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Ann E. Bulkley
Rebuttal
File No. ER-2024-0189

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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2024-0189

REBUTTAL TESTIMONY

OF

ANN E. BULKLEY

ON BEHALF OF

EVERGY MISSOURI WEST, INC.

Kansas City, Missouri

August 2024

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REBUTTAL TESTIMONY

OF

ANN E. BULKLEY

Case No. ER-2024-0189

I. INTRODUCTION

Q: Are you the same Ann E. Bulkley that previously filed direct testimony on February 2, 2024 in this proceeding?

A: Yes. I previously submitted direct testimony before the Missouri Public Service Commission ("Commission") in this proceeding on behalf of Evergy Missouri West, Inc. d/b/a Evergy Missouri West ("Evergy West" or the "Company"), a wholly-owned subsidiary of Evergy, Inc. ("Evergy").

Q: What is the purpose of your rebuttal testimony?

A: The purpose of my rebuttal testimony is to respond to the issues raised in the testimonies of Seoung Joun Won on behalf of the Missouri Public Service Commission Staff ("Staff"),[1] and David Murray[2] and Angela Schaben[3] on behalf of the Missouri Office of Public Counsel regarding the just and reasonable ROE and the appropriate capital structure for the Company in this proceeding. To the extent that I do not address a particular issue raised

[1] Missouri Public Service Commission, Case No. ER-2024-0189, Direct Testimony of Seoung Joun Won, PhD, June 27, 2024 ("Won Direct Testimony").

[2] Missouri Public Service Commission, Case No. ER-2024-0189, Direct Testimony of David Murray, June 27, 2024 ("Murray Direct Testimony").

[3] Missouri Public Service Commission, Case No. ER-2024-0189, Direct Testimony of Angela Schaben, June 27, 2024 ("Schaben Direct Testimony").

by these witnesses in my rebuttal testimony should not be viewed as acceptance of that issue.

Q: Are you sponsoring any exhibits in support of rebuttal direct testimony?

A: Yes. I am sponsoring Schedules AEB-R1 through AEB-R9, which were prepared by me or under my direction.

Q: Have you prepared cost of equity analyses to support your rebuttal testimony that reflect current market conditions?

A: Yes. As discussed in more detail herein, I have prepared updated cost of equity analyses based on market data through June 30, 2024 to rebut the cost of equity analyses of Dr. Won and Mr. Murray. These analyses validate the reasonableness of my recommended ROE range of 10.25 percent to 11.25 percent, and that an ROE of 10.50 percent continues to be a reasonable request. My conclusion continues to be based on not only the results of multiple cost of equity models, but also other factors, including capital market conditions, the capital attraction and comparable return standards, and the Company's specific risks.

Q: How is the remainder of your rebuttal testimony organized?

A: The remainder of my rebuttal testimony is organized as follows:

- Section II provides a summary and overview of my rebuttal testimony and the important factors to be considered in establishing the authorized ROE for the Company.
- Section III provides cost of equity analyses based on market data as of June 30, 2024.
- Section IV discusses the changes in capital market conditions since my direct testimony and their effect on the cost of equity and authorized ROEs for comparable utilities nationwide relative to the witnesses' ROE recommendations in this proceeding.

- Section V provides my response to Dr. Won's cost of equity analyses and recommendations.
- Section VI provides my response to Mr. Murray's cost of equity analyses and recommendations.
- Section VII provides an assessment of the reasonableness of the Company's proposed capital structure.

II. SUMMARY OF ANALYSES AND CONCLUSIONS

Q: What factors should be considered in evaluating the results of the cost of equity analyses and establishing the authorized ROE?

A: The primary factors that should be considered are: (1) the importance of providing a return that is comparable to returns on alternative investments with commensurate risk; (2) the need for a return that supports a utility's ability to attract needed capital at reasonable terms; (3) the effect of current and expected capital market conditions; and (4) achieving a reasonable balance between the interests of investors and customers.

Q: What are the ROE recommendations of the parties in this proceeding?

A: Figure 1 summarizes the results of the cost of equity analyses presented by the Dr. Won and Mr. Murray in this proceeding, as well as each of their final ROE recommendations. As shown, the ROE recommendations of Dr. Won and Mr. Murray are 9.74 percent and 9.50 percent, respectively. To determine his ROE recommendation, Dr. Won conducts a two-step DCF analysis, a CAPM analysis, and Bond Yield Plus Risk Premium ("BYRP" or "Risk Premium") analysis. Dr. Won does not indicate how he develops his recommended ROE range, but his ROE recommendation is equal to the result of his BYRP analysis, while the results of his DCF and CAPM analyses are lower. Mr. Murray conducts a multi-stage DCF analysis and a CAPM analysis, and also a "rule of thumb" BYRP

analysis as a check on the reasonableness of his other two cost of equity analyses. For his DCF and CAPM analyses, Mr. Murray relies on a proxy group of comparable electric companies, as well as separately calculates an ROE for Evergy. Mr. Murray also does not explain how he develops his recommended ROE range, recommending an ROE that is significantly greater any of the results of the cost of equity analyses that he conducts.

Figure 1: Summary of Results of the Cost of Equity Analyses and ROE Recommendations of Dr. Won and Mr. Murray

	Dr. Won	Mr. Murray
DCF Analysis		
Constant Growth DCF	8.70%	n/a
Multi-Stage DCF (Evergy MO West)	n/a	8.63%
Multi-Stage DCF (Evergy Inc.)	n/a	9.06% - 9.15%
CAPM		
Evergy MO West	9.65%	7.80% - 8.94%
Evergy Inc.	n/a	7.89% - 8.84%
Bond Yield Plus Risk Premium	9.74%	8.30% - 8.70%
Recommended ROE Range	9.49% - 9.99%	9.25% - 9.75%
Recommended ROE	**9.74%**	**9.50%**

Q: What are your key conclusions and recommendations regarding the appropriate ROE and capital structure for the Company in this proceeding?

A: Nothing in the direct testimonies of Dr. Won or Mr. Murray has caused me to change my conclusions or recommendations. Based on my review of the direct testimonies of these witnesses, my key conclusions regarding a reasonable ROE and capital structure for the Company in this proceeding are as follows:

Cost of Equity / Authorized ROE

- Updated cost of equity analyses based on market data through June 30, 2024 validate that an ROE of 10.50 percent continues to be a reasonable request.
- While Dr. Won conducts both a DCF and CAPM analysis, he does not rely on the results of either model for his ROE recommendation, which is based solely on the result of his Bond Yield Risk Premium ("BYRP" or "Risk Premium") analysis.
- When Dr. Won's DCF and CAPM analyses are updated to reflect the most current data available and corrected for the issues that I discuss in detail herein, the resulting cost of equity of those two updated analyses plus his existing BYRP analysis is 10.58 percent – *which is consistent with, albeit modestly higher than, the Company proposed cost of equity in this proceeding*.
- Mr. Murray's ROE recommendation lacks any analytical foundation and simply represents his own unsupported opinion as to the appropriate ROE for Evergy West.
    - Mr. Murray also conducts a DCF and CAPM analysis, as well as a "rule of thumb" BYRP analysis, but he does not rely on the results of any of these analyses for his ROE recommendation.
    - Despite a significant increase in interest rates over the past few years that indicates an increase in the cost of equity, which Mr. Murray acknowledges, he nonetheless recommends an ROE that is below recently authorized average ROEs nationally for vertically-integrated electric utilities.

Capital Structure

- Neither Dr. Won's proposed "target" capital structure nor Mr. Murray's proposed holding company capital structure are supported or reasonable.
- While Dr. Won's proposed equity ratio is lower than the Company's proposed capital structure, his testimony actually supports the Company's proposed capital structure.
    - The portion of Evergy West that Dr. Won concludes should be relied upon for setting the ratemaking capital structure in this proceeding averaged an equity ratio of 54.99 percent since 2020, which is substantially greater than the Company's proposed equity ratio.
- There is no basis for Mr. Murray's conclusion that the consolidated parent company capital structure should be used to set the Company's capital structure in this proceeding.
    - Mr. Murray's proposal is inconsistent with Dr. Won's conclusion, which is that the consolidated holding company capital structure is not appropriate for Evergy West in this proceeding.

- Mr. Murray's proposal is also inconsistent with the guidelines Staff relied upon to support its capital structure recommendation in Case No. GR-2021-0180, and which the Commission approved.
- Mr. Murray's contention that Evergy West's proposed capital structure is not a consequence of an arms-length transactions is simply speculation and he has provided no evidence to support his allegation.

- The Company's proposed capital structure is consistent with electric industry norms:
  - The proposed capital structure is consistent with the way in which the Company is financed.
  - The Company's proposed equity ratio is consistent with the average actual equity ratios of the utility operating companies in the proxy group.
  - The Company's proposed equity ratio is also consistent with the capital structures that have recently been authorized for vertically-integrated electric utilities
  - As noted by Dr. Won, Evergy West has had an actual equity ratio for the past three years that is greater than the Company is proposing in this proceeding.

III. UPDATED COST OF EQUITY ANALYSES

Q: Have you prepared cost of equity analyses to support your rebuttal testimony?

A: Yes. I have prepared cost of equity analyses that validate my direct testimony and include market data through June 30, 2024 to rebut the outdated cost of equity analyses provided by Dr. Won and Mr. Murray. Since the filing of my direct testimony, ALLETE, Inc. has announced that it will be acquired, and therefore, no longer meets the proxy group screening criteria outlined in my direct testimony. Therefore, for purposes of my updated cost of equity analyses, ALLETE, Inc. has been excluded from the proxy group.

Figure 2 summarizes the results of my cost of equity analyses. Specifically, the results of each of the DCF analyses have increased on average by approximately 45 basis points and the results of the CAPM and ECAPM analyses have increased on average by

approximately 15 basis points since the filing of my direct testimony, while the results of the Bond Yield Risk Premium have decreased modestly since the filing of my direct testimony. Therefore, as shown, the updated results of the cost of equity analyses continue to support my recommended ROE of 10.50 percent in this proceeding.

Figure 2: Updated Cost of Equity Model Results

Constant Growth DCF

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Mean Results:			
30-Day Avg. Stock Price	9.46%	10.54%	11.35%
90-Day Avg. Stock Price	9.60%	10.67%	11.49%
180-Day Avg. Stock Price	9.69%	10.76%	11.58%
Average	9.59%	10.66%	11.48%
Median Results:			
30-Day Avg. Stock Price	9.79%	10.40%	11.11%
90-Day Avg. Stock Price	9.97%	10.55%	11.24%
180-Day Avg. Stock Price	10.02%	10.74%	11.31%
Average	9.93%	10.57%	11.22%

CAPM / ECAPM / Bond Yield Risk Premium

	30-Year Treasury Bond Yield		
	Current 30-Day Avg	Near-Term Projected	Longer-Term Projected
CAPM:			
Current *Value Line* Beta	12.06%	12.04%	12.04%
Current Bloomberg Beta	10.90%	10.86%	10.86%
Long-term Avg. *Value Line* Beta	10.60%	10.55%	10.55%
ECAPM:			
Current *Value Line* Beta	12.21%	12.20%	12.20%
Current Bloomberg Beta	11.34%	11.31%	11.31%
Long-term Avg. *Value Line* Beta	11.11%	11.08%	11.07%
Bond Yield Risk Premium	10.62%	10.52%	10.51%

IV. CAPITAL MARKET CONDITIONS AND A COMPARABLE RETURN

Q: Do you generally agree with Dr. Won's and Mr. Murray's characterizations of the changes in market conditions over the past few years and their effect on the cost of equity?

A: Yes. I generally agree with Dr. Won's and Mr. Murray's respective characterizations of the capital market conditions over the past few years and the fact that they both acknowledge the cost of equity for electric utilities has increased as a result of the changes in capital market conditions.[4] Dr. Won and Mr. Murray recognize that short-term and long-term interest rates are significantly higher resulting from the Federal Reserve's efforts to combat persistently high inflation. As Dr. Won notes, inflation remains above the Federal Reserve's target and that "[o]ne of the most important factors in the economic conditions that impact the COE [cost of equity] is the interest rate."[5] Dr. Won and Mr. Murray also note that utilities have underperformed the broader market over the past 18 months, which has increased utility dividend yields.[6] However, while Dr. Won and Mr. Murray summarize the capital market conditions over the past few years in a similar manner as I have done, it is our respective conclusions regarding those conditions that differ.

Q: What conclusions have Dr. Won and Mr. Murray drawn from the changes in market conditions?

A: While recognizing the increase in the cost of equity for electric utilities, Dr. Won contends that results of the DCF and CAPM are "overstated":

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4 *See, e.g.*, Won Direct Testimony, at 9; Murray Direct Testimony, at 2.

5 Won Direct Testimony, at 9; clarification added.

6 Won Direct Testimony, at 17; Murray Direct Testimony, at 2.

> .The combined net result of the rise in interest rates and changes in overall market conditions is an increase in COE. Staff's COE estimates for the electric proxy group have also increased. The current COE, as estimated by the DCF and CAPM methods, is overstated when considering utility bond market conditions. Therefore, Staff is cautious about using COE estimates from DCF and CAPM [sic] to recommend a specific authorized ROE in this proceeding, as demonstrated later in this testimony.

Similarly, Mr. Murray also acknowledges that there has been an increase in the electric utility industry's cost of equity in the past few years; however; he contends that his recommended 9.50 percent ROE in this proceeding is reasonable since, despite recent increases in long-term bond yields, the price-to-earnings ("P/E") ratios for the electric industry are (1) generally higher than they were in 2012 when the Commission authorized an ROE of 9.80 percent, and (2) lower than they were in 2015 when the Commission found that an ROE of 9.50 percent was just and reasonable.[7]

Q: Is there any basis to Dr. Won's contention that the results of the DCF and CAPM are "overstated" as a result of the current capital market conditions?

A: No. Dr. Won's position that the results of the DCF and CAPM are "overstated" in the current capital market conditions is invalidated by the fact that his recommended ROE for the Company in this proceeding (*i.e.*, 9.73 percent) is actually greater than the results of either of his DCF and CAPM analyses (*i.e.*, 8.70 percent and 9.65 percent, respectively).

[7] Murray Direct Testimony, at 11-12.

Q: Is Mr. Murray's ROE recommendation of 9.50 percent in this proceeding consistent with the P/E ratio data that he references to support his recommendation?

A: No. The premise of Mr. Murray's discussion of the historical P/E ratios is that as P/E ratios for the electric utility industry increase, the authorized ROE decreases. However, the P/E ratios that Mr. Murray references do not support his ROE recommendation of 9.50 percent.

First, Mr. Murray acknowledges that current P/E ratios for the electric industry are lower than when the Commission authorized an ROE of 9.50 percent in 2015 for Ameren Missouri in Case No. ER-2014-0258. Therefore, according to Mr. Murray's premise, this means that the ROE to be authorized currently should be higher than 9.50 percent the Commission authorized back in 2015 when P/E ratios for the electric industry were higher.

Second, Mr. Murray suggests current P/E ratios for the electric industry are higher than when the Commission authorized an ROE of 9.80 percent in 2012 for Ameren Missouri in Case No. ER-2012-0166, implying that the ROE to be authorized in the current proceeding should be lower than 9.80 percent. However, the flaw with Mr. Murray's position is that the average P/E ratio for the electric utility industry during the pendency of Ameren Missouri's rate case in Case No. ER-2012-0166 was effectively the same as the average for the industry currently. Specifically, the average P/E ratio for Mr. Murray's proxy group during the pendency of the rate proceeding in Case No. ER-2012-0166, which lasted 10 months, was 15.15, while most recent 10-month average for this same group was 15.38.[8]

[8] Bloomberg.

Lastly, Mr. Murray's P/E benchmarking exercise is also simplistic and does not recognize that there are other factors besides P/E ratios that are used to estimate the cost of equity and for the Commission to establish an authorized ROE. To illustrate this point, the average P/E ratio for Mr. Murray's proxy group was 14.00 during the pendency of Ameren Missouri's rate proceeding in Case No. ER-2011-0028, while the P/E ratio for Mr. Murray's proxy group was 13.78 during the pendency of Evergy West's rate proceeding in Case No. ER-2010-0356. Therefore, according to Mr. Murray's premise, the authorized ROE in Case No. ER-2011-0028 should be lower than, or at least equivalent to, the authorized ROE in Case No. ER-2010-0356; however, that was not the case. The Commission authorized an ROE of 10.20 percent for Ameren Missouri in Case No. ER-2011-0028 and authorized an ROE of 10.00 percent for Evergy West in Case No. ER-2010-0356.

Therefore, for all of these reasons, Mr. Murray's attempt to benchmark P/E ratios for a group of electric utilities as the basis for his ROE recommendation fails to support his recommendation and is not credible.

Q: Do changes in capital market conditions since the Company's last rate proceeding continue to indicate an increase in the cost of equity?

A: Yes. Changes in long-term bond yields since the Company's last rate proceeding, as well as since the filing of the Company's direct testimony in this proceeding, demonstrate an increase in the cost of capital. Specifically, as shown in Figure 3, both short-term and long-term interest rates have increased since the filing of the Company's last rate proceeding, and long-term interest rates have increased approximately 30 basis points since the filing of the Company's direct testimony in this proceeding, which is indicative of an increase in

the cost of equity. Core inflation has declined since the last rate proceeding, although remains above the Federal Reserve's long-term target value of 2.0 percent.

Figure 3: Change in Market Conditions Since Evergy West's Last Rate Proceeding[9]

Docket	Date	Federal Funds Rate	30-Day Avg of 30-Year Treasury Bond Yield	Core Inflation Rate
ER-2022-0129/0130				
Company Rebuttal	6/15/2022	0.83%	3.12%	5.90%
Commission Orders	9/22/2002	3.08%	3.35%	6.64%
ER-2024-0189				
Company Direct	11/30/2023	5.33%	4.76%	4.02%
Company Rebuttal	6/30/2024	5.33%	4.50%	3.28%
Change from Jun-22 to Jun-24:		*4.50%*	*1.38%*	*-2.63%*

Q: What are the expectations for inflation and monetary policy over the near-term?

A: Over the last several months the Federal Open Market Committee ("FOMC") has been clear that it intends to rely on market data before making any changes to interest rates. In the FOMC's most recent meeting on June 12, 2024, Chairman Powell observed that the FOMC will make its decision "meeting by meeting."[10] Further, while the FOMC currently forecasts one 25 basis point rate cut in 2024,[11] Chairman Powell noted that is just a projection and not a "plan," and indicated that the FOMC is prepared to maintain the current federal funds rate range higher for longer if needed to reduce inflation.[12] More

[9] St. Louis Federal Reserve Bank; Bureau of Labor Statistics; Bloomberg Professional.

[10] Federal Reserve, Transcript of Chair Powell's Press Conference, June 12, 2024, at 4.

[11] Federal Reserve, Summary of Economic Projections, June 12, 2024, at 2.

[12] Federal Reserve, Transcript of Chair Powell's Press Conference, June 12, 2024, at 4.

recently, Chairman Powell indicated that he welcomed the recent cool-down in inflation, but avoided sending any signals as to when the Federal Reserve may cut short-term interest rates.[13]

Q: What are investors' expectations for the yields on long-term government bonds?

A: Investors expect long-term interest rates to remain elevated. The most recent *Blue Chip Financial Forecasts* report indicates that the consensus estimate of the average yield on the 30-year Treasury bond is 4.35 percent through 4Q/2025 and is also 4.30 percent over the longer term through 2030, meaning long-term interest rates are expected to remain elevated during the period that the Company's rates will be in effect.[14]

Q: What are your conclusions regarding current market conditions?

A: Both short-term and long-term interest rates remain much higher than at the time of the Company's last rate proceeding. While there is speculation as to the timing of any interest rate reductions from the FOMC, particularly given the upcoming presidential election in November, the FOMC's recent actions demonstrate that any decision to reduce interest rates will be measured.

Q: Does Mr. Murray indicate that his recommended ROE accounts for other factors besides the results of his cost of equity analyses?

A: Yes. In addition to his cost of equity analyses, capital market conditions, and recent average authorized ROEs for electric utilities nationally, Mr. Murray states that his

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[13] Jeanna Smialek, "Fed's Powell Welcomes Cooler Inflation but Steers Clear of Rate Cut Timing," New York Times, July 15, 2024.

[14] *Blue Chip Financial Forecasts*, Vol. 43, No. 7, July 1, 2024, at 2; and *Blue Chip Financial Forecasts*, Vol. 43, No. 6, May 31, 2024, at 14.

recommended ROE of 9.50 percent considers that Evergy West competes for capital with affiliates, but that his opinion is that Evergy should chose projects between its Missouri and Kansas electric utility operations based on economic efficiency and rather than the level of authorized ROEs.[15]

Q: Are you aware of examples where capital attraction and willingness to invest have been hampered when a regulatory jurisdiction is perceived as not being credit supportive?

A: Yes. Connecticut and Illinois are two recent examples. I discussed the challenges in Illinois in my direct testimony, where market reactions to regulatory decisions in December 2023 for Ameren Illinois Co. and Commonwealth Edison Co. were universally negative and both utilities considered shifting investment to their other utility operating subsidiaries outside of Illinois.

Connecticut, which is viewed by research analysts, equity analysts, and investors as among the least credit supportive jurisdictions in the United States for utilities, is the most recent example of where capital attraction and a willingness to invest have been hampered. For example:

- The two major utility holding companies operating in Connecticut (i.e., Eversource Energy ("Eversource") and Avangrid Inc. ("Avangrid")) have announced their unwillingness to continue discretionary investment in the state until the regulatory environment and cost recovery outcomes change.
- Avangrid's utility operating subsidiaries in Connecticut (i.e., Connecticut Natural Gas Corporation ("CNG") and Southern Connecticut Gas Company ("SCG")) have recently experienced difficulty fully subscribing bond issuances, and while able to do so, the premiums were higher than anticipated.

[15] Murray Direct Testimony, at 4.

Specifically, in May 2024, Eversource, which owns Connecticut Light & Power and Aquarion Water in Connecticut, announced on its earnings call that it would be cutting investment by its utilities within the state due to "unreasonable, arbitrary decisions by the regulator (*i.e.*, the Public Utilities Regulatory Authority ("PURA"), and that the company had "grave concerns" regarding the Connecticut regulatory environment.[16] Eversource executives stated that the company is unwilling to place capital at risk within Connecticut given that the state's regulatory policy discourages investment.[17] Driving the cut in utility investment is Eversource's view that utility regulators have been slow to approve the recovery of $635 million in storm costs incurred from 2018 through 2021, $400 million in uncollected bills from ratepayers, a rate reduction imposed on Aquarion Water in its most recent rate proceeding, and elimination of a program supporting electric vehicles.[18] Consequently, Eversource stated that is taking a "hard look" at its capital deployment priorities in Connecticut and plans to reduce its capital investment in Connecticut by $500 million over the next five years, which will likely come from reliability areas until "Connecticut's regulatory decisions come back into alignment with law and state policy."[19] Eversource indicated that it will not reduce safety spending, but that it has made significant investments in reliability over the past decade but is unwilling to continue doing so without

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16 Mark Pazniokas, "Eversource escalates CT fight, saying it will cut investments," CT Mirror, May 2, 2024.

17 Jared Anderson, "Eversource cutting investment in Connecticut by up to $500 million over 5 years," S&P Capital IQ Pro, May 3, 2024.

18 Mark Pazniokas, "Eversource escalates CT fight, saying it will cut investments," CT Mirror, May 2, 2024.

19 Jared Anderson, "Eversource cutting investment in Connecticut by up to $500 million over 5 years," S&P Capital IQ Pro, May 3, 2024.

a secure and predictable cost recovery path.[20] Moreover, Eversource has also indicated that it is exploring a sale of Aquarion Water.[21]

Similarly, Avangrid, which owns United Illuminating, CNG, and SCG in Connecticut, has also announced that its planned $191 million in capital investment in the state hinges on both regulatory decisions associated with the pending rate cases of CNG and SCG, and the resolution of Avangrid's ongoing legal appeal of PURA's August 2023 order whereby UI's rate request was reduced from $131 million to $23 million, which the utility says will require it to operate at a loss.

In addition, Avangrid has indicated that it experienced difficulties in attracting adequate subscription levels for debt issuances by its Connecticut utilities that closed in December 2023, and the bonds priced at a higher coupon rate than anticipated.[22] Specifically, as stated in its currently pending rate proceeding:

> The debt issuance was a private offering in which four banks served as lead placement agents and worked with the Company to market the transaction to investors in advance of pricing. On the day of pricing, November 15th, the subscriptions sought for CNG and SCG were only 65% and 50% fulfilled, respectively. This compares to the offering for one of the other Avangrid utilities which was more than two-times subscribed. After some additional negotiation, the banks were able to get one investor to fill the remaining portions of the issuance sought for CNG and SCG and the full transaction priced on the following day; however, the credit spreads were wider than anticipated across the Avangrid Connecticut utilities, raising the financing cost by approximately 10-15 basis points. *The bankers informed Avangrid that the difficulty in fulfilling the necessary subscription levels and the wider credit spreads attracted were caused in part by the limited*

[20] *Id*.

[21] Luther Turmelle, "Aquarion is for sale, but who will buy it? Here's a look at what's next," CT Insider, March 23, 2024.

[22] Public Utilities Regulatory Authority, Docket No. 23-11-02, Response of Connecticut Natural Gas Corporation to data request RRU-402, February 27, 2024.

interest to invest in Connecticut utilities due to concerns over the regulatory environment and potential impacts to current ratings.[23]

Q: Have utilities shifted investment outside of a jurisdiction that is viewed as unsupportive?

A: Yes. After Eversource's announcement to curtail investment in Connecticut, Guggenheim Partners analyst Shahriar Pourreza noted that the threats to reduce investment should be taken seriously and that it has happened in other states, most recently in Illinois. Because utilities are capital intensive and inherently cash-flow negative, Mr. Pourreza stated that he has seen utilities that operate in multiple jurisdictions shift capital to where the return is more predictable.[24]

V. RESPONSE TO DR. WON'S COST OF EQUITY ANALYSES

A. Proxy Group

Q: Does Dr. Won rely on the same proxy group that you have used for your cost of equity analyses?

A: No, although they are nearly identical. Dr. Won relies on a proxy group that is based on a group of U.S. utilities that the Edison Electric Institute classifies as electric utilities, to which he then applies a set of screening criteria. Dr. Won's proxy group consists of 14 companies, which include all the same companies as utilized in my updated cost of equity analyses with the exception of NextEra Energy, Inc., which does not meet Dr. Won's screening criteria that 80 percent of the company's assets must be U.S. regulated.

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[23] *Id*., emphasis added.

[24] Mark Pazniokas, "Eversource escalates CT fight, saying it will cut investments," CT Mirror, May 2, 2024.

Q: Is Dr. Won's asset screening criterion consistent with the screening criteria that Staff has applied in prior electric rate proceedings?

A: No. In the 2019 Empire District Electric rate proceeding, Staff relied on a screening criterion whereby the company must generate at least 80 percent of its income from regulated utility operations[25] – not such as Dr. Won is doing now that 80 percent of the company's assets must be U.S. regulated.

Q: Is the fact that Dr. Won utilizes a different proxy group cause the material differences in the results between your respective cost of equity analyses?

A: No. I do not agree with Dr. Won's new screening criterion, requiring that 80 percent of the company's assets must be U.S. regulated and continue to believe that operating income is a more appropriate screening criterion. Further, approximately 77 percent of NextEra Energy Inc.'s total revenue is from regulated operations, and approximately 88 percent of its total operating income is from regulated operations. Therefore, it is reasonable to include NextEra Energy in the proxy group. However, since the more significant differences in the results of our respective cost of equity analyses are not primarily a function of this proxy group difference, I will not respond further on this issue.

B. Two-Step DCF Analysis

Q: Please summarize Dr. Won's specification of his DCF model.

A: Dr. Won conducts a two-step DCF analysis where he relies on (1) the average of the monthly high and low stock prices for his proxy companies as of October 2023 through

[25] Missouri Public Service Commission, Case No. ER-2019-0374, Staff Report, January 15, 2020, at 14.

December 2023; and (2) a growth rate for each proxy company that is based on a short-term growth rate to which he applies an 80 percent weighting and a long-term growth rate to which he applies a 20 percent weighting. Specifically, Dr. Won's short-term growth rate is an average of the projected earnings per share ("EPS"), dividend per share ("DPS"), and book value per share ("BVPS") growth rates for each of his proxy group companies published by *The Value Line Investment Survey* ("*Value Line*").[26] Dr. Won's long-term growth rate is a projected nominal gross domestic product ("GDP") growth rate of 4.10 percent as reported by the Congressional Budget Office in its Economic Outlook.[27] Dr. Won calculates the cost of equity for each of his proxy group companies and then narrows the range of results by eliminating the top three cost of equity results to establish an upper bound and by eliminating the bottom two cost of equity results to establish a lower bound.[28] Dr. Won then averages his asymmetrically derived upper and lower bounds to estimate a cost of equity from his DCF analysis of 8.70 percent.[29]

Q: Are the results of Dr. Won's DCF analyses reasonable?

A: No. While I disagree with Dr. Won's application of the two-step DCF model and his measure of central tendency, it is important to note that it appears that Dr. Won also recognizes that the results of his constant growth DCF analysis are not reasonable given that his ROE recommendation is more than 100 basis points greater than the result of his DCF analysis. The result of Dr. Won's DCF analysis is well below currently authorized

[26] Won Direct Testimony, Schedules SJW-d10.

[27] *Id.*

[28] *Id.*, Schedule SJW-d12.

[29] *Id*.

ROEs for vertically-integrated electric utilities and would not be viewed positively by the market given it is below the ROEs authorized for Ameren Illinois Co. and Commonwealth Edison Co. in Illinois as discussed in my direct testimony.

Q: What are the primary areas where you disagree with Dr. Won's Two-Step DCF analysis?

A: The major areas where I disagree with Dr. Won's Two-step DCF analysis are: (1) the use of historical growth rates in the short-term growth rate estimate; (2) the development of the long-term growth rate; (3) the approach used to narrow the range of results, and (4) the final recommended ROE which is not based on the results of his analyses.

Q: Do you agree with Dr. Won's use of an average of projected EPS, DPS, and BVPS growth rates in the development of his short-term growth rate in the DCF model?

A: No. It is more appropriate to rely on analysts' projected EPS growth rates in the development of the DCF model for several reasons:

- Earnings are the fundamental determinant of a company's ability to pay dividends, and over the long-term dividend growth can only be sustained by earnings growth.[30] Therefore, EPS, not DPS or BVPS, should be relied on in the DCF analysis.

[30] As noted by Brigham and Houston: "Growth in dividends occurs primarily as a result of growth in earnings per share (EPS). Earnings growth, in turn, results from a number of factors, including (1) inflation, (2) the amount of earnings the company retains and invests, and (3) the rate of return the company earns on its equity (ROE)." Eugene F. Brigham and Joel F. Houston, Fundamentals of Financial Management, at 317 (Concise Fourth Edition, Thomson South-Western, 2004).

- There is significant academic research demonstrating that EPS growth rates are most relevant in stock price valuation.[31] For example, Liu, *et al*. (2002) examined "the valuation performance of a comprehensive list of value drivers" and found that "forward earnings explain stock prices remarkably well" and were generally superior to other value drivers analyzed. Gleason, *et al*. (2012) found that the sell-side analysts with the most accurate stock price targets were those whom the researchers found to have more accurate earnings forecasts.

- Investment analysts report predominant reliance on EPS growth projections. In a survey completed by 297 members of the Association for Investment Management and Research, the majority of respondents ranked earnings as the most important variable in valuing a security (more important than cash flow, dividends, or book value).[32]

- Projected EPS growth rates such as those available from *Yahoo! Finance* and *Zacks Investment Research* ("*Zacks*") are based on consensus estimates available from multiple sources. In other words, projected EPS growth rates include the contributions of more than one analyst and thus the results are less likely to be biased in one direction or another. Moreover, the fact that projected EPS growth estimates are available from multiple sources on a consensus basis attests to the importance of projected EPS growth rates to investors when developing long-term growth expectations.

Q: Has Staff previously relied solely on EPS growth rates in prior cases for the short-term growth rate?

A: Yes. For example, in the 2019 Empire District Electric rate proceeding, Staff witness Mr. Chari relied solely on historical and projected EPS growth rates as short-term growth rates

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[31] *See, e.g.*, Robert S. Harris, "Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return," *Financial Management*, Spring 1986, at 66; James H. Vander Weide and Willard T. Carleton, "Investor growth expectations: Analysts vs. history," *The Journal of Portfolio Management*, Spring, 1988; Robert S. Harris and Felicia C. Marston, "Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts," *Financial Management*, Summer, 1992; Advanced Research Center, "Investor Growth Expectations," Summer 2004; Eugene F. Brigham, Dilip K. Shome and Steve R. Vinson, "The Risk Premium Approach to Measuring a Utility's Cost of Equity," *Financial Management*, Vol. 14, No. 1, Spring, 1985; Dr. Roger A. Morin, *New Regulatory Finance*, Public Utilities Reports, Inc., 2006, at 299-303; Jing Liu, *et. al*., "Equity Valuation Using Multiples," *Journal of Accounting Research*, Vol. 40 No. 1, March 2002; C. A. Gleason, *et. al*., "Valuation Model Use and the Price Target Performance of Sell-Side Equity Analysts," *Contemporary Accounting Research*, September 2011; Bochun Jung, *et al*., "Do financial analysts' long-term growth forecasts matter? Evidence from stock recommendations and career outcomes," *Journal of Accounting and Economics*, Vol. 53 Issues 1-2, February-April 2012.

[32] Stanley B. Block, "A Study of Financial Analysts: Practice and Theory," *Financial Analysts Journal*, July/August 1999

in the DCF, and did not rely on either DPS or BVPS growth rates.[33] Similarly, in the Ameren Missouri 2021 rate proceeding, Staff witness Mr. Chari relied solely on projected EPS growth rates from both *Value Line* and S&P Global Market Intelligence as short-term growth rates, and did not rely either on historical EPS growth rates or any DPS or BVPS growth rates.[34]

Q: Have other regulatory commissions also relied on projected EPS growth rates as the estimate of perpetual growth in the constant growth DCF model?

A: Yes. For example, the Pennsylvania Public Utilities Commission ("Pennsylvania PUC") has historically preferred the use of analysts' projected EPS growth rates in the constant growth DCF analysis.[35] The Pennsylvania PUC has noted the following:

> Upon our consideration of the record evidence, we find that I&E's DCF calculation correctly used forecasted earnings growth rates instead of considering historical growth rates. The record indicates that growth rate forecasts are made by analysts who already factor historical data into their forecasts of earnings per share growth. Although past performance can yield valuable information, relying on it for a DCF analysis results in placing too much weight on past performance. ***Thus, the best measure of growth for use in the DCF model are forecasted earnings growth rates***.[36]

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[33] Missouri Public Service Commission, Case No. ER-2019-0374, Staff Report, January 15, 2020, at 14.

[34] Missouri Public Service Commission, Case No. ER-2021-0240, Staff Report, September 3, 2021, at 25.

[35] *See, e.g.*, Pennsylvania Public Utility Commission, Opinion and Order, October 4, 2018, at 93. *See, also*, Docket No. M-2018-3006643, Public Meeting held January 17, 2018, at 16, in which the Commission discusses the method it uses to set the ROE for the Distribution System Improvement Charge.

[36] Pennsylvania Public Utility Commission, Docket No. Docket No. R-2020-3018929, Opinion and Order, June 17, 2021, at 160; emphasis added.

Q: While Dr. Won references the FERC's ROE methodology set forth in Opinion No. 575 as support for his use of an average short-term and long-term growth rate in his two-step DCF analysis,[37] is his approach for estimating the short-term growth rate in his DCF analysis consistent with the FERC's methodology?

A: No. While Dr. Won references the FERC methodology for the weighting of the short-term and long-term growth rates, he fails to acknowledge that the FERC relies solely on projected EPS growth rates in the development of the short-term growth rate used in the two-step DCF model. Dr. Won's use of an average of projected EPS, DPS, and BVPS growth rates from *Value Line* is not consistent with the FERC decisions that Dr. Won sites in support of his DCF model. Specifically, as stated in Opinion No. 575, the FERC:

- has consistently relied on projected EPS growth rates as the short-term growth rate, not historical growth rates or DPS or BVPS growth rates such as Dr. Won has done; and,[38]
- has consistently relied on projected EPS growth rates from International Brokers' Estimate System ("IBES") (*i.e.*, consistent with the projected EPS growth rates reported on *First Call* and *Yahoo! Finance*), not *Value Line*, such as Dr. Won has used in his DCF analysis.[39]

Q: Do you have any other concerns with the short-term growth rates relied on by Dr. Won to calculate his two-step DCF model?

A: Yes. In addition to the fact that his derivation of the short-term growth rates is inconsistent with the FERC's methodology cited in his testimony, Dr. Won has relied solely on *Value Line* as the source for the historical and projected growth rates in his constant growth DCF analysis. However, the FERC does not rely on *Value Line*, which represents the viewpoint

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[37] Won Direct Testimony, at 35.

[38] *Entergy Arkansas, et al.*, Opinion No. 575, 175 FERC ¶ 61,136 (2021), at P 131.

[39] *Id*.

of a single analyst as a source for the growth rates used in the DCF model. The FERC has consistently relied on consensus estimates rather reflect the viewpoint of a single analyst. There are several consensus estimates of projected EPS growth rates that are publicly available based on the expectations of multiple analysts and are widely used by investors, including *Yahoo! Finance* (which is the source for IBES typically accepted by the FERC) and *Zacks*, both of which I have relied upon in my analyses. It is not reasonable for Dr. Won to exclude these timely and widely-available sources of information from the analysis when these real-time sources have become the more common data points relied on by investors.

Q: How does Dr. Won establish the upper and lower bounds based on the results of his DCF analysis?

A: Dr. Won establishes an upper bound and lower bound for his DCF results by arbitrarily excluding certain high and low end results of the proxy group, respectively, without providing any explanation or support for doing so. Specifically, it appears from the formulas in Dr. Won's workpapers that he may have intended to set (1) the lower bound as the average of the second and third lowest cost of equity results of his proxy group, and (2) the upper bound as the average of the second and third highest cost of equity results. However, the formula that Dr. Won has utilized instead arbitrarily and asymmetrically sets the lower bound as the second lowest cost of equity result of the proxy group and the upper bound as third highest cost of equity result of the proxy group, thus biasing the overall average of the lower and upper bound downward.

Q: Regardless of the error in Dr. Won's approach, even if done symmetrically, is his approach for eliminating low-end and high-end outliers from the results of his DCF analysis consistent with the FERC's methodology?

A: No. In Opinion No. 575 that Dr. Won references in his testimony, the FERC excludes low-end and high-end outliers from the results of the DCF analysis, whereby cost of equity results lower than the yield on corporate Baa bonds plus 20 percent of the market risk premium in the CAPM are excluded, as are cost of equity results higher than 200 percent of the median result of the DCF analysis. As noted, Dr. Won instead calculates a lower bound and upper bound for his DCF results by arbitrarily excluding certain high and low end results, without providing any explanation or support for doing so.

Q: All else equal, what is the impact of Dr. Won's arbitrary approach to setting the lower and upper bounds of his DCF results?

A: As shown on Exhibit AEB-R7, page 1, which recreates the results of Dr. Won's two-step DCF analysis as reflected on Exhibit SJW-d12, the simple average of Dr. Won's DCF results is 8.82 percent. Therefore, the arbitrary and asymmetric determination of an upper and lower bound by Dr. Won understates the resulting cost of equity from his two-step DCF model by 12 basis points.

Q: Is the data that Dr. Won uses in his DCF analysis the most current at the time he filed his testimony and consistent with his other cost of equity analyses?

A: No. The data that Dr. Won uses in his DCF analysis is outdated given that it is as of December 2023. In addition, the time period of the data in his DCF analysis is also

inconsistent with his Bond Yield Plus Risk Premium analysis, which relies on more current data from the first quarter of 2024.[40]

Q: Have you evaluated the result of Dr. Won's two step DCF analysis when current data is utilized and the FERC's DCF approach that he references as support for this analysis is accurately applied?

A: Yes. Exhibit AEB-R7, page 2, shows the cost of equity pursuant to Dr. Won's DCF analysis when current data is utilized in his analysis and the FERC's DCF approach is accurately applied. Specifically, Exhibit AEB-R7, page 2, reflects data as of June 30, 2024, calculates the stock prices for the proxy group companies based on a 6-month average of the high and low monthly stock prices instead of the 3-month average Dr. Won utilizes, and relies on projected EPS growth rates published by IBES[41] for the short-term growth rate. While Dr. Won also does not apply the FERC's method of calculating the long-term growth rate, I have not adjusted Dr. Won's long-term growth rate.

As shown in Exhibit AEB-R7, when current data is utilized in Dr. Won's DCF analysis, and the FERC's DCF approach is accurately applied, the average result of his two-step DCF analysis is 10.69 percent, *which is greater than the Company's proposed ROE in this proceeding of 10.50 percent*. While Dr. Won's outlier test is inconsistent with the FERC's approach and is unsupported, even when his arbitrary approach for setting an upper and lower bound is maintained (and corrected to account for the error in his

[40] Won Direct Testimony, Schedule SJW-d14-1.

[41] The projected EPS growth rates published by Yahoo! Finance are the growth rates published by IBES.

formulae),[42] the average cost of equity is 10.51 percent, which is consistent with the Company's proposed ROE in this proceeding.

Q: Do you agree with the GDP growth rate that Dr. Won has relied upon?

A: No. The CBO Budget and Economic Outlook provides projections for the period 2024 to 2034, and since the short-term growth rates are three- to five-year estimates, the CBO projections from this report will, at best, provide projections for an additional seven years beyond the short-end of the projected EPS growth rates, which is thus not a long-term economic growth rate.

C. CAPM Analysis

Q: Please summarize Dr. Won's application of the CAPM.

A: Dr. Won's CAPM analysis relies on (1) a risk-free rate based on the average yield on the 30-year Treasury bond for the three months ending December 31, 2023; (2) betas for his proxy group published by *Value Line*; and, (3) an average of four measures of a market risk premium. Specifically, Dr. Won's first two estimates of the market risk premium are the long-term arithmetic average and geometric average market risk premia of 4.54 percent and 5.94 percent, respectively, calculated as the difference between the return on large company stocks and long-term government bonds from 1926 to 2023 based on data published by *Kroll*. The second two estimates of Dr. Won's market risk premium are the long-term arithmetic average and geometric average market risk premia of 5.23 percent

[42] As shown on Exhibit AEB-R7, when corrected, the lower bound is calculated as the average of the second and third lowest cost of equity results of the proxy group, and the upper bound is calculated as the average of the second and third highest cost of equity results.

and 6.80 percent, respectively, calculated as the difference between the return on the S&P 500 and long-term government bonds from 1928 to 2021 as published by Professor Damadoran of the NYU Stern School of Business. The results of Dr. Won's CAPM analyses range from 8.67 percent to 10.70 percent. Dr. Won also applies an upper and lower bound to the results of his CAPM analysis, similar to his DCF analysis and averages the upper and lower bounds to estimate a cost of equity of 9.65 percent.[43]

Q: Is Dr. Won's consideration of the CAPM in this proceeding consistent with how he has viewed the CAPM in prior proceedings?

A: No. Dr. Won testifies in the current proceeding that conducting the cost of equity analysis using the DCF and CAPM is "the most appropriate method for generating a composite zone of reasonableness to determine the recommended ROE to be presented to the Commission" for Evergy West.[44] However, in prior proceedings, Dr. Won has stated that his CAPM was solely a test of the reasonableness of his DCF results.[45]

Q: Does Dr. Won rely on the results of his CAPM analysis for purposes of his recommended ROE?

A: No. As with the cost of equity result of his DCF analysis, the cost of equity result of his CAPM analysis is also lower than his recommended ROE for the Company in this proceeding.

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[43] Won Direct Testimony, Exhibit SJW-d13.

[44] *Id*., at 34.

[45] *See*, *e.g*., Missouri Public Service Commission, Case Nos. ER-2022-0129 and ER-2022-0130, Direct Testimony of Seoung Joun Won, June 8, 2022, at 25, 27.

Q: Do you agree with Dr. Won's specification of his CAPM analysis?

A: No. There are several flaws with Dr. Won's CAPM analysis, including:

- Relying on historical data to estimate a forward-looking market return and market risk premium.
- Relying on a historical market risk premium that is unrelated to the current risk-free rate, and therefore does not correctly reflect the inverse relationship between interest rates and the market risk premium.
- Calculating the market risk premium incorrectly, by relying on the historical total return on long-term government bonds instead of the historical income-only return.
- Relying on historical geometric averages of the market return and market risk premia rather than arithmetic averages to estimate the cost of equity.

Each of these assumptions independently and combined cause the result of Dr. Won's CAPM analysis to be severely understated and unreliable.

Q: Why is it not reasonable to use the historical market risk premium in the CAPM to estimate the cost of equity?

A: The cost of equity that is being set in this proceeding is the return that investors expect on current and future investments in the Company. Therefore, the market return and market risk premium fundamentally should be forward-looking. Dr. Won has not provided any evidence that the historical average market return or the market risk premium reflect the expected market conditions during the period in which the Company's proposed rates will be in effect. *Morningstar*, which is the prior publisher of the historical dataset relied on by Dr. Won for his CAPM that is now published by *Kroll*, specifically supports this position indicating that the market risk premium is a forward-looking concept, not a historical analysis:

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

That is, the equity risk premium that is used in the discount rate should be reflective of what investors think the risk premium will be going forward.[46]

Given that the current and projected market conditions that I have previously discussed affect the current and projected equity risk premium, and which is also acknowledged by Dr. Won in his testimony,[47] a forward-looking market return and market risk premium should be used in establishing the ROE in this proceeding.

Q: Has *Kroll* also highlighted a potential inconsistency with relying on historical data for a forward-looking analysis such as the CAPM?

A: Yes. *Kroll* has stated that, "[i]n using a historical measure of the equity risk premium, one assumes that what has happened in the past is representative of what might be expected in the future."[48] As will be discussed in more detail, because the current long-term government bond yields are currently below those that Dr. Won relies on in his historical average market risk premium estimates, the market risk premium based on long-term historical average data is certainly not representative of what is expected in the future. Given the inverse relationship between interest rates and the market risk premium, and since the current interest rate that Dr. Won relies on for his risk-free rate is lower than the historical average, it is reasonable to expect that the market risk premium should be higher than the historical average.

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[46] *Morningstar Inc*., 2010 Ibbotson SBBI Valuation Yearbook, at 55.

[47] Won Direct Testimony, at 13.

[48] *Kroll*, 2022 SBBI Yearbook, at 198.

Q: Is there also evidence that the use of a historical market premium can produce counter-intuitive results?

A: Yes. Figure 4 illustrates the problem with relying on a historical market risk premium such as Dr. Won has done. Specifically, the figure shows that from 2007-2009, the historical market risk premium decreased even as market volatility (the primary statistical measure of risk) significantly increased. Further, this figure demonstrates the significant swings in the annual equity risk premium that are averaged into the long-term historical average calculations. As shown, in 2008, the annual equity "premium" was actually negative, which implies a discount for equity holders relative to the cost of debt. It is incomprehensible that the perceived risk for equity was negative (implying a lower required return) in the height of the financial market collapse when the overall market return was a negative 37 percent. As shown, this individual observation alone, which runs counter to the theory of the equity risk premium, reduces the historical average market risk premium for the prior 80 years by 60 basis points.

Figure 4: Historical Market Risk Premium and Market Volatility

	Market Volatility	Market Return	Annual Equity Premium	Long-term Average Historical Market Risk Premium[49]
2007	17.54	5.49%	0.63%	7.10%
2008	32.69	-37.00%	-41.45%	6.50%
2009	31.48	26.46%	3.47%	6.70%

The assumption that investors would expect or require a lower equity risk premium during periods of increased volatility is counter-intuitive and leads to unreliable analytical

[49] Ibbotson SBBI Yearbook. *Morningstar Inc*. 2008, at 28. *Ibbotson SBBI Yearbook. Morningstar Inc*. 2009, at 23; Ibbotson SBBI Yearbook. *Morningstar Inc*. 2010, at 23. The historical market risk premium equals the total return on large company stocks less the income-only return on long-term government securities.

results. As noted earlier, the relevant objective in the application of the CAPM is to ensure that all three components of the model (*i.e.*, the risk-free rate, the beta, and the market risk premium) are consistent with market conditions and investor perceptions. The forecasted market risk premium estimates used in my CAPM analyses specifically address this concern.

Q: As you discussed previously, Dr. Won references the FERC's ROE methodology when discussing his DCF analysis. Does the FERC support the use of a historical market return and market risk premium when conducting the CAPM analysis?

A: No. Dr. Won's approach to the CAPM is inconsistent with the FERC's methodology. The FERC has concluded that a forward-looking market return and market risk premium should be relied on for estimating a forward-looking estimate of the cost of equity when using the CAPM analysis.[50] Further, the methodology that was most recently endorsed by the FERC to estimate the market risk premium is generally consistent with the approach I have relied upon, which is to calculate the market risk premium based on the difference between the projected return on the market and the risk-free rate.

Q: Has Dr. Won previously relied on a forward-looking estimate of the market risk premium in his CAPM analysis such as you have done in your direct testimony?

A: Yes. In Missouri-American Water's 2020 rate proceeding, Dr. Won relied on two estimates of a historical market risk premium, as well as an estimate of a forward-looking market risk premium based on the market return of the S&P 500 less the current risk-free

[50] *See, e.g.*, *Entergy Arkansas, et al.*, Opinion No. 575, 175 FERC ¶ 61,136 (2021), at P 163-164.

rate.[51] All else equal, if Dr. Won had calculated the market risk premium in this proceeding in the same way that he had calculated it in the Missouri-American Water 2020 rate proceeding, his CAPM result in this proceeding would have been higher.

Q: Do you agree with Dr. Won's calculation of the historical market risk premia relied on in his CAPM analyses?

A: No. Setting aside that it is not appropriate to use historical data to calculate the market risk premium for the reasons discussed, Dr. Won has also not correctly used that data to estimate a market risk premium. Specifically, Dr. Won has calculated his market risk premia in two of his CAPM scenarios as the difference between the long-term average return on large company stocks and the long-term average *total* return on long-term government bonds, and in the other two CAPM scenarios, he has calculated the market risk premia as the difference between the long-term average total return on the S&P 500 and the long-term average *total* return on 30-year Treasury bonds. Dr. Won's estimates of the market risk premia are incorrect and understated because in calculating a historical market risk premium, the market return should be reduced by the *income-only* return on the risk-free investment. The market risk premium is estimating the premium necessary to hold equity as compared to a risk-free investment. Therefore, the proper calculation is the return on the market less the income-only return on the risk-free investment. Dr. Won has incorrectly deducted the *total return* on the risk-free investment, which is the return on and of capital.

[51] Missouri Public Service Commission, Case No. WR-2020-0344, Staff Report Cost of Service, at 26 and Schedule SJW-14, columns [8] through [10].

Morningstar, the former publisher of the historical data on which Dr. Won relies, states that a historical market risk premium is appropriately calculated by subtracting the *income-only* portion of the government bond return from the total return on large company stocks:

> Another point to keep in mind when calculating the equity risk premium is that the income return on the appropriate-horizon Treasury security, rather than the total return, is used in the calculation. The total return is comprised of three return components: the income return, the capital appreciation return, and the reinvestment return…The income return is thus used in the estimation of the equity risk premium because it represents the truly riskless portion of the return.[52]

Q: Why is it not appropriate to rely on a historical market risk premium and the current risk-free rate in the CAPM, as Dr. Won has done?

A: Dr. Won's use of a historical market risk premium in the CAPM with a current interest rate disregards the demonstrated relationship between interest rates and the market risk premium. As just discussed, the market risk premium is the difference between the market return and the return on a risk-free investment. Therefore, at any point in time, the market risk premium is based on the relationship between the market return and the risk-free rate. Dr. Won calculates the cost of equity using the CAPM by relying on a long-term *historical* average market risk premia, which, while calculated incorrectly, attempts to reflect the long-term relationship between the risk free rate and the market risk premium. However, applying that historical market risk premium to a *current* risk-free rate is incorrect because Dr. Won's current risk-free rate bears no relationship to the historical average interest rates underlying the historical average market risk premia. The use of assumptions from

[52] *Morningstar Inc.*, Ibbotson SBBI 2012 Valuation Yearbook, Market Results for Stocks, Bonds, Bills, and Inflation 1926-2011, at 55.

different time periods fails to account for the inverse relationship that exists between the risk-free rate and the equity risk premium. Both academic literature and market evidence indicate that the equity risk premium is inversely related to the level of interest rates (*i.e.*, as interest rates increase, the equity risk premium decreases, and vice versa).[53]

Q: Does Dr. Won acknowledge the historical relationship between interest rates and the market risk premium?

A: Yes. In Figure 7 of his testimony, Dr. Won specifically acknowledges this relationship when discussing his BYRP analysis.[54] Therefore, given that current interest rates on long-term government bonds are below the historical average interest rate of those same bonds, the market risk premium should be *greater than* the long-term historical average market risk premium – which is not the case for Dr. Won's CAPM analyses.

Q: How does this error affect the market risk premium that Dr. Won relies on?

A: By subtracting the total return on the risk-free investment from the market return, Dr. Won has understated the market risk premium. To illustrate this point, in one of his estimates of the historical market risk premium, Dr. Won takes the arithmetic historical market return of 12.16 percent and deducts the arithmetic *total* return on long-term government bonds of 6.22 percent, to derive a market risk premium of 5.94 percent.[55] When correctly calculated as the difference between the total return on large company stocks from for 1926-2023 and

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[53] *See e.g.*, S. Keith Berry, "Interest Rate Risk and Utility Risk Premia during 1982-93," *Managerial and Decision Economics*, Vol. 19, No. 2, March, 1998. *See also*, Robert S. Harris, "Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return," *Financial Management*, Spring 1986, at 66.

[54] Won Direct Testimony, at 39.

[55] *Id.*, Schedule SJW-d13.

the *income-only* return on long-term government bonds over this same period of 4.86 percent, the historical market risk premium is 7.17 percent.[56]

In developing his CAPM analysis, Dr. Won relies on a 3-month average risk-free rate on long-term government bonds as of December 31, 2023 of 4.59 percent. However, the current risk-free rate is lower than the long-term historical average rate of 4.87 percent. Therefore, recognizing the inverse relationship between interest rates and the market risk premium, which Dr. Won agrees with, it stands to reason that the current market risk premium should be *greater than* the long-term historical average of 7.17 percent. However, in Dr. Won's CAPM analysis, his market risk premium of 5.94 percent (in this scenario) is substantially lower than the long-term historical average, which is inconsistent with the negative relationship that Dr. Won notes exists between these two assumptions.

Q: How does the understatement of the market risk premium affect Dr. Won's CAPM analyses?

A: By understating the historical market risk premia, Dr. Won's CAPM results are also understated. As discussed subsequently herein, Mr. Murray's CAPM analysis suffers from this same flaw and also understates the cost of equity.

Q: Is it appropriate to rely on the geometric mean to estimate a historical market return for the CAPM?

A: No. Geometric and arithmetic means are used for different purposes. The geometric mean is used to determine the exact rate of compounded return between a specific starting and ending point. The geometric mean is most appropriately used for series that exhibit serial

[56] *Kroll*, Cost of Capital Navigator.

correlation. It is also commonly referred to as a "holding period return." The arithmetic mean is the appropriate calculation to use to estimate the market risk premium because it is the simple average of single period rates of return and therefore best approximates the uncertainty associated with returns from year to year. The important distinction between the two methods is that the arithmetic mean assumes each periodic return is an independent observation and, therefore, incorporates uncertainty into the calculation of the long-term average. In contrast, the geometric mean does not incorporate the same degree of uncertainty because it assumes that returns remain constant from year to year. Cooper (2006) reviewed the literature on the topic and noted the following rationale for using the arithmetic mean:

> Note that the arithmetic mean, not the geometric mean is the relevant value for this purpose. The quantity desired is the rate of return that investors expect over the next year for the random annual rate of return on the market. The arithmetic mean, or simple average, is the unbiased measure of the expected value of repeated observations of a random variable, not the geometric mean.…[The] geometric mean underestimates the expected annual rate of return.[57]

Furthermore, Pratt and Grabowski note the following in their review of the literature:

> The choice between which average to use is a matter of disagreement among practitioners. The arithmetic average receives the most support in the literature, though other authors recommend a geometric average. The use of the arithmetic average relies on the assumption that (1) market returns are serially independent (not correlated) and (2) the distribution of market returns is stable (not time-varying). Under these assumptions, an arithmetic average gives an unbiased estimate of expected future returns assuming expected conditions in the future are similar to conditions during the

[57] Ian Cooper, "Arithmetic versus geometric mean estimators: Setting discount rates for capital budgeting," *European Financial Management 2.2*, 1996, at 158.

observation period. Moreover, the more observations available, the more accurate will be the estimate.[58]

Q: Have you adjusted Dr. Won's analysis to correct for the issues you have discussed?

A: Yes. I have adjusted Dr. Won's CAPM analysis to calculate the market risk premium as the historical arithmetic average market return from 1926 through 2023 minus his current estimate of the risk-free rate.[59] While I do not agree with the use of a historical market return and historical market risk premium to estimate the forward-looking cost of equity for all of the reasons discussed, a calculation that at least derives the market risk premium from the risk-free rate that is being used in the CAPM to estimate the cost of equity is more appropriate than the calculation performed by Dr. Won. This is because the derived market risk premium reflects an inverse relationship between interest rates and the market risk premium that is established in the CAPM equation (*i.e.*, because current interest rates on long-term government bonds are lower than the long-term historical average interest rate on those same bonds, the market risk premium should be greater than the historical average risk premium).

As shown on Exhibit AEB-R8, when the market risk premium is adjusted as just discussed, the average cost of equity for Dr. Won's CAPM analysis is 11.29 percent, which is an increase of approximately 165 basis points from his as-filed position.

[58] Shannon P. Pratt and Roger J. Grabowski, *Cost of Capital: Applications and Examples*, Wiley, 2008, at 96.

[59] For the risk-free rate in his CAPM analysis, Dr. Won relies on the 3-month average yield of the 30-year Treasury bond as of December 31, 2023 of 4.58 percent. Consistent with my corrections to Dr. Won's DCF analysis and using the most current data available, I have updated his risk-free rate as the 3-month average yield on the 30-year Treasury bond as of June 30, 2024, which, coincidentally, is the same 4.58 percent.

D. BYRP Analysis

Q: Please summarize Dr. Won's BYRP analysis.

A: Dr. Won's BYRP analysis is similar to the BYRP analysis that I have also conducted, with the exception that he evaluates the inverse relationship between A-rated and Baa-rated utility bond yields and authorized ROEs for vertically-integrated electric utilities to estimate the risk premium instead of 30-year Treasury bond yields. In addition, Dr. Won's regression of the utility bond yields and authorized ROEs is based on authorized ROEs for the 10-year period 2014 to 2023, while my regression relies on a longer data set of authorized ROEs from 1980 to current.

Q: Did Dr. Won conduct a BYRP analysis in the Company's last rate proceeding such as he has done in this proceeding?

A: No. In the Company's last rate proceeding, Dr. Won conducted a "rule of thumb" BYRP analysis as a reasonableness check on the results of his other analyses similar to what Mr. Murray has done in the current proceeding.[60]

Q: If Dr. Won had applied the same methodology in the current proceeding that he applied in the prior proceeding, what would the estimated cost of equity be?

A: In the Company's last rate proceeding, Dr. Won estimated the cost of equity using his "rule of thumb" BYRP analysis as a 3-month average of the Moody's A-rated and Baa-rated utility bonds plus a risk premium range of 3.50 percent to 5.50 percent.[61] As shown in Exhibit AEB-R9, if Dr. Won had applied that same methodology in this proceeding, the

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[60] Missouri Public Service Commission, Case Nos. ER-2022-0129 and ER-2022-0130, Direct Testimony of Seoung Joun Won, June 8, 2022, at 29.

[61] *Id*., at 29.

resulting average cost of equity based on Dr. Won's stated range would be 10.22 percent for A-rated utility bonds and 10.44 percent for Baa-rated utility bonds. Given that Evergy West is rated Baa by Moody's, the cost of equity of 10.44 percent would be the applicable result – which is consistent with the Company's proposed ROE in this proceeding.

Q: Does Dr. Won explain why he has conducted a different BYRP analysis in the current proceeding?

A: No.

Q: Do you agree with Dr. Won's BYRP analysis?

A: No, while Dr. Won has also conducted a regression analysis for his BYRP analysis in a similar manner as I have done, there are a number of elements with which I disagree with his analysis:

- Dr. Won only utilizes a 10-year period of data for the analysis when a significantly longer period of utility bond yield and authorized ROE data is available that incorporates a much broader set of market conditions than has been considered in Dr. Won's analysis and is more appropriate to be considered in setting the return on equity.
- Based on what is presented in Figure 7 and Exhibit SJW-d14-2 of his testimony, Dr. Won has conducted a single regression of the risk premium and bond yield for both A-rated and Baa-rated utility bond yields, which he then uses to estimate a forward-looking market risk premium associated with both current A-rated and Baa-rated utility bond yields. However, it is unclear why Dr. Won did not conduct separate regressions of the risk premium and bond yield for A-rated versus Baa-rated utility bond yields, which would then be used separately to estimate a forward-looking market risk premium the current A-rated and separately Baa-rated bond yield.

Dr. Won states that he determines the risk premiums each month by subtracting the 3-month moving average yield of A-rated and Baa-rated utility bonds from the 3-month moving average authorized ROE for vertically-integrated electric utilities in each month.

However, Dr. Won's workpapers do not provide the calculations used to develop his average authorized ROEs, so it is not possible to determine how he establishes his risk premia each month and whether such calculations are reasonable or how the results of his analysis may change based on the factors that I have identified.

E. Overall Cost of Equity Results

Q: Based on the various issues that you have identified with Dr. Won's DCF and CAPM analyses, have you evaluated what the results of those analyses, when updated and corrected, would indicate for an overall cost of equity for the Company in this proceeding?

A: Yes. Figure 5 presents the results of Dr. Won's cost of equity analyses when those analyses are updated to use the most current data available and corrected for the issues that I have discussed. Specifically, the changes to Dr. Won's two-step DCF and CAPM are shown in Exhibits AEB-R7 and AEB-R8, respectively. While Dr. Won has not explained why he has changed his BYRP methodology in this proceeding, and now relies solely on the result of that methodology for his ROE recommendation, even though this is inconsistent with his approach in the past, the average cost of equity shown in Figure 5 is the result of Dr. Won's BYRP without any adjustment. As just discussed, if Dr. Won had applied the same "rule of thumb" methodology that he has historically relied on to establish his recommended ROE in prior cases, including in Evergy West's last rate proceeding, the resulting cost of equity from his analysis would have supported the Company's proposed ROE.

Figure 5: Resulting Cost of Equity from Dr. Won's Adjusted Cost of Equity Analyses

	Cost of Equity
Two-Step DCF	10.69%
CAPM	11.29%
BYRP	9.74%
Average	**10.58%**

As shown in Figure 5, when Dr. Won's DCF and CAPM analyses are updated to reflect the most current data available and are corrected for the issues that I have discussed, the resulting cost of equity is 10.58 percent – which is consistent with, albeit modestly higher than, the Company proposed cost of equity in this proceeding.

VI. RESPONSE TO MR. MURRAY'S COST OF EQUITY ANALYSES

Q: As a threshold matter, prior to discussing details regarding Mr. Murray's cost of equity analyses, are the results of any of Mr. Murray's cost of equity models using an electric utility proxy group consistent with his ROE recommendation?

A: No. The results of all of Mr. Murray's cost of equity models are well below his recommended ROE in this proceeding.

Q: How does Mr. Murray reconcile the significant difference between the results of his cost of equity analyses and his overall ROE recommendation?

A: Mr. Murray's position is that regulators have authorized ROEs higher than the cost of equity. As a result, Mr. Murray states that he first estimates Evergy West's cost of equity,

and then compares those estimates to authorized ROEs in recent years in order to determine if there has been a fundamental change in the cost of capital.[62]

Q: Do you agree with Mr. Murray that regulators consistently have authorized ROEs that overstate the cost of equity?

A: No. I fundamentally disagree with Mr. Murray that regulatory commissions, including this Commission, have consistently erred for decades in establishing utilities' ROEs. While I agree with Mr. Murray that: (1) there is a distinction between the cost of equity and the ROE authorized by regulatory commissions in setting just and reasonable rates; (2) the cost of equity cannot be definitively determined and therefore must be estimated by analysts; and (3) there is significant disagreement as to the way in which to estimate the cost of equity; there is no basis to conclude that that regulators have consistently incorrectly authorized ROEs substantially higher than the cost of equity.

Regulatory commissions are mandated to approve rates that balance the interests of customers and shareholders and that are just and reasonable. There is no evidence that Mr. Murray's estimate of the cost of equity, which includes the results of both his multi-stage DCF and CAPM analyses that are substantially lower than any ROE that has been authorized by a regulatory commission in the past, is in fact reasonable and that regulatory commissions have been consistently approving unjust and unreasonable rates. In fact, Mr. Murray's conclusion is solely reliant on the assumption that he has "correctly" specified his cost of equity models, even though the cost of equity is not observable and his models produce results that even he does not rely on in establishing his recommended ROE. Given

[62] Murray Direct Testimony, at 4.

regulatory commissions' legal mandates for setting just and reasonable rates, it has to be concluded that the ROEs that they authorize were deemed by those agencies to reflect the investor-required return and produced just and reasonable rates at that time based on the information presented in those proceedings.

Q: Are you aware of any other regulatory jurisdiction in the United States that has adopted Mr. Murray's views?

A: No. I am not aware of any regulatory commission in the United States – state or Federal – that has adopted Mr. Murray's position.

Q: Are you aware of any regulatory commissions that have specifically disagreed with Mr. Murray's notion that there is and has been a substantial difference between authorized ROEs and the cost of equity for utilities?

A: Yes. For example, the Minnesota Public Utilities Commission clearly stated in a recent decision when the same argument was made by the Minnesota Department of Commerce, Division of Energy Resources that it did not agree that utility ROEs have exceeded the cost of equity historically:

> The Department's recommended cost of equity of 9.30% is informed by an underlying assumption that the cost of equity and the return on equity are distinct concepts in the sense that utility earnings exceed the cost of equity over time. This understanding, according to the Department, undermines the reliability of earnings' estimates in predicting long-term growth and instead justifies the use of a multi-stage DCF analysis that uses GDP to forecast the long-term cost of equity. ***The Commission does not share this concern***.[63]

[63] Minnesota Public Utilities Commission, Docket No. E-015/GR-21-335, Findings of Fact, Conclusions, and Order. February 28, 2023, at 45; emphasis added.

Q: What has Mr. Murray stated regarding the "zone of reasonableness" for the ROE to be established in this proceeding?

A: Mr. Murray notes that the Commission has developed a "zone of reasonableness standard" with the starting point for establishing such zone as 100 basis points above and below a recent industry average authorized ROE. Mr. Murray contends that the zone of reasonableness in this proceeding should be 8.66 percent to 10.66 percent.[64]

Q: Based on his proxy groups of electric utilities, are the results of Mr. Murray's multi-stage DCF or CAPM analyses actually within the zone of reasonableness that he suggests should be applicable in this proceeding?

A: No. As shown in Figure 6, none of the results of Mr. Murray's multi-stage DCF analyses, regardless of the variation of the proxy group utilized, are within his proposed zone of reasonableness, but rather are all below the low end of such zone. Similarly, as shown in Figure 7, none of the results of Mr. Murray's CAPM analyses where he assumes a market risk premium of 5.00 percent, regardless of the variation of the proxy group utilized, are within his proposed zone of reasonableness, but rather are all below the low end of such zone. Also as shown in Figure 7, when Mr. Murray utilizes a market risk premium of 6.00 percent, the results are either below the low end of his zone of reasonableness or within the zone but at the low end of his stated zone. Therefore, Mr. Murray's ROE recommendation in this proceeding is based simply on his own judgment and not on any of his cost of equity analyses.

[64] Murray Direct Testimony, at 5.

Figure 6: Results of Mr. Murray's Multi-Stage DCF Analyses Relative to His Proposed Zone of Reasonableness

	Cost of Equity	Mr. Murray Zone of Reasonableness	Within Zone?
Multi-Stage DCF			
Avg. of Total Mr. Murray Proxy Group	8.63%	8.66% - 10.66%	No
Avg. Excluding Companies w/ 10% Unreg. or Intl. Operations	8.63%		No
Avg. of Mr. Murray Proxy Companies since 2012/2014	8.45%		No

Figure 7: Results of Mr. Murray's CAPM Analyses Relative to His Proposed Zone of Reasonableness

	Cost of Equity: Market Risk Premium = 5%	Mr. Murray Zone of Reasonableness	Within Zone?	Cost of Equity: Market Risk Premium = 6%	Mr. Murray Zone of Reasonableness	Within Zone?
CAPM						
20-Year Treas. Bond Yld. as Risk-Free Rate						
Avg. of Total Mr. Murray Proxy Group	8.23%	8.66% - 10.66%	No	8.94%	8.66% - 10.66%	Low end
Avg. Excluding Companies w/ 10% Unreg. or Intl. Operation	7.99%		No	8.66%		Low end
Avg. of Mr. Murray Proxy Companies since 2012/2014	8.03%		No	8.71%		Low end
30-Year Treasury Bond Yield as Risk-Free Rate						
Avg. of Total Mr. Murray Proxy Group	8.13%	8.66% - 10.66%	No	8.84%	8.66% - 10.66%	Low end
Avg. Excluding Companies w/ 10% Unreg. or Intl. Operation	7.89%		No	8.56%		No
Avg. of Mr. Murray Proxy Companies since 2012/2014	7.93%		No	8.61%		No
Kroll Risk-Free Rate & Equity Risk Premium						
Avg. of Total Mr. Murray Proxy Group	8.29%	8.66% - 10.66%	No			
Avg. Excluding Companies w/ 10% Unreg. or Intl. Operation	8.06%		No			
Avg. of Mr. Murray Proxy Companies since 2012/2014	8.10%		No			

Q: As a practical matter, are the results of Mr. Murray's multi-stage DCF or CAPM analyses reasonable?

A: No. Given the results of Mr. Murray's cost of equity analyses, it is not surprising that he does not rely on them for purposes of developing his recommended ROE in this proceeding. The results of Mr. Murray's multi-stage DCF for his electric utility proxy group are *below the low end of the range* of comparable authorized ROEs that have been

approved for vertically-integrated electric utilities since at least 1980. Likewise, the results of Mr. Murray's CAPM analyses are at the low end or below the low end of the range of comparable authorized ROEs that have been approved for vertically-integrated electric utilities in decades. I recognize that Mr. Murray contends that the results of his cost of equity analyses are reasonable based on his claim that utility commissions have consistently authorized ROEs well in excess of the cost of equity. However, as I have discussed, his position is unsupported and unfounded given the mandate of regulatory commissions to authorize just and reasonable rates and that his position has been specifically rejected previously.

A. Proxy Group

Q: What proxy group does Mr. Murray utilize to estimate the cost of equity?

A: Mr. Murray relies on a broad proxy group of utilities classified as "regulated and "mostly regulated" as compiled by Edison Electric Institute ("EEI"), and develops cost of equity estimates that consider the entire proxy group, as well as two subsets of this broad proxy group: (1) companies have less than 10 percent of their operations exposed to non-regulated or international markets and (2) companies that Mr. Murray has consistently followed in electric rate cases since 2012/2014.[65] In addition, instead of using a proxy group, Mr. Murray also separately estimates the cost of equity for the Company based on its parent, Evergy.[66]

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[65] Murray Direct Testimony, at 22.

[66] *Id*., at 19-21.

Q: Do you agree with the proxy group on which Mr. Murray relies for his cost of equity analyses?

A: No. Mr. Murray applies no screening criteria to his first proxy group in which he relies on all of the companies compiled by EEI, and provides no support for the very limited screening criteria that he applies in establishing his other two proxy groups (*i.e.*, companies with more than 10 percent of their operations as unregulated or international; and companies that Mr. Murray has used for the past decade). The proxy groups on which Mr. Murray relies are overly broad and include numerous companies that are not comparable to Evergy West (*e.g.*, those that are only electric transmission and distribution-only companies). However, given that Mr. Murray's ROE recommendation is not based on the results of any of his cost of equity analyses, there is no need to discuss my disagreements with his proxy group further and I have limited my response to focus on those issues that cause the unreasonably low cost of equity results of Mr. Murray's multi-stage DCF and CAPM analyses.

B. Multi-Stage DCF Model

Q: What is the DCF approach that Mr. Murray utilizes to estimate the cost of equity?

A: Mr. Murray utilizes a multi-stage DCF analysis that includes three stages, the first two of which have defined time horizons, while the third assumes cash flows in perpetuity. In the first stage, Mr. Murray calculates the projected dividends for each proxy company based on analysts' projected EPS growth rates through 2028 multiplied by their projected dividend payout ratios based on analysts' estimated annual DPS and EPS. For the second stage, which is 2029 through 2038, Mr. Murray relies on a linear transition from analysts'

projected 5-year EPS growth rate for each proxy company as reported by S&P to his assumed long-term growth rate of 3.00 percent in 2038. Mr. Murray also conducts scenarios of his multi-stage DCF analysis by using long-term growth rates of 2.5 percent and 3.5 percent as well.[67]

For the electric proxy groups, Mr. Murray's multi-stage DCF produces cost of equity estimates ranging from 8.45 percent to 8.63 percent, depending on the proxy group considered, and when estimating the cost of equity using Evergy instead of a proxy group, his multi-stage DCF analysis produces a cost of equity estimate of 9.07 percent to 9.15 percent.[68]

Q: Do you agree with Mr. Murray's specification of his multi-stage DCF model?

A: No. I disagree with multiple aspects of Mr. Murray's multi-stage DCF model; however, as noted previously, he does not rely on the results of his DCF model for purposes of his ROE recommendation in this proceeding.

Q: Regardless of whether Mr. Murray relies on the results of his multi-stage DCF for purposes of his ROE recommendation, does Mr. Murray's multi-stage DCF analysis indicate that the cost of equity has increased for electric utilities?

A: Yes. While I disagree with the specification of Mr. Murray's multi-stage DCF model, the results of his multi-stage DCF analysis in the current proceeding using the electric proxy group indicate a significant increase in the cost of equity since the Company's last rate proceeding. Specifically, as shown in Figure 8, the results of Mr. Murray's multi-stage

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[67] Murray Direct Testimony, at 19-20.

[68] *Id*., at Schedule DM-D-2-1 and DM-D-2-2.

DCF analysis are approximately 130 to 145 basis points greater than the results of his equivalent multi-stage DCF analyses in the Company's last rate proceeding.[69]

Figure 8: Results of Mr. Murray's Multi-Stage DCF Analyses in the Current Proceeding as Compared to Evergy West's Last Rate Proceeding

	Cost of Equity		
Proxy Group Scenario	**Current Case**	**Prior Case**	***Increase***
Avg. of Total Mr. Murray Proxy Group	8.63%	7.34%	***1.29%***
Avg. Excluding Companies w/ 10% Unreg. or Intl. Operations	8.63%	7.23%	***1.40%***
Avg. of Mr. Murray Proxy Companies since 2012/2014	8.45%	7.00%	***1.45%***

Mr. Murray also notes that the results of his multi-stage DCF analyses are approximately 100 basis points higher than the results of his multi-stage analyses in the Ameren Missouri rate case in the 2014/2015 period.[70]

Q: Does a multi-stage DCF such as Mr. Murray has conducted increase the accuracy of the DCF results?

A: No. First, the utility industry is considered a mature industry due to its regulated status and relatively stable demand. Thus, financial projections such as analysts' projected EPS growth rates are also likely to be relatively stable over the long term. In fact, as Mr. Murray acknowledges, the utility industry is characterized by slow, but steady growth in earnings.[71] Thus, the relative stability of the financial forecasts for utilities as recognized by Mr.

[69] Missouri Public Service Commission, Case Nos. ER-2022-0129 and ER-2022-0130, Direct Testimony of David Murray, June 8, 2022, at Schedule DM-D-4, page 1. The results of Mr. Murray's multi-stage DCF analysis ranged from 7.00 percent to 7.34 percent, depending on which of his proxy group scenarios is utilized.

[70] Mr. Murray notes that he changed the approach of his multi-stage DCF analysis around 2019, and when using his old multi-stage method in the current case, the results are approximately 80 basis points higher than in the 2014/2015 period (Murray Direct Testimony, at 23).

[71] Murray Direct Testimony, at 9.

Murray supports the use of the constant growth DCF model to estimate the cost of equity for a mature industry like utilities.

Second, since the cost of equity is not observable, it is not possible to conclude that the results of a multi-stage DCF model are more accurate than the results of the constant growth DCF model. The multi-stage DCF model introduces additional assumptions and potential analyst bias. Specifically, the multi-stage DCF model presented by Mr. Murray in this proceeding reflects the following additional assumptions that require subjective judgment:

- Specification of the Model: In this case, Mr. Murray presents a multi-stage DCF model with three stages of growth; however, there are other forms of multi-stage DCF models.
- Selection of the Growth Rates: Mr. Murray's multi-stage DCF model requires selecting both short-term and long-term growth rates.
- Duration of Each Stage of the Multi-Stage DCF Model: For his multi-stage DCF model, Mr. Murray assumes first stage growth from years 1-5 and second stage growth from years 6-15, and then perpetual growth thereafter.

Given the number of additional subjective assumptions required, it is reasonable to conclude that a multi-stage DCF analysis creates greater opportunity for an analyst to influence the results of the DCF model.

Q: Do you agree with the projected long-term growth rate that Mr. Murray uses in his DCF analysis?

A: No, there are multiple problems with Mr. Murray's long-term growth rate that he relies on in his multi-stage DCF analysis. Most importantly, the methodology Mr. Murray uses to estimate the long-term growth rate is not supported by the publisher of the data he relies on for purposes of his CAPM analysis. In addition, it is significantly lower than the long-

term growth rate relied upon by Dr. Won and has not been shown to be reasonably representative of the growth expected to occur in the electric utility industry over the longer-term.

First, *Morningstar*, the former publisher of the SBBI Yearbook that is now owned by *Kroll*, which is a data source relied on by Mr. Murray in his CAPM analysis recommends estimating the projected long-term nominal GDP growth rate by first calculating the historical growth in real GDP and then adding the expected inflation rate:

> Growth in real GDP (with only a few exceptions) has been reasonably stable over time; therefore, its historical performance is a good estimate of expected long-term future performance. ***By combining the inflation estimate with the real growth rate estimate, a long-term estimate of nominal growth is formed***.[72]

Furthermore, regarding the use of long-term historical data, *Morningstar* notes:

> The 87-year period starting with 1926 is representative of what can happen: it includes high and low returns, volatile and quiet markets, war and peace, inflation and deflation, and prosperity and depression. Restricting attention to a shorter historical period underestimates the amount of change that could occur in a long future period. Finally, because historical event-types (not specific events) tend to repeat themselves, long-run capital market return studies can reveal a great deal about the future. Investors probably expect "unusual" events to occur from time to time, and their return expectations reflect this.[73]

Second, Mr. Murray's long-term growth rate is consistent with Dr. Won's long-term growth rate. While I do not support Dr. Won's long-term growth rate, as noted, he relies on a long-term growth rate of 4.10 percent in his two-step DCF analysis, which is

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[72] Ibbotson and Associates, Stocks, Bonds, Bills and Inflation, 1926-2012, 2013 Valuation Yearbook, at 52; emphasis added.

[73] *Id.* at 59.

materially greater than the 3.0 percent long-term growth rate that Mr. Murray suggests is appropriate.

Lastly, Mr. Murray has not demonstrated that his long-term growth rate reasonably represent the growth that is expected to occur in the electric utility industry over the next 30 years, particularly given the significant capital spending requirements to (i) transition to cleaner generation sources, which will include substantial generation and transmission investment; (ii) effectuate grid modernization investments for improved reliability and energy efficiency; and (iii) facilitate the electrification of the economy to switch away from fossil fuels.

Q: What is the estimate of a long-term growth rate consistent with the methodology outlined by *Morningstar*?

A: As shown in Exhibit AEB-R7, when longer-term GDP growth is estimated consistent with the methodology outlined by *Morningstar*, the long-term nominal GDP growth rate is 5.49 percent. Specifically, the long-term nominal GDP growth rate is based on the real GDP growth rate of 3.17 percent from 1929 through 2023, and a projected inflation rate of 2.25 percent. The projected rate of inflation is based on three measures: (1) the average long-term projected growth rate in the Consumer Price Index ("CPI") of 2.20 percent, as reported by *Blue Chip Financial Forecasts*;[74] (2) the compound annual growth rate of the CPI for all urban consumers for 2035-2050 of 2.26 percent as projected by the Energy Information Administration ("EIA") in its Annual Energy Outlook 2024; and (3) the

[74] *Blue Chip Financial Forecasts*, Vol. 43, No. 6, May 31, 2023, at 14.

compound annual growth rate of the GDP chain-type price index for 2035-2050 of 2.30 percent, also reported by the EIA in the Annual Energy Outlook 2024.[75]

C. CAPM Analysis

Q: How does Mr. Murray conduct his CAPM analysis?

A: Mr. Murray develops three separate specifications of the CAPM analysis. The first CAPM analysis uses a risk-free rate based on the average monthly yield on the 20-year Treasury bond for March 2024 through May 2024, four-year raw betas for Evergy West and the electric utility proxy group as published by S&P that Mr. Murray adjusts using the Blume adjustment, and a market risk premium of 5.00 percent and 6.00 percent, which he contends is consistent with the investment community's consensus. The second CAPM analysis is the same as the first, except that it uses a risk-free rate based on the average monthly yield on the 30-year Treasury bond for March 2024 through May 2024. Mr. Murray's third CAPM analysis relies on a risk-free rate and market risk premium published by *Kroll*, and the same betas as in his first two CAPM scenarios.[76] The results of Mr. Murray's CAPM analyses range from 7.80 percent to 8.94 percent, and ultimately, he states that his CAPM analyses indicate a cost of equity in the 8.00 percent to 8.50 percent range.[77]

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[75] Energy Information Administration, Annual Energy Outlook 2023 at Table 20, March 16, 2023.

[76] *Kroll* states that the risk-free rate should be the spot yield on the 20-year Treasury bond since the spot yield currently exceeds *Kroll*'s normalized risk-free rate.

[77] Murray Direct Testimony, at 25-28 and Schedule DM-D-5.

Q: Do you agree with the CAPM analyses conducted by Mr. Murray?

A: No. Just as with his DCF analysis, I disagree with multiple aspects of Mr. Murray's CAPM analyses as well; however, it is important to recognize that he does not rely on the results of his CAPM model for purposes of his ROE recommendation in this proceeding.

Q: Does Mr. Murray's assumed market risk premia suffer from similar issues that you have identified in your response to Dr. Won?

A: Yes. Mr. Murray states that his estimated risk premia range of 5.0 percent and 6.0 percent is based on the range of historical arithmetic and geometric equity risk premia, as well as *Kroll*'s current recommended market risk premium.[78] However, the historical data referenced by Mr. Murray is the same data relied on by Dr. Won, and Mr. Murray's reliance on that information also suffers from the same issues that I discussed in my response to Dr. Won (*i.e.*, historical data used to estimate a forward-looking market return and market risk premium; incorrectly mismatching a historically-derived market risk premium with a current risk-free rate; incorrectly calculating the market risk premia based on the total return on long-term government bonds instead of the income-only return; and relying on historical geometric averages of the market return and market risk premia to estimate the cost of equity).

[78] *Id.*, at 25.

Q: Does the projected market risk premium on which Mr. Murray relies from *Kroll* suffer from the same failure to reflect the inverse relationship between interest rates and the market risk premium that you discussed in your response to Dr. Won?

A: Yes. The projected market risk premia that Mr. Murray relies on from *Kroll* in his third CAPM scenario also fails to reflect the inverse relationship between interest rates and the market risk premium. For example, as noted previously in my response to Dr. Won, the historical arithmetic mean market risk premium from 1926-2023 is 7.17 percent.[79] As also noted previously, the historical income-only return on government bonds used to calculate the historical market risk premium over that same period is 4.87 percent; however, Mr. Murray's assumed risk-free rate in this scenario is 4.71 percent.[80] Because current interest rates on long-term government bonds are *less than* the historical long-term average interest rate for those same bonds, the inverse relationship between interest rates and the market risk premium indicates that the projected market risk premium should be *greater than*, not less than, the long-term historical average of 7.17 percent. However, the projected market risk premium assumed by Mr. Murray of 5.00 percent in this CAPM scenario is materially *less than* the historical average market risk premium of 7.17 percent, instead of greater than the historical average as it should be. As a result, Mr. Murray has severely understated the market risk premium in his CAPM analyses that rely on a projected market risk premium, which in turn, has caused the result of those CAPM analyses to range from 7.97 percent to

[79] *Kroll*, Cost of Capital Navigator.

[80] Murray Direct Testimony, Schedule DM-D-5, page 3.

8.29 percent,[81] or *substantially lower than any ROE authorized for a vertically-integrated electric utility in at least 40 years*.

Q: Is there further evidence that Mr. Murray's assumed 6.00 percent market risk premium is unreasonable?

A: Yes. In his first two CAPM analyses where he relies on a market risk premium of 6.00 percent as an upper bound, Mr. Murray relies on risk-free rates of 4.65 percent and 4.55 percent, respectively,[82] which implies an overall market return of 10.65 percent and 10.55 percent, respectively. However, in his workpapers, Mr. Murray notes that the long-term arithmetic historical market return is 12.16 percent, or significantly greater than the implied market returns on which the upper bound of his risk premium is based, as well as significantly greater than the shorter-term projected market return that he references as support for his claim that his market risk premium range of 5.00 percent to 6.00 percent may actually be "excessive" for purposes of the CAPM.[83] Consequently, the implied market returns of the market risk premia relied on by Mr. Murray are well below, and cannot be reconciled with, the long-term historical returns for the market.

D. "Rule of Thumb" BYRP Analysis

Q: Please summarize Mr. Murray's BYRP analysis.

A: Mr. Murray conducts a BYRP analysis that he characterizes a simple "rule of thumb" methodology as a check on the reasonableness of his DCF and CAPM results. Specifically,

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[81] *Id*.

[82] *Id*., pages 1-2.

[83] *Id*., at 25.

Mr. Murray's "rule of thumb" BYRP analysis is a form of a risk premium methodology that simply adds an estimated equity risk premium to an average utility bond yield in order to estimate the cost of equity. For his "rule of thumb" analysis, he states that the yield to maturity on Evergy West's recent long-term bonds ranges from 5.3 percent to 5.7 percent, to which he then suggests adding a "rule of thumb" risk premium of 3.00 percent to 4.00 percent, although he contends that the risk premium should be no higher than 3.00 percent since utility stocks are viewed by the investment community as bond substitutes. From this analysis, Mr. Murray concludes that his "rule of thumb" BYRP analysis supports a cost of equity range of 8.30 percent to 8.70 percent.[84]

Q: Is this "rule of thumb" approach employed by Mr. Murray reasonable?

A: No. Similar to my response regarding Dr. Won's and Mr. Murray's historical market risk premia, Mr. Murray's specification of a simplistic BYRP approach also relies on historical "rule of thumb" estimates of the market risk premium and fails to account for the effect on the market risk premium of current market conditions. As previously discussed, both academic literature and market evidence indicate that the equity risk premium is inversely related to the level of interest rates (*i.e.*, as interest rates increase, the equity risk premium decreases, and vice versa).[85] In fact, Dr. Won also demonstrates this inverse relationship regarding his BYRP analysis in Figure 7 of his testimony. Therefore, given that current interest rates on long-term government bonds are below the historical average interest rate of those same bonds, the market risk premium should be *greater than* the long-term

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[84] *Id*., at 28.

[85] *See e.g*., S. Keith Berry, "Interest Rate Risk and Utility Risk Premia during 1982-93," *Managerial and Decision Economics*, Vol. 19, No. 2, March, 1998. *See also*, Robert S. Harris, "Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return," *Financial Management*, Spring 1986, at 66.

historical average market risk premium – which is not the case for Mr. Murray's simplistic BYRP analysis.

Furthermore, Mr. Murray's "rule of thumb" does not provide any meaningful insight into the cost of equity for the Company in this proceeding given that multiple "rules of thumb" that have been offered in testimony in prior cases before the Commission. For example, in the Company's last rate proceeding, Dr. Won testified that the "rule of thumb" risk premium ranged from 3.50 percent to 5.50 percent.[86] In addition, Dr. Won has previously also testified that the range of the "rule of thumb" market risk premium was 4.00 percent to 6.00 percent.[87] Given Mr. Murray's position that the yield to maturity on Evergy West's recent long-term bonds ranges from 5.3 percent to 5.7 percent, if this prior "rule of thumb" range of 4.00 percent to 6.00 percent were utilized, it would suggest that Mr. Murray's estimated cost of equity should be in the range of 9.30 percent to 11.70 percent, or an average of 10.50 percent – *which is the Company's requested ROE in this proceeding*.

Lastly, further evidence that Mr. Murray's overly simplistic "rule of thumb" provides no meaningful insight into the cost of equity for the Company in this proceeding is the material differences in the results of Mr. Murray's "rule of thumb" over time. Specifically, in Ameren Missouri's 2021 rate proceeding, Mr. Murray testified that his "rule of thumb" analysis suggested a cost of equity of 5.75 percent, and he recommended an ROE of 9.00 percent. However, in this proceeding, Mr. Murray claims that this "rule

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[86] Missouri Public Service Commission, Case Nos. ER-2022-0129 and ER-2022-0130, Direct Testimony of Seoung Joun Won, June 8, 2022, at 29.

[87] Missouri Public Service Commission, Case No. WR-2020-0344, Staff Cost of Service Report, November 2020, at 27.

of thumb" analysis indicates a cost of equity of 8.30 percent to 8.70 percent, while he is recommending an ROE of 9.50 percent. In other words, Mr. Murray's "rule of thumb" reasonableness check is approximately 250 to 300 basis points higher in the current proceeding than he indicated in Ameren Missouri's 2021 rate proceeding, yet his ROE recommendation is just 50 basis points higher.

For all of these reasons, Mr. Murray's "rule of thumb" analysis is not credible, and its result does not support his own ROE recommendation in this proceeding.

VII. BUSINESS AND REGULATORY RISKS

Q: What have Dr. Won, Mr. Murray, and Ms. Schaben stated regarding the Company's business and regulatory risk?

A: Dr. Won states that Evergy West's credit ratings are comparable to those of the average electric utilities in the U.S., and thus Evergy West is perceived to have similar credit risks as the average electric utilities in the U.S.[88] Dr. Won contends that this comparison of credit ratings suggests that Evergy West's authorized ROE should fall within a reasonable range of the average authorized ROE of electric utilities in the U.S.[89]

Mr. Murray contends that, as a result of Missouri's electric utilities' ability to utilize plant in service accounting ("PISA") as well as recover energy transition costs and qualified extraordinary costs through securitization, both of which Evergy West has elected to do, the Company's business risk is reduced. Mr. Murray states that Evergy West's

[88] Won Direct Testimony, at 27.

[89] *Id*.

reduced business risk allows for greater debt capacity, but instead of Evergy allowing Evergy West to use more debt in its capital structure, Evergy is issuing more debt at the holding company level.[90]

Similar to Mr. Murray, Ms. Schaben states that, since the utilization of cost trackers reduce business risk, the reduction in cost recovery risk and regulatory lag should be factored into the ROE established for the Company in this proceeding.[91]

Q: Do you agree with these witnesses' assessments of the relative risk of the Company?

A: No. First, credit ratings are assessments of the likelihood a company could default on its debt, whereas the topic of the current proceeding is to determine the riskiness and cost of the Company's equity. Second, while credit rating agencies consider the business risks of an individual company, they do not conduct a comparative analysis of business risks relative to the proxy group when establishing its debt credit rating. The development of the investor-required ROE is based on a proxy group of risk-comparable companies. In developing the proxy group, it is essential to balance the relative risk of the companies included in the proxy group with the overall size of the group. Therefore, it is always the case that the proxy companies do not have exactly the same risk profile as the subject company. As such, it is reasonable to review the relative risks of the proxy group companies and the subject company to determine how the subject company's risk profile compares with the group to determine the appropriate placement of the ROE within the

[90] Murray Direct Testimony, at 3.

[91] Schaben Direct Testimony, at 3.

range of results established using the proxy group companies, which neither Dr. Won, Mr. Murray, nor Ms. Schaben have done.

All else equal, I agree that regulatory mechanisms that reduce a utility's regulatory lag in cost recovery help to mitigate risk. However, as just discussed, it is not Evergy West's risk with versus without certain cost recovery mechanisms that is relevant, but rather its risk *relative* to the proxy group in setting the ROE. Mr. Murray and Ms. Schaben reference certain regulatory mechanisms that Evergy West has for cost recovery, yet neither evaluates Evergy West's cost recovery risk relative to any of Mr. Murray's proxy groups.

As discussed in my direct testimony, I did evaluate the Company's business and regulatory risk relative to the operating utilities of my proxy group and, based on that analysis, demonstrated that Evergy West's business and regulatory risk is generally consistent with the operating utilities of the proxy group, albeit moderately higher as compared to the operating subsidiaries of the proxy group companies given the lack of full fuel cost recovery, and the limitations on capital cost recovery associated with PISA. In addition, as noted, both the RRA and S&P rankings for Missouri also indicate a greater risk than the average for the proxy group.

VIII. CAPITAL STRUCTURE

Q: What have Dr. Won and Mr. Murray proposed for the Company's capital structure in this proceeding?

A: Dr. Won states that Evergy West's standalone capital structure is more suitable for ratemaking purposes than Evergy's capital structure given that Evergy West has a stand-

alone capital structure that supports its individual credit rating and that Evergy's assets do not secure Evergy West's debt.[92] Dr. Won states that Staff's recommended capital structure in the Company's last rate proceeding was 50 percent equity and 50 percent long-term debt, and that there have been no discernible changes in either Evergy West's or Evergy's capital structure policies since Staff's prior recommendation.[93] In addition, Dr. Won states that Evergy West aims to maintain a capital structure that is slightly higher than 50 percent equity.[94] Accordingly, Dr. Won recommends a capital structure of 50 percent equity and 50 percent long-term debt which is subject to change based on updated data at the time to true-up.[95]

In contrast, Mr. Murray recommends a capital structure that consists of 47.2 percent equity and 52.8 percent long-term debt, which he states reflects Evergy's consolidated equity ratio of 44.7 percent as of December 31, 2023 plus 2.50 percent.[96] Mr. Murray states that the 2.50 percent is based on the condition in the merger that formed Evergy ("Merger Proceeding") that incentivized Evergy to limit the difference in its consolidated equity ratio relative to the equity ratios of its Kansas subsidiaries to no more than 2.50 percent.[97] While Mr. Murray acknowledges that the Commission has shown a preference for using a subsidiary capital structure if that subsidiary issues its own long-term debt, he nonetheless supports his recommendation on the basis that he is not confident that the utility subsidiaries' capital structures are a consequence of arms-length transactions

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92 Won Direct Testimony, at 28-29.

93 *Id*., at 28-29.

94 *Id*., at 29.

95 *Id*., at 31.

96 Murray Direct Testimony, at 31.

97 *Id*.

intended to optimize the subsidiary capital structure in order to minimize costs charged to ratepayers and to preserve the subsidiaries' credit capacity by not letting the parent take borrowing capacity and lower costs of capital from its subsidiaries.[98]

Q: Is Dr. Won's equity ratio recommendation reasonably supported?

A: No. While I do not believe that Dr. Won's proposed equity ratio is reasonable, his testimony actually supports the Company's proposed capital structure. Specifically, Dr. Won concludes that the capital structure of the KCP&L Greater Missouri Operations Company ("GMO") business unit of Evergy West is the appropriate capital structure to be used for ratemaking purposes, and that the average actual equity ratio of the GMO portion of Evergy West has been 54.99 percent since 2020.[99] Therefore, these conclusions support the Company's proposed equity ratio of 52.04 percent. Moreover, given that the Company's proposed equity ratio is lower than the GMO's average actual equity ratio since 2020 noted by Dr. Won, the Company's proposal is also consistent with Dr. Won's contention that Evergy aims to maintain a capital structure slightly higher than 50 percent equity.

Q: Is the use of a consolidated capital structure as suggested by Mr. Murray appropriate to set the Company's capital structure for ratemaking purposes in this proceeding?

A: No. In addition to the fact that Mr. Murray's position is counter to Dr. Won's conclusion that a stand-alone capital structure for ratemaking purposes is appropriate for the Company

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98 *Id*., at 43.

99 Won Direct Testimony, at 30-31.

in this proceeding, the Company's proposed capital structure is consistent with electric industry norms and is reasonable for several reasons.

First, Evergy West's proposed capital structure is consistent with the way in which the Company is financed as opposed to Dr. Won's proposed "target" capital structure or Mr. Murray's proposed consolidated parent company capital structure.

Second, as discussed in my direct testimony, the Company's proposed equity ratio is consistent with the average actual equity ratios of the utility operating companies in the proxy group. Specifically, as shown in Schedule AEB-12, the Company's proposed equity ratio of 52.04 percent is well within the range of equity ratios of the proxy group, and in fact, is slightly below the average.

Third, the Company's proposed equity ratio is also consistent with the capital structures that have recently been authorized for vertically-integrated electric utilities. As shown in Figure 9, Evergy West's proposed equity ratio is well within the range of authorized equity ratios authorized for companies of comparable risk, and consistent with the average and median equity ratios since 2021.[100] In contrast, Mr. Murray's proposed

[100] Note, through June 30, 2024, there are only five observations in the data set. For context, there are 29 observations in 2023 and 19 observations in 2022.

equity ratio for the Company is lower than approximately 88 percent of the authorized equity ratios over this time period.

Figure 9: Authorized Equity Ratios of Vertically-Integrated Electric Utilities[101]

Year	Avg.	Median	Minimum	Maximum
2021	51.12%	51.92%	43.25%	55.00%
2022	52.35%	52.00%	48.90%	58.22%
2023	52.41%	52.25%	48.02%	60.70%
2024	49.54%	51.21%	41.25%	53.72%

Q: Has Mr. Murray provided any evidence that Evergy West's proposed capital structure is not a consequence of an arms-length transaction?

A: No. Mr. Murray simply speculates that he is not "confident" that Evergy West's proposed capital structure is not a consequence of arms-length transactions.

Q: What does Mr. Murray state regarding Evergy's capital structure?

A: Mr. Murray states that ** [redacted] ** [102] Mr. Murray also states that Evergy previously had an incentive to limit the amount of holding company debt until recently since the condition related to the Earnings Review and Sharing Plan in Kansas that was specified in the settlement approved in the Merger Proceeding is no longer applicable.[103]

[101] S&P Capital IQ Pro.

[102] Murray Direct Testimony, at 36.

[103] *Id*., at 37.

CONFIDENTIAL

Q: Is Mr. Murray's capital structure proposal consistent with financial theory?

A: No. ** [redacted] **

Q: What is Mr. Murray's proposal with respect to the cost recovery from Winter Storm Uri?

A: Mr. Murray estimates that ratepayers were overcharged by approximately $20 million for carrying costs on the embedded cost of long-term debt as compared to the average cost of short-term debt over the period that Evergy West carried Storm Uri costs. Mr. Murray states that, while he is not proposing that the money be clawed back for ratepayers since doing so would constitute retroactive ratemaking, the Commission should consider this issue in determining a fair and reasonable ratemaking capital structure for Evergy West in this proceeding.[104]

[104] Murray Direct Testimony, at 40.

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Q: Is Mr. Murray's recommendation appropriate that any overcollection of prior carrying costs be considered in determining the ratemaking capital structure for Evergy West in this proceeding?

A: No. The assertion raised by Mr. Murray was previously decided by the Commission in its Amended Report and Order on November 17, 2022 filed in No. EF-2022-0155, which approved the Company's petition to securitize the costs of Winter Storm Uri, and the same assertion was denied by the Missouri Court of Appeals in its decision on the matter issued on September 26, 2023.[105] While not specifically stated, the implication of Mr. Murray's recommendation is that the Commission should lower the Company's equity ratio based on a consideration of such an overcollection. Although this is not a specific "clawback," it is a distinction without a difference, as Mr. Murray's proposal is simply another form of retroactive ratemaking – which he acknowledges is not just and reasonable. Further, as discussed previously, the Commission and the Court of Appeals have heard Mr. Murray's views on this issue and have denied his proposals. Therefore, it would be reasonable that the Commission give no weight to Mr. Murray's recommendation on this issue in the current proceeding.

Q: You noted previously that Mr. Murray claims Evergy West's business risk is reduced and thus allows for greater debt capacity.[106] Do you agree with Mr. Murray's conclusion?

A: No. As discussed previously, Mr. Murray has no basis for determining that Evergy West's business risk is reduced since he has not conducted any comparative analysis of the risk of Evergy West to any of his proxy groups. Further, Mr. Murray fails to acknowledge that in May 2024, Moody's revised its outlook on Evergy West to negative from stable because

of a deterioration in Evergy West's credit metrics that are expected to be sustained at levels that are weak for its Baa2 rating.[107] Moody's also noted that the expectation to continue to add debt to finance its ongoing elevated capital program will result in "sustained pressure on its credit metrics."[108] Based on this recent review from Moody's and the credit rating downgrade from S&P in November 2023[109] that was discussed in my Direct Testimony, Mr. Murray cannot reasonably conclude that Evergy West should have a capital structure that is more highly leveraged.

Q: Does this conclude your rebuttal testimony?

A: Yes, it does.

[107] Moody's Ratings, Rating Action: Moody's Ratings affirms ratings of Evergy Missouri West, revises outlook to negative, May 3, 2024.

[108] *Id*.

[109] S&P Global Ratings, Research Update: Evergy Inc. and Subsidiaries Downgraded by One Notch on Weakening Financials; Outlook Revised to Stable, November 29, 2023.

COST OF EQUITY ANALYSES
SUMMARY OF RESULTS

Constant Growth DCF

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Mean Results:			
30-Day Avg. Stock Price	9.46%	10.54%	11.35%
90-Day Avg. Stock Price	9.60%	10.67%	11.49%
180-Day Avg. Stock Price	9.69%	10.76%	11.58%
Average	9.59%	10.66%	11.48%
Median Results:			
30-Day Avg. Stock Price	9.79%	10.40%	11.11%
90-Day Avg. Stock Price	9.97%	10.55%	11.24%
180-Day Avg. Stock Price	10.02%	10.74%	11.31%
Average	9.93%	10.57%	11.22%

CAPM / ECAPM / Bond Yield Risk Premium

	30-Year Treasury Bond Yield		
	Current 30-Day Avg	Near-Term Projected	Longer-Term Projected
CAPM:			
Current *Value Line* Beta	12.06%	12.04%	12.04%
Current Bloomberg Beta	10.90%	10.86%	10.86%
Long-term Avg. *Value Line* Beta	10.60%	10.55%	10.55%
ECAPM:			
Current *Value Line* Beta	12.21%	12.20%	12.20%
Current Bloomberg Beta	11.34%	11.31%	11.31%
Long-term Avg. *Value Line* Beta	11.11%	11.08%	11.07%
Bond Yield Risk Premium	10.62%	10.52%	10.51%

30-DAY CONSTANT GROWTH DCF

Company	Ticker	[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line Earnings Growth	[6] Yahoo! Finance Earnings Growth	[7] Zacks Earnings Growth	[8] Average Growth Rate	[9] Low ROE	[10] Mean ROE	[11] High ROE
Alliant Energy Corporation	LNT	$1.92	$50.66	3.79%	3.91%	6.00%	6.30%	6.10%	6.13%	9.90%	10.04%	10.21%
Ameren Corporation	AEE	$2.68	$71.34	3.76%	3.87%	6.50%	5.50%	6.20%	6.07%	9.36%	9.94%	10.38%
American Electric Power Company, Inc.	AEP	$3.52	$89.01	3.95%	4.08%	6.50%	6.36%	6.10%	6.32%	10.18%	10.40%	10.58%
Avista Corporation	AVA	$1.90	$35.62	5.33%	5.50%	6.00%	6.20%	n/a	6.10%	11.49%	11.60%	11.70%
CMS Energy Corporation	CMS	$2.06	$60.92	3.38%	3.50%	5.00%	7.60%	7.60%	6.73%	8.47%	10.23%	11.11%
Duke Energy Corporation	DUK	$4.10	$101.95	4.02%	4.14%	5.00%	6.66%	6.10%	5.92%	9.12%	10.06%	10.82%
Entergy Corporation	ETR	$4.52	$108.95	4.15%	4.25%	0.50%	6.80%	7.30%	4.87%	4.66%	9.12%	11.60%
IDACORP, Inc.	IDA	$3.32	$93.69	3.54%	3.63%	5.00%	4.40%	n/a	4.70%	8.02%	8.33%	8.63%
NextEra Energy, Inc.	NEE	$2.06	$74.85	2.75%	2.87%	8.00%	8.20%	8.60%	8.27%	10.86%	11.13%	11.47%
NorthWestern Corporation	NWE	$2.60	$50.34	5.16%	5.27%	4.00%	4.50%	n/a	4.25%	9.27%	9.52%	9.78%
OGE Energy Corporation	OGE	$1.67	$35.77	4.68%	4.81%	6.50%	negative	5.00%	5.75%	9.79%	10.56%	11.33%
Pinnacle West Capital Corporation	PNW	$3.52	$76.61	4.59%	4.75%	4.50%	7.20%	8.20%	6.63%	9.20%	11.38%	12.98%
Portland General Electric Company	POR	$2.00	$43.02	4.65%	4.86%	6.00%	12.50%	n/a	9.25%	10.79%	14.11%	17.44%
Southern Company	SO	$2.88	$78.61	3.66%	3.79%	6.50%	7.30%	7.00%	6.93%	10.28%	10.72%	11.10%
Xcel Energy Inc.	XEL	$2.19	$54.15	4.04%	4.18%	7.00%	6.73%	6.40%	6.71%	10.57%	10.89%	11.19%
Mean				4.10%	4.23%	5.53%	6.88%	6.78%	6.31%	9.46%	10.54%	11.35%
Median				4.02%	4.14%	6.00%	6.70%	6.40%	6.13%	9.79%	10.40%	11.11%

Notes:
[1] Bloomberg Professional
[2] Bloomberg Professional, equals 30-day average as of June 30, 2024
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Value Line
[6] Yahoo! Finance
[7] Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

90-DAY CONSTANT GROWTH DCF

Company		[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line Earnings Growth	[6] Yahoo! Finance Earnings Growth	[7] Zacks Earnings Growth	[8] Average Growth Rate	[9] Low ROE	[10] Mean ROE	[11] High ROE
Alliant Energy Corporation	LNT	$1.92	$49.53	3.88%	4.00%	6.00%	6.30%	6.10%	6.13%	9.99%	10.13%	10.30%
Ameren Corporation	AEE	$2.68	$71.82	3.73%	3.84%	6.50%	5.50%	6.20%	6.07%	9.33%	9.91%	10.35%
American Electric Power Company, Inc.	AEP	$3.52	$85.75	4.11%	4.23%	6.50%	6.36%	6.10%	6.32%	10.33%	10.55%	10.74%
Avista Corporation	AVA	$1.90	$34.85	5.45%	5.62%	6.00%	6.20%	n/a	6.10%	11.61%	11.72%	11.82%
CMS Energy Corporation	CMS	$2.06	$59.65	3.45%	3.57%	5.00%	7.60%	7.60%	6.73%	8.54%	10.30%	11.18%
Duke Energy Corporation	DUK	$4.10	$97.53	4.20%	4.33%	5.00%	6.66%	6.10%	5.92%	9.31%	10.25%	11.00%
Entergy Corporation	ETR	$4.52	$105.61	4.28%	4.38%	0.50%	6.80%	7.30%	4.87%	4.79%	9.25%	11.74%
IDACORP, Inc.	IDA	$3.32	$92.22	3.60%	3.68%	5.00%	4.40%	n/a	4.70%	8.08%	8.38%	8.69%
NextEra Energy, Inc.	NEE	$2.06	$66.86	3.08%	3.21%	8.00%	8.20%	8.60%	8.27%	11.20%	11.47%	11.81%
NorthWestern Corporation	NWE	$2.60	$49.38	5.27%	5.38%	4.00%	4.50%	n/a	4.25%	9.37%	9.63%	9.88%
OGE Energy Corporation	OGE	$1.67	$34.52	4.85%	4.99%	6.50%	negative	5.00%	5.75%	9.97%	10.74%	11.50%
Pinnacle West Capital Corporation	PNW	$3.52	$73.66	4.78%	4.94%	4.50%	7.20%	8.20%	6.63%	9.39%	11.57%	13.17%
Portland General Electric Company	POR	$2.00	$41.88	4.78%	5.00%	6.00%	12.50%	n/a	9.25%	10.92%	14.25%	17.57%
Southern Company	SO	$2.88	$73.26	3.93%	4.07%	6.50%	7.30%	7.00%	6.93%	10.56%	11.00%	11.37%
Xcel Energy Inc.	XEL	$2.19	$53.46	4.10%	4.23%	7.00%	6.73%	6.40%	6.71%	10.63%	10.94%	11.24%
Mean				4.23%	4.36%	5.53%	6.88%	6.78%	6.31%	9.60%	10.67%	11.49%
Median				4.11%	4.23%	6.00%	6.70%	6.40%	6.13%	9.97%	10.55%	11.24%

Notes:
[1] Bloomberg Professional
[2] Bloomberg Professional, equals 90-day average as of June 30, 2024
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Value Line
[6] Yahoo! Finance
[7] Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

180-DAY CONSTANT GROWTH DCF

Company		[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line Earnings Growth	[6] Yahoo! Finance Earnings Growth	[7] Zacks Earnings Growth	[8] Average Growth Rate	[9] Low ROE	[10] Mean ROE	[11] High ROE
Alliant Energy Corporation	LNT	$1.92	$49.21	3.90%	4.02%	6.00%	6.30%	6.10%	6.13%	10.02%	10.15%	10.32%
Ameren Corporation	AEE	$2.68	$72.14	3.71%	3.83%	6.50%	5.50%	6.20%	6.07%	9.32%	9.89%	10.34%
American Electric Power Company, Inc.	AEP	$3.52	$81.37	4.33%	4.46%	6.50%	6.36%	6.10%	6.32%	10.56%	10.78%	10.97%
Avista Corporation	AVA	$1.90	$34.01	5.59%	5.76%	6.00%	6.20%	n/a	6.10%	11.75%	11.86%	11.96%
CMS Energy Corporation	CMS	$2.06	$57.67	3.57%	3.69%	5.00%	7.60%	7.60%	6.73%	8.66%	10.43%	11.31%
Duke Energy Corporation	DUK	$4.10	$94.20	4.35%	4.48%	5.00%	6.66%	6.10%	5.92%	9.46%	10.40%	11.16%
Entergy Corporation	ETR	$4.52	$101.22	4.47%	4.57%	0.50%	6.80%	7.30%	4.87%	4.98%	9.44%	11.93%
IDACORP, Inc.	IDA	$3.32	$93.06	3.57%	3.65%	5.00%	4.40%	n/a	4.70%	8.05%	8.35%	8.66%
NextEra Energy, Inc.	NEE	$2.06	$61.96	3.32%	3.46%	8.00%	8.20%	8.60%	8.27%	11.46%	11.73%	12.07%
NorthWestern Corporation	NWE	$2.60	$48.68	5.34%	5.45%	4.00%	4.50%	n/a	4.25%	9.45%	9.70%	9.96%
OGE Energy Corporation	OGE	$1.67	$34.06	4.91%	5.05%	6.50%	negative	5.00%	5.75%	10.03%	10.80%	11.57%
Pinnacle West Capital Corporation	PNW	$3.52	$72.08	4.88%	5.05%	4.50%	7.20%	8.20%	6.63%	9.49%	11.68%	13.28%
Portland General Electric Company	POR	$2.00	$41.10	4.87%	5.09%	6.00%	12.50%	n/a	9.25%	11.01%	14.34%	17.67%
Southern Company	SO	$2.88	$70.45	4.09%	4.23%	6.50%	7.30%	7.00%	6.93%	10.72%	11.16%	11.54%
Xcel Energy Inc.	XEL	$2.19	$56.13	3.90%	4.03%	7.00%	6.73%	6.40%	6.71%	10.43%	10.74%	11.04%
Mean				4.32%	4.46%	5.53%	6.88%	6.78%	6.31%	9.69%	10.76%	11.58%
Median				4.33%	4.46%	6.00%	6.70%	6.40%	6.13%	10.02%	10.74%	11.31%

Notes:

[1] Bloomberg Professional
[2] Bloomberg Professional, equals 180-day average as of June 30, 2024
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Value Line
[6] Yahoo! Finance
[7] Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & VL BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Current 30-day average of 30-year U.S. Treasury bond yield	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm − Rf)	ROE (K)	ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.50%	0.90	12.65%	8.15%	11.84%	12.04%
Ameren Corporation	AEE	4.50%	0.90	12.65%	8.15%	11.84%	12.04%
American Electric Power Company, Inc.	AEP	4.50%	0.85	12.65%	8.15%	11.43%	11.74%
Avista Corporation	AVA	4.50%	0.95	12.65%	8.15%	12.25%	12.35%
CMS Energy Corporation	CMS	4.50%	0.85	12.65%	8.15%	11.43%	11.74%
Duke Energy Corporation	DUK	4.50%	0.90	12.65%	8.15%	11.84%	12.04%
Entergy Corporation	ETR	4.50%	1.00	12.65%	8.15%	12.65%	12.65%
IDACORP, Inc.	IDA	4.50%	0.85	12.65%	8.15%	11.43%	11.74%
NextEra Energy, Inc.	NEE	4.50%	1.05	12.65%	8.15%	13.06%	12.96%
NorthWestern Corporation	NWE	4.50%	0.95	12.65%	8.15%	12.25%	12.35%
OGE Energy Corporation	OGE	4.50%	1.05	12.65%	8.15%	13.06%	12.96%
Pinnacle West Capital Corporation	PNW	4.50%	0.95	12.65%	8.15%	12.25%	12.35%
Portland General Electric Company	POR	4.50%	0.90	12.65%	8.15%	11.84%	12.04%
Southern Company	SO	4.50%	0.95	12.65%	8.15%	12.25%	12.35%
Xcel Energy Inc.	XEL	4.50%	0.85	12.65%	8.15%	11.43%	11.74%
Mean						12.06%	12.21%

Notes:
[1] Bloomberg Professional, as of June 30, 2024
[2] Value Line
[3] Schedule AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & VL BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Near-term projected 30-year U.S. Treasury bond yield (Q3 2024 - Q3 2025)	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm − Rf)	[5] ROE (K)	[6] ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.32%	0.90	12.65%	8.33%	11.82%	12.03%
Ameren Corporation	AEE	4.32%	0.90	12.65%	8.33%	11.82%	12.03%
American Electric Power Company, Inc.	AEP	4.32%	0.85	12.65%	8.33%	11.40%	11.72%
Avista Corporation	AVA	4.32%	0.95	12.65%	8.33%	12.24%	12.34%
CMS Energy Corporation	CMS	4.32%	0.85	12.65%	8.33%	11.40%	11.72%
Duke Energy Corporation	DUK	4.32%	0.90	12.65%	8.33%	11.82%	12.03%
Entergy Corporation	ETR	4.32%	1.00	12.65%	8.33%	12.65%	12.65%
IDACORP, Inc.	IDA	4.32%	0.85	12.65%	8.33%	11.40%	11.72%
NextEra Energy, Inc.	NEE	4.32%	1.05	12.65%	8.33%	13.07%	12.97%
NorthWestern Corporation	NWE	4.32%	0.95	12.65%	8.33%	12.24%	12.34%
OGE Energy Corporation	OGE	4.32%	1.05	12.65%	8.33%	13.07%	12.97%
Pinnacle West Capital Corporation	PNW	4.32%	0.95	12.65%	8.33%	12.24%	12.34%
Portland General Electric Company	POR	4.32%	0.90	12.65%	8.33%	11.82%	12.03%
Southern Company	SO	4.32%	0.95	12.65%	8.33%	12.24%	12.34%
Xcel Energy Inc.	XEL	4.32%	0.85	12.65%	8.33%	11.40%	11.72%
Mean						12.04%	12.20%

Notes:
[1] Blue Chip Financial Forecasts, Vol. 43, No. 7, June 30, 2024, at 2
[2] Value Line
[3] Schedule AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & VL BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Projected 30-year U.S. Treasury bond yield (2026 - 2030)	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm − Rf)	[5] ROE (K)	[6] ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.30%	0.90	12.65%	8.35%	11.82%	12.03%
Ameren Corporation	AEE	4.30%	0.90	12.65%	8.35%	11.82%	12.03%
American Electric Power Company, Inc.	AEP	4.30%	0.85	12.65%	8.35%	11.40%	11.71%
Avista Corporation	AVA	4.30%	0.95	12.65%	8.35%	12.24%	12.34%
CMS Energy Corporation	CMS	4.30%	0.85	12.65%	8.35%	11.40%	11.71%
Duke Energy Corporation	DUK	4.30%	0.90	12.65%	8.35%	11.82%	12.03%
Entergy Corporation	ETR	4.30%	1.00	12.65%	8.35%	12.65%	12.65%
IDACORP, Inc.	IDA	4.30%	0.85	12.65%	8.35%	11.40%	11.71%
NextEra Energy, Inc.	NEE	4.30%	1.05	12.65%	8.35%	13.07%	12.97%
NorthWestern Corporation	NWE	4.30%	0.95	12.65%	8.35%	12.24%	12.34%
OGE Energy Corporation	OGE	4.30%	1.05	12.65%	8.35%	13.07%	12.97%
Pinnacle West Capital Corporation	PNW	4.30%	0.95	12.65%	8.35%	12.24%	12.34%
Portland General Electric Company	POR	4.30%	0.90	12.65%	8.35%	11.82%	12.03%
Southern Company	SO	4.30%	0.95	12.65%	8.35%	12.24%	12.34%
Xcel Energy Inc.	XEL	4.30%	0.85	12.65%	8.35%	11.40%	11.71%
Mean						12.04%	12.20%

Notes:
[1] Blue Chip Financial Forecasts, Vol. 43, No. 6, May 31, 2024, at 14
[2] Value Line
[3] Schedule AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & BLOOMBERG BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Current 30-day average of 30-year U.S. Treasury bond yield	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm − Rf)	[5] ROE (K)	[6] ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.50%	0.78	12.65%	8.15%	10.87%	11.31%
Ameren Corporation	AEE	4.50%	0.74	12.65%	8.15%	10.54%	11.07%
American Electric Power Company, Inc.	AEP	4.50%	0.75	12.65%	8.15%	10.65%	11.15%
Avista Corporation	AVA	4.50%	0.75	12.65%	8.15%	10.63%	11.14%
CMS Energy Corporation	CMS	4.50%	0.74	12.65%	8.15%	10.54%	11.07%
Duke Energy Corporation	DUK	4.50%	0.71	12.65%	8.15%	10.32%	10.90%
Entergy Corporation	ETR	4.50%	0.85	12.65%	8.15%	11.45%	11.75%
IDACORP, Inc.	IDA	4.50%	0.78	12.65%	8.15%	10.90%	11.34%
NextEra Energy, Inc.	NEE	4.50%	0.81	12.65%	8.15%	11.10%	11.49%
NorthWestern Corporation	NWE	4.50%	0.86	12.65%	8.15%	11.50%	11.79%
OGE Energy Corporation	OGE	4.50%	0.91	12.65%	8.15%	11.91%	12.09%
Pinnacle West Capital Corporation	PNW	4.50%	0.81	12.65%	8.15%	11.10%	11.49%
Portland General Electric Company	POR	4.50%	0.78	12.65%	8.15%	10.84%	11.29%
Southern Company	SO	4.50%	0.77	12.65%	8.15%	10.80%	11.26%
Xcel Energy Inc.	XEL	4.50%	0.72	12.65%	8.15%	10.40%	10.96%
Mean						10.90%	11.34%

Notes:
[1] Bloomberg Professional, as of June 30, 2024
[2] Bloomberg Professional, based on 10-year weekly returns
[3] Schedule AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

$$K = Rf + \beta\,(Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Near-term projected 30-year U.S. Treasury bond yield (Q3 2024 - Q3 2025)	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm − Rf)	[5] ROE (K)	[6] ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.32%	0.78	12.65%	8.33%	10.83%	11.28%
Ameren Corporation	AEE	4.32%	0.74	12.65%	8.33%	10.50%	11.04%
American Electric Power Company, Inc.	AEP	4.32%	0.75	12.65%	8.33%	10.61%	11.12%
Avista Corporation	AVA	4.32%	0.75	12.65%	8.33%	10.59%	11.11%
CMS Energy Corporation	CMS	4.32%	0.74	12.65%	8.33%	10.50%	11.04%
Duke Energy Corporation	DUK	4.32%	0.71	12.65%	8.33%	10.27%	10.86%
Entergy Corporation	ETR	4.32%	0.85	12.65%	8.33%	11.42%	11.73%
IDACORP, Inc.	IDA	4.32%	0.78	12.65%	8.33%	10.86%	11.31%
NextEra Energy, Inc.	NEE	4.32%	0.81	12.65%	8.33%	11.07%	11.46%
NorthWestern Corporation	NWE	4.32%	0.86	12.65%	8.33%	11.47%	11.77%
OGE Energy Corporation	OGE	4.32%	0.91	12.65%	8.33%	11.89%	12.08%
Pinnacle West Capital Corporation	PNW	4.32%	0.81	12.65%	8.33%	11.07%	11.46%
Portland General Electric Company	POR	4.32%	0.78	12.65%	8.33%	10.80%	11.26%
Southern Company	SO	4.32%	0.77	12.65%	8.33%	10.76%	11.23%
Xcel Energy Inc.	XEL	4.32%	0.72	12.65%	8.33%	10.35%	10.93%
Mean						10.86%	11.31%

Notes:
[1] Blue Chip Financial Forecasts, Vol. 43, No. 7, June 30, 2024, at 2
[2] Bloomberg Professional, based on 10-year weekly returns
[3] Schedule AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Projected 30-year U.S. Treasury bond yield (2026 - 2030)	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm − Rf)	[5] ROE (K)	[6] ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.30%	0.78	12.65%	8.35%	10.82%	11.28%
Ameren Corporation	AEE	4.30%	0.74	12.65%	8.35%	10.49%	11.03%
American Electric Power Company, Inc.	AEP	4.30%	0.75	12.65%	8.35%	10.60%	11.11%
Avista Corporation	AVA	4.30%	0.75	12.65%	8.35%	10.58%	11.10%
CMS Energy Corporation	CMS	4.30%	0.74	12.65%	8.35%	10.49%	11.03%
Duke Energy Corporation	DUK	4.30%	0.71	12.65%	8.35%	10.26%	10.86%
Entergy Corporation	ETR	4.30%	0.85	12.65%	8.35%	11.42%	11.73%
IDACORP, Inc.	IDA	4.30%	0.78	12.65%	8.35%	10.85%	11.30%
NextEra Energy, Inc.	NEE	4.30%	0.81	12.65%	8.35%	11.06%	11.46%
NorthWestern Corporation	NWE	4.30%	0.86	12.65%	8.35%	11.47%	11.76%
OGE Energy Corporation	OGE	4.30%	0.91	12.65%	8.35%	11.89%	12.08%
Pinnacle West Capital Corporation	PNW	4.30%	0.81	12.65%	8.35%	11.06%	11.46%
Portland General Electric Company	POR	4.30%	0.78	12.65%	8.35%	10.79%	11.26%
Southern Company	SO	4.30%	0.77	12.65%	8.35%	10.75%	11.23%
Xcel Energy Inc.	XEL	4.30%	0.72	12.65%	8.35%	10.34%	10.92%
Mean						10.86%	11.31%

Notes:
[1] Blue Chip Financial Forecasts, Vol. 43, No. 6, May 31, 2024, at 14
[2] Bloomberg Professional, based on 10-year weekly returns
[3] Schedule AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & VALUE LINE LT AVERAGE BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Current 30-day average of 30-year U.S. Treasury bond yield	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm − Rf)	[5] ROE (K)	[6] ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.50%	0.76	12.65%	8.15%	10.73%	11.21%
Ameren Corporation	AEE	4.50%	0.74	12.65%	8.15%	10.54%	11.07%
American Electric Power Company, Inc.	AEP	4.50%	0.69	12.65%	8.15%	10.10%	10.74%
Avista Corporation	AVA	4.50%	0.80	12.65%	8.15%	10.99%	11.40%
CMS Energy Corporation	CMS	4.50%	0.70	12.65%	8.15%	10.25%	10.85%
Duke Energy Corporation	DUK	4.50%	0.69	12.65%	8.15%	10.10%	10.74%
Entergy Corporation	ETR	4.50%	0.76	12.65%	8.15%	10.73%	11.21%
IDACORP, Inc.	IDA	4.50%	0.74	12.65%	8.15%	10.54%	11.07%
NextEra Energy, Inc.	NEE	4.50%	0.75	12.65%	8.15%	10.65%	11.15%
NorthWestern Corporation	NWE	4.50%	0.76	12.65%	8.15%	10.73%	11.21%
OGE Energy Corporation	OGE	4.50%	0.94	12.65%	8.15%	12.17%	12.29%
Pinnacle West Capital Corporation	PNW	4.50%	0.75	12.65%	8.15%	10.65%	11.15%
Portland General Electric Company	POR	4.50%	0.76	12.65%	8.15%	10.73%	11.21%
Southern Company	SO	4.50%	0.68	12.65%	8.15%	10.06%	10.71%
Xcel Energy Inc.	XEL	4.50%	0.67	12.65%	8.15%	9.99%	10.65%
Mean						10.60%	11.11%

Notes:
[1] Bloomberg Professional, as of June 30, 2024
[2] Schedule AEB-5
[3] Schedule AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & VALUE LINE LT AVERAGE BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Near-term projected 30-year U.S. Treasury bond yield (Q3 2024 - Q3 2025)	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm − Rf)	[5] ROE (K)	[6] ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.32%	76.36%	12.65%	8.33%	10.68%	11.18%
Ameren Corporation	AEE	4.32%	74.09%	12.65%	8.33%	10.50%	11.03%
American Electric Power Company, Inc.	AEP	4.32%	68.64%	12.65%	8.33%	10.04%	10.69%
Avista Corporation	AVA	4.32%	79.55%	12.65%	8.33%	10.95%	11.38%
CMS Energy Corporation	CMS	4.32%	70.45%	12.65%	8.33%	10.19%	10.81%
Duke Energy Corporation	DUK	4.32%	68.64%	12.65%	8.33%	10.04%	10.69%
Entergy Corporation	ETR	4.32%	76.36%	12.65%	8.33%	10.68%	11.18%
IDACORP, Inc.	IDA	4.32%	74.09%	12.65%	8.33%	10.50%	11.03%
NextEra Energy, Inc.	NEE	4.32%	75.45%	12.65%	8.33%	10.61%	11.12%
NorthWestern Corporation	NWE	4.32%	76.36%	12.65%	8.33%	10.68%	11.18%
OGE Energy Corporation	OGE	4.32%	94.09%	12.65%	8.33%	12.16%	12.29%
Pinnacle West Capital Corporation	PNW	4.32%	75.45%	12.65%	8.33%	10.61%	11.12%
Portland General Electric Company	POR	4.32%	76.36%	12.65%	8.33%	10.68%	11.18%
Southern Company	SO	4.32%	68.18%	12.65%	8.33%	10.00%	10.67%
Xcel Energy Inc.	XEL	4.32%	67.27%	12.65%	8.33%	9.93%	10.61%
Mean						10.55%	11.08%

Notes:
[1] Blue Chip Financial Forecasts, Vol. 43, No. 7, June 30, 2024, at 2
[2] Schedule AEB-5
[3] Schedule AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & VALUE LINE LT BETA

$$K = Rf + \beta (Rm - Rf)$$
$$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$$

Company	Ticker	[1] Projected 30-year U.S. Treasury bond yield (2026 - 2030)	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm − Rf)	[5] ROE (K)	[6] ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.30%	0.76	12.65%	8.35%	10.68%	11.17%
Ameren Corporation	AEE	4.30%	0.74	12.65%	8.35%	10.49%	11.03%
American Electric Power Company, Inc.	AEP	4.30%	0.69	12.65%	8.35%	10.03%	10.69%
Avista Corporation	AVA	4.30%	0.80	12.65%	8.35%	10.95%	11.37%
CMS Energy Corporation	CMS	4.30%	0.70	12.65%	8.35%	10.19%	10.80%
Duke Energy Corporation	DUK	4.30%	0.69	12.65%	8.35%	10.03%	10.69%
Entergy Corporation	ETR	4.30%	0.76	12.65%	8.35%	10.68%	11.17%
IDACORP, Inc.	IDA	4.30%	0.74	12.65%	8.35%	10.49%	11.03%
NextEra Energy, Inc.	NEE	4.30%	0.75	12.65%	8.35%	10.60%	11.12%
NorthWestern Corporation	NWE	4.30%	0.76	12.65%	8.35%	10.68%	11.17%
OGE Energy Corporation	OGE	4.30%	0.94	12.65%	8.35%	12.16%	12.28%
Pinnacle West Capital Corporation	PNW	4.30%	0.75	12.65%	8.35%	10.60%	11.12%
Portland General Electric Company	POR	4.30%	0.76	12.65%	8.35%	10.68%	11.17%
Southern Company	SO	4.30%	0.68	12.65%	8.35%	10.00%	10.66%
Xcel Energy Inc.	XEL	4.30%	0.67	12.65%	8.35%	9.92%	10.60%
Mean						10.55%	11.07%

Notes:
[1] Blue Chip Financial Forecasts, Vol. 43, No. 6, May 31, 2024, at 14
[2] Schedule AEB-5
[3] Schedule AEB-6
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

HISTORICAL BETA - 2013 - 2023

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	Average
Alliant Energy Corporation	LNT	0.75	0.80	0.80	0.70	0.70	0.60	0.60	0.85	0.85	0.85	0.90	0.76
Ameren Corporation	AEE	0.80	0.75	0.75	0.65	0.70	0.55	0.55	0.85	0.80	0.85	0.90	0.74
American Electric Power Company, Inc.	AEP	0.70	0.70	0.70	0.65	0.65	0.55	0.55	0.75	0.75	0.75	0.80	0.69
Avista Corporation	AVA	0.75	0.80	0.80	0.70	0.75	0.65	0.60	0.95	0.95	0.90	0.90	0.80
CMS Energy Corporation	CMS	0.70	0.70	0.75	0.65	0.65	0.55	0.50	0.80	0.80	0.80	0.85	0.70
Duke Energy Corporation	DUK	0.65	0.60	0.65	0.60	0.60	0.50	0.50	0.85	0.85	0.85	0.90	0.69
Entergy Corporation	ETR	0.70	0.70	0.70	0.65	0.65	0.60	0.60	0.95	0.95	0.95	0.95	0.76
IDACORP, Inc.	IDA	0.75	0.80	0.80	0.75	0.70	0.55	0.55	0.80	0.80	0.80	0.85	0.74
NextEra Energy, Inc.	NEE	0.70	0.70	0.75	0.65	0.65	0.55	0.55	0.90	0.90	0.95	1.00	0.75
NorthWestern Corporation	NWE	0.70	0.70	0.70	0.70	0.70	0.55	0.60	0.95	0.95	0.90	0.95	0.76
OGE Energy Corporation	OGE	0.85	0.90	0.95	0.90	0.95	0.85	0.75	1.10	1.05	1.00	1.05	0.94
Pinnacle West Capital Corporation	PNW	0.75	0.70	0.75	0.70	0.70	0.55	0.50	0.90	0.90	0.90	0.95	0.75
Portland General Electric Company	POR	0.75	0.80	0.80	0.70	0.70	0.60	0.55	0.85	0.90	0.85	0.90	0.76
Southern Company	SO	0.55	0.55	0.60	0.55	0.55	0.50	0.50	0.90	0.95	0.90	0.95	0.68
Xcel Energy Inc.	XEL	0.65	0.65	0.65	0.60	0.60	0.50	0.50	0.80	0.80	0.80	0.85	0.67
Mean		0.72	0.72	0.74	0.68	0.68	0.58	0.56	0.88	0.88	0.87	0.91	0.75

Notes:
[1] Value Line, dated December 26, 2013.
[2] Value Line, dated December 31, 2014.
[3] Value Line, dated December 30, 2015.
[4] Value Line, dated December 29, 2016.
[5] Value Line, dated December 28, 2017.
[6] Value Line, dated December 27, 2018.
[7] Value Line, dated December 26, 2019.
[8] Value Line, dated December 30, 2020.
[9] Value Line, dated December 29, 2021.
[10] Value Line, dated December 30, 2022.
[11] Value Line, dated December 30, 2023.
[12] Average ([1] - [11])

MARKET RISK PREMIUM DERIVED FROM ANALYSTS' LONG-TERM GROWTH ESTIMATES

[1] Estimated Weighted Average Dividend Yield	1.58%
[2] Estimated Weighted Average Long-Term Growth Rate	10.99%
[3] S&P 500 Estimated Required Market Return	12.65%

STANDARD AND POOR'S 500 INDEX

		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Outst'g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Bloomberg Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
LyondellBasell Industries NV	LYB	325.62	95.66	31,149.00	0.09%	5.60%	0.01%	10.72%	0.01%
American Express Co	AXP	719.30	231.55	166,554.61	0.48%	1.21%	0.01%	15.12%	0.07%
Verizon Communications Inc	VZ	4,209.26	41.24	173,589.68	0.50%	6.45%	0.03%	2.10%	0.01%
Broadcom Inc	AVGO	465.49	1,605.53	747,354.95	2.14%	1.31%	0.03%	15.86%	0.34%
Boeing Co/The	BA	613.88	182.01	111,733.03				46.91%	
Solventum Corp	SOLV	172.71	52.88	9,132.90				-2.00%	
Caterpillar Inc	CAT	489.05	333.10	162,903.55	0.47%	1.69%	0.01%	7.70%	0.04%
JPMorgan Chase & Co	JPM	2,871.67	202.26	580,823.57	1.67%	2.47%	0.04%	3.03%	0.05%
Chevron Corp	CVX	1,847.32	156.42	288,957.79		4.17%			
Coca-Cola Co/The	KO	4,307.96	63.65	274,201.34	0.79%	3.05%	0.02%	6.36%	0.05%
AbbVie Inc	ABBV	1,765.87	171.52	302,881.68	0.87%	3.61%	0.03%	8.34%	0.07%
Walt Disney Co/The	DIS	1,823.04	99.29	181,009.94		0.91%		21.45%	
Corpay Inc	CPAY	70.27	266.41	18,720.36	0.05%			15.03%	0.01%
Extra Space Storage Inc	EXR	211.73	155.41	32,904.18	0.09%	4.17%	0.00%	3.30%	0.00%
Exxon Mobil Corp	XOM	4,485.93	115.12	516,420.03	1.48%	3.30%	0.05%	6.00%	0.09%
Phillips 66	PSX	423.95	141.17	59,849.30		3.26%			
General Electric Co	GE	1,094.61	158.97	174,009.67		0.70%		32.59%	
HP Inc	HPQ	978.56	35.02	34,269.17	0.10%	3.15%	0.00%	5.12%	0.01%
Home Depot Inc/The	HD	991.61	344.24	341,353.20	0.98%	2.61%	0.03%	3.43%	0.03%
Monolithic Power Systems Inc	MPWR	48.67	821.68	39,992.81	0.11%	0.61%	0.00%	18.00%	0.02%
International Business Machines Corp	IBM	918.60	172.95	158,872.39	0.46%	3.86%	0.02%	3.19%	0.01%
Johnson & Johnson	JNJ	2,406.68	146.16	351,760.20	1.01%	3.39%	0.03%	4.99%	0.05%
Lululemon Athletica Inc	LULU	119.89	298.70	35,809.95	0.10%			7.00%	0.01%
McDonald's Corp	MCD	720.68	254.84	183,658.60	0.53%	2.62%	0.01%	7.51%	0.04%
Merck & Co Inc	MRK	2,532.81	123.80	313,561.38	0.90%	2.49%	0.02%	11.00%	0.10%
3M Co	MMM	553.36	102.19	56,547.96		2.74%		-7.15%	
American Water Works Co Inc	AWK	194.82	129.16	25,163.34	0.07%	2.37%	0.00%	8.00%	0.01%
Bank of America Corp	BAC	7,820.37	39.77	311,016.11		2.41%		-6.00%	
Pfizer Inc	PFE	5,666.59	27.98	158,551.27	0.45%	6.00%	0.03%	7.72%	0.04%
Procter & Gamble Co/The	PG	2,360.14	164.92	389,233.46	1.12%	2.44%	0.03%	8.09%	0.09%
AT&T Inc	T	7,170.17	19.11	137,021.85	0.39%	5.81%	0.02%	1.63%	0.01%
Travelers Cos Inc/The	TRV	228.99	203.34	46,563.44	0.13%	2.07%	0.00%	18.24%	0.02%
RTX Corp	RTX	1,329.51	100.39	133,469.11	0.38%	2.51%	0.01%	10.62%	0.04%
Analog Devices Inc	ADI	496.22	228.26	113,266.49		1.61%		-2.75%	
Walmart Inc	WMT	8,043.54	67.71	544,628.30	1.56%	1.23%	0.02%	8.23%	0.13%
Cisco Systems Inc	CSCO	4,049.19	47.51	192,376.87		3.37%		-0.09%	
Intel Corp	INTC	4,256.87	30.97	131,835.33	0.38%	1.61%	0.01%	11.40%	0.04%
General Motors Co	GM	1,140.40	46.46	52,982.75	0.15%	1.03%	0.00%	16.07%	0.02%
Microsoft Corp	MSFT	7,432.31	446.95	3,321,869.17	9.53%	0.67%	0.06%	14.81%	1.41%
Dollar General Corp	DG	219.90	132.23	29,076.72		1.78%		-1.92%	
Cigna Group/The	CI	284.07	330.57	93,906.34	0.27%	1.69%	0.00%	11.65%	0.03%
Kinder Morgan Inc	KMI	2,219.38	19.87	44,099.16	0.13%	5.79%	0.01%	5.86%	0.01%
Citigroup Inc	C	1,907.44	63.46	121,046.14		3.34%		27.67%	
American International Group Inc	AIG	663.67	74.24	49,270.71	0.14%	2.16%	0.00%	14.09%	0.02%
Altria Group Inc	MO	1,717.63	45.55	78,237.86	0.22%	8.61%	0.02%	3.89%	0.01%
HCA Healthcare Inc	HCA	261.91	321.28	84,147.73	0.24%	0.82%	0.00%	9.57%	0.02%
International Paper Co	IP	347.33	43.15	14,987.38		4.29%		-2.00%	
Hewlett Packard Enterprise Co	HPE	1,299.67	21.17	27,514.08	0.08%	2.46%	0.00%	3.73%	0.00%
Abbott Laboratories	ABT	1,739.63	103.91	180,765.37	0.52%	2.12%	0.01%	8.00%	0.04%
Aflac Inc	AFL	568.22	89.31	50,747.91	0.15%	2.24%	0.00%	7.55%	0.01%
Air Products and Chemicals Inc	APD	222.31	256.28	56,972.58	0.16%	2.76%	0.00%	9.63%	0.02%
Super Micro Computer Inc	SMCI	58.56	819.35	47,978.68				53.18%	
Royal Caribbean Cruises Ltd	RCL	257.35	159.43	41,029.15				29.92%	
Hess Corp	HES	308.11	147.52	45,452.24	0.13%	1.19%	0.00%	18.00%	0.02%
Archer-Daniels-Midland Co	ADM	494.44	60.45	29,888.78		3.31%		-2.85%	
Automatic Data Processing Inc	ADP	409.29	238.69	97,693.67	0.28%	2.35%	0.01%	11.31%	0.03%
Verisk Analytics Inc	VRSK	142.68	269.55	38,458.05	0.11%	0.58%	0.00%	11.71%	0.01%
AutoZone Inc	AZO	17.08	2,964.10	50,635.72	0.15%			14.66%	0.02%
Linde PLC	LIN	480.68	438.81	210,925.44	0.60%	1.27%	0.01%	11.82%	0.07%
Avery Dennison Corp	AVY	80.55	218.65	17,612.91	0.05%	1.61%	0.00%	11.67%	0.01%
Enphase Energy Inc	ENPH	136.06	99.71	13,566.84	0.04%			18.17%	0.01%
MSCI Inc	MSCI	79.22	481.75	38,166.16	0.11%	1.33%	0.00%	11.58%	0.01%
Ball Corp	BALL	310.38	60.02	18,628.89	0.05%	1.33%	0.00%	12.89%	0.01%
Axon Enterprise Inc	AXON	75.47	294.24	22,205.41					
Dayforce Inc	DAY	155.56	49.60	7,715.88					
Carrier Global Corp	CARR	901.01	63.08	56,835.84	0.16%	1.20%	0.00%	7.87%	0.01%
Bank of New York Mellon Corp/The	BK	747.82	59.89	44,786.70	0.13%	2.81%	0.00%	10.01%	0.01%
Otis Worldwide Corp	OTIS	404.32	96.26	38,920.13	0.11%	1.62%	0.00%	9.00%	0.01%
Baxter International Inc	BAX	509.58	33.45	17,045.45	0.05%	3.47%	0.00%	9.78%	0.00%
Becton Dickinson & Co	BDX	289.01	233.71	67,543.59	0.19%	1.63%	0.00%	7.77%	0.02%
Berkshire Hathaway Inc	BRK/B	1,311.39	406.80	533,471.42					
Best Buy Co Inc	BBY	215.71	84.29	18,182.53		4.46%		-0.43%	
Boston Scientific Corp	BSX	1,470.18	77.01	113,218.56	0.32%			12.08%	0.04%
Bristol-Myers Squibb Co	BMY	2,027.10	41.53	84,185.46		5.78%		-4.12%	
Brown-Forman Corp	BF/B	305.54	43.19	13,196.14		2.02%		-1.26%	
Coterra Energy Inc	CTRA	744.23	26.67	19,848.69	0.06%	3.15%	0.00%	10.79%	0.01%
Campbell Soup Co	CPB	298.55	45.19	13,491.66	0.04%	3.28%	0.00%	8.14%	0.00%
Hilton Worldwide Holdings Inc	HLT	250.05	218.20	54,560.04	0.16%	0.27%	0.00%	15.52%	0.02%
Carnival Corp	CCL	1,122.32	18.72	21,009.83					

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Bloomberg Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Qorvo Inc	QRVO	95.63	116.04	11,096.79				20.04%	
Builders FirstSource Inc	BLDR	122.06	138.41	16,893.91	0.05%			4.81%	0.00%
UDR Inc	UDR	329.31	41.15	13,550.98	0.04%	4.13%	0.00%	1.85%	0.00%
Clorox Co/The	CLX	124.19	136.47	16,947.94	0.05%	3.52%	0.00%	15.46%	0.01%
Paycom Software Inc	PAYC	58.11	143.04	8,312.05	0.02%	1.05%	0.00%	6.00%	0.00%
CMS Energy Corp	CMS	298.64	59.53	17,777.74	0.05%	3.46%	0.00%	7.75%	0.00%
Colgate-Palmolive Co	CL	820.44	97.04	79,615.59	0.23%	2.06%	0.00%	8.36%	0.02%
EPAM Systems Inc	EPAM	57.97	188.11	10,905.49	0.03%			5.54%	0.00%
Conagra Brands Inc	CAG	478.06	28.42	13,586.55	0.04%	4.93%	0.00%	1.58%	0.00%
Airbnb Inc	ABNB	441.50	151.63	66,944.65				20.22%	
Consolidated Edison Inc	ED	344.92	89.42	30,843.10	0.09%	3.71%	0.00%	5.70%	0.01%
Corning Inc	GLW	856.62	38.85	33,279.65	0.10%	2.88%	0.00%	12.03%	0.01%
GoDaddy Inc	GDDY	140.94	139.71	19,690.87					
Cummins Inc	CMI	136.78	276.93	37,878.49	0.11%	2.43%	0.00%	7.56%	0.01%
Caesars Entertainment Inc	CZR	216.42	39.74	8,600.37				-32.44%	
Danaher Corp	DHR	740.69	249.85	185,060.65	0.53%	0.43%	0.00%	3.84%	0.02%
Target Corp	TGT	462.64	148.04	68,488.78	0.20%	3.03%	0.01%	13.97%	0.03%
Deere & Co	DE	275.57	373.63	102,961.22		1.57%		-6.84%	
Dominion Energy Inc	D	837.59	49.00	41,042.06	0.12%	5.45%	0.01%	11.59%	0.01%
Dover Corp	DOV	137.43	180.45	24,799.24	0.07%	1.13%	0.00%	7.56%	0.01%
Alliant Energy Corp	LNT	256.38	50.90	13,049.69	0.04%	3.77%	0.00%	6.00%	0.00%
Steel Dynamics Inc	STLD	157.13	129.50	20,348.72		1.42%		-4.60%	
Duke Energy Corp	DUK	771.00	100.23	77,277.33	0.22%	4.09%	0.01%	6.20%	0.01%
Regency Centers Corp	REG	184.58	62.20	11,480.94	0.03%	4.31%	0.00%	3.27%	0.00%
Eaton Corp PLC	ETN	399.89	313.55	125,386.14	0.36%	1.20%	0.00%	13.83%	0.05%
Ecolab Inc	ECL	285.57	238.00	67,965.66	0.19%	0.96%	0.00%	14.16%	0.03%
Revvity Inc	RVTY	123.39	104.86	12,938.99	0.04%	0.27%	0.00%	8.26%	0.00%
Emerson Electric Co	EMR	572.10	110.16	63,022.54	0.18%	1.91%	0.00%	15.07%	0.03%
EOG Resources Inc	EOG	574.71	125.87	72,338.87	0.21%	2.89%	0.01%	5.99%	0.01%
Aon PLC	AON	217.43	293.58	63,833.39	0.18%	0.92%	0.00%	10.38%	0.02%
Entergy Corp	ETR	213.27	107.00	22,820.21	0.07%	4.22%	0.00%	6.64%	0.00%
Equifax Inc	EFX	123.61	242.46	29,970.72	0.09%	0.64%	0.00%	15.31%	0.01%
EQT Corp	EQT	441.59	36.98	16,330.11		1.70%			
IQVIA Holdings Inc	IQV	182.20	211.44	38,524.37	0.11%			10.44%	0.01%
Gartner Inc	IT	77.63	449.06	34,860.53	0.10%			9.89%	0.01%
FedEx Corp	FDX	245.52	299.84	73,617.92	0.21%	1.84%	0.00%	13.35%	0.03%
FMC Corp	FMC	124.82	57.55	7,183.28	0.02%	4.03%	0.00%	18.88%	0.00%
Brown & Brown Inc	BRO	285.25	89.41	25,504.11	0.07%	0.58%	0.00%	9.77%	0.01%
Ford Motor Co	F	3,921.49	12.54	49,175.42	0.14%	4.78%	0.01%	1.67%	0.00%
NextEra Energy Inc	NEE	2,055.00	70.81	145,514.55	0.42%	2.91%	0.01%	9.59%	0.04%
Franklin Resources Inc	BEN	526.09	22.35	11,758.13		5.55%			
Garmin Ltd	GRMN	192.08	162.92	31,293.35	0.09%	1.84%	0.00%	8.04%	0.01%
Freeport-McMoRan Inc	FCX	1,436.49	48.60	69,813.41	0.20%	1.23%	0.00%	17.27%	0.03%
Dexcom Inc	DXCM	397.68	113.38	45,089.41				23.63%	
General Dynamics Corp	GD	274.36	290.14	79,603.97	0.23%	1.96%	0.00%	14.18%	0.03%
General Mills Inc	GIS	558.15	63.26	35,308.32	0.10%	3.79%	0.00%	1.19%	0.00%
Genuine Parts Co	GPC	139.30	138.32	19,267.84		2.89%			
Atmos Energy Corp	ATO	150.88	116.65	17,599.80	0.05%	2.76%	0.00%	7.00%	0.00%
WW Grainger Inc	GWW	49.07	902.24	44,272.01		0.91%			
Halliburton Co	HAL	885.30	33.78	29,905.47	0.09%	2.01%	0.00%	10.30%	0.01%
L3Harris Technologies Inc	LHX	189.68	224.58	42,598.33	0.12%	2.07%	0.00%	8.53%	0.01%
Healthpeak Properties Inc	DOC	703.78	19.60	13,794.13	0.04%	6.12%	0.00%	4.48%	0.00%
Insulet Corp	PODD	70.04	201.80	14,134.07				28.44%	
Catalent Inc	CTLT	180.98	56.23	10,176.51				28.24%	
Fortive Corp	FTV	352.03	74.10	26,085.35	0.07%	0.43%	0.00%	8.98%	0.01%
Hershey Co/The	HSY	147.62	183.83	27,136.25	0.08%	2.98%	0.00%	2.36%	0.00%
Synchrony Financial	SYF	401.54	47.19	18,948.86		2.12%			
Hormel Foods Corp	HRL	548.31	30.49	16,717.82	0.05%	3.71%	0.00%	6.59%	0.00%
Arthur J Gallagher & Co	AJG	218.50	259.31	56,659.24	0.16%	0.93%	0.00%	12.55%	0.02%
Mondelez International Inc	MDLZ	1,341.36	65.44	87,778.53	0.25%	2.60%	0.01%	7.65%	0.02%
CenterPoint Energy Inc	CNP	639.72	30.98	19,818.65	0.06%	2.58%	0.00%	7.95%	0.00%
Humana Inc	HUM	120.50	373.65	45,025.20		0.95%		-1.30%	
Willis Towers Watson PLC	WTW	102.24	262.14	26,800.15	0.08%	1.34%	0.00%	12.41%	0.01%
Illinois Tool Works Inc	ITW	298.40	236.96	70,708.86	0.20%	2.36%	0.00%	7.26%	0.01%
CDW Corp/DE	CDW	134.40	223.84	30,083.65	0.09%	1.11%	0.00%	7.02%	0.01%
Trane Technologies PLC	TT	226.35	328.93	74,453.96	0.21%	1.02%	0.00%	13.47%	0.03%
Interpublic Group of Cos Inc/The	IPG	377.42	29.09	10,979.26	0.03%	4.54%	0.00%	3.36%	0.00%
International Flavors & Fragrances Inc	IFF	255.35	95.21	24,311.97	0.07%	1.68%	0.00%	0.23%	0.00%
Generac Holdings Inc	GNRC	60.61	132.22	8,014.38	0.02%			7.00%	0.00%
NXP Semiconductors NV	NXPI	255.68	269.09	68,802.01	0.20%	1.51%	0.00%	6.92%	0.01%
Kellanova	K	341.88	57.68	19,719.87	0.06%	3.88%	0.00%	8.42%	0.00%
Broadridge Financial Solutions Inc	BR	118.18	197.00	23,281.46		1.62%			
Kimberly-Clark Corp	KMB	336.71	138.20	46,533.18	0.13%	3.53%	0.00%	9.18%	0.01%
Kimco Realty Corp	KIM	674.12	19.46	13,118.30	0.04%	4.93%	0.00%	3.25%	0.00%
Oracle Corp	ORCL	2,755.86	141.20	389,127.43	1.12%	1.13%	0.01%	15.06%	0.17%
Kroger Co/The	KR	721.79	49.93	36,039.02	0.10%	2.56%	0.00%	3.11%	0.00%
Lennar Corp	LEN	241.70	149.87	36,224.03	0.10%	1.33%	0.00%	4.30%	0.00%
Eli Lilly & Co	LLY	950.41	905.38	860,477.68		0.57%		40.01%	
Bath & Body Works Inc	BBWI	223.23	39.05	8,717.17	0.02%	2.05%	0.00%	13.41%	0.00%
Charter Communications Inc	CHTR	144.39	298.96	43,165.64	0.12%			5.00%	0.01%
Loews Corp	L	221.41	74.74	16,547.88		0.33%			
Lowe's Cos Inc	LOW	569.84	220.46	125,625.82	0.36%	2.09%	0.01%	4.03%	0.01%
Hubbell Inc	HUBB	53.69	365.48	19,621.16	0.06%	1.34%	0.00%	18.00%	0.01%
IDEX Corp	IEX	75.70	201.20	15,229.83		1.37%			
Marsh & McLennan Cos Inc	MMC	492.72	210.72	103,826.80	0.30%	1.35%	0.00%	8.12%	0.02%
Masco Corp	MAS	220.24	66.67	14,683.67	0.04%	1.74%	0.00%	8.64%	0.00%
S&P Global Inc	SPGI	320.26	446.00	142,834.62	0.41%	0.82%	0.00%	13.11%	0.05%
Medtronic PLC	MDT	1,282.27	78.71	100,927.47	0.29%	3.56%	0.01%	5.61%	0.02%
Viatris Inc	VTRS	1,190.68	10.63	12,656.89		4.52%		-2.57%	
CVS Health Corp	CVS	1,255.37	59.06	74,142.33	0.21%	4.50%	0.01%	4.01%	0.01%
DuPont de Nemours Inc	DD	418.10	80.49	33,653.19	0.10%	1.89%	0.00%	1.03%	0.00%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Bloomberg Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Micron Technology Inc	MU	1,108.84	131.53	145,845.86		0.35%		31.94%	
Motorola Solutions Inc	MSI	166.79	386.05	64,388.12	0.18%	1.02%	0.00%	8.89%	0.02%
Cboe Global Markets Inc	CBOE	105.15	170.06	17,882.49	0.05%	1.29%	0.00%	14.28%	0.01%
Newmont Corp	NEM	1,153.16	41.87	48,282.93		2.39%		47.89%	
NIKE Inc	NKE	1,211.46	75.37	91,307.89	0.26%	1.96%	0.01%	4.46%	0.01%
NiSource Inc	NI	448.31	28.81	12,915.67	0.04%	3.68%	0.00%	7.00%	0.00%
Norfolk Southern Corp	NSC	225.91	214.69	48,501.48	0.14%	2.52%	0.00%	9.42%	0.01%
Principal Financial Group Inc	PFG	234.38	78.45	18,387.42	0.05%	3.62%	0.00%	12.40%	0.01%
Eversource Energy	ES	350.73	56.71	19,889.73	0.06%	5.04%	0.00%	5.23%	0.00%
Northrop Grumman Corp	NOC	147.99	435.95	64,516.24	0.19%	1.89%	0.00%	18.34%	0.03%
Wells Fargo & Co	WFC	3,486.32	59.39	207,052.25	0.59%	2.36%	0.01%	8.79%	0.05%
Nucor Corp	NUE	239.76	158.08	37,901.58		1.37%		-1.29%	
Occidental Petroleum Corp	OXY	886.64	63.03	55,884.73	0.16%	1.40%	0.00%	20.00%	0.03%
Omnicom Group Inc	OMC	195.83	89.70	17,566.31	0.05%	3.12%	0.00%	7.48%	0.00%
ONEOK Inc	OKE	583.65	81.55	47,596.41	0.14%	4.86%	0.01%	2.55%	0.00%
Raymond James Financial Inc	RJF	207.28	123.16	25,528.26	0.07%	1.46%	0.00%	15.38%	0.01%
PG&E Corp	PCG	2,133.51	17.46	37,251.05	0.11%	0.23%	0.00%	9.95%	0.01%
Parker-Hannifin Corp	PH	128.54	505.81	65,017.32	0.19%	1.29%	0.00%	13.84%	0.03%
Rollins Inc	ROL	484.23	48.79	23,625.58	0.07%	1.23%	0.00%	13.04%	0.01%
PPL Corp	PPL	737.12	27.65	20,381.48	0.06%	3.73%	0.00%	7.67%	0.00%
ConocoPhillips	COP	1,169.53	114.38	133,771.30	0.38%	2.73%	0.01%	9.00%	0.03%
PulteGroup Inc	PHM	210.34	110.10	23,158.65	0.07%	0.73%	0.00%	7.65%	0.01%
Pinnacle West Capital Corp	PNW	113.56	76.38	8,673.48	0.02%	4.61%	0.00%	6.67%	0.00%
PNC Financial Services Group Inc/The	PNC	397.91	155.48	61,866.58		3.99%		31.00%	
PPG Industries Inc	PPG	235.36	125.89	29,629.60	0.08%	2.07%	0.00%	8.03%	0.01%
Progressive Corp/The	PGR	585.70	207.71	121,655.33		0.19%		33.41%	
Veralto Corp	VLTO	246.85	95.47	23,566.48		0.38%			
Public Service Enterprise Group Inc	PEG	498.59	73.70	36,745.86	0.11%	3.26%	0.00%	6.28%	0.01%
Cooper Cos Inc/The	COO	199.12	87.30	17,383.18	0.05%			10.00%	0.00%
Edison International	EIX	383.93	71.81	27,569.65	0.08%	4.34%	0.00%	7.30%	0.01%
Schlumberger NV	SLB	1,429.34	47.18	67,436.17	0.19%	2.33%	0.00%	12.91%	0.02%
Charles Schwab Corp/The	SCHW	1,777.28	73.69	130,967.84	0.38%	1.36%	0.01%	14.20%	0.05%
Sherwin-Williams Co/The	SHW	253.55	298.43	75,666.63	0.22%	0.96%	0.00%	9.56%	0.02%
West Pharmaceutical Services Inc	WST	72.84	329.39	23,993.76	0.07%	0.24%	0.00%	7.72%	0.01%
J M Smucker Co/The	SJM	106.43	109.04	11,605.45	0.03%	3.89%	0.00%	6.52%	0.00%
Snap-on Inc	SNA	52.72	261.39	13,780.22	0.04%	2.85%	0.00%	3.83%	0.00%
AMETEK Inc	AME	231.47	166.71	38,588.36	0.11%	0.67%	0.00%	7.43%	0.01%
Uber Technologies Inc	UBER	2,089.52	72.68	151,866.31				61.05%	
Southern Co/The	SO	1,094.63	77.57	84,910.68	0.24%	3.71%	0.01%	6.15%	0.01%
Truist Financial Corp	TFC	1,338.10	38.85	51,985.03	0.15%	5.35%	0.01%	10.51%	0.02%
Southwest Airlines Co	LUV	598.46	28.61	17,121.83		2.52%			
W R Berkley Corp	WRB	255.66	78.58	20,089.92	0.06%	0.61%	0.00%	13.64%	0.01%
Stanley Black & Decker Inc	SWK	153.88	79.89	12,293.39	0.04%	4.06%	0.00%	7.00%	0.00%
Public Storage	PSA	175.83	287.65	50,577.21	0.15%	4.17%	0.01%	3.07%	0.00%
Arista Networks Inc	ANET	313.36	350.48	109,827.46	0.31%			13.58%	0.04%
Sysco Corp	SYY	497.98	71.39	35,550.93	0.10%	2.86%	0.00%	13.00%	0.01%
Corteva Inc	CTVA	687.80	53.94	37,099.77	0.11%	1.19%	0.00%	11.33%	0.01%
Texas Instruments Inc	TXN	910.48	194.53	177,116.06		2.67%		-1.14%	
Textron Inc	TXT	190.70	85.86	16,373.42	0.05%	0.09%	0.00%	10.05%	0.00%
Thermo Fisher Scientific Inc	TMO	381.72	553.00	211,088.95	0.61%	0.28%	0.00%	7.40%	0.04%
TJX Cos Inc/The	TJX	1,130.15	110.10	124,429.40	0.36%	1.36%	0.00%	8.13%	0.03%
Globe Life Inc	GL	92.27	82.28	7,591.98	0.02%	1.17%	0.00%	7.00%	0.00%
Johnson Controls International plc	JCI	673.68	66.47	44,779.24	0.13%	2.23%	0.00%	9.45%	0.01%
Ulta Beauty Inc	ULTA	47.72	385.87	18,412.17	0.05%			6.46%	0.00%
Union Pacific Corp	UNP	610.12	226.26	138,046.20	0.40%	2.30%	0.01%	11.49%	0.05%
Keysight Technologies Inc	KEYS	174.54	136.75	23,868.21				-3.55%	
UnitedHealth Group Inc	UNH	920.39	509.26	468,715.27	1.34%	1.65%	0.02%	9.94%	0.13%
Blackstone Inc	BX	714.65	123.80	88,473.17		2.68%		23.93%	
Marathon Oil Corp	MRO	564.04	28.67	16,170.91		1.53%			
Bio-Rad Laboratories Inc	BIO	23.45	273.11	6,403.34					
Ventas Inc	VTR	404.77	50.81	20,566.57	0.06%	3.54%	0.00%	6.19%	0.00%
Labcorp Holdings Inc	LH	84.29	203.51	17,154.67	0.05%	1.42%	0.00%	9.46%	0.00%
Vulcan Materials Co	VMC	132.25	248.68	32,888.43	0.09%	0.74%	0.00%	15.71%	0.01%
Weyerhaeuser Co	WY	729.62	28.39	20,713.83		2.82%		-0.33%	
Williams Cos Inc/The	WMB	1,218.75	42.50	51,797.05	0.15%	4.47%	0.01%	3.94%	0.01%
Constellation Energy Corp	CEG	315.12	200.27	63,109.28	0.18%	0.70%	0.00%	14.59%	0.03%
WEC Energy Group Inc	WEC	315.82	78.46	24,779.47	0.07%	4.26%	0.00%	6.85%	0.00%
Adobe Inc	ADBE	443.40	555.54	246,326.44	0.71%			16.27%	0.11%
Vistra Corp	VST	347.46	85.98	29,874.61		1.01%			
AES Corp/The	AES	710.67	17.57	12,486.42		3.93%			
Expeditors International of Washington Inc	EXPD	141.25	124.79	17,626.84	0.05%	1.17%	0.00%	4.39%	0.00%
Amgen Inc	AMGN	536.44	312.45	167,609.12	0.48%	2.88%	0.01%	6.22%	0.03%
Apple Inc	AAPL	15,334.08	210.62	3,229,664.35	9.26%	0.47%	0.04%	12.73%	1.18%
Autodesk Inc	ADSK	215.51	247.45	53,327.70	0.15%			9.94%	0.02%
Cintas Corp	CTAS	101.46	700.26	71,050.48	0.20%	0.77%	0.00%	12.04%	0.02%
Comcast Corp	CMCSA	3,914.18	39.16	153,279.37	0.44%	3.17%	0.01%	8.33%	0.04%
Molson Coors Beverage Co	TAP	197.55	50.83	10,041.52	0.03%	3.46%	0.00%	4.65%	0.00%
KLA Corp	KLAC	134.64	824.51	111,012.03	0.32%	0.70%	0.00%	8.99%	0.03%
Marriott International Inc/MD	MAR	285.62	241.77	69,054.83	0.20%	1.04%	0.00%	5.56%	0.01%
Fiserv Inc	FI	585.10	149.04	87,203.60	0.25%			11.74%	0.03%
McCormick & Co Inc/MD	MKC	252.02	70.94	17,877.94	0.05%	2.37%	0.00%	5.83%	0.00%
PACCAR Inc	PCAR	524.15	102.94	53,955.49		1.17%		-2.16%	
Costco Wholesale Corp	COST	443.34	849.99	376,830.32	1.08%	0.55%	0.01%	9.64%	0.10%
Stryker Corp	SYK	380.95	340.25	129,618.24	0.37%	0.94%	0.00%	8.39%	0.03%
Tyson Foods Inc	TSN	286.02	57.14	16,342.95		3.43%		53.92%	
Lamb Weston Holdings Inc	LW	144.39	84.08	12,140.40	0.03%	1.71%	0.00%	11.00%	0.00%
Applied Materials Inc	AMAT	827.98	235.99	195,393.82	0.56%	0.68%	0.00%	15.06%	0.08%
American Airlines Group Inc	AAL	653.54	11.33	7,404.62				-4.75%	
Cardinal Health Inc	CAH	243.57	97.81	23,824.36	0.07%	2.07%	0.00%	11.98%	0.01%
Cincinnati Financial Corp	CINF	156.56	118.10	18,489.50	0.05%	2.74%	0.00%	7.33%	0.00%
Paramount Global	PARA	625.78	10.39	6,501.81		1.92%		45.42%	

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DR Horton Inc	DHI	329.31	140.93	46,409.94	0.13%	0.85%	0.00%	4.37%	0.01%
Electronic Arts Inc	EA	265.74	139.33	37,024.86	0.11%	0.55%	0.00%	12.24%	0.01%
Fair Isaac Corp	FICO	24.71	1,488.66	36,786.28					
Fastenal Co	FAST	572.43	62.84	35,971.31		2.48%			
M&T Bank Corp	MTB	166.85	151.36	25,255.02	0.07%	3.57%	0.00%	5.82%	0.00%
Xcel Energy Inc	XEL	555.64	53.41	29,676.68	0.09%	4.10%	0.00%	7.13%	0.01%
Fifth Third Bancorp	FITB	684.05	36.49	24,960.80		3.84%		25.00%	
Gilead Sciences Inc	GILD	1,245.85	68.61	85,477.97	0.25%	4.49%	0.01%	14.05%	0.03%
Hasbro Inc	HAS	139.22	58.50	8,144.14		4.79%		25.99%	
Huntington Bancshares Inc/OH	HBAN	1,449.25	13.18	19,101.17	0.05%	4.70%	0.00%	4.46%	0.00%
Welltower Inc	WELL	597.92	104.25	62,332.74	0.18%	2.34%	0.00%	14.68%	0.03%
Biogen Inc	BIIB	145.60	231.82	33,752.30	0.10%			5.36%	0.01%
Northern Trust Corp	NTRS	204.59	83.98	17,181.64	0.05%	3.57%	0.00%	10.80%	0.01%
Packaging Corp of America	PKG	89.80	182.56	16,393.52	0.05%	2.74%	0.00%	4.44%	0.00%
Paychex Inc	PAYX	359.96	118.56	42,677.21		3.31%			
QUALCOMM Inc	QCOM	1,116.00	199.18	222,284.88	0.64%	1.71%	0.01%	11.88%	0.08%
Ross Stores Inc	ROST	333.58	145.32	48,475.12		1.01%		188.00%	
IDEXX Laboratories Inc	IDXX	82.59	487.20	40,236.39	0.12%			11.11%	0.01%
Starbucks Corp	SBUX	1,132.70	77.85	88,180.70	0.25%	2.93%	0.01%	10.71%	0.03%
KeyCorp	KEY	942.86	14.21	13,398.04	0.04%	5.77%	0.00%	19.11%	0.01%
Fox Corp	FOXA	231.15	34.37	7,944.63	0.02%	1.51%	0.00%	6.84%	0.00%
Fox Corp	FOX	235.58	32.02	7,543.30	0.02%	1.62%	0.00%	6.84%	0.00%
State Street Corp	STT	301.26	73.31	22,085.30	0.06%	3.76%	0.00%	8.07%	0.01%
Norwegian Cruise Line Holdings Ltd	NCLH	429.04	18.79	8,061.68				51.83%	
US Bancorp	USB	1,560.46	39.70	61,950.26	0.18%	4.94%	0.01%	2.71%	0.00%
A O Smith Corp	AOS	120.78	81.78	9,877.72		1.57%			
Gen Digital Inc	GEN	626.15	24.98	15,641.13	0.04%	2.00%	0.00%	10.16%	0.00%
T Rowe Price Group Inc	TROW	223.30	115.31	25,748.72	0.07%	4.30%	0.00%	5.88%	0.00%
Waste Management Inc	WM	401.08	213.34	85,567.05	0.25%	1.41%	0.00%	11.11%	0.03%
Constellation Brands Inc	STZ	182.35	257.28	46,916.04	0.13%	1.57%	0.00%	11.21%	0.02%
Invesco Ltd	IVZ	449.83	14.96	6,729.47	0.02%	5.48%	0.00%	8.71%	0.00%
Intuit Inc	INTU	279.55	657.21	183,721.08	0.53%	0.55%	0.00%	15.15%	0.08%
Morgan Stanley	MS	1,625.16	97.19	157,949.59	0.45%	3.50%	0.02%	9.49%	0.04%
Microchip Technology Inc	MCHP	536.89	91.50	49,125.07		1.98%		-9.39%	
Crowdstrike Holdings Inc	CRWD	230.88	383.19	88,472.06	0.25%			19.85%	0.05%
Chubb Ltd	CB	406.06	255.08	103,578.04	0.30%	1.43%	0.00%	1.99%	0.01%
Hologic Inc	HOLX	233.38	74.25	17,328.24	0.05%			7.36%	0.00%
Citizens Financial Group Inc	CFG	455.02	36.03	16,394.37		4.66%			
Jabil Inc	JBL	120.60	108.79	13,119.75	0.04%	0.29%	0.00%	7.13%	0.00%
O'Reilly Automotive Inc	ORLY	58.89	1,056.06	62,195.60	0.18%			11.00%	0.02%
Allstate Corp/The	ALL	263.92	159.66	42,136.67		2.30%		169.00%	
Equity Residential	EQR	378.94	68.67	26,019.92	0.07%	3.93%	0.00%	3.98%	0.00%
BorgWarner Inc	BWA	227.84	32.24	7,345.50	0.02%	1.36%	0.00%	4.17%	0.00%
Keurig Dr Pepper Inc	KDP	1,355.57	33.40	45,276.17	0.13%	2.57%	0.00%	7.06%	0.01%
Host Hotels & Resorts Inc	HST	703.60	17.98	12,650.73		4.45%		-0.49%	
Incyte Corp	INCY	224.86	60.62	13,630.71	0.04%			19.22%	0.01%
Simon Property Group Inc	SPG	325.77	151.80	49,451.28	0.14%	5.27%	0.01%	1.31%	0.00%
Eastman Chemical Co	EMN	117.65	97.97	11,526.07	0.03%	3.31%	0.00%	6.19%	0.00%
AvalonBay Communities Inc	AVB	142.19	206.89	29,416.86	0.08%	3.29%	0.00%	7.71%	0.01%
Prudential Financial Inc	PRU	359.00	117.19	42,071.21	0.12%	4.44%	0.01%	9.96%	0.01%
United Parcel Service Inc	UPS	729.40	136.85	99,818.25	0.29%	4.76%	0.01%	6.39%	0.02%
Walgreens Boots Alliance Inc	WBA	863.28	12.10	10,441.31		8.27%		-10.00%	
STERIS PLC	STE	98.90	219.54	21,712.51		0.95%			
McKesson Corp	MCK	129.71	584.04	75,756.41	0.22%	0.42%	0.00%	11.67%	0.03%
Lockheed Martin Corp	LMT	239.94	467.10	112,075.04	0.32%	2.70%	0.01%	2.21%	0.01%
Cencora Inc	COR	196.93	225.30	44,368.10	0.13%	0.91%	0.00%	10.82%	0.01%
Capital One Financial Corp	COF	381.92	138.45	52,877.10	0.15%	1.73%	0.00%	12.00%	0.02%
Waters Corp	WAT	59.32	290.12	17,209.92	0.05%			5.12%	0.00%
Nordson Corp	NDSN	57.27	231.94	13,282.97		1.17%			
Dollar Tree Inc	DLTR	214.94	106.77	22,949.57	0.07%			12.39%	0.01%
Darden Restaurants Inc	DRI	119.36	151.32	18,061.40	0.05%	3.70%	0.00%	9.82%	0.01%
Evergy Inc	EVRG	229.75	52.97	12,169.65	0.03%	4.85%	0.00%	5.00%	0.00%
Match Group Inc	MTCH	265.67	30.38	8,070.99				35.69%	
Domino's Pizza Inc	DPZ	34.88	516.33	18,009.59	0.05%	1.17%	0.00%	14.43%	0.01%
NVR Inc	NVR	3.13	7,588.56	23,767.37	0.07%			4.87%	0.00%
NetApp Inc	NTAP	205.80	128.80	26,507.30	0.08%	1.61%	0.00%	5.26%	0.00%
Old Dominion Freight Line Inc	ODFL	217.29	176.60	38,372.53	0.11%	0.59%	0.00%	5.45%	0.01%
DaVita Inc	DVA	87.70	138.57	12,152.59	0.03%			15.98%	0.01%
Hartford Financial Services Group Inc/The	HIG	295.76	100.54	29,735.21	0.09%	1.87%	0.00%	12.22%	0.01%
Iron Mountain Inc	IRM	293.13	89.62	26,270.58	0.08%	2.90%	0.00%	4.00%	0.00%
Estee Lauder Cos Inc/The	EL	233.02	106.40	24,793.54	0.07%	2.48%	0.00%	16.13%	0.01%
Cadence Design Systems Inc	CDNS	273.88	307.75	84,285.03	0.24%			15.67%	0.04%
Tyler Technologies Inc	TYL	42.46	502.78	21,345.52					
Universal Health Services Inc	UHS	59.68	184.93	11,036.25	0.03%	0.43%	0.00%	17.84%	0.01%
Skyworks Solutions Inc	SWKS	160.45	106.58	17,100.44		2.55%		-1.59%	
Quest Diagnostics Inc	DGX	111.09	136.88	15,206.27		2.19%		-0.82%	
Rockwell Automation Inc	ROK	114.00	275.28	31,382.75	0.09%	1.82%	0.00%	5.23%	0.00%
Kraft Heinz Co/The	KHC	1,214.30	32.22	39,124.68	0.11%	4.97%	0.01%	3.77%	0.00%
American Tower Corp	AMT	466.98	194.38	90,770.60	0.26%	3.33%	0.01%	11.49%	0.03%
Regeneron Pharmaceuticals Inc	REGN	108.37	1,051.03	113,896.97				34.31%	
Amazon.com Inc	AMZN	10,406.63	193.25	2,011,080.67				28.96%	
Jack Henry & Associates Inc	JKHY	72.90	166.02	12,102.86	0.03%	1.33%	0.00%	7.46%	0.00%
Ralph Lauren Corp	RL	40.77	175.06	7,137.90	0.02%	1.89%	0.00%	11.05%	0.00%
BXP Inc	BXP	157.05	61.56	9,667.94	0.03%	6.37%	0.00%	0.23%	0.00%
Amphenol Corp	APH	1,201.21	67.37	80,925.38	0.23%	0.65%	0.00%	13.37%	0.03%
Howmet Aerospace Inc	HWM	408.18	77.63	31,687.25	0.09%	0.26%	0.00%	19.82%	0.02%
Valero Energy Corp	VLO	327.00	156.76	51,259.89		2.73%		-24.00%	
Synopsys Inc	SNPS	153.22	595.06	91,172.71	0.26%			16.59%	0.04%
Etsy Inc	ETSY	116.93	58.98	6,896.71	0.02%			7.51%	0.00%
CH Robinson Worldwide Inc	CHRW	117.10	88.12	10,318.41	0.03%	2.77%	0.00%	13.90%	0.00%
Accenture PLC	ACN	628.73	303.41	190,762.67	0.55%	1.70%	0.01%	5.80%	0.03%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Bloomberg Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
TransDigm Group Inc	TDG	55.96	1,277.61	71,492.50	0.21%			16.91%	0.03%
Yum! Brands Inc	YUM	281.63	132.46	37,304.97	0.11%	2.02%	0.00%	10.66%	0.01%
Prologis Inc	PLD	925.84	112.31	103,981.54	0.30%	3.42%	0.01%	7.57%	0.02%
FirstEnergy Corp	FE	575.52	38.27	22,025.00	0.06%	4.44%	0.00%	5.65%	0.00%
VeriSign Inc	VRSN	100.14	177.80	17,804.71					
Quanta Services Inc	PWR	146.39	254.00	37,182.57	0.11%	0.14%	0.00%	12.00%	0.01%
Henry Schein Inc	HSIC	128.05	64.10	8,208.07	0.02%			7.53%	0.00%
Ameren Corp	AEE	266.51	71.11	18,951.60	0.05%	3.77%	0.00%	6.00%	0.00%
ANSYS Inc	ANSS	87.30	321.50	28,066.95	0.08%			6.37%	0.01%
FactSet Research Systems Inc	FDS	38.12	408.27	15,561.62	0.04%	1.02%	0.00%	9.34%	0.00%
NVIDIA Corp	NVDA	24,600.00	123.54	3,039,084.00		0.03%		42.80%	
Cognizant Technology Solutions Corp	CTSH	497.20	68.00	33,809.53	0.10%	1.76%	0.00%	5.15%	0.00%
Intuitive Surgical Inc	ISRG	354.71	444.85	157,790.96	0.45%			16.41%	0.07%
Take-Two Interactive Software Inc	TTWO	171.39	155.49	26,648.65				64.77%	
Republic Services Inc	RSG	314.98	194.34	61,212.24	0.18%	1.10%	0.00%	10.52%	0.02%
eBay Inc	EBAY	506.00	53.72	27,182.32	0.08%	2.01%	0.00%	8.83%	0.01%
Goldman Sachs Group Inc/The	GS	322.46	452.32	145,856.46	0.42%	2.43%	0.01%	14.02%	0.06%
SBA Communications Corp	SBAC	107.44	196.30	21,091.06		2.00%		23.41%	
Sempra	SRE	632.85	76.06	48,134.27	0.14%	3.26%	0.00%	6.00%	0.01%
Moody's Corp	MCO	182.60	420.93	76,861.82	0.22%	0.81%	0.00%	11.79%	0.03%
ON Semiconductor Corp	ON	430.23	68.55	29,492.40	0.08%			2.64%	0.00%
Booking Holdings Inc	BKNG	33.93	3,961.50	134,405.77	0.39%	0.88%	0.00%	15.03%	0.06%
F5 Inc	FFIV	58.61	172.23	10,094.57	0.03%			7.81%	0.00%
Akamai Technologies Inc	AKAM	152.32	90.08	13,720.72	0.04%			1.54%	0.00%
Charles River Laboratories International Inc	CRL	51.51	206.58	10,641.35	0.03%			9.81%	0.00%
MarketAxess Holdings Inc	MKTX	37.90	200.53	7,599.49	0.02%	1.48%	0.00%	3.07%	0.00%
Devon Energy Corp	DVN	632.00	47.40	29,956.80	0.09%	2.95%	0.00%	7.22%	0.01%
Bio-Techne Corp	TECH	157.59	71.65	11,290.97		0.45%			
Alphabet Inc	GOOGL	5,874.00	182.15	1,069,949.10	3.07%	0.44%	0.01%	15.01%	0.46%
Teleflex Inc	TFX	47.10	210.33	9,907.17	0.03%	0.65%	0.00%	7.51%	0.00%
Allegion plc	ALLE	87.44	118.15	10,331.15	0.03%	1.63%	0.00%	7.25%	0.00%
Netflix Inc	NFLX	430.90	674.88	290,806.47				35.61%	
Warner Bros Discovery Inc	WBD	2,450.31	7.44	18,230.33				34.78%	
Agilent Technologies Inc	A	291.76	129.63	37,820.98	0.11%	0.73%	0.00%	5.23%	0.01%
Trimble Inc	TRMB	244.21	55.92	13,656.11	0.04%			10.00%	0.00%
Elevance Health Inc	ELV	232.42	541.86	125,938.02	0.36%	1.20%	0.00%	12.03%	0.04%
CME Group Inc	CME	360.06	196.60	70,788.19	0.20%	2.34%	0.00%	4.90%	0.01%
Juniper Networks Inc	JNPR	324.99	36.46	11,849.06	0.03%	2.41%	0.00%	4.78%	0.00%
BlackRock Inc	BLK	148.60	787.32	116,995.75	0.34%	2.59%	0.01%	11.89%	0.04%
DTE Energy Co	DTE	206.93	111.01	22,970.74	0.07%	3.68%	0.00%	9.20%	0.01%
Celanese Corp	CE	109.22	134.89	14,732.69	0.04%	2.08%	0.00%	3.69%	0.00%
Nasdaq Inc	NDAQ	576.53	60.26	34,741.88	0.10%	1.59%	0.00%	5.72%	0.01%
Philip Morris International Inc	PM	1,554.56	101.33	157,523.26	0.45%	5.13%	0.02%	8.99%	0.04%
Ingersoll Rand Inc	IR	403.43	90.84	36,647.76	0.11%	0.09%	0.00%	16.00%	0.02%
Salesforce Inc	CRM	969.00	257.10	249,129.90	0.71%	0.62%	0.00%	17.34%	0.12%
Roper Technologies Inc	ROP	107.05	563.66	60,336.98		0.53%			
Huntington Ingalls Industries Inc	HII	39.43	246.33	9,713.53	0.03%	2.11%	0.00%	7.78%	0.00%
MetLife Inc	MET	711.12	70.19	49,913.72	0.14%	3.11%	0.00%	13.85%	0.02%
Tapestry Inc	TPR	229.77	42.79	9,831.99	0.03%	3.27%	0.00%	9.91%	0.00%
CSX Corp	CSX	1,954.93	33.45	65,392.31	0.19%	1.43%	0.00%	10.76%	0.02%
Edwards Lifesciences Corp	EW	601.30	92.37	55,542.08	0.16%			9.03%	0.01%
Ameriprise Financial Inc	AMP	99.33	427.19	42,430.65		1.39%			
Zebra Technologies Corp	ZBRA	51.42	308.93	15,884.87					
Zimmer Biomet Holdings Inc	ZBH	205.73	108.53	22,327.66	0.06%	0.88%	0.00%	7.00%	0.00%
Camden Property Trust	CPT	106.54	109.11	11,624.03	0.03%	3.78%	0.00%	1.59%	0.00%
CBRE Group Inc	CBRE	306.82	89.11	27,341.09					
Mastercard Inc	MA	922.47	441.16	406,956.87	1.17%	0.60%	0.01%	15.54%	0.18%
CarMax Inc	KMX	156.08	73.34	11,446.83	0.03%			18.30%	0.01%
Intercontinental Exchange Inc	ICE	573.59	136.89	78,518.05	0.23%	1.31%	0.00%	8.96%	0.02%
Fidelity National Information Services Inc	FIS	556.25	75.36	41,919.08		1.91%		21.47%	
Chipotle Mexican Grill Inc	CMG	1,373.37	62.65	86,041.32				22.88%	
Wynn Resorts Ltd	WYNN	112.07	89.50	10,030.35		1.12%		-3.85%	
Live Nation Entertainment Inc	LYV	231.44	93.74	21,695.47					
Assurant Inc	AIZ	51.99	166.25	8,642.67	0.02%	1.73%	0.00%	6.19%	0.00%
NRG Energy Inc	NRG	208.48	77.86	16,231.94	0.05%	2.09%	0.00%	3.00%	0.00%
Monster Beverage Corp	MNST	1,041.73	49.95	52,034.31	0.15%			12.72%	0.02%
Regions Financial Corp	RF	915.83	20.04	18,353.17	0.05%	4.79%	0.00%	4.18%	0.00%
Baker Hughes Co	BKR	998.00	35.17	35,099.59		2.39%		69.47%	
Mosaic Co/The	MOS	321.39	28.90	9,288.26		2.91%		-18.32%	
Expedia Group Inc	EXPE	127.22	125.99	16,028.95				22.40%	
CF Industries Holdings Inc	CF	182.78	74.12	13,547.80		2.70%		-4.63%	
APA Corp	APA	371.19	29.44	10,927.89	0.03%	3.40%	0.00%	18.81%	0.01%
Leidos Holdings Inc	LDOS	135.21	145.88	19,724.73	0.06%	1.04%	0.00%	10.53%	0.01%
Alphabet Inc	GOOG	5,617.00	183.42	1,030,270.14	2.95%	0.44%	0.01%	15.01%	0.44%
First Solar Inc	FSLR	107.04	225.46	24,133.46				42.58%	
TE Connectivity Ltd	TEL	306.23	150.43	46,065.88	0.13%	1.73%	0.00%	5.04%	0.01%
Discover Financial Services	DFS	250.60	130.81	32,780.86		2.14%		61.19%	
Visa Inc	V	1,574.15	262.47	413,167.68	1.18%	0.79%	0.01%	13.05%	0.15%
Mid-America Apartment Communities Inc	MAA	116.69	142.61	16,640.88	0.05%	4.12%	0.00%	0.83%	0.00%
Xylem Inc/NY	XYL	242.45	135.63	32,883.09		1.06%			
Marathon Petroleum Corp	MPC	352.33	173.48	61,122.21		1.90%			
Tractor Supply Co	TSCO	107.81	270.00	29,108.70	0.08%	1.63%	0.00%	5.15%	0.00%
Advanced Micro Devices Inc	AMD	1,616.31	162.21	262,182.29				31.82%	
ResMed Inc	RMD	146.91	191.42	28,120.94	0.08%	1.00%	0.00%	13.45%	0.01%
Mettler-Toledo International Inc	MTD	21.36	1,397.59	29,848.33	0.09%			9.29%	0.01%
VICI Properties Inc	VICI	1,043.14	28.64	29,875.44	0.09%	5.80%	0.00%	5.44%	0.00%
Copart Inc	CPRT	962.30	54.16	52,118.06					
Jacobs Solutions Inc	J	125.21	139.71	17,493.51	0.05%	0.83%	0.00%	10.76%	0.01%
Albemarle Corp	ALB	117.53	95.52	11,226.18		1.68%		-12.68%	
Fortinet Inc	FTNT	763.94	60.27	46,042.54	0.13%			9.59%	0.01%
Moderna Inc	MRNA	383.24	118.75	45,509.75	0.13%			17.71%	0.02%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Bloomberg Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Essex Property Trust Inc	ESS	64.21	272.20	17,476.87	0.05%	3.60%	0.00%	4.64%	0.00%
CoStar Group Inc	CSGP	408.34	74.14	30,274.48	0.09%			15.09%	0.01%
Realty Income Corp	O	870.77	52.56	45,765.27	0.13%	6.00%	0.01%	2.47%	0.00%
Westrock Co	WRK	258.15	50.26	12,974.52	0.04%	2.41%	0.00%	11.18%	0.00%
Westinghouse Air Brake Technologies Corp	WAB	176.39	158.05	27,877.65	0.08%	0.51%	0.00%	15.49%	0.01%
Pool Corp	POOL	38.33	307.33	11,779.65		1.56%			
Western Digital Corp	WDC	326.53	75.77	24,740.80				-10.00%	
PepsiCo Inc	PEP	1,374.79	164.93	226,743.45	0.65%	3.29%	0.02%	7.91%	0.05%
Diamondback Energy Inc	FANG	178.34	200.19	35,702.69	0.10%	3.94%	0.00%	9.67%	0.01%
Palo Alto Networks Inc	PANW	323.80	339.01	109,771.44	0.31%			14.33%	0.05%
ServiceNow Inc	NOW	205.00	786.67	161,267.35				25.00%	
Church & Dwight Co Inc	CHD	244.52	103.68	25,352.14	0.07%	1.09%	0.00%	8.02%	0.01%
Federal Realty Investment Trust	FRT	82.78	100.97	8,357.79	0.02%	4.32%	0.00%	4.11%	0.00%
MGM Resorts International	MGM	313.68	44.44	13,939.94	0.04%			15.86%	0.01%
American Electric Power Co Inc	AEP	526.59	87.74	46,203.01	0.13%	4.01%	0.01%	6.00%	0.01%
Invitation Homes Inc	INVH	612.54	35.89	21,983.92	0.06%	3.12%	0.00%	5.86%	0.00%
PTC Inc	PTC	119.74	181.67	21,753.89	0.06%			14.94%	0.01%
JB Hunt Transport Services Inc	JBHT	103.20	160.00	16,511.52	0.05%	1.08%	0.00%	11.79%	0.01%
Lam Research Corp	LRCX	130.74	1,064.85	139,214.23	0.40%	0.75%	0.00%	8.61%	0.03%
Mohawk Industries Inc	MHK	63.86	113.59	7,254.20	0.02%			2.74%	0.00%
GE HealthCare Technologies Inc	GEHC	456.47	77.92	35,567.75	0.10%	0.15%	0.00%	11.26%	0.01%
Pentair PLC	PNR	166.03	76.67	12,729.14	0.04%	1.20%	0.00%	13.13%	0.00%
Vertex Pharmaceuticals Inc	VRTX	258.05	468.72	120,954.60	0.35%			12.79%	0.04%
Amcor PLC	AMCR	1,445.34	9.78	14,135.45	0.04%	5.11%	0.00%	2.32%	0.00%
Meta Platforms Inc	META	2,191.45	504.22	1,104,970.90	3.17%	0.40%	0.01%	18.58%	0.59%
T-Mobile US Inc	TMUS	1,171.85	176.18	206,457.24	0.59%	1.48%	0.01%	5.00%	0.03%
United Rentals Inc	URI	66.59	646.73	43,065.75	0.12%	1.01%	0.00%	5.27%	0.01%
Alexandria Real Estate Equities Inc	ARE	174.88	116.97	20,456.06	0.06%	4.45%	0.00%	4.21%	0.00%
Honeywell International Inc	HON	651.19	213.54	139,054.26	0.40%	2.02%	0.01%	8.98%	0.04%
Delta Air Lines Inc	DAL	645.31	47.44	30,613.60	0.09%	1.26%	0.00%	12.00%	0.01%
United Airlines Holdings Inc	UAL	328.80	48.66	15,999.55	0.05%			12.79%	0.01%
Seagate Technology Holdings PLC	STX	209.99	103.27	21,685.56		2.71%			
News Corp	NWS	190.68	28.39	5,413.52		0.70%			
Centene Corp	CNC	533.66	66.30	35,381.39	0.10%			5.16%	0.01%
Martin Marietta Materials Inc	MLM	61.64	541.80	33,396.55	0.10%	0.55%	0.00%	9.77%	0.01%
Teradyne Inc	TER	156.11	148.29	23,149.85	0.07%	0.32%	0.00%	17.47%	0.01%
PayPal Holdings Inc	PYPL	1,046.05	58.03	60,702.05	0.17%			8.69%	0.02%
Tesla Inc	TSLA	3,189.20	197.88	631,078.10				-7.00%	
KKR & Co Inc	KKR	887.40	105.24	93,390.19		0.67%			
Arch Capital Group Ltd	ACGL	375.49	100.89	37,883.59	0.11%			4.41%	0.00%
Dow Inc	DOW	703.27	53.05	37,308.37	0.11%	5.28%	0.01%	1.46%	0.00%
Everest Group Ltd	EG	43.46	381.02	16,558.37	0.05%	2.10%	0.00%	1.85%	0.00%
Teledyne Technologies Inc	TDY	47.42	387.98	18,398.79	0.05%			7.34%	0.00%
GE Vernova Inc	GEV	274.09	171.51	47,008.49					
News Corp	NWSA	379.21	27.57	10,454.68		0.73%			
Exelon Corp	EXC	999.74	34.61	34,600.83	0.10%	4.39%	0.00%	5.60%	0.01%
Global Payments Inc	GPN	255.25	96.70	24,682.68	0.07%	1.03%	0.00%	9.40%	0.01%
Crown Castle Inc	CCI	434.52	97.70	42,452.90	0.12%	6.41%	0.01%	0.81%	0.00%
Aptiv PLC	APTV	272.06	70.42	19,158.61				24.81%	
Align Technology Inc	ALGN	75.28	241.43	18,175.33	0.05%			11.74%	0.01%
Kenvue Inc	KVUE	1,914.81	18.18	34,811.26	0.10%	4.40%	0.00%	15.93%	0.02%
Targa Resources Corp	TRGP	221.72	128.78	28,552.72		2.33%		21.12%	
Bunge Global SA	BG	141.60	106.77	15,118.10		2.55%		-8.30%	
LKQ Corp	LKQ	266.78	41.59	11,095.21		2.89%			
Deckers Outdoor Corp	DECK	25.44	967.95	24,626.58	0.07%			8.39%	0.01%
Zoetis Inc	ZTS	456.30	173.36	79,103.30	0.23%	1.00%	0.00%	10.36%	0.02%
Equinix Inc	EQIX	94.91	756.60	71,805.88	0.21%	2.25%	0.00%	10.10%	0.02%
Digital Realty Trust Inc	DLR	324.50	152.05	49,340.53	0.14%	3.21%	0.00%	2.08%	0.00%
Molina Healthcare Inc	MOH	59.00	297.30	17,540.70	0.05%			11.72%	0.01%
Las Vegas Sands Corp	LVS	745.05	44.25	32,968.33		1.81%			

Notes:

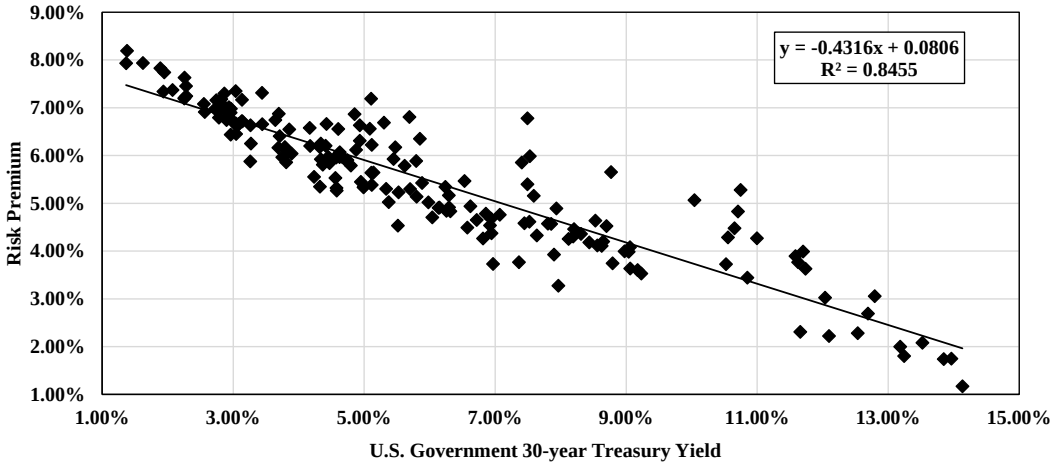
[1] Equals sum of Col. [9]
[2] Equals sum of Col. [11]
[3] Equals ([1] x (1 + (0.5 x [2]))) + [2]
[4] Source: Bloomberg Professional as of October 31, 2023
[5] Source: Bloomberg Professional as of October 31, 2023
[6] Equals [4] x [5]
[7] Equals weight in S&P 500 based on market capitalization [6] if Growth Rate >0% and ≤20%
[8] Source: Bloomberg Professional, as of October 31, 2023
[9] Equals [7] x [8]
[10] Source: Value Line, as of October 31, 2023
[11] Equals [7] x [10]

BOND YIELD PLUS RISK PREMIUM

Quarter	[1] Average Authorized VI Electric ROE	[2] U.S. Govt. 30-year Treasury	[3] Risk Premium
1980.1	13.97%	11.66%	2.31%
1980.2	14.25%	10.52%	3.73%
1980.3	14.30%	10.85%	3.45%
1980.4	14.32%	12.10%	2.23%
1981.1	14.82%	12.53%	2.28%
1981.2	15.05%	13.24%	1.81%
1981.3	15.31%	14.13%	1.17%
1981.4	15.59%	13.85%	1.74%
1982.1	15.71%	13.96%	1.75%
1982.2	15.60%	13.52%	2.08%
1982.3	15.85%	12.79%	3.06%
1982.4	16.03%	10.75%	5.28%
1983.1	15.54%	10.71%	4.83%
1983.2	15.13%	10.65%	4.48%
1983.3	15.39%	11.62%	3.77%
1983.4	15.37%	11.74%	3.63%
1984.1	15.06%	12.04%	3.02%
1984.2	15.18%	13.18%	2.00%
1984.3	15.38%	12.69%	2.69%
1984.4	15.69%	11.70%	3.99%
1985.1	15.48%	11.58%	3.90%
1985.2	15.27%	11.00%	4.27%
1985.3	14.84%	10.55%	4.29%
1985.4	15.11%	10.04%	5.07%
1986.1	14.42%	8.77%	5.65%
1986.2	14.27%	7.49%	6.78%
1986.3	13.26%	7.40%	5.86%
1986.4	13.52%	7.53%	5.99%
1987.1	12.90%	7.49%	5.40%
1987.2	13.17%	8.53%	4.64%
1987.3	13.14%	9.06%	4.08%
1987.4	12.76%	9.23%	3.53%
1988.1	12.74%	8.63%	4.11%
1988.2	12.70%	9.06%	3.63%
1988.3	12.78%	9.18%	3.60%
1988.4	12.97%	8.97%	4.00%
1989.1	13.02%	9.04%	3.99%
1989.2	13.22%	8.70%	4.52%
1989.3	12.38%	8.12%	4.26%
1989.4	12.83%	7.93%	4.90%
1990.1	12.62%	8.44%	4.19%
1990.2	12.85%	8.65%	4.20%
1990.3	12.54%	8.79%	3.75%
1990.4	12.68%	8.56%	4.12%
1991.1	12.66%	8.20%	4.46%
1991.2	12.67%	8.31%	4.36%
1991.3	12.49%	8.19%	4.30%
1991.4	12.42%	7.85%	4.57%
1992.1	12.38%	7.81%	4.58%
1992.2	11.83%	7.90%	3.93%
1992.3	12.03%	7.45%	4.59%
1992.4	12.14%	7.52%	4.62%
1993.1	11.84%	7.07%	4.76%
1993.2	11.64%	6.86%	4.78%
1993.3	11.15%	6.32%	4.84%
1993.4	11.04%	6.14%	4.91%
1994.1	11.07%	6.58%	4.49%
1994.2	11.13%	7.36%	3.77%
1994.3	12.75%	7.59%	5.16%
1994.4	11.24%	7.96%	3.28%
1995.1	11.96%	7.63%	4.33%

1995.2	11.32%	6.94%	4.37%
1995.3	11.37%	6.72%	4.65%
1995.4	11.58%	6.24%	5.35%
1996.1	11.46%	6.29%	5.17%
1996.2	11.46%	6.92%	4.54%
1996.3	10.70%	6.97%	3.73%
1996.4	11.56%	6.62%	4.94%
1997.1	11.08%	6.82%	4.26%
1997.2	11.62%	6.94%	4.68%
1997.3	12.00%	6.53%	5.47%
1997.4	11.06%	6.15%	4.91%
1998.1	11.31%	5.88%	5.43%
1998.2	12.20%	5.85%	6.35%
1998.3	11.65%	5.48%	6.17%
1998.4	12.30%	5.11%	7.19%
1999.1	10.40%	5.37%	5.03%
1999.2	10.94%	5.80%	5.14%
1999.3	10.75%	6.04%	4.71%
1999.4	11.10%	6.26%	4.84%
2000.1	11.21%	6.30%	4.92%
2000.2	11.00%	5.98%	5.02%
2000.3	11.68%	5.79%	5.89%
2000.4	12.50%	5.69%	6.81%
2001.1	11.38%	5.45%	5.93%
2001.2	11.00%	5.70%	5.30%
2001.3	10.76%	5.53%	5.23%
2001.4	11.99%	5.30%	6.69%
2002.1	10.05%	5.52%	4.53%
2002.2	11.41%	5.62%	5.79%
2002.3	11.65%	5.09%	6.56%
2002.4	11.57%	4.93%	6.63%
2003.1	11.72%	4.85%	6.87%
2003.2	11.16%	4.60%	6.56%
2003.3	10.50%	5.11%	5.39%
2003.4	11.34%	5.11%	6.23%
2004.1	11.00%	4.88%	6.12%
2004.2	10.64%	5.34%	5.30%
2004.3	10.75%	5.11%	5.64%
2004.4	11.24%	4.93%	6.31%
2005.1	10.63%	4.71%	5.92%
2005.2	10.31%	4.47%	5.84%
2005.3	11.08%	4.42%	6.66%
2005.4	10.63%	4.65%	5.98%
2006.1	10.70%	4.63%	6.07%
2006.2	10.79%	5.14%	5.64%
2006.3	10.35%	5.00%	5.35%
2006.4	10.65%	4.74%	5.91%
2007.1	10.59%	4.80%	5.79%
2007.2	10.33%	4.99%	5.34%
2007.3	10.40%	4.95%	5.45%
2007.4	10.65%	4.61%	6.04%
2008.1	10.62%	4.41%	6.21%
2008.2	10.54%	4.57%	5.96%
2008.3	10.43%	4.45%	5.98%
2008.4	10.39%	3.64%	6.74%
2009.1	10.75%	3.44%	7.31%
2009.2	10.75%	4.17%	6.58%
2009.3	10.50%	4.32%	6.18%
2009.4	10.59%	4.34%	6.25%
2010.1	10.59%	4.62%	5.97%
2010.2	10.18%	4.37%	5.81%
2010.3	10.40%	3.86%	6.55%
2010.4	10.38%	4.17%	6.20%
2011.1	10.09%	4.56%	5.53%
2011.2	10.26%	4.34%	5.92%
2011.3	10.57%	3.70%	6.88%
2011.4	10.39%	3.04%	7.35%

2012.1	10.30%	3.14%	7.17%
2012.2	9.95%	2.94%	7.01%
2012.3	9.90%	2.74%	7.16%
2012.4	10.16%	2.86%	7.30%
2013.1	9.85%	3.13%	6.72%
2013.2	9.86%	3.14%	6.72%
2013.3	10.12%	3.71%	6.41%
2013.4	9.97%	3.79%	6.18%
2014.1	9.86%	3.69%	6.16%
2014.2	10.10%	3.44%	6.66%
2014.3	9.90%	3.27%	6.63%
2014.4	9.94%	2.96%	6.98%
2015.1	9.64%	2.55%	7.08%
2015.2	9.83%	2.88%	6.94%
2015.3	9.40%	2.96%	6.44%
2015.4	9.86%	2.96%	6.90%
2016.1	9.70%	2.72%	6.98%
2016.2	9.48%	2.57%	6.91%
2016.3	9.74%	2.28%	7.46%
2016.4	9.83%	2.83%	7.00%
2017.1	9.72%	3.05%	6.67%
2017.2	9.64%	2.90%	6.75%
2017.3	10.00%	2.82%	7.18%
2017.4	9.91%	2.82%	7.09%
2018.1	9.69%	3.02%	6.66%
2018.2	9.75%	3.09%	6.66%
2018.3	9.69%	3.06%	6.63%
2018.4	9.52%	3.27%	6.25%
2019.1	9.72%	3.01%	6.70%
2019.2	9.58%	2.78%	6.79%
2019.3	9.53%	2.29%	7.25%
2019.4	9.89%	2.26%	7.63%
2020.1	9.72%	1.89%	7.83%
2020.2	9.58%	1.38%	8.19%
2020.3	9.30%	1.37%	7.93%
2020.4	9.56%	1.62%	7.94%
2021.1	9.45%	2.07%	7.38%
2021.2	9.47%	2.26%	7.21%
2021.3	9.27%	1.93%	7.34%
2021.4	9.69%	1.95%	7.74%
2022.1	9.45%	2.25%	7.20%
2022.2	9.50%	3.05%	6.45%
2022.3	9.14%	3.26%	5.88%
2022.4	9.94%	3.89%	6.04%
2023.1	9.72%	3.75%	5.97%
2023.2	9.67%	3.81%	5.86%
2023.3	9.79%	4.23%	5.55%
2023.4	9.85%	4.58%	5.27%
2024.1	9.67%	4.32%	5.35%
2024.2	9.90%	4.58%	5.32%
AVERAGE	11.51%	6.07%	5.45%
MEDIAN	11.02%	5.32%	5.64%



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9195180
R Square	0.8455134
Adjusted R Square	0.8446356
Standard Error	0.0056583
Observations	178

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.03084	0.03084	963.25740	0.00000
Residual	176	0.00563	0.00003		
Total	177	0.03648			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.0806	0.00	85.41	0.0000	0.0788	0.0825	0.0788	0.0825
X Variable 1	(0.4316)	0.01	(31.04)	0.0000	(0.4590)	(0.4041)	(0.4590)	(0.4041)

	[7]	[8]	[9]
	U.S. Govt. 30-year Treasury	Risk Premium	ROE
Current 30-day average of 30-year U.S. Treasury bond yield [4]	4.50%	6.12%	10.62%
Blue Chip Near-Term Projected Forecast (Q1 2024 - Q1 2025) [5]	4.32%	6.20%	10.52%
Blue Chip Long-Term Projected Forecast (2025-2029) [6]	4.30%	6.21%	10.51%
AVERAGE			10.55%

Notes:
[1] Regulatory Research Associates, rate cases through June 30, 2024
[2] S&P Capital IQ Pro, quarterly bond yields are the average of each trading day in the quarter
[3] Equals Column [1] − Column [2]
[4] S&P Capital IQ Pro, 30-day average as of June 30, 2024
[5] Source: Blue Chip Financial Forecasts, Vol. 43, No. 7, June 30, 2024, at 2
[6] Source: Blue Chip Financial Forecasts, Vol. 43, No. 6, May 31, 2024, at 14
[7] See notes [4], [5] & [6]
[8] Equals 0.080636 + (-0.431577 x Column [7])
[9] Equals Column [7] + Column [8]

Dr. Won's DCF Analysis

As Filed

Company	Ticker	Annualized Dividend as of Dec 31, 2023	3-Month Average High/Low Stock Price as of Dec 31, 2023	Dividend Yield	Expected Dividend Yield	*Value Line* Projected EPS, Gwth Rates as of Dec 31, 2023	Projected Nominal GDP Gwth Rate	Wgtd Gwth Rate	Cost of Equity
Alliant Energy Corporation	LNT	$ 1.81	$ 49.98	3.62%	3.72%	5.83%	4.10%	5.48%	9.20%
Ameren Corporation	AEE	$ 2.52	$ 75.93	3.32%	3.42%	6.50%	4.10%	6.02%	9.44%
American Electric Power Co., Inc.	AEP	$ 3.35	$ 77.61	4.32%	4.44%	6.00%	4.10%	5.62%	10.06%
Avista Corporation	AVA	$ 1.84	$ 33.78	5.45%	5.57%	4.67%	4.10%	4.56%	10.13%
CMS Energy Corporation	CMS	$ 1.95	$ 55.74	3.50%	3.58%	5.00%	4.10%	4.82%	8.40%
Duke Energy Corporation	DUK	$ 4.06	$ 90.54	4.48%	4.56%	3.17%	4.10%	3.36%	7.92%
Entergy Corporation	ETR	$ 4.34	$ 97.66	4.44%	4.51%	2.83%	4.10%	3.08%	7.60%
IDACORP, Inc.	IDA	$ 3.20	$ 96.66	3.31%	3.39%	4.67%	4.10%	4.56%	7.94%
Northwestern Corporation	NWE	$ 2.56	$ 49.94	5.13%	5.21%	3.00%	4.10%	3.22%	8.43%
OGE Energy Corp.	OGE	$ 1.66	$ 34.52	4.81%	4.93%	5.00%	4.10%	4.82%	9.75%
Pinnacle West Capital Corporation	PNW	$ 3.48	$ 73.15	4.76%	4.82%	2.50%	4.10%	2.82%	7.64%
Portland General Electric Company	POR	$ 1.88	$ 41.48	4.53%	4.64%	4.83%	4.10%	4.68%	9.32%
The Southern Company	SO	$ 2.78	$ 68.31	4.07%	4.16%	4.50%	4.10%	4.42%	8.58%
Xcel Energy Inc.	XEL	$ 2.08	$ 59.79	3.48%	3.57%	5.83%	4.10%	5.48%	9.06%
								Average:	**8.82%**
								Lower Bound:	**7.64%**
								Upper Bound:	**9.75%**
								Average of Lower/Upper Bound:	**8.70%**

Dr. Won's DCF Analysis

Data Updated Through June 30, 2024 and Stock Prices and Short-Term Growth Rate is Consistent With the FERC Methodology

Company	Ticker	Annualized Dividend as of Jun 30, 2024	6-Month Average High/Low Stock Price as of Jun 30, 2024	Dividend Yield	Expected Dividend Yield	Projected *IBES* EPS Gwth Rate as of Jun 30, 2024	Projected Nominal GDP Gwth Rate	Wgtd Gwth Rate	Cost of Equity
Alliant Energy Corporation	LNT	$ 1.92	$ 49.31	3.89%	4.01%	6.30%	4.10%	5.86%	9.87%
Ameren Corporation	AEE	$ 2.68	$ 70.96	3.78%	3.88%	5.50%	4.10%	5.22%	9.10%
American Electric Power Co., Inc.	AEP	$ 3.52	$ 83.83	4.20%	4.32%	6.36%	4.10%	5.91%	10.23%
Avista Corporation	AVA	$ 1.90	$ 34.43	5.52%	5.68%	6.20%	4.10%	5.78%	11.46%
CMS Energy Corporation	CMS	$ 2.06	$ 58.80	3.50%	3.62%	7.60%	4.10%	6.90%	10.52%
Duke Energy Corporation	DUK	$ 4.10	$ 96.49	4.25%	4.38%	6.66%	4.10%	6.15%	10.53%
Entergy Corporation	ETR	$ 4.52	$ 103.64	4.36%	4.50%	6.80%	4.10%	6.26%	10.76%
IDACORP, Inc.	IDA	$ 3.32	$ 92.08	3.61%	3.68%	4.40%	4.10%	4.34%	8.02%
Northwestern Corporation	NWE	$ 2.60	$ 48.83	5.32%	5.44%	4.50%	4.10%	4.42%	9.86%
OGE Energy Corp.	OGE	$ 1.67	$ 34.14	4.90%	n/a	negative	4.10%	n/a	n/a
Pinnacle West Capital Corp.	PNW	$ 3.52	$ 72.20	4.88%	5.04%	7.20%	4.10%	6.58%	11.62%
Portland General Electric Co.	POR	$ 2.00	$ 41.54	4.81%	5.08%	12.50%	4.10%	10.82%	15.90%
The Southern Company	SO	$ 2.88	$ 71.90	4.01%	4.14%	7.30%	4.10%	6.66%	10.80%
Xcel Energy Inc.	XEL	$ 2.19	$ 54.66	4.01%	4.13%	6.73%	4.10%	6.20%	10.34%
								Average:	**10.69%**

Dr. Won Outlier Methodology

Lower Bound:	9.48%
Upper Bound:	11.54%
Average of Lower/Upper Bound:	10.51%

FERC Outlier Methodology

Lower Bound:	
Baa Corporate Bond Yield:	5.86%
Dr. Won Avg. MRP	5.63%
20% of Dr. Won Avg. MRP	1.13%
Lower Bound:	6.99%
Upper Bound:	
Median:	10.52%
Upper Bound (200% of Median):	21.05%

Dr. Won's Adjusted CAPM Analysis

Company	Ticker	Risk-Free Rate	Historical Arithmetic Avg. Return on Lg. Cap Stocks (1926-2023)	Historical Arithmetic Avg. Income-Only Return on LT Govt. Bonds (1926-2023)	Historical Market Risk Premium	*Value Line* Beta	Cost of Equity
Alliant Energy Corporation	LNT	4.58%	12.04%	4.58%	7.46%	0.90	11.29%
Ameren Corporation	AEE	4.58%	12.04%	4.58%	7.46%	0.90	11.29%
American Electric Power Company, Inc.	AEP	4.58%	12.04%	4.58%	7.46%	0.80	10.55%
Avista Corporation	AVA	4.58%	12.04%	4.58%	7.46%	0.90	11.29%
CMS Energy Corporation	CMS	4.58%	12.04%	4.58%	7.46%	0.85	10.92%
Duke Energy Corporation	DUK	4.58%	12.04%	4.58%	7.46%	0.85	10.92%
Entergy Corporation	ETR	4.58%	12.04%	4.58%	7.46%	0.95	11.67%
IDACORP, Inc.	IDA	4.58%	12.04%	4.58%	7.46%	0.85	10.92%
Northwestern Corporation	NWE	4.58%	12.04%	4.58%	7.46%	0.95	11.67%
OGE Energy Corp.	OGE	4.58%	12.04%	4.58%	7.46%	1.05	12.41%
Pinnacle West Capital Corporation	PNW	4.58%	12.04%	4.58%	7.46%	0.95	11.67%
Portland General Electric Company	POR	4.58%	12.04%	4.58%	7.46%	0.90	11.29%
The Southern Company	SO	4.58%	12.04%	4.58%	7.46%	0.90	11.29%
Xcel Energy Inc.	XEL	4.58%	12.04%	4.58%	7.46%	0.85	10.92%
						Average:	**11.29%**

Dr. Won's "Rule of Thumb" BYRP Analysis in Evergy West's Last Rate Proceeding As Applied to the Current Proceeding

	Lower Bound		Upper Bound
3-month Average Moody's A-Rated Utility Bond Yield	5.72%		5.72%
Dr. Won "Rule of Thumb" Risk Premium	3.50%		5.50%
Cost of Equity - Range	9.22%		11.22%
Cost of Equity - Average		**10.22%**	
3-month Average Moody's Baa-Rated Utility Bond Yield	5.94%		5.94%
Dr. Won "Rule of Thumb" Risk Premium	3.50%		5.50%
Cost of Equity - Range	9.44%		11.44%
Cost of Equity - Average		**10.44%**	

Evergy Metro, Inc. d/b/a Evergy Missouri Metro and
Evergy Missouri West, Inc. d/b/a Evergy Missouri West

Docket No.: ER-2024-0189
Date: August 6, 2024

CONFIDENTIAL INFORMATION

The following information is provided to the Missouri Public Service Commission under CONFIDENTIAL SEAL:

Document/Page	Reason for Confidentiality from List Below
Bulkley Rebuttal, p. 67, lns. 10-14	4 and 6
Bulkley Rebuttal, p. 68, lns. 2-9	4 and 6

Rationale for the "confidential" designation pursuant to 20 CSR 4240-2.135 is documented below:

1. Customer-specific information;

2. Employee-sensitive personnel information;

3. Marketing analysis or other market-specific information relating to services offered in competition with others;

4. Marketing analysis or other market-specific information relating to goods or services purchased or acquired for use by a company in providing services to customers;

5. Reports, work papers, or other documentation related to work produced by internal or external auditors, consultants, or attorneys, except that total amounts billed by each external auditor, consultant, or attorney for services related to general rate proceedings shall always be public;

6. Strategies employed, to be employed, or under consideration in contract negotiations;

7. Relating to the security of a company's facilities; or

8. Concerning trade secrets, as defined in section 417.453, RSMo.

9. Other (specify) _____.

Should any party challenge the Company's assertion of confidentiality with respect to the above information, the Company reserves the right to supplement the rationale contained herein with additional factual or legal information.