.60%	9.32%	10.26%	11.73%
Hawaiian Electric Industries, Inc.	HE	$0.34	$0.34	$0.34	$0.33	$0.36	$0.36	$0.36	$0.34	$42.98	7.30%	1.30%	5.00%	4.53%	4.54%	7.91%	10.81%
IDACORP, Inc.	IDA	$0.71	$0.71	$0.71	$0.71	$0.74	$0.74	$0.74	$0.74	$102.95	3.90%	3.20%	4.00%	3.70%	6.11%	6.63%	6.94%
NextEra Energy, Inc.	NEE	$0.39	$0.39	$0.39	$0.35	$0.42	$0.42	$0.42	$0.38	$78.52	8.30%	7.85%	10.50%	8.88%	9.99%	11.06%	12.72%
NorthWestern Corporation	NWE	$0.62	$0.62	$0.62	$0.60	$0.65	$0.65	$0.65	$0.62	$62.33	4.80%	4.50%	3.00%	4.10%	7.17%	8.34%	9.08%
OGE Energy Corp.	OGE	$0.41	$0.40	$0.40	$0.40	$0.43	$0.42	$0.42	$0.42	$34.47	4.50%	3.90%	4.00%	4.13%	8.94%	9.19%	9.58%
Otter Tail Corporation	OTTR	$0.39	$0.39	$0.39	$0.37	$0.42	$0.42	$0.42	$0.40	$51.74	4.70%	9.00%	7.00%	6.90%	7.91%	10.20%	12.39%
Pinnacle West Capital Corporation	PNW	$0.83	$0.83	$0.83	$0.83	$0.86	$0.86	$0.86	$0.86	$80.87	5.00%	0.10%	5.00%	3.37%	4.27%	7.73%	9.46%
Portland General Electric Company	POR	$0.43	$0.43	$0.41	$0.41	$0.46	$0.46	$0.44	$0.44	$48.96	8.60%	7.10%	8.50%	8.07%	10.91%	11.93%	12.49%
The Southern Company	SO	$0.66	$0.66	$0.64	$0.64	$0.70	$0.70	$0.68	$0.68	$63.98	4.90%	6.50%	6.00%	5.80%	9.31%	10.26%	11.00%
WEC Energy Group, Inc.	WEC	$0.68	$0.68	$0.68	$0.63	$0.72	$0.72	$0.72	$0.67	$93.25	6.30%	6.50%	6.50%	6.43%	9.45%	9.58%	9.65%
Xcel Energy Inc.	XEL	$0.46	$0.46	$0.46	$0.43	$0.49	$0.49	$0.49	$0.46	$67.87	6.10%	6.30%	6.00%	6.13%	8.91%	9.05%	9.22%
Proxy Group Mean											5.71%	5.40%	5.80%	5.64%	8.17%	9.25%	10.19%
Proxy Group Median											5.80%	5.76%	6.00%	5.86%	8.92%	9.41%	10.16%
Average of the Proxy Group Mean and Median															8.55%	9.33%	10.18%

Notes:
[1] Source: Bloomberg Professional Service
[2] Source: Bloomberg Professional Service
[3] Source: Bloomberg Professional Service
[4] Source: Bloomberg Professional Service
[5] Equals Col. [1] x (1 + Col. [13])
[6] Equals Col. [2] x (1 + Col. [13])
[7] Equals Col. [3] x (1 + Col. [13])
[8] Equals Col. [4] x (1 + Col. [13])
[9] Source: Bloomberg Professional Service, equals indicated number of trading day average as of 09/30/2021
[10] Source: Zacks
[11] Source: Yahoo! Finance
[12] Source: Value Line
[13] Equals Average (Cols. [10], [11], [12])
[14] Implied Low DCF
[15] Implied Mean DCF
[16] Implied High DCF

Exhibit JEN-2R
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Quarterly Discounted Cash Flow Model
180 Day Average Stock Price

Company	Ticker	[1] Dividend 1	[2] Dividend 2	[3] Dividend 3	[4] Dividend 4	[5] Expected Dividend 1	[6] Expected Dividend 2	[7] Expected Dividend 3	[8] Expected Dividend 4	[9] Stock Price	[10] Zacks Earnings Growth	[11] Yahoo! Earnings Growth	[12] Value Line Earnings Growth	[13] Average Earnings Growth	[14] Low ROE	[15] Mean ROE	[16] High ROE
ALLETE, Inc.	ALE	$0.63	$0.63	$0.63	$0.62	$0.67	$0.67	$0.67	$0.65	$67.78	6.00%	5.67%	5.00%	5.56%	9.01%	9.60%	10.07%
Alliant Energy Corporation	LNT	$0.40	$0.40	$0.40	$0.38	$0.43	$0.43	$0.43	$0.40	$55.51	5.90%	5.80%	5.50%	5.73%	8.61%	8.86%	9.03%
Ameren Corporation	AEE	$0.55	$0.55	$0.55	$0.52	$0.59	$0.59	$0.59	$0.55	$81.67	7.30%	7.70%	6.50%	7.17%	9.42%	10.11%	10.67%
American Electric Power Company, Inc.	AEP	$0.74	$0.74	$0.74	$0.74	$0.78	$0.78	$0.78	$0.78	$84.94	5.70%	6.03%	6.50%	6.08%	9.51%	9.91%	10.35%
Avista Corporation	AVA	$0.42	$0.42	$0.42	$0.41	$0.44	$0.44	$0.44	$0.42	$43.11	5.10%	6.20%	3.00%	4.77%	7.10%	8.97%	10.48%
CMS Energy Corporation	CMS	$0.44	$0.44	$0.44	$0.41	$0.46	$0.46	$0.46	$0.43	$60.85	6.90%	5.72%	6.00%	6.21%	8.79%	9.30%	10.02%
Duke Energy Corporation	DUK	$0.99	$0.97	$0.97	$0.97	$1.04	$1.02	$1.02	$1.02	$98.90	5.30%	5.45%	7.00%	5.92%	9.58%	10.23%	11.37%
Entergy Corporation	ETR	$0.95	$0.95	$0.95	$0.95	$0.98	$0.98	$0.98	$0.98	$102.73	1.40%	3.50%	3.00%	2.63%	5.22%	6.52%	7.43%
Evergy, Inc	EVRG	$0.54	$0.54	$0.54	$0.54	$0.57	$0.57	$0.57	$0.57	$61.59	6.10%	5.70%	8.00%	6.60%	9.50%	10.45%	11.92%
Hawaiian Electric Industries, Inc.	HE	$0.34	$0.34	$0.34	$0.33	$0.36	$0.36	$0.36	$0.34	$41.30	7.30%	1.30%	5.00%	4.53%	4.67%	8.05%	10.95%
IDACORP, Inc.	IDA	$0.71	$0.71	$0.71	$0.71	$0.74	$0.74	$0.74	$0.74	$99.22	3.90%	3.20%	4.00%	3.70%	6.22%	6.74%	7.05%
NextEra Energy, Inc.	NEE	$0.39	$0.39	$0.39	$0.35	$0.42	$0.42	$0.42	$0.38	$77.90	8.30%	7.85%	10.50%	8.88%	10.01%	11.07%	12.74%
NorthWestern Corporation	NWE	$0.62	$0.62	$0.62	$0.60	$0.65	$0.65	$0.65	$0.62	$62.36	4.80%	4.50%	3.00%	4.10%	7.17%	8.33%	9.07%
OGE Energy Corp.	OGE	$0.41	$0.40	$0.40	$0.40	$0.43	$0.42	$0.42	$0.42	$33.34	4.50%	3.90%	4.00%	4.13%	9.11%	9.36%	9.75%
Otter Tail Corporation	OTTR	$0.39	$0.39	$0.39	$0.37	$0.42	$0.42	$0.42	$0.40	$48.20	4.70%	9.00%	7.00%	6.90%	8.15%	10.45%	12.65%
Pinnacle West Capital Corporation	PNW	$0.83	$0.83	$0.83	$0.83	$0.86	$0.86	$0.86	$0.86	$80.51	5.00%	0.10%	5.00%	3.37%	4.29%	7.75%	9.48%
Portland General Electric Company	POR	$0.43	$0.43	$0.41	$0.41	$0.46	$0.46	$0.44	$0.44	$47.63	8.60%	7.10%	8.50%	8.07%	11.02%	12.04%	12.60%
The Southern Company	SO	$0.66	$0.66	$0.64	$0.64	$0.70	$0.70	$0.68	$0.68	$62.88	4.90%	6.50%	6.00%	5.80%	9.39%	10.34%	11.08%
WEC Energy Group, Inc.	WEC	$0.68	$0.68	$0.68	$0.63	$0.72	$0.72	$0.72	$0.67	$91.92	6.30%	6.50%	6.50%	6.43%	9.49%	9.63%	9.70%
Xcel Energy Inc.	XEL	$0.46	$0.46	$0.46	$0.43	$0.49	$0.49	$0.49	$0.46	$66.91	6.10%	6.30%	6.00%	6.13%	8.95%	9.09%	9.26%
Proxy Group Mean											5.71%	5.40%	5.80%	5.64%	8.26%	9.34%	10.28%
Proxy Group Median											5.80%	5.76%	6.00%	5.86%	8.98%	9.48%	10.21%
Average of the Proxy Group Mean and Median															8.62%	9.41%	10.25%

Notes:
[1] Source: Bloomberg Professional Service
[2] Source: Bloomberg Professional Service
[3] Source: Bloomberg Professional Service
[4] Source: Bloomberg Professional Service
[5] Equals Col. [1] x (1 + Col. [13])
[6] Equals Col. [2] x (1 + Col. [13])
[7] Equals Col. [3] x (1 + Col. [13])
[8] Equals Col. [4] x (1 + Col. [13])
[9] Source: Bloomberg Professional Service, equals indicated number of trading day average as of 09/30/2021
[10] Source: Zacks
[11] Source: Yahoo! Finance
[12] Source: Value Line
[13] Equals Average (Cols. [10], [11], [12])
[14] Implied Low DCF
[15] Implied Mean DCF
[16] Implied High DCF

Exhibit JEN-2R
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Expected Market Return
Market DCF Method Based - Value Line

[1] S&P 500 Est. Required Market Return
15.08%

Company	Ticker	[2] Market Capitalization	[3] Weight in Index	[4] Estimated Dividend Yield	[5] Long-Term Growth Est.	[6] DCF Result	[7] Weighted DCF Result
Agilent Technologies Inc	A	52,249.32	0.14%	0.45%	11.50%	11.98%	0.0168%
American Airlines Group Inc	AAL	13,285.59	N/A	0.00%	N/A	N/A	N/A
Advance Auto Parts Inc	AAP	13,411.62	0.04%	1.89%	11.00%	12.99%	0.0047%
Apple Inc	AAPL	2,414,830.00	6.49%	0.63%	17.00%	17.68%	1.1474%
AbbVie Inc	ABBV	188,029.30	0.51%	4.89%	6.50%	11.55%	0.0583%
AmerisourceBergen Corp	ABC	25,359.44	0.07%	1.49%	6.50%	8.04%	0.0055%
ABIOMED Inc	ABMD	15,835.11	0.04%	0.00%	9.50%	9.50%	0.0040%
Abbott Laboratories	ABT	220,981.60	0.59%	1.44%	11.50%	13.02%	0.0773%
Accenture PLC	ACN	202,509.36	0.54%	1.21%	10.00%	11.27%	0.0613%
Adobe Inc	ADBE	298,640.10	0.80%	0.00%	15.50%	15.50%	0.1244%
Analog Devices Inc	ADI	64,014.01	0.17%	1.59%	11.00%	12.68%	0.0218%
Archer-Daniels-Midland Co	ADM	32,975.41	0.09%	2.58%	8.50%	11.19%	0.0099%
Automatic Data Processing Inc	ADP	84,023.95	0.23%	2.03%	9.00%	11.12%	0.0251%
Autodesk Inc	ADSK	62,983.75	0.17%	0.00%	18.00%	18.00%	0.0305%
Ameren Corp	AEE	21,485.85	0.06%	2.76%	6.50%	9.35%	0.0054%
American Electric Power Co Inc	AEP	41,378.04	0.11%	3.77%	6.50%	10.39%	0.0116%
AES Corp/The	AES	15,772.03	0.04%	2.62%	24.00%	26.93%	0.0114%
Aflac Inc	AFL	34,862.84	0.09%	2.66%	11.00%	13.81%	0.0129%
American International Group Inc	AIG	45,918.18	0.12%	2.38%	28.50%	31.22%	0.0385%
Assurant Inc	AIZ	9,518.63	0.03%	1.65%	11.50%	13.24%	0.0034%
Arthur J Gallagher & Co	AJG	31,307.46	0.08%	1.27%	12.50%	13.85%	0.0117%
Akamai Technologies Inc	AKAM	17,713.64	0.05%	0.00%	9.50%	9.50%	0.0045%
Albemarle Corp	ALB	26,111.48	0.07%	0.70%	6.50%	7.22%	0.0051%
Align Technology Inc	ALGN	56,574.93	0.15%	0.00%	17.00%	17.00%	0.0258%
Alaska Air Group Inc	ALK	7,194.41	0.02%	0.00%	80.00%	80.00%	0.0155%
Allstate Corp/The	ALL	38,716.91	0.10%	2.49%	5.00%	7.55%	0.0079%
Allegion plc	ALLE	11,856.55	0.03%	1.09%	9.50%	10.64%	0.0034%
Applied Materials Inc	AMAT	124,694.40	0.34%	0.70%	16.50%	17.26%	0.0578%
Amcor PLC	AMCR	17,848.60	0.05%	4.14%	15.00%	19.45%	0.0093%
Advanced Micro Devices Inc	AMD	126,612.90	0.34%	0.00%	29.00%	29.00%	0.0987%
AMETEK Inc	AME	29,557.37	0.08%	0.63%	10.00%	10.66%	0.0085%
Amgen Inc	AMGN	121,689.40	0.33%	3.47%	5.50%	9.07%	0.0296%
Ameriprise Financial Inc	AMP	29,617.78	0.08%	1.74%	13.50%	15.36%	0.0122%
American Tower Corp	AMT	133,574.30	0.36%	1.84%	9.50%	11.43%	0.0410%
Amazon.com Inc	AMZN	1,710,305.00	4.60%	0.00%	30.00%	30.00%	1.3787%
Arista Networks Inc	ANET	26,845.01	0.07%	0.00%	4.50%	4.50%	0.0032%
ANSYS Inc	ANSS	31,204.01	0.08%	0.00%	8.00%	8.00%	0.0067%
Anthem Inc	ANTM	91,590.27	0.25%	1.25%	13.00%	14.33%	0.0353%
Aon PLC	AON	64,512.58	0.17%	0.71%	7.00%	7.74%	0.0134%
A O Smith Corp	AOS	10,150.78	0.03%	1.63%	9.50%	11.21%	0.0031%
APA Corp	APA	7,605.80	0.02%	1.24%	72.50%	74.19%	0.0152%
Air Products and Chemicals Inc	APD	57,098.89	0.15%	2.33%	12.00%	14.47%	0.0222%
Amphenol Corp	APH	45,147.10	0.12%	0.77%	10.50%	11.31%	0.0137%
Aptiv PLC	APTV	40,297.87	0.11%	0.00%	15.50%	15.50%	0.0168%
Alexandria Real Estate Equities Inc	ARE	26,865.05	0.07%	2.28%	12.00%	14.42%	0.0104%
Atmos Energy Corp	ATO	11,607.35	0.03%	3.04%	7.00%	10.15%	0.0032%
Activision Blizzard Inc	ATVI	56,623.68	0.15%	0.71%	13.00%	13.76%	0.0209%
AvalonBay Communities Inc	AVB	31,181.50	0.08%	2.91%	1.50%	4.43%	0.0037%
Broadcom Inc	AVGO	199,606.89	0.54%	2.97%	27.00%	30.37%	0.1629%
Avery Dennison Corp	AVY	17,701.13	0.05%	1.31%	9.00%	10.37%	0.0049%
American Water Works Co Inc	AWK	32,255.29	0.09%	1.38%	8.50%	9.94%	0.0086%
American Express Co	AXP	133,657.00	0.36%	1.11%	8.50%	9.66%	0.0347%
AutoZone Inc	AZO	36,402.89	0.10%	0.00%	14.50%	14.50%	0.0142%
Boeing Co/The	BA	127,123.40	N/A	0.00%	N/A	N/A	N/A
Bank of America Corp	BAC	340,674.30	0.92%	2.09%	6.00%	8.15%	0.0746%
Baxter International Inc	BAX	40,513.25	0.11%	1.38%	8.50%	9.94%	0.0108%
Bath & Body Works Inc	BBWI	17,601.30	0.05%	0.90%	23.50%	24.51%	0.0116%
Best Buy Co Inc	BBY	26,411.64	0.07%	2.62%	8.50%	11.23%	0.0080%
Becton Dickinson and Co	BDX	73,750.39	0.20%	1.34%	7.50%	8.89%	0.0176%
Franklin Resources Inc	BEN	15,367.74	0.04%	3.67%	11.50%	15.38%	0.0064%
Brown-Forman Corp	BF/B	32,848.98	0.09%	1.09%	11.00%	12.15%	0.0107%
Biogen Inc	BIIB	43,137.61	0.12%	0.00%	7.00%	7.00%	0.0081%
Bio-Rad Laboratories Inc	BIO	23,390.86	0.06%	0.00%	11.50%	11.50%	0.0072%
Bank of New York Mellon Corp/The	BK	43,098.28	0.12%	2.72%	5.00%	7.79%	0.0090%
Booking Holdings Inc	BKNG	98,794.87	0.27%	0.00%	14.00%	14.00%	0.0372%
Baker Hughes Co	BKR	19,408.32	N/A	3.07%	N/A	N/A	N/A
BlackRock Inc	BLK	129,614.10	0.35%	1.94%	9.50%	11.53%	0.0402%
Ball Corp	BLL	30,373.36	0.08%	0.86%	21.00%	21.95%	0.0179%
Bristol-Myers Squibb Co	BMY	133,660.20	0.36%	3.26%	12.50%	15.96%	0.0573%
Broadridge Financial Solutions Inc	BR	19,019.19	0.05%	1.56%	8.50%	10.13%	0.0052%
Berkshire Hathaway Inc	BRK/B	354,822.00	0.95%	0.00%	6.00%	6.00%	0.0572%
Brown & Brown Inc	BRO	16,165.05	0.04%	0.65%	9.50%	10.18%	0.0044%
Boston Scientific Corp	BSX	62,996.28	0.17%	0.00%	17.50%	17.50%	0.0296%
BorgWarner Inc	BWA	10,239.03	0.03%	1.59%	9.50%	11.17%	0.0031%
Boston Properties Inc	BXP	17,317.51	0.05%	3.71%	-2.00%	1.67%	0.0008%
Citigroup Inc	C	138,307.80	0.37%	2.99%	5.00%	8.06%	0.0300%
Conagra Brands Inc	CAG	15,982.24	0.04%	3.39%	5.00%	8.47%	0.0036%
Cardinal Health Inc	CAH	14,843.91	0.04%	3.84%	12.00%	16.07%	0.0064%
Carrier Global Corp	CARR	45,792.95	N/A	0.91%	N/A	N/A	N/A
Caterpillar Inc	CAT	104,758.60	0.28%	2.32%	9.00%	11.42%	0.0322%
Chubb Ltd	CB	74,873.97	0.20%	1.84%	12.50%	14.46%	0.0291%
Cboe Global Markets Inc	CBOE	13,220.06	0.04%	1.55%	12.00%	13.64%	0.0048%
CBRE Group Inc	CBRE	32,177.52	0.09%	0.00%	10.50%	10.50%	0.0091%

Company	Ticker	[2] Market Capitalization	[3] Weight in Index	[4] Estimated Dividend Yield	[5] Long-Term Growth Est.	[6] DCF Result	[7] Weighted DCF Result
Crown Castle International Corp	CCI	80,982.72	0.22%	3.01%	8.50%	11.64%	0.0253%
Carnival Corp	CCL	24,534.81	N/A	0.00%	N/A	N/A	N/A
Ceridian HCM Holding Inc	CDAY	16,881.74	N/A	0.00%	N/A	N/A	N/A
Cadence Design Systems Inc	CDNS	44,902.02	0.12%	0.00%	9.50%	9.50%	0.0115%
CDW Corp/DE	CDW	26,225.83	0.07%	0.84%	10.00%	10.88%	0.0077%
Celanese Corp	CE	16,186.12	0.04%	1.87%	6.50%	8.43%	0.0037%
Cerner Corp	CERN	21,850.06	0.06%	1.21%	11.00%	12.28%	0.0072%
CF Industries Holdings Inc	CF	10,844.74	0.03%	2.52%	19.50%	22.27%	0.0065%
Citizens Financial Group Inc	CFG	18,185.22	0.05%	3.75%	8.50%	12.41%	0.0061%
Church & Dwight Co Inc	CHD	20,415.74	0.05%	1.21%	8.00%	9.26%	0.0051%
CH Robinson Worldwide Inc	CHRW	11,563.13	0.03%	2.33%	8.00%	10.42%	0.0032%
Charter Communications Inc	CHTR	138,151.40	0.37%	0.00%	27.50%	27.50%	0.1021%
Cigna Corp	CI	68,698.21	0.18%	1.98%	10.00%	12.08%	0.0223%
Cincinnati Financial Corp	CINF	18,439.51	0.05%	2.20%	13.50%	15.85%	0.0079%
Colgate-Palmolive Co	CL	64,469.69	0.17%	2.36%	4.50%	6.91%	0.0120%
Clorox Co/The	CLX	19,913.69	0.05%	2.86%	5.00%	7.93%	0.0042%
Comerica Inc	CMA	9,852.28	0.03%	3.70%	2.50%	6.25%	0.0017%
Comcast Corp	CMCSA	257,117.00	0.69%	1.79%	11.00%	12.89%	0.0890%
CME Group Inc	CME	67,838.45	0.18%	1.90%	8.50%	10.48%	0.0191%
Chipotle Mexican Grill Inc	CMG	54,370.75	0.15%	0.00%	22.00%	22.00%	0.0321%
Cummins Inc	CMI	31,846.79	0.09%	2.62%	7.00%	9.71%	0.0083%
CMS Energy Corp	CMS	17,813.65	0.05%	2.91%	6.00%	9.00%	0.0043%
Centene Corp	CNC	36,694.15	0.10%	0.00%	9.50%	9.50%	0.0094%
CenterPoint Energy Inc	CNP	14,560.45	0.04%	2.73%	9.50%	12.36%	0.0048%
Capital One Financial Corp	COF	71,208.72	0.19%	1.50%	5.50%	7.04%	0.0135%
Cabot Oil & Gas Corp	COG	7,737.50	0.02%	2.48%	14.50%	17.16%	0.0036%
Cooper Cos Inc/The	COO	21,340.99	0.06%	0.01%	14.50%	14.51%	0.0083%
ConocoPhillips	COP	83,371.25	0.22%	2.96%	13.50%	16.66%	0.0373%
Costco Wholesale Corp	COST	199,993.60	0.54%	0.70%	10.50%	11.24%	0.0604%
Campbell Soup Co	CPB	13,682.28	0.04%	3.49%	5.00%	8.58%	0.0032%
Copart Inc	CPRT	34,148.59	0.09%	0.00%	10.00%	10.00%	0.0092%
Charles River Laboratories International Inc	CRL	22,491.52	0.06%	0.00%	7.00%	7.00%	0.0042%
salesforce.com Inc	CRM	253,468.30	0.68%	0.00%	20.00%	20.00%	0.1362%
Cisco Systems Inc/Delaware	CSCO	234,016.80	0.63%	2.67%	7.00%	9.76%	0.0614%
CSX Corp	CSX	67,319.25	0.18%	1.24%	11.50%	12.81%	0.0232%
Cintas Corp	CTAS	41,228.97	0.11%	0.96%	12.50%	13.52%	0.0150%
Catalent Inc	CTLT	23,366.86	0.06%	0.00%	21.00%	21.00%	0.0132%
Cognizant Technology Solutions Corp	CTSH	39,579.75	0.11%	1.27%	6.50%	7.81%	0.0083%
Corteva Inc	CTVA	30,801.62	N/A	1.38%	N/A	N/A	N/A
Citrix Systems Inc	CTXS	13,544.40	0.04%	1.39%	8.50%	9.95%	0.0036%
CVS Health Corp	CVS	110,527.50	0.30%	2.39%	6.00%	8.46%	0.0251%
Chevron Corp	CVX	188,827.20	0.51%	5.49%	23.50%	29.64%	0.1504%
Caesars Entertainment Inc	CZR	N/A	N/A	0.00%	N/A	N/A	N/A
Dominion Energy Inc	D	60,507.16	0.16%	3.46%	12.00%	15.67%	0.0255%
Delta Air Lines Inc	DAL	26,614.06	0.07%	0.00%	49.00%	49.00%	0.0350%
DuPont de Nemours Inc	DD	35,817.45	N/A	1.85%	N/A	N/A	N/A
Deere & Co	DE	105,681.20	0.28%	1.23%	17.00%	18.33%	0.0521%
Discover Financial Services	DFS	37,539.66	0.10%	1.61%	16.00%	17.74%	0.0179%
Dollar General Corp	DG	51,099.55	0.14%	0.77%	10.50%	11.31%	0.0155%
Quest Diagnostics Inc	DGX	18,630.62	0.05%	1.62%	7.50%	9.18%	0.0046%
DR Horton Inc	DHI	31,683.32	0.09%	0.97%	15.50%	16.55%	0.0141%
Danaher Corp	DHR	231,364.00	0.62%	0.26%	18.00%	18.28%	0.1137%
Walt Disney Co/The	DIS	309,270.60	0.83%	0.00%	14.00%	14.00%	0.1163%
Discovery Inc	DISCA	12,872.64	0.03%	0.00%	13.50%	13.50%	0.0047%
Discovery Inc	DISCK	8,012.74	N/A	0.00%	N/A	N/A	N/A
DISH Network Corp	DISH	22,355.51	0.06%	0.00%	2.50%	2.50%	0.0015%
Digital Realty Trust Inc	DLR	44,714.66	0.12%	3.02%	8.00%	11.14%	0.0134%
Dollar Tree Inc	DLTR	19,172.72	0.05%	0.00%	9.50%	9.50%	0.0049%
Dover Corp	DOV	23,357.67	0.06%	1.23%	7.00%	8.27%	0.0052%
Dow Inc	DOW	41,986.96	N/A	5.24%	N/A	N/A	N/A
Domino's Pizza Inc	DPZ	18,261.89	0.05%	0.79%	15.00%	15.85%	0.0078%
Duke Realty Corp	DRE	18,446.41	0.05%	2.23%	-1.00%	1.22%	0.0006%
Darden Restaurants Inc	DRI	19,656.29	0.05%	2.93%	19.00%	22.21%	0.0117%
DTE Energy Co	DTE	22,078.04	0.06%	2.90%	2.00%	4.93%	0.0029%
Duke Energy Corp	DUK	75,777.26	0.20%	4.02%	7.00%	11.16%	0.0227%
DaVita Inc	DVA	12,792.24	0.03%	0.00%	16.00%	16.00%	0.0055%
Devon Energy Corp	DVN	20,607.88	0.06%	1.45%	20.00%	21.60%	0.0120%
DXC Technology Co	DXC	8,833.56	0.02%	0.00%	6.50%	6.50%	0.0015%
Dexcom Inc	DXCM	55,159.62	0.15%	0.00%	34.00%	34.00%	0.0504%
Electronic Arts Inc	EA	36,072.28	0.10%	0.57%	12.50%	13.11%	0.0127%
eBay Inc	EBAY	48,391.81	0.13%	1.04%	16.50%	17.63%	0.0229%
Ecolab Inc	ECL	63,188.04	0.17%	0.87%	6.00%	6.90%	0.0117%
Consolidated Edison Inc	ED	25,857.25	0.07%	4.30%	4.00%	8.39%	0.0058%
Equifax Inc	EFX	31,994.42	0.09%	0.59%	10.50%	11.12%	0.0096%
Edison International	EIX	22,155.20	N/A	4.63%	N/A	N/A	N/A
Estee Lauder Cos Inc/The	EL	115,499.30	0.31%	0.67%	11.50%	12.21%	0.0379%
Eastman Chemical Co	EMN	13,601.38	0.04%	2.76%	10.50%	13.40%	0.0049%
Emerson Electric Co	EMR	57,109.00	0.15%	2.14%	10.50%	12.75%	0.0196%
Enphase Energy Inc	ENPH	21,290.48	0.06%	0.00%	40.00%	40.00%	0.0229%
EOG Resources Inc	EOG	43,555.89	0.12%	2.31%	12.50%	14.95%	0.0175%
Equinix Inc	EQIX	77,195.77	0.21%	1.42%	17.00%	18.54%	0.0385%
Equity Residential	EQR	30,294.21	0.08%	2.96%	2.00%	4.99%	0.0041%
Eversource Energy	ES	28,501.70	0.08%	3.00%	6.50%	9.60%	0.0074%
Essex Property Trust Inc	ESS	21,426.27	0.06%	2.59%	-0.50%	2.08%	0.0012%
Eaton Corp PLC	ETN	62,353.00	0.17%	1.94%	9.00%	11.03%	0.0185%
Entergy Corp	ETR	21,299.01	0.06%	3.81%	3.00%	6.87%	0.0039%
Etsy Inc	ETSY	27,755.35	0.07%	0.00%	30.00%	30.00%	0.0224%
Evergy Inc	EVRG	14,406.67	0.04%	3.60%	8.00%	11.74%	0.0045%
Edwards Lifesciences Corp	EW	74,560.15	0.20%	0.00%	13.00%	13.00%	0.0260%
Exelon Corp	EXC	48,285.39	0.13%	3.10%	5.50%	8.69%	0.0113%
Expeditors International of Washington Inc	EXPD	20,814.55	0.06%	0.94%	10.00%	10.99%	0.0061%
Expedia Group Inc	EXPE	23,956.95	N/A	0.00%	N/A	N/A	N/A
Extra Space Storage Inc	EXR	23,536.73	0.06%	2.79%	5.00%	7.86%	0.0050%
Ford Motor Co	F	54,401.76	0.15%	0.00%	47.50%	47.50%	0.0694%
Diamondback Energy Inc	FANG	15,276.92	N/A	2.13%	N/A	N/A	N/A

Company	Ticker	[2] Market Capitalization	[3] Weight in Index	[4] Estimated Dividend Yield	[5] Long-Term Growth Est.	[6] DCF Result	[7] Weighted DCF Result
Fastenal Co	FAST	30,591.55	0.08%	2.10%	9.00%	11.19%	0.0092%
Facebook Inc	FB	969,911.50	2.61%	0.00%	18.50%	18.50%	0.4821%
Fortune Brands Home & Security Inc	FBHS	12,854.46	0.03%	1.12%	11.00%	12.18%	0.0042%
Freeport-McMoRan Inc	FCX	45,477.96	0.12%	0.95%	37.50%	38.63%	0.0472%
FedEx Corp	FDX	60,855.10	0.16%	1.31%	12.00%	13.39%	0.0219%
FirstEnergy Corp	FE	20,058.99	0.05%	4.31%	11.50%	16.06%	0.0087%
F5 Networks Inc	FFIV	11,974.78	0.03%	0.00%	7.00%	7.00%	0.0023%
Fidelity National Information Services Inc	FIS	75,439.27	0.20%	1.28%	28.00%	29.46%	0.0597%
Fiserv Inc	FISV	71,844.09	0.19%	0.00%	13.00%	13.00%	0.0251%
Fifth Third Bancorp	FITB	27,481.05	0.07%	3.07%	8.00%	11.19%	0.0083%
FleetCor Technologies Inc	FLT	21,217.83	0.06%	0.00%	11.00%	11.00%	0.0063%
FMC Corp	FMC	12,102.85	0.03%	2.11%	9.50%	11.71%	0.0038%
Fox Corp	FOX	9,331.97	N/A	2.59%	N/A	N/A	N/A
Fox Corp	FOXA	22,272.30	N/A	1.26%	N/A	N/A	N/A
First Republic Bank/CA	FRC	33,152.19	0.09%	0.48%	13.50%	14.01%	0.0125%
Federal Realty Investment Trust	FRT	9,104.43	0.02%	3.61%	1.00%	4.63%	0.0011%
Fortinet Inc	FTNT	49,254.55	0.13%	0.00%	20.00%	20.00%	0.0265%
Fortive Corp	FTV	26,234.88	0.07%	0.38%	6.00%	6.39%	0.0045%
General Dynamics Corp	GD	54,161.07	0.15%	2.46%	5.00%	7.52%	0.0109%
General Electric Co	GE	108,163.70	0.29%	0.33%	15.00%	15.35%	0.0446%
Gilead Sciences Inc	GILD	89,510.52	0.24%	3.98%	3.50%	7.55%	0.0182%
General Mills Inc	GIS	36,329.50	0.10%	3.47%	3.00%	6.52%	0.0064%
Globe Life Inc	GL	8,981.15	0.02%	0.90%	8.00%	8.94%	0.0022%
Corning Inc	GLW	31,274.16	0.08%	2.79%	20.00%	23.07%	0.0194%
General Motors Co	GM	73,718.55	0.20%	0.00%	11.00%	11.00%	0.0218%
Generac Holdings Inc	GNRC	31,955.34	0.09%	0.00%	23.50%	23.50%	0.0202%
Alphabet Inc	GOOG	1,881,915.00	5.06%	0.00%	21.00%	21.00%	1.0619%
Alphabet Inc	GOOGL	804,943.40	N/A	0.00%	N/A	N/A	N/A
Genuine Parts Co	GPC	17,531.57	0.05%	2.67%	7.00%	9.76%	0.0046%
Global Payments Inc	GPN	47,324.37	0.13%	0.62%	16.50%	17.17%	0.0218%
Gap Inc/The	GPS	8,884.88	0.02%	2.03%	25.00%	27.28%	0.0065%
Garmin Ltd	GRMN	29,898.07	0.08%	1.72%	10.00%	11.81%	0.0095%
Goldman Sachs Group Inc/The	GS	130,009.80	0.35%	2.08%	7.00%	9.15%	0.0320%
WW Grainger Inc	GWW	20,943.12	0.06%	1.63%	5.50%	7.17%	0.0040%
Halliburton Co	HAL	17,557.75	0.05%	0.91%	9.00%	9.95%	0.0047%
Hasbro Inc	HAS	12,983.56	0.03%	2.88%	12.50%	15.56%	0.0054%
Huntington Bancshares Inc/OH	HBAN	21,410.08	0.06%	4.14%	8.50%	12.82%	0.0074%
Hanesbrands Inc	HBI	6,458.63	0.02%	3.24%	6.50%	9.85%	0.0017%
HCA Healthcare Inc	HCA	83,369.55	0.22%	0.75%	12.00%	12.80%	0.0287%
Home Depot Inc/The	HD	354,742.10	0.95%	2.10%	8.50%	10.69%	0.1019%
Hess Corp	HES	21,931.04	N/A	1.41%	N/A	N/A	N/A
Hartford Financial Services Group Inc/The	HIG	24,056.43	0.06%	2.03%	8.50%	10.62%	0.0069%
Huntington Ingalls Industries Inc	HII	7,697.09	0.02%	2.38%	7.00%	9.46%	0.0020%
Hilton Worldwide Holdings Inc	HLT	36,003.32	N/A	0.00%	N/A	N/A	N/A
Hologic Inc	HOLX	19,437.63	0.05%	0.00%	25.00%	25.00%	0.0131%
Honeywell International Inc	HON	149,830.60	0.40%	1.71%	9.50%	11.29%	0.0455%
Hewlett Packard Enterprise Co	HPE	17,200.12	0.05%	3.65%	6.50%	10.27%	0.0047%
HP Inc	HPQ	31,798.00	0.09%	2.83%	12.50%	15.51%	0.0132%
Hormel Foods Corp	HRL	22,157.17	0.06%	2.47%	9.00%	11.58%	0.0069%
Henry Schein Inc	HSIC	10,743.57	0.03%	0.00%	6.50%	6.50%	0.0019%
Host Hotels & Resorts Inc	HST	11,653.21	0.03%	0.00%	10.00%	10.00%	0.0031%
Hershey Co/The	HSY	35,516.48	0.10%	2.09%	5.50%	7.65%	0.0073%
Humana Inc	HUM	51,589.50	0.14%	0.70%	12.00%	12.74%	0.0177%
Howmet Aerospace Inc	HWM	13,343.45	0.04%	0.26%	12.00%	12.28%	0.0044%
International Business Machines Corp	IBM	120,671.60	0.32%	4.89%	1.50%	6.43%	0.0208%
Intercontinental Exchange Inc	ICE	65,820.33	0.18%	1.13%	8.00%	9.18%	0.0162%
IDEXX Laboratories Inc	IDXX	57,139.41	0.15%	0.00%	14.50%	14.50%	0.0223%
IDEX Corp	IEX	16,377.58	0.04%	1.00%	8.00%	9.04%	0.0040%
International Flavors & Fragrances Inc	IFF	33,026.65	0.09%	2.43%	7.50%	10.02%	0.0089%
Illumina Inc	ILMN	63,884.73	0.17%	0.00%	14.00%	14.00%	0.0240%
Incyte Corp	INCY	15,339.38	0.04%	0.00%	58.50%	58.50%	0.0241%
IHS Markit Ltd	INFO	48,776.68	0.13%	0.65%	10.50%	11.18%	0.0147%
Intel Corp	INTC	217,049.50	0.58%	2.60%	7.00%	9.69%	0.0565%
Intuit Inc	INTU	153,886.40	0.41%	0.48%	16.00%	16.52%	0.0683%
International Paper Co	IP	21,935.60	0.06%	3.65%	12.00%	15.87%	0.0094%
Interpublic Group of Cos Inc/The	IPG	14,555.56	0.04%	3.03%	12.00%	15.21%	0.0059%
IPG Photonics Corp	IPGP	8,536.79	0.02%	0.00%	17.00%	17.00%	0.0039%
IQVIA Holdings Inc	IQV	49,768.10	0.13%	0.00%	14.00%	14.00%	0.0187%
Ingersoll Rand Inc	IR	22,221.54	N/A	0.00%	N/A	N/A	N/A
Iron Mountain Inc	IRM	12,961.97	0.03%	5.54%	8.00%	13.76%	0.0048%
Intuitive Surgical Inc	ISRG	122,079.40	0.33%	0.00%	15.00%	15.00%	0.0492%
Gartner Inc	IT	26,633.88	0.07%	0.00%	18.50%	18.50%	0.0132%
Illinois Tool Works Inc	ITW	67,936.05	0.18%	2.26%	11.00%	13.38%	0.0244%
Invesco Ltd	IVZ	11,207.41	0.03%	3.05%	15.00%	18.28%	0.0055%
Jacobs Engineering Group Inc	J	17,008.45	0.05%	0.64%	15.00%	15.69%	0.0072%
JB Hunt Transport Services Inc	JBHT	17,726.58	0.05%	0.72%	8.00%	8.75%	0.0042%
Johnson Controls International plc	JCI	51,864.16	0.14%	1.48%	8.50%	10.04%	0.0140%
Jack Henry & Associates Inc	JKHY	12,534.31	0.03%	1.09%	9.50%	10.64%	0.0036%
Johnson & Johnson	JNJ	431,461.90	1.16%	2.59%	10.00%	12.72%	0.1475%
Juniper Networks Inc	JNPR	8,997.48	0.02%	2.88%	7.00%	9.98%	0.0024%
JPMorgan Chase & Co	JPM	465,883.30	1.25%	2.57%	6.50%	9.15%	0.1146%
Kellogg Co	K	21,558.02	0.06%	3.69%	3.50%	7.25%	0.0042%
KeyCorp	KEY	19,503.21	0.05%	3.74%	9.50%	13.42%	0.0070%
Keysight Technologies Inc	KEYS	32,549.88	0.09%	0.00%	17.00%	17.00%	0.0149%
Kraft Heinz Co/The	KHC	44,186.99	0.12%	4.43%	1.50%	5.96%	0.0071%
Kimco Realty Corp	KIM	9,446.22	0.03%	3.53%	10.50%	14.22%	0.0036%
KLA Corp	KLAC	55,841.16	0.15%	1.15%	18.00%	19.25%	0.0289%
Kimberly-Clark Corp	KMB	44,955.94	0.12%	3.42%	5.50%	9.01%	0.0109%
Kinder Morgan Inc	KMI	36,528.08	0.10%	6.70%	19.00%	26.34%	0.0258%
CarMax Inc	KMX	22,875.45	0.06%	0.00%	12.50%	12.50%	0.0077%
Coca-Cola Co/The	KO	233,570.90	0.63%	3.10%	7.00%	10.21%	0.0641%
Kroger Co/The	KR	29,834.40	0.08%	2.10%	5.00%	7.15%	0.0057%
Kansas City Southern	KSU	24,549.59	0.07%	0.80%	10.50%	11.34%	0.0075%
Loews Corp	L	13,608.97	0.04%	0.48%	12.50%	13.01%	0.0048%
Leidos Holdings Inc	LDOS	13,093.82	0.04%	1.56%	9.00%	10.63%	0.0037%

Company	Ticker	[2] Market Capitalization	[3] Weight in Index	[4] Estimated Dividend Yield	[5] Long-Term Growth Est.	[6] DCF Result	[7] Weighted DCF Result
Leggett & Platt Inc	LEG	6,117.09	0.02%	3.66%	10.00%	13.84%	0.0023%
Lennar Corp	LEN	30,628.83	0.08%	1.06%	12.00%	13.12%	0.0108%
Laboratory Corp of America Holdings	LH	28,184.18	0.08%	0.00%	5.50%	5.50%	0.0042%
L3Harris Technologies Inc	LHX	45,785.72	N/A	1.83%	N/A	N/A	N/A
Linde PLC	LIN	151,504.37	N/A	1.45%	N/A	N/A	N/A
LKQ Corp	LKQ	14,980.32	0.04%	0.00%	12.00%	12.00%	0.0048%
Eli Lilly & Co	LLY	218,491.80	0.59%	1.49%	11.00%	12.57%	0.0738%
Lockheed Martin Corp	LMT	94,630.50	0.25%	3.22%	7.50%	10.84%	0.0276%
Lincoln National Corp	LNC	12,181.18	0.03%	2.75%	9.00%	11.87%	0.0039%
Alliant Energy Corp	LNT	14,353.45	0.04%	2.93%	5.50%	8.51%	0.0033%
Lowe's Cos Inc	LOW	146,014.10	0.39%	1.60%	14.50%	16.22%	0.0636%
Lam Research Corp	LRCX	85,657.35	0.23%	1.00%	17.50%	18.59%	0.0428%
Lumen Technologies Inc	LUMN	13,870.08	0.04%	7.97%	2.50%	10.57%	0.0039%
Southwest Airlines Co	LUV	29,966.82	0.08%	0.00%	34.50%	34.50%	0.0278%
Las Vegas Sands Corp	LVS	27,595.68	0.07%	0.00%	17.50%	17.50%	0.0130%
Lamb Weston Holdings Inc	LW	8,911.30	0.02%	1.56%	2.50%	4.08%	0.0010%
LyondellBasell Industries NV	LYB	31,394.70	0.08%	4.82%	8.00%	13.01%	0.0110%
Live Nation Entertainment Inc	LYV	19,341.20	N/A	0.00%	N/A	N/A	N/A
Mastercard Inc	MA	339,289.10	0.91%	0.51%	12.50%	13.04%	0.1189%
Mid-America Apartment Communities Inc	MAA	21,763.08	0.06%	2.78%	9.00%	11.91%	0.0070%
Marriott International Inc/MD	MAR	47,016.64	0.13%	0.00%	17.50%	17.50%	0.0221%
Masco Corp	MAS	13,929.72	0.04%	1.66%	9.50%	11.24%	0.0042%
McDonald's Corp	MCD	181,569.30	0.49%	2.20%	10.50%	12.82%	0.0625%
Microchip Technology Inc	MCHP	44,254.72	0.12%	1.08%	10.50%	11.64%	0.0138%
McKesson Corp	MCK	31,407.65	0.08%	0.93%	9.00%	9.97%	0.0084%
Moody's Corp	MCO	68,956.98	0.19%	0.67%	8.50%	9.20%	0.0170%
Mondelez International Inc	MDLZ	85,945.17	0.23%	2.28%	8.00%	10.37%	0.0240%
Medtronic PLC	MDT	168,696.03	0.45%	2.01%	9.00%	11.10%	0.0503%
MetLife Inc	MET	51,189.84	0.14%	3.30%	6.50%	9.91%	0.0136%
MGM Resorts International	MGM	20,930.52	0.06%	0.02%	25.00%	25.02%	0.0141%
Mohawk Industries Inc	MHK	12,706.86	0.03%	0.00%	10.50%	10.50%	0.0036%
McCormick & Co Inc/MD	MKC	22,806.15	0.06%	1.62%	6.00%	7.67%	0.0047%
MarketAxess Holdings Inc	MKTX	16,178.11	0.04%	0.62%	14.00%	14.66%	0.0064%
Martin Marietta Materials Inc	MLM	21,856.22	0.06%	0.70%	7.00%	7.72%	0.0045%
Marsh & McLennan Cos Inc	MMC	79,634.05	0.21%	1.36%	11.00%	12.43%	0.0266%
3M Co	MMM	104,062.30	0.28%	3.29%	4.50%	7.86%	0.0220%
Monster Beverage Corp	MNST	48,956.30	0.13%	0.00%	11.50%	11.50%	0.0151%
Altria Group Inc	MO	89,016.64	0.24%	7.46%	6.00%	13.68%	0.0327%
Mosaic Co/The	MOS	12,604.88	0.03%	1.03%	33.50%	34.70%	0.0118%
Marathon Petroleum Corp	MPC	38,222.58	N/A	3.87%	N/A	N/A	N/A
Monolithic Power Systems Inc	MPWR	23,322.62	0.06%	0.47%	20.50%	21.02%	0.0132%
Merck & Co Inc	MRK	182,459.40	0.49%	3.61%	7.50%	11.25%	0.0551%
Moderna Inc	MRNA	177,610.10	N/A	0.00%	N/A	N/A	N/A
Marathon Oil Corp	MRO	9,483.78	0.03%	1.66%	69.00%	71.23%	0.0182%
Morgan Stanley	MS	184,904.50	0.50%	2.78%	8.50%	11.40%	0.0566%
MSCI Inc	MSCI	53,184.88	0.14%	0.65%	16.00%	16.70%	0.0239%
Microsoft Corp	MSFT	2,245,023.00	6.03%	0.83%	17.00%	17.90%	1.0798%
Motorola Solutions Inc	MSI	40,488.09	0.11%	1.26%	7.00%	8.30%	0.0090%
M&T Bank Corp	MTB	17,565.64	0.05%	3.22%	8.00%	11.35%	0.0054%
Match Group Inc	MTCH	42,507.73	0.11%	0.00%	15.00%	15.00%	0.0171%
Mettler-Toledo International Inc	MTD	35,664.45	0.10%	0.00%	12.00%	12.00%	0.0115%
Micron Technology Inc	MU	82,846.40	0.22%	0.54%	11.50%	12.07%	0.0269%
Norwegian Cruise Line Holdings Ltd	NCLH	9,622.04	N/A	0.00%	N/A	N/A	N/A
Nasdaq Inc	NDAQ	34,211.97	0.09%	1.11%	6.50%	7.65%	0.0070%
NextEra Energy Inc	NEE	160,687.80	0.43%	1.98%	10.50%	12.58%	0.0543%
Newmont Corp	NEM	43,883.95	0.12%	4.03%	14.00%	18.31%	0.0216%
Netflix Inc	NFLX	261,419.30	0.70%	0.00%	23.50%	23.50%	0.1651%
NiSource Inc	NI	9,466.88	0.03%	3.65%	9.50%	13.32%	0.0034%
NIKE Inc	NKE	248,597.80	0.67%	0.70%	24.00%	24.78%	0.1656%
NortonLifeLock Inc	NLOK	14,490.14	0.04%	2.01%	7.00%	9.08%	0.0035%
Nielsen Holdings PLC	NLSN	7,007.36	N/A	1.23%	N/A	N/A	N/A
Northrop Grumman Corp	NOC	55,897.04	0.15%	1.80%	7.00%	8.86%	0.0133%
ServiceNow Inc	NOW	131,294.20	0.35%	0.00%	44.50%	44.50%	0.1570%
NRG Energy Inc	NRG	10,324.61	0.03%	3.08%	-1.50%	1.56%	0.0004%
Norfolk Southern Corp	NSC	59,154.73	0.16%	1.82%	10.00%	11.91%	0.0189%
NetApp Inc	NTAP	20,155.52	0.05%	2.22%	6.50%	8.79%	0.0048%
Northern Trust Corp	NTRS	22,179.48	0.06%	2.63%	7.00%	9.72%	0.0058%
Nucor Corp	NUE	28,541.28	0.08%	1.67%	8.00%	9.74%	0.0075%
NVIDIA Corp	NVDA	547,647.40	1.47%	0.07%	17.00%	17.08%	0.2513%
NVR Inc	NVR	17,957.45	0.05%	0.00%	9.00%	9.00%	0.0043%
Newell Brands Inc	NWL	10,192.58	N/A	3.84%	N/A	N/A	N/A
News Corp	NWS	4,637.40	N/A	1.72%	N/A	N/A	N/A
News Corp	NWSA	13,658.92	N/A	0.87%	N/A	N/A	N/A
NXP Semiconductors NV	NXPI	51,925.14	0.14%	1.14%	11.00%	12.21%	0.0170%
Realty Income Corp	O	24,481.89	0.07%	4.25%	6.00%	10.38%	0.0068%
Old Dominion Freight Line Inc	ODFL	34,364.30	0.09%	0.28%	9.50%	9.79%	0.0090%
Organon & Co	OGN	8,312.27	N/A	3.42%	N/A	N/A	N/A
ONEOK Inc	OKE	24,453.12	0.07%	7.04%	9.50%	16.87%	0.0111%
Omnicom Group Inc	OMC	15,531.64	0.04%	4.00%	6.00%	10.12%	0.0042%
Oracle Corp	ORCL	242,590.90	0.65%	1.45%	10.00%	11.52%	0.0751%
O'Reilly Automotive Inc	ORLY	42,880.43	0.12%	0.00%	11.00%	11.00%	0.0127%
Otis Worldwide Corp	OTIS	35,974.97	N/A	1.14%	N/A	N/A	N/A
Occidental Petroleum Corp	OXY	24,977.41	0.07%	0.60%	36.50%	37.21%	0.0250%
Paycom Software Inc	PAYC	28,985.06	0.08%	0.00%	19.50%	19.50%	0.0152%
Paychex Inc	PAYX	39,406.01	0.11%	2.49%	7.00%	9.58%	0.0101%
People's United Financial Inc	PBCT	6,814.85	0.02%	4.58%	4.00%	8.67%	0.0016%
PACCAR Inc	PCAR	27,573.04	0.07%	2.57%	5.50%	8.14%	0.0060%
Healthpeak Properties Inc	PEAK	18,639.58	0.05%	3.47%	-12.00%	-8.74%	-0.0044%
Public Service Enterprise Group Inc	PEG	30,754.08	0.08%	3.41%	3.50%	6.97%	0.0058%
Penn National Gaming Inc	PENN	11,561.47	0.03%	0.00%	30.00%	30.00%	0.0093%
PepsiCo Inc	PEP	212,841.80	0.57%	2.79%	6.50%	9.38%	0.0536%
Pfizer Inc	PFE	246,076.00	0.66%	3.55%	8.00%	11.69%	0.0773%
Principal Financial Group Inc	PFG	16,831.33	0.05%	4.03%	5.50%	9.64%	0.0044%
Procter & Gamble Co/The	PG	348,905.80	0.94%	2.42%	7.00%	9.50%	0.0891%
Progressive Corp/The	PGR	53,861.80	0.14%	0.44%	5.00%	5.45%	0.0079%

Company	Ticker	[2] Market Capitalization	[3] Weight in Index	[4] Estimated Dividend Yield	[5] Long-Term Growth Est.	[6] DCF Result	[7] Weighted DCF Result
Parker-Hannifin Corp	PH	36,858.27	0.10%	1.44%	13.00%	14.53%	0.0144%
PulteGroup Inc	PHM	12,452.01	0.03%	1.21%	12.50%	13.79%	0.0046%
Packaging Corp of America	PKG	13,367.34	0.04%	2.84%	5.00%	7.91%	0.0028%
PerkinElmer Inc	PKI	20,730.22	0.06%	0.15%	11.00%	11.16%	0.0062%
Prologis Inc	PLD	96,126.93	0.26%	2.05%	8.50%	10.64%	0.0275%
Philip Morris International Inc	PM	156,652.90	0.42%	4.98%	6.50%	11.64%	0.0490%
PNC Financial Services Group Inc/The	PNC	79,759.76	0.21%	2.66%	10.00%	12.79%	0.0274%
Pentair PLC	PNR	12,046.41	0.03%	1.10%	11.00%	12.16%	0.0039%
Pinnacle West Capital Corp	PNW	8,227.59	0.02%	4.76%	5.00%	9.88%	0.0022%
Pool Corp	POOL	18,300.19	0.05%	0.70%	15.00%	15.75%	0.0077%
PPG Industries Inc	PPG	34,478.48	0.09%	1.63%	3.00%	4.65%	0.0043%
PPL Corp	PPL	21,917.18	0.06%	5.83%	-7.00%	-1.37%	-0.0008%
Prudential Financial Inc	PRU	38,696.44	0.10%	4.75%	4.50%	9.36%	0.0097%
Public Storage	PSA	53,979.01	0.15%	2.64%	2.50%	5.17%	0.0075%
Phillips 66	PSX	29,349.64	0.08%	5.45%	20.00%	26.00%	0.0205%
PTC Inc	PTC	14,201.43	N/A	0.00%	N/A	N/A	N/A
PVH Corp	PVH	7,684.09	0.02%	0.00%	12.50%	12.50%	0.0026%
Quanta Services Inc	PWR	16,128.87	0.04%	0.21%	12.50%	12.72%	0.0055%
Pioneer Natural Resources Co	PXD	36,606.05	0.10%	1.49%	20.00%	21.64%	0.0213%
PayPal Holdings Inc	PYPL	319,999.50	0.86%	0.00%	16.00%	16.00%	0.1376%
QUALCOMM Inc	QCOM	150,035.30	0.40%	2.05%	14.00%	16.19%	0.0653%
Qorvo Inc	QRVO	19,276.03	0.05%	0.00%	27.00%	27.00%	0.0140%
Royal Caribbean Cruises Ltd	RCL	21,732.87	N/A	0.00%	N/A	N/A	N/A
Everest Re Group Ltd	RE	9,950.95	0.03%	2.47%	10.50%	13.10%	0.0035%
Regency Centers Corp	REG	11,553.51	0.03%	3.50%	16.00%	19.78%	0.0061%
Regeneron Pharmaceuticals Inc	REGN	67,857.84	0.18%	0.00%	12.50%	12.50%	0.0228%
Regions Financial Corp	RF	18,632.11	0.05%	3.48%	9.50%	13.15%	0.0066%
Robert Half International Inc	RHI	11,303.37	0.03%	1.60%	7.50%	9.16%	0.0028%
Raymond James Financial Inc	RJF	17,856.15	0.05%	1.20%	6.50%	7.74%	0.0037%
Ralph Lauren Corp	RL	8,335.20	0.02%	2.43%	6.00%	8.50%	0.0019%
ResMed Inc	RMD	42,016.53	0.11%	0.58%	8.50%	9.10%	0.0103%
Rockwell Automation Inc	ROK	35,032.89	0.09%	1.49%	7.50%	9.05%	0.0085%
Rollins Inc	ROL	18,472.65	0.05%	0.85%	11.50%	12.40%	0.0062%
Roper Technologies Inc	ROP	48,597.30	0.13%	0.49%	8.00%	8.51%	0.0111%
Ross Stores Inc	ROST	40,617.16	0.11%	1.03%	7.50%	8.57%	0.0094%
Republic Services Inc	RSG	39,762.11	0.11%	1.48%	7.50%	9.04%	0.0097%
Raytheon Technologies Corp	RTX	128,576.80	0.35%	2.39%	1.00%	3.40%	0.0118%
SBA Communications Corp	SBAC	39,265.75	0.11%	0.70%	45.00%	45.86%	0.0484%
Starbucks Corp	SBUX	133,309.50	0.36%	1.77%	16.00%	17.91%	0.0642%
Charles Schwab Corp/The	SCHW	132,901.10	0.36%	1.07%	7.00%	8.11%	0.0290%
Sealed Air Corp	SEE	8,449.24	0.02%	1.42%	13.50%	15.02%	0.0034%
Sherwin-Williams Co/The	SHW	76,881.55	0.21%	0.79%	10.50%	11.33%	0.0234%
SVB Financial Group	SIVB	33,144.97	0.09%	0.00%	8.00%	8.00%	0.0071%
J M Smucker Co/The	SJM	13,064.97	0.04%	3.28%	4.00%	7.35%	0.0026%
Schlumberger NV	SLB	37,967.46	0.10%	1.84%	8.50%	10.42%	0.0106%
Snap-on Inc	SNA	11,442.93	0.03%	2.50%	4.50%	7.06%	0.0022%
Synopsys Inc	SNPS	48,910.39	0.13%	0.00%	12.50%	12.50%	0.0164%
Southern Co/The	SO	67,362.99	0.18%	4.18%	6.00%	10.31%	0.0187%
Simon Property Group Inc	SPG	43,899.81	0.12%	4.71%	1.50%	6.25%	0.0074%
S&P Global Inc	SPGI	107,399.20	0.29%	0.74%	10.50%	11.28%	0.0325%
Sempra Energy	SRE	41,214.60	0.11%	3.45%	10.00%	13.62%	0.0151%
STERIS PLC	STE	20,387.14	0.05%	0.84%	10.00%	10.88%	0.0060%
State Street Corp	STT	28,562.27	0.08%	2.74%	7.00%	9.84%	0.0075%
Seagate Technology Holdings PLC	STX	18,781.55	0.05%	3.25%	4.00%	7.31%	0.0037%
Constellation Brands Inc	STZ	40,546.78	0.11%	1.44%	7.00%	8.49%	0.0093%
Stanley Black & Decker Inc	SWK	32,162.73	0.09%	1.74%	6.00%	7.79%	0.0067%
Skyworks Solutions Inc	SWKS	28,549.09	0.08%	1.30%	13.50%	14.89%	0.0114%
Synchrony Financial	SYF	27,724.66	0.07%	1.82%	4.50%	6.36%	0.0047%
Stryker Corp	SYK	102,438.10	0.28%	0.93%	11.00%	11.98%	0.0330%
Sysco Corp	SYY	39,769.34	0.11%	2.42%	10.00%	12.54%	0.0134%
AT&T Inc	T	192,847.50	0.52%	7.70%	2.50%	10.30%	0.0534%
Molson Coors Beverage Co	TAP	9,303.83	0.02%	2.93%	41.00%	44.53%	0.0111%
TransDigm Group Inc	TDG	34,646.50	0.09%	0.00%	11.00%	11.00%	0.0102%
Teledyne Technologies Inc	TDY	19,911.99	0.05%	0.00%	14.50%	14.50%	0.0078%
Bio-Techne Corp	TECH	20,709.18	0.06%	0.25%	13.00%	13.27%	0.0074%
TE Connectivity Ltd	TEL	45,008.16	0.12%	1.46%	9.00%	10.52%	0.0127%
Teradyne Inc	TER	19,573.68	0.05%	0.34%	13.50%	13.86%	0.0073%
Truist Financial Corp	TFC	73,065.30	0.20%	3.51%	7.00%	10.63%	0.0209%
Teleflex Inc	TFX	17,933.33	0.05%	0.36%	14.50%	14.89%	0.0072%
Target Corp	TGT	118,382.90	0.32%	1.49%	13.00%	14.59%	0.0464%
TJX Cos Inc/The	TJX	83,643.27	0.22%	1.50%	12.00%	13.59%	0.0305%
Thermo Fisher Scientific Inc	TMO	238,659.80	0.64%	0.17%	14.50%	14.68%	0.0942%
T-Mobile US Inc	TMUS	159,396.90	0.43%	0.00%	8.50%	8.50%	0.0364%
Tapestry Inc	TPR	10,867.63	0.03%	2.57%	1.50%	4.09%	0.0012%
Trimble Inc	TRMB	22,779.86	0.06%	0.00%	14.00%	14.00%	0.0086%
T Rowe Price Group Inc	TROW	46,957.59	0.13%	2.09%	8.00%	10.17%	0.0128%
Travelers Cos Inc/The	TRV	38,517.81	0.10%	2.28%	8.00%	10.37%	0.0107%
Tractor Supply Co	TSCO	24,285.17	0.07%	1.05%	11.00%	12.11%	0.0079%
Tesla Inc	TSLA	739,908.90	N/A	0.00%	N/A	N/A	N/A
Tyson Foods Inc	TSN	27,550.20	0.07%	2.36%	6.00%	8.43%	0.0062%
Trane Technologies PLC	TT	41,021.64	N/A	1.37%	N/A	N/A	N/A
Take-Two Interactive Software Inc	TTWO	16,910.73	0.05%	0.00%	12.00%	12.00%	0.0055%
Twitter Inc	TWTR	51,267.71	0.14%	0.00%	35.00%	35.00%	0.0482%
Texas Instruments Inc	TXN	180,851.20	0.49%	2.35%	9.00%	11.46%	0.0557%
Textron Inc	TXT	15,631.84	0.04%	0.12%	8.00%	8.12%	0.0034%
Tyler Technologies Inc	TYL	22,528.93	0.06%	0.00%	12.50%	12.50%	0.0076%
Under Armour Inc	UA	4,294.15	N/A	0.00%	N/A	N/A	N/A
Under Armour Inc	UAA	9,720.23	0.03%	0.00%	11.00%	11.00%	0.0029%
United Airlines Holdings Inc	UAL	14,782.55	N/A	0.00%	N/A	N/A	N/A
UDR Inc	UDR	15,910.27	0.04%	2.80%	6.00%	8.88%	0.0038%
Universal Health Services Inc	UHS	12,108.03	0.03%	0.55%	11.00%	11.58%	0.0038%
Ulta Beauty Inc	ULTA	20,463.53	0.05%	0.00%	12.50%	12.50%	0.0069%
UnitedHealth Group Inc	UNH	385,404.10	1.04%	1.42%	12.00%	13.51%	0.1399%
Union Pacific Corp	UNP	129,330.80	0.35%	2.16%	10.00%	12.27%	0.0426%
United Parcel Service Inc	UPS	161,526.00	0.43%	2.21%	10.50%	12.83%	0.0557%

Company	Ticker	[2] Market Capitalization	[3] Weight in Index	[4] Estimated Dividend Yield	[5] Long-Term Growth Est.	[6] DCF Result	[7] Weighted DCF Result
United Rentals Inc	URI	25,038.66	0.07%	0.00%	10.50%	10.50%	0.0071%
US Bancorp	USB	85,872.36	0.23%	3.18%	6.50%	9.78%	0.0226%
Visa Inc	V	433,026.00	1.16%	0.62%	12.00%	12.66%	0.1473%
VF Corp	VFC	25,932.68	0.07%	2.97%	5.50%	8.55%	0.0060%
ViacomCBS Inc	VIAC	25,323.20	0.07%	2.45%	7.00%	9.54%	0.0065%
Valero Energy Corp	VLO	26,704.45	0.07%	6.00%	13.00%	19.39%	0.0139%
Vulcan Materials Co	VMC	23,119.14	0.06%	0.85%	10.00%	10.89%	0.0068%
Vornado Realty Trust	VNO	8,149.01	0.02%	4.98%	-19.00%	-14.49%	-0.0032%
Verisk Analytics Inc	VRSK	33,285.51	0.09%	0.56%	8.00%	8.58%	0.0077%
VeriSign Inc	VRSN	24,065.65	0.06%	0.00%	8.50%	8.50%	0.0055%
Vertex Pharmaceuticals Inc	VRTX	47,746.93	0.13%	0.00%	17.00%	17.00%	0.0218%
Ventas Inc	VTR	21,056.77	0.06%	3.47%	4.50%	8.05%	0.0046%
Viatris Inc	VTRS	16,385.89	N/A	3.25%	N/A	N/A	N/A
Verizon Communications Inc	VZ	223,814.70	0.60%	4.74%	3.50%	8.32%	0.0501%
Westinghouse Air Brake Technologies Corp	WAB	16,416.54	0.04%	0.55%	9.50%	10.08%	0.0044%
Waters Corp	WAT	24,320.65	0.07%	0.00%	6.00%	6.00%	0.0039%
Walgreens Boots Alliance Inc	WBA	41,522.99	0.11%	3.98%	6.00%	10.10%	0.0113%
Western Digital Corp	WDC	17,313.48	0.05%	0.00%	1.00%	1.00%	0.0005%
WEC Energy Group Inc	WEC	28,777.13	0.08%	3.12%	6.50%	9.72%	0.0075%
Welltower Inc	WELL	35,662.74	0.10%	3.00%	-1.50%	1.48%	0.0014%
Wells Fargo & Co	WFC	193,404.50	0.52%	1.70%	-0.50%	1.20%	0.0062%
Whirlpool Corp	WHR	13,064.31	0.04%	2.70%	5.50%	8.27%	0.0029%
Willis Towers Watson PLC	WLTW	29,788.49	0.08%	1.39%	8.00%	9.45%	0.0076%
Waste Management Inc	WM	64,561.44	0.17%	1.50%	7.50%	9.06%	0.0157%
Williams Cos Inc/The	WMB	30,386.42	0.08%	6.55%	10.50%	17.39%	0.0142%
Walmart Inc	WMT	398,247.80	1.07%	1.54%	7.50%	9.10%	0.0974%
W R Berkley Corp	WRB	12,825.26	0.03%	0.72%	14.50%	15.27%	0.0053%
Westrock Co	WRK	13,038.07	0.04%	1.97%	8.00%	10.05%	0.0035%
West Pharmaceutical Services Inc	WST	33,239.32	0.09%	0.15%	17.00%	17.16%	0.0153%
Western Union Co/The	WU	8,140.00	0.02%	4.70%	6.00%	10.84%	0.0024%
Weyerhaeuser Co	WY	27,299.56	0.07%	1.87%	22.00%	24.08%	0.0177%
Wynn Resorts Ltd	WYNN	9,346.11	0.03%	0.00%	27.00%	27.00%	0.0068%
Xcel Energy Inc	XEL	34,015.56	0.09%	2.99%	6.00%	9.08%	0.0083%
Xilinx Inc	XLNX	37,825.72	0.10%	0.00%	8.00%	8.00%	0.0081%
Exxon Mobil Corp	XOM	233,759.10	N/A	6.34%	N/A	N/A	N/A
DENTSPLY SIRONA Inc	XRAY	13,053.19	0.04%	0.74%	5.50%	6.26%	0.0022%
Xylem Inc/NY	XYL	23,982.12	0.06%	0.84%	10.50%	11.38%	0.0073%
Yum! Brands Inc	YUM	37,162.80	0.10%	1.64%	10.50%	12.23%	0.0122%
Zimmer Biomet Holdings Inc	ZBH	30,407.59	0.08%	0.66%	8.50%	9.19%	0.0075%
Zebra Technologies Corp	ZBRA	29,242.41	0.08%	0.00%	12.50%	12.50%	0.0098%
Zions Bancorp NA	ZION	9,233.53	0.02%	2.67%	8.50%	11.28%	0.0028%
Zoetis Inc	ZTS	95482.39	0.26%	0.50%	11.00%	11.53%	0.0296%
Total Market Capitalization:		37,216,501.26					15.08%

[2] Source: Value Line
[3] Equals weight in S&P 500 based on market capitalization
[4] Source: Value Line
[5] Source: Value Line
[6] Equals ([4] x (1 + (0.5 x [5]))) + [5]
[7] Equals Col. [3] x Col. [6]

Expected Market Return
Market DCF Method Based - Bloomberg

[1] S&P 500 Est. Required Market Return
17.28%

Company	Ticker	[2] Market Capitalization	[3] Weight in Index	[4] Estimated Dividend Yield	[5] Long-Term Growth Est.	[6] DCF Result	[7] Weighted DCF Result
Agilent Technologies Inc	A	47,687.95	0.13%	0.49%	16.35%	16.88%	0.0215%
American Airlines Group Inc	AAL	13,285.84	0.04%	0.00%	-118.97%	-118.97%	-0.0422%
Advance Auto Parts Inc	AAP	13,160.28	0.04%	1.91%	15.08%	17.14%	0.0060%
Apple Inc	AAPL	2,339,018.49	6.24%	0.62%	12.80%	13.46%	0.8399%
AbbVie Inc	ABBV	190,625.28	0.51%	4.82%	2.42%	7.30%	0.0371%
AmerisourceBergen Corp	ABC	24,820.16	0.07%	1.47%	10.09%	11.63%	0.0077%
ABIOMED Inc	ABMD	14,772.10	N/A	N/A	N/A	N/A	N/A
Abbott Laboratories	ABT	209,422.87	0.56%	1.52%	11.47%	13.08%	0.0731%
Accenture PLC	ACN	202,873.11	0.54%	1.21%	10.30%	11.58%	0.0626%
Adobe Inc	ADBE	273,927.58	0.73%	0.00%	18.58%	18.58%	0.1357%
Analog Devices Inc	ADI	90,005.59	0.24%	1.65%	13.38%	15.13%	0.0363%
Archer-Daniels-Midland Co	ADM	33,567.55	0.09%	2.47%	5.86%	8.40%	0.0075%
Automatic Data Processing Inc	ADP	84,510.78	0.23%	1.86%	12.75%	14.73%	0.0332%
Autodesk Inc	ADSK	62,694.62	0.17%	0.00%	29.00%	29.00%	0.0485%
Ameren Corp	AEE	20,688.21	0.06%	2.72%	7.90%	10.72%	0.0059%
American Electric Power Co Inc	AEP	40,610.38	0.11%	3.65%	5.88%	9.63%	0.0104%
AES Corp/The	AES	15,213.00	0.04%	2.64%	8.33%	11.07%	0.0045%
Aflac Inc	AFL	34,965.73	N/A	2.53%	N/A	N/A	N/A
American International Group Inc	AIG	46,942.04	0.13%	2.33%	21.00%	23.58%	0.0295%
Assurant Inc	AIZ	9,277.91	0.02%	1.67%	17.78%	19.60%	0.0049%
Arthur J Gallagher & Co	AJG	30,733.39	0.08%	1.29%	15.22%	16.61%	0.0136%
Akamai Technologies Inc	AKAM	17,030.39	0.05%	0.00%	11.73%	11.73%	0.0053%
Albemarle Corp	ALB	25,608.54	0.07%	0.71%	19.01%	19.79%	0.0135%
Align Technology Inc	ALGN	52,576.96	0.14%	0.00%	26.56%	26.56%	0.0372%
Alaska Air Group Inc	ALK	7,338.65	N/A	N/A	N/A	N/A	N/A
Allstate Corp/The	ALL	37,643.15	0.10%	2.54%	0.61%	3.16%	0.0032%
Allegion plc	ALLE	11,856.02	0.03%	1.09%	7.67%	8.80%	0.0028%
Applied Materials Inc	AMAT	116,233.92	0.31%	0.75%	19.00%	19.82%	0.0614%
Amcor PLC	AMCR	17,791.13	0.05%	4.06%	6.73%	10.92%	0.0052%
Advanced Micro Devices Inc	AMD	124,814.10	0.33%	0.00%	27.15%	27.15%	0.0904%
AMETEK Inc	AME	28,671.86	0.08%	0.65%	11.94%	12.63%	0.0097%
Amgen Inc	AMGN	120,753.73	0.32%	3.31%	5.45%	8.85%	0.0285%
Ameriprise Financial Inc	AMP	30,042.59	0.08%	1.71%	13.30%	15.13%	0.0121%
American Tower Corp	AMT	120,798.97	0.32%	1.97%	14.77%	16.89%	0.0544%
Amazon.com Inc	AMZN	1,663,678.94	4.44%	0.00%	28.88%	28.88%	1.2816%
Arista Networks Inc	ANET	26,363.03	0.07%	0.00%	12.19%	12.19%	0.0086%
ANSYS Inc	ANSS	29,705.28	0.08%	0.00%	10.93%	10.93%	0.0087%
Anthem Inc	ANTM	90,894.23	0.24%	1.21%	11.41%	12.69%	0.0308%
Aon PLC	AON	64,511.72	0.17%	0.71%	16.00%	16.77%	0.0289%
A O Smith Corp	AOS	8,134.40	0.02%	1.70%	10.00%	11.79%	0.0026%
APA Corp	APA	8,101.01	0.02%	1.17%	2.00%	3.18%	0.0007%
Air Products and Chemicals Inc	APD	56,693.79	0.15%	2.34%	12.54%	15.03%	0.0227%
Amphenol Corp	APH	43,805.09	0.12%	0.79%	13.68%	14.53%	0.0170%
Aptiv PLC	APTV	40,297.58	0.11%	0.00%	18.40%	18.40%	0.0198%
Alexandria Real Estate Equities Inc	ARE	29,112.00	0.08%	2.34%	7.44%	9.87%	0.0077%
Atmos Energy Corp	ATO	11,535.77	0.03%	2.83%	7.70%	10.64%	0.0033%
Activision Blizzard Inc	ATVI	60,186.82	0.16%	0.61%	13.63%	14.27%	0.0229%
AvalonBay Communities Inc	AVB	30,944.71	0.08%	2.87%	8.65%	11.64%	0.0096%
Broadcom Inc	AVGO	199,604.95	0.53%	2.97%	11.90%	15.05%	0.0801%
Avery Dennison Corp	AVY	17,174.19	0.05%	1.31%	7.20%	8.56%	0.0039%
American Water Works Co Inc	AWK	30,680.08	0.08%	1.43%	8.78%	10.27%	0.0084%
American Express Co	AXP	133,091.36	0.36%	1.03%	32.84%	34.04%	0.1208%
AutoZone Inc	AZO	36,583.19	0.10%	0.00%	12.72%	12.72%	0.0124%
Boeing Co/The	BA	128,918.27	0.34%	0.00%	-169.00%	-169.00%	-0.5812%
Bank of America Corp	BAC	357,212.67	0.95%	1.98%	15.10%	17.23%	0.1642%
Baxter International Inc	BAX	40,207.76	0.11%	1.39%	12.75%	14.23%	0.0153%
Bath & Body Works Inc	BBWI	16,663.43	N/A	0.95%	N/A	N/A	N/A
Best Buy Co Inc	BBY	26,000.85	0.07%	2.65%	3.90%	6.60%	0.0046%
Becton Dickinson and Co	BDX	70,597.05	0.19%	1.35%	8.99%	10.40%	0.0196%
Franklin Resources Inc	BEN	14,944.82	N/A	3.77%	N/A	N/A	N/A
Brown-Forman Corp	BF/B	20,754.07	0.06%	1.07%	7.02%	8.13%	0.0045%
Biogen Inc	BIIB	42,174.85	0.11%	0.00%	-0.15%	-0.15%	-0.0002%
Bio-Rad Laboratories Inc	BIO	18,427.95	0.05%	0.00%	12.50%	12.50%	0.0061%
Bank of New York Mellon Corp/The	BK	44,746.94	0.12%	2.62%	8.75%	11.49%	0.0137%
Booking Holdings Inc	BKNG	97,471.10	0.26%	0.00%	42.50%	42.50%	0.1105%
Baker Hughes Co	BKR	20,488.48	0.05%	2.91%	35.45%	38.88%	0.0212%
BlackRock Inc	BLK	127,640.70	0.34%	1.97%	8.00%	10.05%	0.0342%
Ball Corp	BLL	29,385.10	0.08%	0.89%	8.40%	9.33%	0.0073%
Bristol-Myers Squibb Co	BMY	131,482.49	0.35%	3.31%	3.80%	7.17%	0.0251%
Broadridge Financial Solutions Inc	BR	19,358.24	0.05%	1.54%	11.90%	13.53%	0.0070%
Berkshire Hathaway Inc	BRK/B	361,747.31	0.96%	0.00%	2.30%	2.30%	0.0222%
Brown & Brown Inc	BRO	15,615.11	0.04%	0.67%	17.00%	17.72%	0.0074%
Boston Scientific Corp	BSX	61,780.98	0.16%	0.00%	15.08%	15.08%	0.0249%
BorgWarner Inc	BWA	10,361.33	0.03%	1.57%	24.08%	25.84%	0.0071%
Boston Properties Inc	BXP	16,920.91	0.05%	3.62%	0.48%	4.11%	0.0019%
Citigroup Inc	C	142,239.77	0.38%	2.91%	19.53%	22.72%	0.0862%
Conagra Brands Inc	CAG	16,268.91	0.04%	3.69%	6.30%	10.11%	0.0044%
Cardinal Health Inc	CAH	14,034.82	0.04%	3.97%	5.96%	10.05%	0.0038%

Company	Ticker	[2] Market Capitalization	[3] Weight in Index	[4] Estimated Dividend Yield	[5] Long-Term Growth Est.	[6] DCF Result	[7] Weighted DCF Result
Carrier Global Corp	CARR	44,912.20	0.12%	0.93%	17.30%	18.30%	0.0219%
Caterpillar Inc	CAT	105,098.01	0.28%	2.31%	15.45%	17.94%	0.0503%
Chubb Ltd	CB	74,868.94	0.20%	1.84%	17.70%	19.71%	0.0394%
Cboe Global Markets Inc	CBOE	13,206.32	N/A	1.55%	N/A	N/A	N/A
CBRE Group Inc	CBRE	32,687.26	0.09%	0.00%	18.70%	18.70%	0.0163%
Crown Castle International Corp	CCI	74,908.21	0.20%	3.07%	16.07%	19.38%	0.0387%
Carnival Corp	CCL	24,536.01	N/A	N/A	N/A	N/A	N/A
Ceridian HCM Holding Inc	CDAY	16,877.46	N/A	N/A	N/A	N/A	N/A
Cadence Design Systems Inc	CDNS	41,915.56	0.11%	0.00%	11.56%	11.56%	0.0129%
CDW Corp/DE	CDW	25,026.84	0.07%	0.88%	13.10%	14.04%	0.0094%
Celanese Corp	CE	16,738.36	0.04%	1.81%	16.29%	18.24%	0.0081%
Cerner Corp	CERN	20,844.72	0.06%	1.25%	7.89%	9.19%	0.0051%
CF Industries Holdings Inc	CF	12,006.88	0.03%	2.15%	7.20%	9.43%	0.0030%
Citizens Financial Group Inc	CFG	20,017.38	0.05%	3.32%	28.76%	32.56%	0.0174%
Church & Dwight Co Inc	CHD	20,274.49	0.05%	1.22%	7.50%	8.77%	0.0047%
CH Robinson Worldwide Inc	CHRW	11,458.94	0.03%	2.34%	13.47%	15.97%	0.0049%
Charter Communications Inc	CHTR	133,741.53	0.36%	0.00%	36.01%	36.01%	0.1285%
Cigna Corp	CI	68,076.02	0.18%	2.00%	10.95%	13.05%	0.0237%
Cincinnati Financial Corp	CINF	18,410.32	N/A	2.21%	N/A	N/A	N/A
Colgate-Palmolive Co	CL	63,752.71	0.17%	2.38%	5.95%	8.40%	0.0143%
Clorox Co/The	CLX	20,339.06	0.05%	2.80%	5.00%	7.87%	0.0043%
Comerica Inc	CMA	10,780.88	0.03%	3.38%	21.98%	25.73%	0.0074%
Comcast Corp	CMCSA	256,175.79	0.68%	1.79%	14.51%	16.43%	0.1123%
CME Group Inc	CME	69,449.53	0.19%	1.86%	6.30%	8.22%	0.0152%
Chipotle Mexican Grill Inc	CMG	51,063.22	0.14%	0.00%	26.05%	26.05%	0.0355%
Cummins Inc	CMI	32,248.39	0.09%	2.58%	12.20%	14.94%	0.0128%
CMS Energy Corp	CMS	17,301.03	0.05%	2.91%	5.80%	8.80%	0.0041%
Centene Corp	CNC	36,329.47	0.10%	0.00%	9.86%	9.86%	0.0096%
CenterPoint Energy Inc	CNP	14,585.09	0.04%	2.76%	3.42%	6.23%	0.0024%
Capital One Financial Corp	COF	72,257.08	0.19%	1.48%	50.46%	52.32%	0.1008%
Cabot Oil & Gas Corp	COG	8,696.69	0.02%	2.02%	43.37%	45.83%	0.0106%
Cooper Cos Inc/The	COO	20,377.84	0.05%	0.01%	11.07%	11.08%	0.0060%
ConocoPhillips	COP	90,749.59	0.24%	2.72%	2.50%	5.25%	0.0127%
Costco Wholesale Corp	COST	198,534.06	0.53%	0.70%	10.00%	10.74%	0.0569%
Campbell Soup Co	CPB	12,606.47	0.03%	3.54%	1.56%	5.12%	0.0017%
Copart Inc	CPRT	32,890.65	N/A	N/A	N/A	N/A	N/A
Charles River Laboratories International Inc	CRL	20,797.33	0.06%	0.00%	16.23%	16.23%	0.0090%
salesforce.com Inc	CRM	265,524.38	0.71%	0.00%	20.05%	20.05%	0.1420%
Cisco Systems Inc/Delaware	CSCO	229,571.37	0.61%	2.72%	6.30%	9.10%	0.0558%
CSX Corp	CSX	67,048.71	0.18%	1.26%	12.99%	14.33%	0.0256%
Cintas Corp	CTAS	39,592.07	0.11%	1.00%	8.47%	9.51%	0.0100%
Catalent Inc	CTLT	22,757.37	0.06%	0.00%	15.86%	15.86%	0.0096%
Cognizant Technology Solutions Corp	CTSH	39,004.55	0.10%	1.29%	12.00%	13.37%	0.0139%
Corteva Inc	CTVA	30,904.44	0.08%	1.33%	17.70%	19.15%	0.0158%
Citrix Systems Inc	CTXS	13,338.79	0.04%	1.38%	5.20%	6.61%	0.0024%
CVS Health Corp	CVS	111,979.13	0.30%	2.36%	6.23%	8.66%	0.0259%
Chevron Corp	CVX	196,195.37	0.52%	5.28%	-2.22%	3.00%	0.0157%
Caesars Entertainment Inc	CZR	23,963.92	N/A	N/A	N/A	N/A	N/A
Dominion Energy Inc	D	59,035.72	0.16%	3.45%	6.99%	10.56%	0.0166%
Delta Air Lines Inc	DAL	27,266.78	N/A	N/A	N/A	N/A	N/A
DuPont de Nemours Inc	DD	35,562.65	0.09%	1.76%	10.56%	12.42%	0.0118%
Deere & Co	DE	103,892.14	0.28%	1.25%	39.56%	41.06%	0.1138%
Discover Financial Services	DFS	36,789.64	0.10%	1.63%	55.69%	57.77%	0.0567%
Dollar General Corp	DG	49,494.38	0.13%	0.79%	6.63%	7.44%	0.0098%
Quest Diagnostics Inc	DGX	17,754.12	0.05%	1.71%	-4.70%	-3.04%	-0.0014%
DR Horton Inc	DHI	30,077.55	0.08%	0.95%	29.90%	31.00%	0.0249%
Danaher Corp	DHR	217,339.72	0.58%	0.28%	14.30%	14.59%	0.0846%
Walt Disney Co/The	DIS	307,403.37	0.82%	0.00%	62.71%	62.71%	0.5142%
Discovery Inc	DISCA	4,291.43	0.01%	0.00%	11.00%	11.00%	0.0013%
Discovery Inc	DISCK	8,012.64	0.02%	0.00%	11.00%	11.00%	0.0024%
DISH Network Corp	DISH	12,579.67	0.03%	0.00%	7.27%	7.27%	0.0024%
Digital Realty Trust Inc	DLR	41,886.74	0.11%	3.21%	22.00%	25.56%	0.0286%
Dollar Tree Inc	DLTR	21,528.58	0.06%	0.00%	8.63%	8.63%	0.0050%
Dover Corp	DOV	22,385.94	0.06%	1.29%	13.60%	14.97%	0.0089%
Dow Inc	DOW	42,895.15	0.11%	4.86%	27.49%	33.02%	0.0378%
Domino's Pizza Inc	DPZ	17,577.88	0.05%	0.79%	13.15%	13.99%	0.0066%
Duke Realty Corp	DRE	18,111.14	0.05%	2.13%	7.63%	9.84%	0.0048%
Darden Restaurants Inc	DRI	19,739.57	0.05%	2.90%	12.60%	15.69%	0.0083%
DTE Energy Co	DTE	21,644.04	0.06%	2.95%	3.73%	6.74%	0.0039%
Duke Energy Corp	DUK	75,046.71	0.20%	4.04%	4.93%	9.07%	0.0182%
DaVita Inc	DVA	12,184.05	0.03%	0.00%	14.20%	14.20%	0.0046%
Devon Energy Corp	DVN	24,040.27	0.06%	1.24%	18.39%	19.74%	0.0127%
DXC Technology Co	DXC	8,466.49	0.02%	0.00%	27.26%	27.26%	0.0062%
Dexcom Inc	DXCM	52,908.16	0.14%	0.00%	15.20%	15.20%	0.0214%
Electronic Arts Inc	EA	40,481.79	0.11%	0.48%	6.55%	7.04%	0.0076%
eBay Inc	EBAY	45,289.40	0.12%	1.03%	10.38%	11.46%	0.0138%
Ecolab Inc	ECL	59,683.47	0.16%	0.92%	14.23%	15.21%	0.0242%
Consolidated Edison Inc	ED	25,652.00	0.07%	4.27%	4.60%	8.97%	0.0061%
Equifax Inc	EFX	30,875.93	0.08%	0.62%	15.32%	15.98%	0.0132%
Edison International	EIX	21,062.24	0.06%	4.78%	3.85%	8.72%	0.0049%
Estee Lauder Cos Inc/The	EL	69,857.30	0.19%	0.71%	11.27%	12.01%	0.0224%
Eastman Chemical Co	EMN	13,678.78	0.04%	2.74%	14.57%	17.51%	0.0064%
Emerson Electric Co	EMR	56,312.76	0.15%	2.14%	10.34%	12.60%	0.0189%
Enphase Energy Inc	ENPH	20,189.11	0.05%	0.00%	34.30%	34.30%	0.0185%
EOG Resources Inc	EOG	46,866.44	0.13%	2.06%	13.08%	15.27%	0.0191%
Equinix Inc	EQIX	70,914.17	0.19%	1.45%	23.55%	25.17%	0.0476%
Equity Residential	EQR	30,301.06	0.08%	2.98%	9.13%	12.24%	0.0099%
Eversource Energy	ES	28,096.25	0.07%	2.95%	7.77%	10.83%	0.0081%
Essex Property Trust Inc	ESS	20,794.29	0.06%	2.61%	8.04%	10.76%	0.0060%
Eaton Corp PLC	ETN	59,514.97	0.16%	2.04%	11.53%	13.68%	0.0217%

Company	Ticker	[2] Market Capitalization	[3] Weight in Index	[4] Estimated Dividend Yield	[5] Long-Term Growth Est.	[6] DCF Result	[7] Weighted DCF Result
Entergy Corp	ETR	19,956.84	0.05%	3.83%	3.22%	7.10%	0.0038%
Etsy Inc	ETSY	26,322.95	N/A	N/A	N/A	N/A	N/A
Evergy Inc	EVRG	14,118.96	0.04%	3.44%	9.63%	13.24%	0.0050%
Edwards Lifesciences Corp	EW	70,566.96	0.19%	0.00%	15.67%	15.67%	0.0295%
Exelon Corp	EXC	47,216.58	0.13%	3.17%	2.59%	5.80%	0.0073%
Expeditors International of Washington Inc	EXPD	20,239.11	0.05%	0.97%	11.30%	12.33%	0.0067%
Expedia Group Inc	EXPE	23,814.01	0.06%	0.00%	4.00%	4.00%	0.0025%
Extra Space Storage Inc	EXR	22,478.24	0.06%	2.98%	8.30%	11.40%	0.0068%
Ford Motor Co	F	55,562.59	0.15%	0.00%	47.75%	47.75%	0.0708%
Diamondback Energy Inc	FANG	17,140.38	0.05%	1.90%	17.38%	19.45%	0.0089%
Fastenal Co	FAST	29,662.28	0.08%	2.17%	7.90%	10.16%	0.0080%
Facebook Inc	FB	809,041.95	2.16%	0.00%	26.98%	26.98%	0.5822%
Fortune Brands Home & Security Inc	FBHS	12,329.14	0.03%	1.16%	16.60%	17.86%	0.0059%
Freeport-McMoRan Inc	FCX	47,756.12	0.13%	0.92%	33.24%	34.32%	0.0437%
FedEx Corp	FDX	58,254.39	0.16%	1.37%	13.88%	15.34%	0.0238%
FirstEnergy Corp	FE	19,384.19	0.05%	4.38%	0.38%	4.77%	0.0025%
F5 Networks Inc	FFIV	11,988.82	0.03%	0.00%	14.78%	14.78%	0.0047%
Fidelity National Information Services Inc	FIS	75,160.64	0.20%	1.28%	13.07%	14.43%	0.0289%
Fiserv Inc	FISV	71,849.24	0.19%	0.00%	17.46%	17.46%	0.0335%
Fifth Third Bancorp	FITB	29,314.07	0.08%	2.83%	13.00%	16.01%	0.0125%
FleetCor Technologies Inc	FLT	21,581.95	0.06%	0.00%	15.04%	15.04%	0.0087%
FMC Corp	FMC	11,783.68	0.03%	2.10%	9.23%	11.43%	0.0036%
Fox Corp	FOX	9,285.68	0.02%	1.29%	6.06%	7.39%	0.0018%
Fox Corp	FOXA	12,929.94	0.03%	1.20%	6.06%	7.29%	0.0025%
First Republic Bank/CA	FRC	34,537.09	0.09%	0.46%	17.17%	17.67%	0.0163%
Federal Realty Investment Trust	FRT	9,175.85	0.02%	3.63%	14.14%	18.02%	0.0044%
Fortinet Inc	FTNT	47,695.97	0.13%	0.00%	15.18%	15.18%	0.0193%
Fortive Corp	FTV	25,291.65	0.07%	0.40%	8.55%	8.96%	0.0060%
General Dynamics Corp	GD	54,798.42	0.15%	2.43%	8.66%	11.19%	0.0164%
General Electric Co	GE	113,092.22	0.30%	0.31%	94.85%	95.31%	0.2875%
Gilead Sciences Inc	GILD	87,578.56	0.23%	4.07%	2.07%	6.17%	0.0144%
General Mills Inc	GIS	36,232.50	0.10%	3.41%	6.10%	9.61%	0.0093%
Globe Life Inc	GL	9,056.22	N/A	0.89%	N/A	N/A	N/A
Corning Inc	GLW	31,163.63	0.08%	2.63%	20.23%	23.13%	0.0192%
General Motors Co	GM	76,520.37	0.20%	0.00%	12.90%	12.90%	0.0263%
Generac Holdings Inc	GNRC	25,795.66	0.07%	0.00%	14.23%	14.23%	0.0098%
Alphabet Inc	GOOG	853,346.97	2.28%	0.00%	34.61%	34.61%	0.7879%
Alphabet Inc	GOOGL	804,956.77	2.15%	0.00%	34.61%	34.61%	0.7432%
Genuine Parts Co	GPC	17,361.59	0.05%	2.69%	10.19%	13.01%	0.0060%
Global Payments Inc	GPN	46,288.81	0.12%	0.63%	18.36%	19.06%	0.0235%
Gap Inc/The	GPS	8,537.58	0.02%	2.11%	18.50%	20.81%	0.0047%
Garmin Ltd	GRMN	29,898.38	0.08%	1.72%	9.05%	10.85%	0.0087%
Goldman Sachs Group Inc/The	GS	127,432.78	0.34%	2.12%	10.92%	13.15%	0.0447%
WW Grainger Inc	GWW	20,468.21	0.05%	1.65%	12.40%	14.15%	0.0077%
Halliburton Co	HAL	19,252.59	0.05%	0.83%	43.83%	44.85%	0.0230%
Hasbro Inc	HAS	12,284.08	0.03%	3.05%	13.85%	17.10%	0.0056%
Huntington Bancshares Inc/OH	HBAN	22,827.57	0.06%	3.88%	22.96%	27.29%	0.0166%
Hanesbrands Inc	HBI	5,991.45	0.02%	3.50%	12.00%	15.71%	0.0025%
HCA Healthcare Inc	HCA	77,704.87	0.21%	0.79%	11.11%	11.94%	0.0247%
Home Depot Inc/The	HD	346,432.15	0.92%	2.01%	8.96%	11.06%	0.1022%
Hess Corp	HES	24,188.56	0.06%	1.28%	-5.23%	-3.98%	-0.0026%
Hartford Financial Services Group Inc/The	HIG	24,389.82	0.07%	1.99%	7.00%	9.06%	0.0059%
Huntington Ingalls Industries Inc	HII	7,749.62	0.02%	2.36%	28.70%	31.40%	0.0065%
Hilton Worldwide Holdings Inc	HLT	36,817.21	0.10%	0.00%	44.00%	44.00%	0.0432%
Hologic Inc	HOLX	18,709.88	0.05%	0.00%	11.18%	11.18%	0.0056%
Honeywell International Inc	HON	146,557.90	0.39%	1.75%	13.20%	15.06%	0.0589%
Hewlett Packard Enterprise Co	HPE	18,639.71	0.05%	3.37%	8.17%	11.68%	0.0058%
HP Inc	HPQ	31,532.92	0.08%	2.83%	11.39%	14.38%	0.0121%
Hormel Foods Corp	HRL	22,244.84	0.06%	2.39%	6.01%	8.48%	0.0050%
Henry Schein Inc	HSIC	10,639.02	0.03%	0.00%	13.85%	13.85%	0.0039%
Host Hotels & Resorts Inc	HST	11,659.18	0.03%	0.00%	42.86%	42.86%	0.0133%
Hershey Co/The	HSY	24,613.35	0.07%	2.13%	7.60%	9.81%	0.0064%
Humana Inc	HUM	50,007.72	0.13%	0.72%	12.30%	13.06%	0.0174%
Howmet Aerospace Inc	HWM	13,382.05	0.04%	0.26%	37.00%	37.30%	0.0133%
International Business Machines Corp	IBM	124,525.74	0.33%	4.72%	9.58%	14.53%	0.0483%
Intercontinental Exchange Inc	ICE	64,661.46	0.17%	1.15%	9.05%	10.25%	0.0177%
IDEXX Laboratories Inc	IDXX	52,908.76	0.14%	0.00%	18.57%	18.57%	0.0262%
IDEX Corp	IEX	15,727.79	0.04%	1.04%	14.03%	15.15%	0.0064%
International Flavors & Fragrances Inc	IFF	34,035.08	0.09%	2.36%	33.01%	35.76%	0.0325%
Illumina Inc	ILMN	63,477.97	0.17%	0.00%	31.48%	31.48%	0.0533%
Incyte Corp	INCY	15,189.03	0.04%	0.00%	93.73%	93.73%	0.0380%
IHS Markit Ltd	INFO	46,512.84	0.12%	0.69%	11.00%	11.72%	0.0145%
Intel Corp	INTC	216,156.96	0.58%	2.61%	4.43%	7.09%	0.0409%
Intuit Inc	INTU	147,335.86	0.39%	0.50%	15.56%	16.10%	0.0633%
International Paper Co	IP	20,694.71	0.06%	3.87%	4.25%	8.20%	0.0045%
Interpublic Group of Cos Inc/The	IPG	14,434.05	0.04%	2.95%	7.57%	10.63%	0.0041%
IPG Photonics Corp	IPGP	8,473.92	N/A	N/A	N/A	N/A	N/A
IQVIA Holdings Inc	IQV	45,898.74	0.12%	0.00%	22.70%	22.70%	0.0278%
Ingersoll Rand Inc	IR	21,180.01	0.06%	0.00%	15.00%	15.00%	0.0085%
Iron Mountain Inc	IRM	12,577.04	0.03%	5.69%	4.00%	9.81%	0.0033%
Intuitive Surgical Inc	ISRG	118,203.44	0.32%	0.00%	18.58%	18.58%	0.0586%
Gartner Inc	IT	25,419.26	0.07%	0.00%	13.50%	13.50%	0.0092%
Illinois Tool Works Inc	ITW	65,081.84	0.17%	2.36%	13.56%	16.08%	0.0279%
Invesco Ltd	IVZ	11,124.16	0.03%	2.82%	8.70%	11.64%	0.0035%
Jacobs Engineering Group Inc	J	17,270.51	0.05%	0.63%	15.05%	15.73%	0.0072%
JB Hunt Transport Services Inc	JBHT	17,590.88	0.05%	0.72%	14.65%	15.42%	0.0072%
Johnson Controls International plc	JCI	48,488.21	0.13%	1.59%	15.70%	17.41%	0.0225%
Jack Henry & Associates Inc	JKHY	12,142.74	0.03%	1.12%	13.10%	14.30%	0.0046%
Johnson & Johnson	JNJ	425,145.84	1.13%	2.63%	8.70%	11.44%	0.1297%
Juniper Networks Inc	JNPR	8,948.18	0.02%	2.91%	8.93%	11.97%	0.0029%

Company	Ticker	[2] Market Capitalization	[3] Weight in Index	[4] Estimated Dividend Yield	[5] Long-Term Growth Est.	[6] DCF Result	[7] Weighted DCF Result
JPMorgan Chase & Co	JPM	489,131.09	1.30%	2.44%	9.70%	12.26%	0.1600%
Kellogg Co	K	21,788.99	0.06%	3.63%	4.24%	7.95%	0.0046%
KeyCorp	KEY	20,676.72	0.06%	3.42%	18.28%	22.01%	0.0121%
Keysight Technologies Inc	KEYS	30,261.56	0.08%	0.00%	13.01%	13.01%	0.0105%
Kraft Heinz Co/The	KHC	45,045.11	0.12%	4.35%	0.28%	4.63%	0.0056%
Kimco Realty Corp	KIM	12,717.47	0.03%	3.28%	13.09%	16.58%	0.0056%
KLA Corp	KLAC	50,843.18	0.14%	1.26%	9.05%	10.36%	0.0141%
Kimberly-Clark Corp	KMB	44,600.76	0.12%	3.44%	1.60%	5.07%	0.0060%
Kinder Morgan Inc	KMI	37,918.90	0.10%	6.46%	7.65%	14.35%	0.0145%
CarMax Inc	KMX	20,849.16	0.06%	0.00%	14.24%	14.24%	0.0079%
Coca-Cola Co/The	KO	226,493.00	0.60%	3.20%	9.42%	12.77%	0.0771%
Kroger Co/The	KR	30,065.28	0.08%	2.08%	8.28%	10.45%	0.0084%
Kansas City Southern	KSU	24,622.02	0.07%	0.80%	11.10%	11.94%	0.0078%
Loews Corp	L	13,874.73	N/A	0.46%	N/A	N/A	N/A
Leidos Holdings Inc	LDOS	13,608.64	0.04%	1.50%	10.69%	12.26%	0.0045%
Leggett & Platt Inc	LEG	5,977.13	N/A	3.75%	N/A	N/A	N/A
Lennar Corp	LEN	25,467.10	0.07%	1.07%	25.25%	26.45%	0.0180%
Laboratory Corp of America Holdings	LH	27,130.82	0.07%	0.00%	-9.41%	-9.41%	-0.0068%
L3Harris Technologies Inc	LHX	44,255.91	0.12%	1.85%	9.32%	11.25%	0.0133%
Linde PLC	LIN	151,123.27	0.40%	1.45%	12.28%	13.81%	0.0557%
LKQ Corp	LKQ	14,787.79	0.04%	0.00%	11.30%	11.30%	0.0045%
Eli Lilly & Co	LLY	221,018.04	0.59%	1.47%	17.35%	18.94%	0.1117%
Lockheed Martin Corp	LMT	95,563.71	0.25%	3.25%	3.88%	7.19%	0.0183%
Lincoln National Corp	LNC	12,919.71	0.03%	2.44%	30.59%	33.40%	0.0115%
Alliant Energy Corp	LNT	14,009.44	0.04%	2.88%	6.16%	9.13%	0.0034%
Lowe's Cos Inc	LOW	140,466.96	0.37%	1.58%	20.36%	22.10%	0.0828%
Lam Research Corp	LRCX	80,138.03	0.21%	1.05%	14.40%	15.53%	0.0332%
Lumen Technologies Inc	LUMN	13,693.82	0.04%	8.07%	-9.22%	-1.52%	-0.0006%
Southwest Airlines Co	LUV	30,428.30	N/A	N/A	N/A	N/A	N/A
Las Vegas Sands Corp	LVS	27,962.03	N/A	N/A	N/A	N/A	N/A
Lamb Weston Holdings Inc	LW	8,905.95	0.02%	1.53%	16.02%	17.67%	0.0042%
LyondellBasell Industries NV	LYB	31,394.23	0.08%	4.82%	8.00%	13.01%	0.0109%
Live Nation Entertainment Inc	LYV	20,178.37	N/A	N/A	N/A	N/A	N/A
Mastercard Inc	MA	340,319.27	0.91%	0.51%	25.80%	26.37%	0.2394%
Mid-America Apartment Communities Inc	MAA	21,666.74	0.06%	2.20%	3.00%	5.23%	0.0030%
Marriott International Inc/MD	MAR	48,226.40	0.13%	0.00%	74.63%	74.63%	0.0960%
Masco Corp	MAS	13,729.90	0.04%	1.69%	15.35%	17.17%	0.0063%
McDonald's Corp	MCD	180,060.71	0.48%	2.29%	11.87%	14.29%	0.0686%
Microchip Technology Inc	MCHP	42,062.40	0.11%	1.14%	13.03%	14.24%	0.0160%
McKesson Corp	MCK	30,839.10	0.08%	0.94%	1.70%	2.65%	0.0022%
Moody's Corp	MCO	66,121.48	0.18%	0.70%	11.00%	11.74%	0.0207%
Mondelez International Inc	MDLZ	81,324.99	0.22%	2.41%	7.33%	9.82%	0.0213%
Medtronic PLC	MDT	168,697.28	0.45%	2.01%	10.29%	12.40%	0.0558%
MetLife Inc	MET	52,896.25	0.14%	3.11%	4.70%	7.88%	0.0111%
MGM Resorts International	MGM	20,793.12	0.06%	0.02%	-25.20%	-25.18%	-0.0140%
Mohawk Industries Inc	MHK	12,245.74	N/A	N/A	N/A	N/A	N/A
McCormick & Co Inc/MD	MKC	20,204.99	0.05%	1.68%	6.25%	7.98%	0.0043%
MarketAxess Holdings Inc	MKTX	15,986.22	N/A	0.63%	N/A	N/A	N/A
Martin Marietta Materials Inc	MLM	21,312.97	0.06%	0.71%	19.35%	20.13%	0.0114%
Marsh & McLennan Cos Inc	MMC	76,718.38	0.20%	1.41%	12.01%	13.51%	0.0276%
3M Co	MMM	101,504.68	0.27%	3.37%	9.45%	12.98%	0.0352%
Monster Beverage Corp	MNST	46,980.94	0.13%	0.00%	12.17%	12.17%	0.0153%
Altria Group Inc	MO	83,942.43	0.22%	7.91%	4.25%	12.33%	0.0276%
Mosaic Co/The	MOS	13,569.92	0.04%	0.84%	7.23%	8.10%	0.0029%
Marathon Petroleum Corp	MPC	39,447.27	0.11%	3.75%	28.85%	33.14%	0.0349%
Monolithic Power Systems Inc	MPWR	22,256.51	0.06%	0.50%	24.85%	25.41%	0.0151%
Merck & Co Inc	MRK	190,131.58	0.51%	3.46%	12.36%	16.03%	0.0813%
Moderna Inc	MRNA	155,347.20	0.41%	0.00%	-22.63%	-22.63%	-0.0938%
Marathon Oil Corp	MRO	10,777.41	0.03%	1.46%	1.00%	2.47%	0.0007%
Morgan Stanley	MS	177,548.03	0.47%	2.88%	3.81%	6.74%	0.0319%
MSCI Inc	MSCI	50,152.77	0.13%	0.68%	13.30%	14.03%	0.0188%
Microsoft Corp	MSFT	2,118,598.07	5.65%	0.88%	10.29%	11.22%	0.6340%
Motorola Solutions Inc	MSI	39,337.58	0.10%	1.22%	12.40%	13.70%	0.0144%
M&T Bank Corp	MTB	19,216.77	0.05%	2.95%	11.59%	14.71%	0.0075%
Match Group Inc	MTCH	43,456.56	0.12%	0.00%	14.24%	14.24%	0.0165%
Mettler-Toledo International Inc	MTD	31,840.43	0.08%	0.00%	15.68%	15.68%	0.0133%
Micron Technology Inc	MU	79,906.02	0.21%	0.56%	13.62%	14.22%	0.0303%
Norwegian Cruise Line Holdings Ltd	NCLH	9,883.50	0.03%	0.00%	-99.44%	-99.44%	-0.0262%
Nasdaq Inc	NDAQ	32,273.72	N/A	1.12%	N/A	N/A	N/A
NextEra Energy Inc	NEE	154,037.16	0.41%	1.96%	9.15%	11.20%	0.0460%
Newmont Corp	NEM	43,392.54	0.12%	4.05%	-3.00%	0.99%	0.0011%
Netflix Inc	NFLX	270,134.04	0.72%	0.00%	35.37%	35.37%	0.2548%
NiSource Inc	NI	9,508.09	0.03%	3.63%	5.81%	9.55%	0.0024%
NIKE Inc	NKE	185,616.58	0.50%	0.76%	13.24%	14.05%	0.0696%
NortonLifeLock Inc	NLOK	14,717.92	0.04%	1.98%	16.20%	18.34%	0.0072%
Nielsen Holdings PLC	NLSN	6,885.37	N/A	1.25%	N/A	N/A	N/A
Northrop Grumman Corp	NOC	57,663.26	0.15%	1.74%	5.29%	7.08%	0.0109%
ServiceNow Inc	NOW	123,271.69	0.33%	0.00%	40.10%	40.10%	0.1319%
NRG Energy Inc	NRG	9,994.24	0.03%	3.18%	30.98%	34.66%	0.0092%
Norfolk Southern Corp	NSC	59,088.05	0.16%	1.82%	12.86%	14.80%	0.0233%
NetApp Inc	NTAP	20,072.94	0.05%	2.23%	10.70%	13.04%	0.0070%
Northern Trust Corp	NTRS	22,467.06	0.06%	2.60%	13.00%	15.77%	0.0094%
Nucor Corp	NUE	28,926.02	N/A	1.64%	N/A	N/A	N/A
NVIDIA Corp	NVDA	517,900.00	1.38%	0.08%	24.53%	24.61%	0.3400%
NVR Inc	NVR	17,086.10	0.05%	0.00%	19.00%	19.00%	0.0087%
Newell Brands Inc	NWL	9,418.36	N/A	4.16%	N/A	N/A	N/A
News Corp	NWS	4,637.40	0.01%	0.86%	11.60%	12.51%	0.0015%
News Corp	NWSA	9,205.22	0.02%	0.85%	11.60%	12.50%	0.0031%
NXP Semiconductors NV	NXPI	51,931.99	0.14%	1.15%	27.08%	28.38%	0.0393%
Realty Income Corp	O	25,255.71	0.07%	4.37%	7.17%	11.69%	0.0079%

Company	Ticker	[2] Market Capitalization	[3] Weight in Index	[4] Estimated Dividend Yield	[5] Long-Term Growth Est.	[6] DCF Result	[7] Weighted DCF Result
Old Dominion Freight Line Inc	ODFL	33,119.34	0.09%	0.28%	21.08%	21.39%	0.0189%
Organon & Co	OGN	8,313.74	0.02%	3.42%	-5.62%	-2.30%	-0.0005%
ONEOK Inc	OKE	25,843.88	0.07%	6.45%	9.99%	16.76%	0.0116%
Omnicom Group Inc	OMC	15,536.00	0.04%	3.86%	11.84%	15.93%	0.0066%
Oracle Corp	ORCL	238,186.06	0.64%	1.47%	12.65%	14.21%	0.0903%
O'Reilly Automotive Inc	ORLY	42,133.81	0.11%	0.00%	11.55%	11.55%	0.0130%
Otis Worldwide Corp	OTIS	35,115.38	0.09%	1.17%	7.40%	8.61%	0.0081%
Occidental Petroleum Corp	OXY	27,619.88	N/A	0.14%	N/A	N/A	N/A
Paycom Software Inc	PAYC	29,791.60	0.08%	0.00%	31.20%	31.20%	0.0248%
Paychex Inc	PAYX	40,551.72	0.11%	2.35%	7.40%	9.83%	0.0106%
People's United Financial Inc	PBCT	7,476.37	N/A	4.18%	N/A	N/A	N/A
PACCAR Inc	PCAR	27,398.89	0.07%	1.72%	13.35%	15.19%	0.0111%
Healthpeak Properties Inc	PEAK	18,044.65	0.05%	3.58%	11.47%	15.25%	0.0073%
Public Service Enterprise Group Inc	PEG	30,789.64	0.08%	3.35%	4.62%	8.04%	0.0066%
Penn National Gaming Inc	PENN	11,360.93	N/A	N/A	N/A	N/A	N/A
PepsiCo Inc	PEP	207,883.92	0.55%	2.86%	8.57%	11.55%	0.0641%
Pfizer Inc	PFE	241,143.65	0.64%	3.63%	-3.63%	-0.07%	-0.0005%
Principal Financial Group Inc	PFG	17,284.57	0.05%	3.91%	15.19%	19.40%	0.0089%
Procter & Gamble Co/The	PG	339,478.58	0.91%	2.49%	6.40%	8.97%	0.0812%
Progressive Corp/The	PGR	52,905.27	0.14%	0.44%	-3.52%	-3.09%	-0.0044%
Parker-Hannifin Corp	PH	35,947.11	0.10%	1.47%	12.20%	13.76%	0.0132%
PulteGroup Inc	PHM	11,917.34	0.03%	1.22%	35.00%	36.43%	0.0116%
Packaging Corp of America	PKG	13,055.70	0.03%	2.91%	5.00%	7.98%	0.0028%
PerkinElmer Inc	PKI	19,428.24	0.05%	0.16%	-3.57%	-3.41%	-0.0018%
Prologis Inc	PLD	92,786.22	0.25%	2.01%	7.60%	9.68%	0.0240%
Philip Morris International Inc	PM	147,734.10	0.39%	5.27%	11.35%	16.92%	0.0667%
PNC Financial Services Group Inc/The	PNC	83,145.63	0.22%	2.56%	32.17%	35.14%	0.0779%
Pentair PLC	PNR	12,046.63	0.03%	1.10%	13.98%	15.16%	0.0049%
Pinnacle West Capital Corp	PNW	8,161.19	0.02%	4.59%	1.92%	6.55%	0.0014%
Pool Corp	POOL	17,420.28	0.05%	0.74%	17.00%	17.80%	0.0083%
PPG Industries Inc	PPG	33,944.42	0.09%	1.65%	5.75%	7.45%	0.0067%
PPL Corp	PPL	21,456.62	0.06%	5.95%	-4.45%	1.37%	0.0008%
Prudential Financial Inc	PRU	40,607.20	0.11%	4.37%	6.83%	11.35%	0.0123%
Public Storage	PSA	52,060.24	0.14%	2.69%	9.69%	12.51%	0.0174%
Phillips 66	PSX	30,672.37	0.08%	5.14%	42.54%	48.77%	0.0399%
PTC Inc	PTC	14,061.19	0.04%	0.00%	20.23%	20.23%	0.0076%
PVH Corp	PVH	7,303.44	0.02%	0.00%	33.54%	33.54%	0.0065%
Quanta Services Inc	PWR	15,838.28	0.04%	0.21%	14.00%	14.23%	0.0060%
Pioneer Natural Resources Co	PXD	40,621.61	0.11%	1.35%	22.67%	24.16%	0.0262%
PayPal Holdings Inc	PYPL	305,755.08	0.82%	0.00%	21.76%	21.76%	0.1775%
QUALCOMM Inc	QCOM	145,489.44	0.39%	2.11%	24.72%	27.09%	0.1051%
Qorvo Inc	QRVO	18,581.83	0.05%	0.00%	14.31%	14.31%	0.0071%
Royal Caribbean Cruises Ltd	RCL	22,655.03	N/A	N/A	N/A	N/A	N/A
Everest Re Group Ltd	RE	9,999.35	0.03%	2.47%	67.39%	70.69%	0.0189%
Regency Centers Corp	REG	11,437.62	0.03%	3.53%	9.56%	13.26%	0.0040%
Regeneron Pharmaceuticals Inc	REGN	63,608.05	0.17%	0.00%	11.55%	11.55%	0.0196%
Regions Financial Corp	RF	20,341.23	0.05%	3.19%	29.15%	32.81%	0.0178%
Robert Half International Inc	RHI	11,233.95	0.03%	1.52%	13.90%	15.52%	0.0047%
Raymond James Financial Inc	RJF	18,990.12	0.05%	1.13%	15.00%	16.21%	0.0082%
Ralph Lauren Corp	RL	5,399.65	0.01%	2.48%	57.38%	60.57%	0.0087%
ResMed Inc	RMD	38,394.23	0.10%	0.64%	15.41%	16.09%	0.0165%
Rockwell Automation Inc	ROK	34,116.29	0.09%	1.46%	13.10%	14.65%	0.0133%
Rollins Inc	ROL	17,385.15	N/A	0.91%	N/A	N/A	N/A
Roper Technologies Inc	ROP	47,032.81	0.13%	0.50%	13.50%	14.04%	0.0176%
Ross Stores Inc	ROST	38,681.59	0.10%	1.05%	41.67%	42.93%	0.0443%
Republic Services Inc	RSG	38,222.90	0.10%	1.53%	9.28%	10.88%	0.0111%
Raytheon Technologies Corp	RTX	129,617.19	0.35%	2.37%	20.54%	23.16%	0.0801%
SBA Communications Corp	SBAC	36,214.94	0.10%	0.70%	8.00%	8.73%	0.0084%
Starbucks Corp	SBUX	130,066.52	0.35%	1.78%	14.00%	15.90%	0.0552%
Charles Schwab Corp/The	SCHW	131,746.36	0.35%	0.99%	20.50%	21.59%	0.0759%
Sealed Air Corp	SEE	8,212.64	0.02%	1.46%	8.30%	9.82%	0.0022%
Sherwin-Williams Co/The	SHW	73,653.47	0.20%	0.79%	9.08%	9.90%	0.0195%
SVB Financial Group	SIVB	36,714.97	0.10%	0.00%	7.00%	7.00%	0.0069%
J M Smucker Co/The	SJM	13,006.33	0.03%	3.30%	0.73%	4.04%	0.0014%
Schlumberger NV	SLB	41,449.55	0.11%	1.69%	46.62%	48.70%	0.0538%
Snap-on Inc	SNA	11,277.24	0.03%	2.35%	7.71%	10.16%	0.0031%
Synopsys Inc	SNPS	45,660.92	0.12%	0.00%	16.13%	16.13%	0.0196%
Southern Co/The	SO	65,667.19	0.18%	4.26%	4.60%	8.96%	0.0157%
Simon Property Group Inc	SPG	42,709.57	0.11%	4.62%	7.92%	12.72%	0.0145%
S&P Global Inc	SPGI	102,398.49	0.27%	0.72%	9.40%	10.16%	0.0277%
Sempra Energy	SRE	39,856.48	0.11%	3.48%	6.30%	9.89%	0.0105%
STERIS PLC	STE	20,378.77	0.05%	0.84%	12.00%	12.89%	0.0070%
State Street Corp	STT	30,975.92	0.08%	2.69%	9.50%	12.32%	0.0102%
Seagate Technology Holdings PLC	STX	18,647.21	0.05%	3.25%	5.26%	8.59%	0.0043%
Constellation Brands Inc	STZ	35,448.80	0.09%	1.44%	7.67%	9.17%	0.0087%
Stanley Black & Decker Inc	SWK	28,568.87	0.08%	1.80%	15.38%	17.32%	0.0132%
Skyworks Solutions Inc	SWKS	27,212.59	0.07%	1.36%	24.05%	25.57%	0.0186%
Synchrony Financial	SYF	27,846.89	0.07%	1.80%	35.60%	37.72%	0.0280%
Stryker Corp	SYK	99,447.76	0.27%	0.96%	12.33%	13.34%	0.0354%
Sysco Corp	SYY	40,198.44	0.11%	2.39%	30.70%	33.46%	0.0359%
AT&T Inc	T	192,851.40	0.51%	7.70%	2.11%	9.89%	0.0509%
Molson Coors Beverage Co	TAP	9,302.53	0.02%	2.93%	3.84%	6.83%	0.0017%
TransDigm Group Inc	TDG	34,421.30	0.09%	0.00%	24.61%	24.61%	0.0226%
Teledyne Technologies Inc	TDY	20,021.44	0.05%	0.00%	14.10%	14.10%	0.0075%
Bio-Techne Corp	TECH	19,013.56	0.05%	0.26%	27.23%	27.53%	0.0140%
TE Connectivity Ltd	TEL	45,007.75	0.12%	1.46%	12.58%	14.13%	0.0170%
Teradyne Inc	TER	18,010.10	N/A	0.37%	N/A	N/A	N/A
Truist Financial Corp	TFC	78,287.84	0.21%	3.27%	10.54%	13.99%	0.0292%
Teleflex Inc	TFX	17,622.92	0.05%	0.36%	9.50%	9.88%	0.0046%
Target Corp	TGT	111,648.68	0.30%	1.57%	19.49%	21.22%	0.0632%

Company	Ticker	[2] Market Capitalization	[3] Weight in Index	[4] Estimated Dividend Yield	[5] Long-Term Growth Est.	[6] DCF Result	[7] Weighted DCF Result
TJX Cos Inc/The	TJX	79,343.52	0.21%	1.58%	69.20%	71.32%	0.1509%
Thermo Fisher Scientific Inc	TMO	224,772.08	0.60%	0.18%	2.80%	2.98%	0.0179%
T-Mobile US Inc	TMUS	159,440.14	0.43%	0.00%	20.40%	20.40%	0.0868%
Tapestry Inc	TPR	10,303.41	0.03%	2.70%	14.00%	16.89%	0.0046%
Trimble Inc	TRMB	20,695.75	0.06%	0.00%	10.00%	10.00%	0.0055%
T Rowe Price Group Inc	TROW	44,638.51	0.12%	2.20%	10.60%	12.91%	0.0154%
Travelers Cos Inc/The	TRV	37,925.43	0.10%	2.32%	8.63%	11.04%	0.0112%
Tractor Supply Co	TSCO	23,166.02	0.06%	1.03%	9.36%	10.43%	0.0064%
Tesla Inc	TSLA	776,850.27	2.07%	0.00%	40.27%	40.27%	0.8344%
Tyson Foods Inc	TSN	23,272.78	0.06%	2.25%	7.79%	10.13%	0.0063%
Trane Technologies PLC	TT	41,023.19	0.11%	1.37%	17.00%	18.48%	0.0202%
Take-Two Interactive Software Inc	TTWO	17,951.93	0.05%	0.00%	7.88%	7.88%	0.0038%
Twitter Inc	TWTR	48,189.23	0.13%	0.00%	39.00%	39.00%	0.0501%
Texas Instruments Inc	TXN	177,450.19	0.47%	2.39%	10.60%	13.12%	0.0621%
Textron Inc	TXT	15,647.07	0.04%	0.11%	30.73%	30.86%	0.0129%
Tyler Technologies Inc	TYL	18,732.64	0.05%	0.00%	17.90%	17.90%	0.0089%
Under Armour Inc	UA	4,295.61	N/A	N/A	N/A	N/A	N/A
Under Armour Inc	UAA	3,806.86	0.01%	0.00%	25.00%	25.00%	0.0025%
United Airlines Holdings Inc	UAL	15,394.18	0.04%	0.00%	-151.50%	-151.50%	-0.0622%
UDR Inc	UDR	15,726.95	0.04%	2.74%	4.65%	7.45%	0.0031%
Universal Health Services Inc	UHS	10,498.69	0.03%	0.58%	6.52%	7.12%	0.0020%
Ulta Beauty Inc	ULTA	19,618.89	0.05%	0.00%	49.50%	49.50%	0.0259%
UnitedHealth Group Inc	UNH	368,435.39	0.98%	1.48%	11.97%	13.55%	0.1331%
Union Pacific Corp	UNP	127,822.63	0.34%	2.18%	11.10%	13.40%	0.0457%
United Parcel Service Inc	UPS	132,621.61	0.35%	2.24%	14.39%	16.79%	0.0594%
United Rentals Inc	URI	25,403.82	0.07%	0.00%	15.43%	15.43%	0.0105%
US Bancorp	USB	88,128.66	0.24%	3.10%	12.07%	15.35%	0.0361%
Visa Inc	V	375,922.48	1.00%	0.57%	19.60%	20.23%	0.2028%
VF Corp	VFC	26,302.89	0.07%	2.93%	30.74%	34.12%	0.0239%
ViacomCBS Inc	VIAC	23,935.67	0.06%	2.43%	1.04%	3.49%	0.0022%
Valero Energy Corp	VLO	28,850.64	0.08%	5.55%	-22.39%	-17.46%	-0.0134%
Vulcan Materials Co	VMC	22,443.81	0.06%	0.87%	22.60%	23.57%	0.0141%
Vornado Realty Trust	VNO	8,047.48	0.02%	5.05%	-1.79%	3.21%	0.0007%
Verisk Analytics Inc	VRSK	32,313.56	0.09%	0.58%	8.39%	8.99%	0.0078%
VeriSign Inc	VRSN	22,935.29	N/A	N/A	N/A	N/A	N/A
Vertex Pharmaceuticals Inc	VRTX	47,057.64	0.13%	0.00%	15.92%	15.92%	0.0200%
Ventas Inc	VTR	21,723.75	0.06%	3.26%	9.43%	12.84%	0.0074%
Viatris Inc	VTRS	16,385.88	0.04%	3.25%	-5.51%	-2.35%	-0.0010%
Verizon Communications Inc	VZ	223,607.67	0.60%	4.74%	2.89%	7.70%	0.0459%
Westinghouse Air Brake Technologies Corp	WAB	16,296.62	0.04%	0.56%	10.99%	11.57%	0.0050%
Waters Corp	WAT	21,925.00	0.06%	0.00%	10.76%	10.76%	0.0063%
Walgreens Boots Alliance Inc	WBA	40,697.64	0.11%	4.06%	2.53%	6.64%	0.0072%
Western Digital Corp	WDC	17,425.74	0.05%	0.00%	4.30%	4.30%	0.0020%
WEC Energy Group Inc	WEC	27,821.37	0.07%	3.07%	6.66%	9.83%	0.0073%
Welltower Inc	WELL	34,819.19	0.09%	2.96%	20.09%	23.35%	0.0217%
Wells Fargo & Co	WFC	190,578.53	0.51%	1.72%	37.06%	39.10%	0.1988%
Whirlpool Corp	WHR	12,782.63	0.03%	2.75%	8.12%	10.98%	0.0037%
Willis Towers Watson PLC	WLTW	29,997.10	0.08%	1.38%	14.00%	15.47%	0.0124%
Waste Management Inc	WM	62,895.35	0.17%	1.54%	11.44%	13.07%	0.0219%
Williams Cos Inc/The	WMB	31,516.04	0.08%	6.32%	7.05%	13.60%	0.0114%
Walmart Inc	WMT	388,660.85	1.04%	1.58%	7.43%	9.07%	0.0940%
W R Berkley Corp	WRB	12,991.65	0.03%	0.71%	21.50%	22.29%	0.0077%
Westrock Co	WRK	13,304.91	0.04%	1.93%	15.50%	17.57%	0.0062%
West Pharmaceutical Services Inc	WST	31,407.04	0.08%	0.16%	19.83%	20.01%	0.0168%
Western Union Co/The	WU	8,216.36	0.02%	4.65%	3.35%	8.08%	0.0018%
Weyerhaeuser Co	WY	26,669.82	N/A	1.91%	N/A	N/A	N/A
Wynn Resorts Ltd	WYNN	9,803.20	0.03%	0.00%	-115.01%	-115.01%	-0.0301%
Xcel Energy Inc	XEL	33,652.31	0.09%	2.93%	6.47%	9.49%	0.0085%
Xilinx Inc	XLNX	37,365.19	0.10%	0.00%	9.25%	9.25%	0.0092%
Exxon Mobil Corp	XOM	249,018.18	0.66%	5.92%	16.84%	23.25%	0.1545%
DENTSPLY SIRONA Inc	XRAY	12,686.89	0.03%	0.76%	22.21%	23.05%	0.0078%
Xylem Inc/NY	XYL	22,282.56	0.06%	0.91%	15.80%	16.78%	0.0100%
Yum! Brands Inc	YUM	36,160.58	0.10%	1.64%	14.55%	16.30%	0.0157%
Zimmer Biomet Holdings Inc	ZBH	30,565.82	0.08%	0.66%	14.30%	15.01%	0.0122%
Zebra Technologies Corp	ZBRA	27,524.97	0.07%	0.00%	14.60%	14.60%	0.0107%
Zions Bancorp NA	ZION	10,030.51	0.03%	2.46%	13.49%	16.11%	0.0043%
Zoetis Inc	ZTS	92,011.49	0.25%	0.52%	14.73%	15.28%	0.0375%
	Total Market Capitalization:	37,488,922.47					17.28%

Notes:
[1] Equals sum of Col. [7]
[2] Source: Bloomberg Professional Service
[3] Equals weight in S&P 500 based on market capitalization
[4] Source: Bloomberg Professional Service
[5] Source: Bloomberg Professional Service
[6] Equals ([4] x (1 + (0.5 x [5]))) + [5]
[7] Equals Col. [3] x Col. [6]

Ex Ante Capital Asset Pricing Model and Empirical Capital Asset Pricing Model Results
Using *Value Line*-derived Expected Market Required Return and Beta Coefficients

Company	Ticker	[1] Current 30-Year Treasury Yield	[2] Value Line Beta Coefficient	[3] Value Line Proj. Market Required Return	[4] Traditional CAPM	[5] Empirical CAPM
ALLETE, Inc.	ALE	1.93%	0.90	15.08%	13.77%	14.09%
Alliant Energy Corporation	LNT	1.93%	0.85	15.08%	13.11%	13.60%
Ameren Corporation	AEE	1.93%	0.85	15.08%	13.11%	13.60%
American Electric Power Company, Inc.	AEP	1.93%	0.75	15.08%	11.79%	12.61%
Avista Corporation	AVA	1.93%	0.95	15.08%	14.42%	14.59%
CMS Energy Corporation	CMS	1.93%	0.80	15.08%	12.45%	13.11%
Duke Energy Corporation	DUK	1.93%	0.90	15.08%	13.77%	14.09%
Entergy Corporation	ETR	1.93%	0.95	15.08%	14.42%	14.59%
Evergy, Inc	EVRG	1.93%	0.95	15.08%	14.42%	14.59%
Hawaiian Electric Industries, Inc.	HE	1.93%	0.80	15.08%	12.45%	13.11%
IDACORP, Inc.	IDA	1.93%	0.85	15.08%	13.11%	13.60%
NextEra Energy, Inc.	NEE	1.93%	0.95	15.08%	14.42%	14.59%
NorthWestern Corporation	NWE	1.93%	0.95	15.08%	14.42%	14.59%
OGE Energy Corp.	OGE	1.93%	1.05	15.08%	15.74%	15.57%
Otter Tail Corporation	OTTR	1.93%	0.90	15.08%	13.77%	14.09%
Pinnacle West Capital Corporation	PNW	1.93%	0.90	15.08%	13.77%	14.09%
Portland General Electric Company	POR	1.93%	0.90	15.08%	13.77%	14.09%
The Southern Company	SO	1.93%	0.95	15.08%	14.42%	14.59%
WEC Energy Group, Inc.	WEC	1.93%	0.80	15.08%	12.45%	13.11%
Xcel Energy Inc.	XEL	1.93%	0.80	15.08%	12.45%	13.11%
				Mean:	13.60%	13.97%
				Median:	13.77%	14.09%

Company	Ticker	[6] Projected 30-Year Treasury Yield	[7] Value Line Beta Coefficient	[8] Value Line Proj. Market Required Return	[9] Traditional CAPM	[10] Empirical CAPM
ALLETE, Inc.	ALE	3.08%	0.90	15.08%	13.88%	14.18%
Alliant Energy Corporation	LNT	3.08%	0.85	15.08%	13.28%	13.73%
Ameren Corporation	AEE	3.08%	0.85	15.08%	13.28%	13.73%
American Electric Power Company, Inc.	AEP	3.08%	0.75	15.08%	12.08%	12.83%
Avista Corporation	AVA	3.08%	0.95	15.08%	14.48%	14.63%
CMS Energy Corporation	CMS	3.08%	0.80	15.08%	12.68%	13.28%
Duke Energy Corporation	DUK	3.08%	0.90	15.08%	13.88%	14.18%
Entergy Corporation	ETR	3.08%	0.95	15.08%	14.48%	14.63%
Evergy, Inc	EVRG	3.08%	0.95	15.08%	14.48%	14.63%
Hawaiian Electric Industries, Inc.	HE	3.08%	0.80	15.08%	12.68%	13.28%
IDACORP, Inc.	IDA	3.08%	0.85	15.08%	13.28%	13.73%
NextEra Energy, Inc.	NEE	3.08%	0.95	15.08%	14.48%	14.63%
NorthWestern Corporation	NWE	3.08%	0.95	15.08%	14.48%	14.63%
OGE Energy Corp.	OGE	3.08%	1.05	15.08%	15.68%	15.53%
Otter Tail Corporation	OTTR	3.08%	0.90	15.08%	13.88%	14.18%
Pinnacle West Capital Corporation	PNW	3.08%	0.90	15.08%	13.88%	14.18%
Portland General Electric Company	POR	3.08%	0.90	15.08%	13.88%	14.18%
The Southern Company	SO	3.08%	0.95	15.08%	14.48%	14.63%
WEC Energy Group, Inc.	WEC	3.08%	0.80	15.08%	12.68%	13.28%
Xcel Energy Inc.	XEL	3.08%	0.80	15.08%	12.68%	13.28%
				Mean:	13.73%	14.07%
				Median:	13.88%	14.18%

Notes:
[1] Source: Bloomberg Professional Service; 30-day average
[2] Source: Value Line
[3] Exhibit JEN-3R, page 1
[4] Equals Col. [1] + (Col. [2] x (Col. [3] - Col. [1]))
[5] Equals Col. [1] + ((0.75 x (Col. [2] x (Col. [3] - Col. [1])) + 0.25 x (Col. [3] - Col. [1]))
[6] Source: Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2020, at 14; Vol. 40, No. 10, October 1, 2021, at 2.
[7] See Note [2]
[8] See Note [3]
[9] See Note [4]
[10] See Note [5]

Bond Yield Plus Risk Premium

[1]	[2]	[3]	[4]	[5]
Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
-2.21%	-2.57%			
Current 30-Year Treasury		1.93%	7.95%	9.87%
Projected 30-Year Treasury		3.08%	6.75%	9.82%

Notes:
[1] Constant of regression equation
[2] Slope of regression equation
[3] Sources: Current = Bloomberg Professional Service,
Projected = Average of near-term and long-term projected 30-year Treasury yield.
Source: Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2020, at 14; Vol. 40, No. 10, October 1, 2021, at 2.
[4] Equals [1] + ln([3]) x [2]
[5] Equals [3] + [4]
[6] Source: S&P Global Market Intelligence
[7] Source: S&P Global Market Intelligence
[8] Source: Bloomberg Professional Service, equals 200-trading day average (i.e. lag period)
[9] Equals [7] - [8]

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
1/1/1980	14.50%	9.36%	5.14%
1/7/1980	14.39%	9.38%	5.01%
1/9/1980	15.00%	9.40%	5.60%
1/14/1980	15.17%	9.42%	5.75%
1/17/1980	13.93%	9.44%	4.49%
1/23/1980	15.50%	9.47%	6.03%
1/30/1980	13.86%	9.52%	4.34%
1/31/1980	12.61%	9.53%	3.08%
2/6/1980	13.71%	9.58%	4.13%
2/13/1980	12.80%	9.63%	3.17%
2/14/1980	13.00%	9.65%	3.35%
2/19/1980	13.50%	9.68%	3.82%
2/27/1980	13.75%	9.78%	3.97%
2/29/1980	13.75%	9.81%	3.94%
2/29/1980	14.00%	9.81%	4.19%
2/29/1980	14.77%	9.81%	4.96%
3/7/1980	12.70%	9.89%	2.81%
3/14/1980	13.50%	9.97%	3.53%
3/26/1980	14.16%	10.10%	4.06%
3/27/1980	14.24%	10.12%	4.12%
3/28/1980	14.50%	10.13%	4.37%
4/11/1980	12.75%	10.27%	2.48%
4/14/1980	13.85%	10.29%	3.56%
4/16/1980	15.50%	10.31%	5.19%
4/22/1980	13.25%	10.35%	2.90%
4/22/1980	13.90%	10.35%	3.55%
4/24/1980	16.80%	10.38%	6.43%
4/29/1980	15.50%	10.41%	5.09%
5/6/1980	13.70%	10.45%	3.25%
5/7/1980	15.00%	10.45%	4.55%
5/8/1980	13.75%	10.46%	3.29%
5/9/1980	14.35%	10.47%	3.88%
5/13/1980	13.60%	10.48%	3.12%
5/15/1980	13.25%	10.49%	2.76%
5/19/1980	13.75%	10.51%	3.24%
5/27/1980	13.62%	10.54%	3.08%
5/27/1980	14.60%	10.54%	4.06%
5/29/1980	16.00%	10.56%	5.44%
5/30/1980	13.80%	10.56%	3.24%
6/2/1980	15.63%	10.57%	5.06%
6/9/1980	15.90%	10.60%	5.30%
6/10/1980	13.78%	10.60%	3.18%
6/12/1980	14.25%	10.61%	3.64%
6/19/1980	13.40%	10.62%	2.78%
6/30/1980	13.00%	10.65%	2.35%
6/30/1980	13.40%	10.65%	2.75%
7/9/1980	14.75%	10.67%	4.08%
7/10/1980	15.00%	10.68%	4.32%
7/15/1980	15.80%	10.70%	5.10%
7/18/1980	13.80%	10.71%	3.09%
7/22/1980	14.10%	10.72%	3.38%
7/24/1980	15.00%	10.73%	4.27%
7/25/1980	13.48%	10.73%	2.75%
7/31/1980	14.58%	10.75%	3.83%
8/8/1980	13.50%	10.78%	2.72%
8/8/1980	14.00%	10.78%	3.22%
8/8/1980	15.45%	10.78%	4.67%
8/11/1980	14.85%	10.78%	4.07%
8/14/1980	14.00%	10.79%	3.21%
8/14/1980	16.25%	10.79%	5.46%
8/25/1980	13.75%	10.82%	2.93%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
8/27/1980	13.80%	10.83%	2.97%
8/29/1980	12.50%	10.84%	1.66%
9/15/1980	13.50%	10.88%	2.62%
9/15/1980	13.93%	10.88%	3.05%
9/15/1980	15.80%	10.88%	4.92%
9/24/1980	12.50%	10.93%	1.57%
9/24/1980	15.00%	10.93%	4.07%
9/26/1980	13.75%	10.94%	2.81%
9/30/1980	14.10%	10.96%	3.14%
9/30/1980	14.20%	10.96%	3.24%
10/1/1980	13.90%	10.97%	2.93%
10/3/1980	15.50%	10.98%	4.52%
10/7/1980	12.50%	10.99%	1.51%
10/9/1980	13.25%	11.00%	2.25%
10/9/1980	14.50%	11.00%	3.50%
10/9/1980	14.50%	11.00%	3.50%
10/16/1980	16.10%	11.02%	5.08%
10/17/1980	14.50%	11.03%	3.47%
10/31/1980	13.75%	11.11%	2.64%
10/31/1980	14.25%	11.11%	3.14%
11/4/1980	15.00%	11.12%	3.88%
11/5/1980	13.75%	11.12%	2.63%
11/5/1980	14.00%	11.12%	2.88%
11/8/1980	13.75%	11.14%	2.61%
11/10/1980	14.85%	11.15%	3.70%
11/17/1980	14.00%	11.18%	2.82%
11/18/1980	14.00%	11.19%	2.81%
11/19/1980	13.00%	11.19%	1.81%
11/24/1980	14.00%	11.21%	2.79%
11/26/1980	14.00%	11.21%	2.79%
12/8/1980	14.15%	11.22%	2.93%
12/8/1980	15.10%	11.22%	3.88%
12/9/1980	15.35%	11.22%	4.13%
12/12/1980	15.45%	11.23%	4.22%
12/17/1980	13.25%	11.23%	2.02%
12/18/1980	15.80%	11.23%	4.57%
12/19/1980	14.50%	11.23%	3.27%
12/19/1980	14.64%	11.23%	3.41%
12/22/1980	13.45%	11.23%	2.22%
12/22/1980	15.00%	11.23%	3.77%
12/30/1980	14.50%	11.22%	3.28%
12/30/1980	14.95%	11.22%	3.73%
12/31/1980	13.39%	11.22%	2.17%
1/2/1981	15.25%	11.22%	4.03%
1/7/1981	14.30%	11.21%	3.09%
1/19/1981	15.25%	11.20%	4.05%
1/23/1981	13.10%	11.20%	1.90%
1/23/1981	14.40%	11.20%	3.20%
1/26/1981	15.25%	11.20%	4.05%
1/27/1981	15.00%	11.21%	3.79%
1/31/1981	13.47%	11.22%	2.25%
2/3/1981	15.25%	11.23%	4.02%
2/5/1981	15.75%	11.25%	4.50%
2/11/1981	15.60%	11.28%	4.32%
2/20/1981	15.25%	11.33%	3.92%
3/11/1981	15.40%	11.49%	3.91%
3/12/1981	14.51%	11.50%	3.01%
3/12/1981	16.00%	11.50%	4.50%
3/13/1981	13.02%	11.52%	1.50%
3/18/1981	16.19%	11.55%	4.64%
3/19/1981	13.75%	11.56%	2.19%
3/23/1981	14.30%	11.58%	2.72%
3/25/1981	15.30%	11.60%	3.70%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/1/1981	14.53%	11.68%	2.85%
4/3/1981	19.10%	11.71%	7.39%
4/9/1981	15.00%	11.78%	3.22%
4/9/1981	15.30%	11.78%	3.52%
4/9/1981	16.50%	11.78%	4.72%
4/9/1981	17.00%	11.78%	5.22%
4/10/1981	13.75%	11.80%	1.95%
4/13/1981	13.57%	11.82%	1.75%
4/15/1981	15.30%	11.85%	3.45%
4/16/1981	13.50%	11.87%	1.63%
4/17/1981	14.10%	11.87%	2.23%
4/21/1981	14.00%	11.90%	2.10%
4/21/1981	16.80%	11.90%	4.90%
4/24/1981	16.00%	11.95%	4.05%
4/27/1981	12.50%	11.97%	0.53%
4/27/1981	13.61%	11.97%	1.64%
4/29/1981	13.65%	12.00%	1.65%
4/30/1981	13.50%	12.02%	1.48%
5/4/1981	16.22%	12.05%	4.17%
5/5/1981	14.40%	12.07%	2.33%
5/7/1981	16.25%	12.11%	4.14%
5/7/1981	16.27%	12.11%	4.16%
5/8/1981	13.00%	12.13%	0.87%
5/8/1981	16.00%	12.13%	3.87%
5/12/1981	13.50%	12.16%	1.34%
5/15/1981	15.75%	12.22%	3.53%
5/18/1981	14.88%	12.23%	2.65%
5/20/1981	16.00%	12.26%	3.74%
5/21/1981	14.00%	12.27%	1.73%
5/26/1981	14.90%	12.30%	2.60%
5/27/1981	15.00%	12.31%	2.69%
5/29/1981	15.50%	12.34%	3.16%
6/1/1981	16.50%	12.35%	4.15%
6/3/1981	14.67%	12.37%	2.30%
6/5/1981	13.00%	12.39%	0.61%
6/10/1981	16.75%	12.42%	4.33%
6/17/1981	14.40%	12.46%	1.94%
6/18/1981	16.33%	12.47%	3.86%
6/25/1981	14.75%	12.51%	2.24%
6/26/1981	16.00%	12.52%	3.48%
6/30/1981	15.25%	12.54%	2.71%
7/1/1981	15.50%	12.56%	2.94%
7/1/1981	17.50%	12.56%	4.94%
7/10/1981	16.00%	12.62%	3.38%
7/14/1981	16.90%	12.64%	4.26%
7/15/1981	16.00%	12.65%	3.35%
7/17/1981	15.00%	12.67%	2.33%
7/20/1981	15.00%	12.68%	2.32%
7/21/1981	14.00%	12.69%	1.31%
7/28/1981	13.48%	12.74%	0.74%
7/31/1981	13.50%	12.78%	0.72%
7/31/1981	15.00%	12.78%	2.22%
7/31/1981	16.00%	12.78%	3.22%
8/5/1981	15.71%	12.83%	2.88%
8/10/1981	14.50%	12.87%	1.63%
8/11/1981	15.00%	12.88%	2.12%
8/20/1981	13.50%	12.95%	0.55%
8/20/1981	16.50%	12.95%	3.55%
8/24/1981	15.00%	12.97%	2.03%
8/28/1981	15.00%	13.01%	1.99%
9/3/1981	14.50%	13.05%	1.45%
9/10/1981	14.50%	13.11%	1.39%
9/11/1981	16.00%	13.12%	2.88%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/16/1981	16.00%	13.15%	2.85%
9/17/1981	16.50%	13.16%	3.34%
9/23/1981	15.85%	13.20%	2.65%
9/28/1981	15.50%	13.23%	2.27%
10/9/1981	15.75%	13.33%	2.42%
10/15/1981	16.25%	13.37%	2.88%
10/16/1981	15.50%	13.38%	2.12%
10/16/1981	16.50%	13.38%	3.12%
10/19/1981	14.25%	13.39%	0.86%
10/20/1981	15.25%	13.41%	1.84%
10/20/1981	17.00%	13.41%	3.59%
10/23/1981	16.00%	13.45%	2.55%
10/27/1981	10.00%	13.48%	-3.48%
10/29/1981	14.75%	13.51%	1.24%
10/29/1981	16.50%	13.51%	2.99%
11/3/1981	15.17%	13.53%	1.64%
11/5/1981	16.60%	13.55%	3.05%
11/6/1981	15.17%	13.56%	1.61%
11/24/1981	15.50%	13.61%	1.89%
11/25/1981	15.25%	13.61%	1.64%
11/25/1981	15.35%	13.61%	1.74%
11/25/1981	16.10%	13.61%	2.49%
11/25/1981	16.10%	13.61%	2.49%
12/1/1981	15.70%	13.61%	2.09%
12/1/1981	16.00%	13.61%	2.39%
12/1/1981	16.49%	13.61%	2.88%
12/1/1981	16.50%	13.61%	2.89%
12/4/1981	16.00%	13.61%	2.39%
12/11/1981	16.25%	13.63%	2.62%
12/14/1981	14.00%	13.63%	0.37%
12/15/1981	15.81%	13.63%	2.18%
12/15/1981	16.00%	13.63%	2.37%
12/16/1981	15.25%	13.63%	1.62%
12/17/1981	16.50%	13.63%	2.87%
12/18/1981	15.45%	13.63%	1.82%
12/30/1981	14.25%	13.67%	0.58%
12/30/1981	16.00%	13.67%	2.33%
12/30/1981	16.25%	13.67%	2.58%
12/31/1981	16.15%	13.67%	2.48%
1/4/1982	15.50%	13.67%	1.83%
1/11/1982	14.50%	13.72%	0.78%
1/11/1982	17.00%	13.72%	3.28%
1/13/1982	14.75%	13.74%	1.01%
1/14/1982	15.75%	13.75%	2.00%
1/15/1982	15.00%	13.76%	1.24%
1/15/1982	16.50%	13.76%	2.74%
1/22/1982	16.25%	13.79%	2.46%
1/27/1982	16.84%	13.81%	3.03%
1/28/1982	13.00%	13.81%	-0.81%
1/29/1982	15.50%	13.82%	1.68%
2/1/1982	15.85%	13.82%	2.03%
2/3/1982	16.44%	13.84%	2.60%
2/8/1982	15.50%	13.86%	1.64%
2/11/1982	16.00%	13.88%	2.12%
2/11/1982	16.20%	13.88%	2.32%
2/17/1982	15.00%	13.89%	1.11%
2/19/1982	15.17%	13.89%	1.28%
2/26/1982	15.25%	13.89%	1.36%
3/1/1982	15.03%	13.89%	1.14%
3/1/1982	16.00%	13.89%	2.11%
3/3/1982	15.00%	13.88%	1.12%
3/8/1982	17.10%	13.88%	3.22%
3/12/1982	16.25%	13.88%	2.37%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
3/17/1982	17.30%	13.88%	3.42%
3/22/1982	15.10%	13.89%	1.21%
3/27/1982	15.40%	13.89%	1.51%
3/30/1982	15.50%	13.90%	1.60%
3/31/1982	17.00%	13.91%	3.09%
4/1/1982	14.70%	13.91%	0.79%
4/1/1982	16.50%	13.91%	2.59%
4/2/1982	15.50%	13.91%	1.59%
4/5/1982	15.50%	13.92%	1.58%
4/8/1982	16.40%	13.93%	2.47%
4/13/1982	14.50%	13.94%	0.56%
4/23/1982	15.75%	13.94%	1.81%
4/27/1982	15.00%	13.94%	1.06%
4/28/1982	15.75%	13.94%	1.81%
4/30/1982	14.70%	13.94%	0.76%
4/30/1982	15.50%	13.94%	1.56%
5/3/1982	16.60%	13.94%	2.66%
5/4/1982	16.00%	13.94%	2.06%
5/14/1982	15.50%	13.92%	1.58%
5/18/1982	15.42%	13.92%	1.50%
5/19/1982	14.69%	13.92%	0.77%
5/20/1982	15.00%	13.91%	1.09%
5/20/1982	15.10%	13.91%	1.19%
5/20/1982	15.50%	13.91%	1.59%
5/20/1982	16.30%	13.91%	2.39%
5/21/1982	17.75%	13.91%	3.84%
5/27/1982	15.00%	13.89%	1.11%
5/28/1982	15.50%	13.89%	1.61%
5/28/1982	17.00%	13.89%	3.11%
6/1/1982	13.75%	13.89%	-0.14%
6/1/1982	16.60%	13.89%	2.71%
6/9/1982	17.86%	13.88%	3.98%
6/14/1982	15.75%	13.88%	1.87%
6/15/1982	14.85%	13.88%	0.97%
6/18/1982	15.50%	13.87%	1.63%
6/21/1982	14.90%	13.87%	1.03%
6/23/1982	16.00%	13.86%	2.14%
6/23/1982	16.17%	13.86%	2.31%
6/24/1982	14.85%	13.86%	0.99%
6/25/1982	14.70%	13.86%	0.84%
7/1/1982	16.00%	13.84%	2.16%
7/2/1982	15.62%	13.84%	1.78%
7/2/1982	17.00%	13.84%	3.16%
7/13/1982	14.00%	13.82%	0.18%
7/13/1982	16.80%	13.82%	2.98%
7/14/1982	15.76%	13.82%	1.94%
7/14/1982	16.02%	13.82%	2.20%
7/19/1982	16.50%	13.80%	2.70%
7/22/1982	14.50%	13.77%	0.73%
7/22/1982	17.00%	13.77%	3.23%
7/27/1982	16.75%	13.75%	3.00%
7/29/1982	16.50%	13.74%	2.76%
8/11/1982	17.50%	13.68%	3.82%
8/18/1982	17.07%	13.63%	3.44%
8/20/1982	15.73%	13.60%	2.13%
8/25/1982	16.00%	13.57%	2.43%
8/26/1982	15.50%	13.56%	1.94%
8/30/1982	15.00%	13.55%	1.45%
9/3/1982	16.20%	13.53%	2.67%
9/8/1982	15.00%	13.52%	1.48%
9/15/1982	13.08%	13.50%	-0.42%
9/15/1982	16.25%	13.50%	2.75%
9/16/1982	16.00%	13.50%	2.50%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/17/1982	15.25%	13.50%	1.75%
9/23/1982	17.17%	13.47%	3.70%
9/24/1982	14.50%	13.46%	1.04%
9/27/1982	15.25%	13.46%	1.79%
10/1/1982	15.50%	13.42%	2.08%
10/15/1982	15.90%	13.32%	2.58%
10/22/1982	15.75%	13.24%	2.51%
10/22/1982	17.15%	13.24%	3.91%
10/29/1982	15.54%	13.16%	2.38%
11/1/1982	15.50%	13.15%	2.35%
11/3/1982	17.20%	13.13%	4.07%
11/4/1982	16.25%	13.11%	3.14%
11/5/1982	16.20%	13.09%	3.11%
11/9/1982	16.00%	13.05%	2.95%
11/23/1982	15.50%	12.89%	2.61%
11/23/1982	15.85%	12.89%	2.96%
11/30/1982	16.50%	12.81%	3.69%
12/1/1982	17.04%	12.79%	4.25%
12/6/1982	15.00%	12.73%	2.27%
12/6/1982	16.35%	12.73%	3.62%
12/10/1982	15.50%	12.66%	2.84%
12/13/1982	16.00%	12.65%	3.35%
12/14/1982	15.30%	12.63%	2.67%
12/14/1982	16.40%	12.63%	3.77%
12/20/1982	16.00%	12.57%	3.43%
12/21/1982	14.75%	12.56%	2.19%
12/21/1982	15.85%	12.56%	3.29%
12/22/1982	16.25%	12.54%	3.71%
12/22/1982	16.58%	12.54%	4.04%
12/22/1982	16.75%	12.54%	4.21%
12/29/1982	14.90%	12.48%	2.42%
12/29/1982	16.25%	12.48%	3.77%
12/30/1982	16.00%	12.47%	3.53%
12/30/1982	16.35%	12.47%	3.88%
12/30/1982	16.77%	12.47%	4.30%
1/5/1983	17.33%	12.40%	4.93%
1/11/1983	15.90%	12.34%	3.56%
1/12/1983	14.63%	12.33%	2.30%
1/12/1983	15.50%	12.33%	3.17%
1/20/1983	17.75%	12.24%	5.51%
1/21/1983	15.00%	12.22%	2.78%
1/24/1983	14.50%	12.21%	2.29%
1/24/1983	15.50%	12.21%	3.29%
1/25/1983	15.85%	12.19%	3.66%
1/27/1983	16.14%	12.17%	3.97%
2/1/1983	18.50%	12.13%	6.37%
2/4/1983	14.00%	12.10%	1.90%
2/10/1983	15.00%	12.06%	2.94%
2/21/1983	15.50%	11.98%	3.52%
2/22/1983	15.50%	11.97%	3.53%
2/23/1983	15.10%	11.96%	3.14%
2/23/1983	16.00%	11.96%	4.04%
3/2/1983	15.25%	11.89%	3.36%
3/9/1983	15.20%	11.82%	3.38%
3/15/1983	13.00%	11.77%	1.23%
3/18/1983	15.25%	11.73%	3.52%
3/23/1983	15.40%	11.69%	3.71%
3/24/1983	15.00%	11.67%	3.33%
3/29/1983	15.50%	11.63%	3.87%
3/30/1983	16.71%	11.61%	5.10%
3/31/1983	15.00%	11.59%	3.41%
4/4/1983	15.20%	11.58%	3.62%
4/8/1983	15.50%	11.51%	3.99%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/11/1983	14.81%	11.49%	3.32%
4/19/1983	14.50%	11.38%	3.12%
4/20/1983	16.00%	11.36%	4.64%
4/29/1983	16.00%	11.24%	4.76%
5/1/1983	14.50%	11.24%	3.26%
5/9/1983	15.50%	11.15%	4.35%
5/11/1983	16.46%	11.12%	5.34%
5/12/1983	14.14%	11.11%	3.03%
5/18/1983	15.00%	11.05%	3.95%
5/23/1983	14.90%	11.01%	3.89%
5/23/1983	15.50%	11.01%	4.49%
5/25/1983	15.50%	10.98%	4.52%
5/27/1983	15.00%	10.96%	4.04%
5/31/1983	14.00%	10.95%	3.05%
5/31/1983	15.50%	10.95%	4.55%
6/2/1983	14.50%	10.93%	3.57%
6/17/1983	15.03%	10.84%	4.19%
7/1/1983	14.80%	10.78%	4.02%
7/1/1983	14.90%	10.78%	4.12%
7/8/1983	16.25%	10.76%	5.49%
7/13/1983	13.20%	10.75%	2.45%
7/19/1983	15.00%	10.74%	4.26%
7/19/1983	15.10%	10.74%	4.36%
7/25/1983	16.25%	10.73%	5.52%
7/28/1983	15.90%	10.74%	5.16%
8/3/1983	16.34%	10.75%	5.59%
8/3/1983	16.50%	10.75%	5.75%
8/19/1983	15.00%	10.80%	4.20%
8/22/1983	15.50%	10.80%	4.70%
8/22/1983	16.40%	10.80%	5.60%
8/31/1983	14.75%	10.84%	3.91%
9/7/1983	15.00%	10.86%	4.14%
9/14/1983	15.78%	10.89%	4.89%
9/16/1983	15.00%	10.90%	4.10%
9/19/1983	14.50%	10.91%	3.59%
9/20/1983	16.50%	10.91%	5.59%
9/28/1983	14.50%	10.94%	3.56%
9/29/1983	15.50%	10.95%	4.55%
9/30/1983	15.25%	10.95%	4.30%
9/30/1983	16.15%	10.95%	5.20%
10/4/1983	14.80%	10.96%	3.84%
10/7/1983	16.00%	10.97%	5.03%
10/13/1983	15.52%	10.99%	4.53%
10/17/1983	15.50%	11.00%	4.50%
10/18/1983	14.50%	11.00%	3.50%
10/19/1983	16.25%	11.01%	5.24%
10/19/1983	16.50%	11.01%	5.49%
10/26/1983	15.00%	11.04%	3.96%
10/27/1983	15.20%	11.04%	4.16%
11/1/1983	16.00%	11.06%	4.94%
11/9/1983	14.90%	11.09%	3.81%
11/10/1983	14.35%	11.10%	3.25%
11/23/1983	16.00%	11.13%	4.87%
11/23/1983	16.15%	11.13%	5.02%
11/30/1983	15.00%	11.14%	3.86%
12/5/1983	15.25%	11.15%	4.10%
12/6/1983	15.07%	11.15%	3.92%
12/8/1983	15.90%	11.16%	4.74%
12/9/1983	14.75%	11.17%	3.58%
12/12/1983	14.50%	11.17%	3.33%
12/15/1983	15.56%	11.19%	4.37%
12/19/1983	14.80%	11.21%	3.59%
12/20/1983	14.69%	11.22%	3.47%