Exhibit No.:	
Issue(s):	Rate of Return (ROR)/ Capital Structure
Witness/Type of Exhibit:	Murray/Rebuttal
Sponsoring Party:	Public Counsel
Case No.:	ER-2019-0335

REBUTTAL TESTIMONY

OF

DAVID MURRAY

Submitted on Behalf of the Office of the Public Counsel

UNION ELECTRIC COMPANY
D/B/A AMEREN MISSOURI

FILE NO. ER-2019-0335

** **

Denotes Confidential Information that has been Redacted

January 21, 2020

PUBLIC

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Union Electric Company d/b/a Ameren Missouri's Tariffs to Decrease Its Revenues for Electric Service	)))	File No. ER-2019-0335

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

David Murray, of lawful age and being first duly sworn, deposes and states:

1. My name is David Murray. I am a Utility Regulatory Manager for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

David Murray
Utility Regulatory Manager

Subscribed and sworn to me this 21st day of January 2020.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

JERENE A. BUCKMAN
My Commission Expires
August 23, 2021
Cole County
Commission #13754037

Jerene A. Buckman
Notary Public

My Commission expires August 23, 2021.

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REBUTTAL TESTIMONY

OF

DAVID MURRAY

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

FILE NO. ER-2019-0335

Q. Please state your name and business address.

A. My name is David Murray and my business address is P.O. Box 2230, Jefferson City, Missouri 65102.

Q. Are you the same David Murray who previously filed Direct Testimony in this case?

A. Yes.

Q. What it the purpose of your testimony?

A. To respond to the Direct Testimony of Ameren Missouri's witnesses, Robert B. Hevert and Daryl Sagel, as it relates to rate of return ("ROR") and capital structure. I also briefly comment on certain aspects of the testimony of Staff witness, Jeffrey Smith, and the Missouri Industrial Energy Consumers ("MIEC") witness, Christopher C. Walters.

Q. Which ROR witness is least credible as it relates to his or her recommended return on common equity ("ROE") in this case?

A. Mr. Hevert. While the other ROR witnesses, including myself, acknowledge that our recommended ROEs are higher than the cost of equity ("COE"), Mr. Hevert does not. Mr. Hevert's recommended ROE is purportedly based on his opinion that the utility industry's COE is in the range of 9.80% to 10.60%. While this may be consistent with what Ameren Missouri wants the Commission to allow, it is likely at least 400 basis points higher than the utility industry's COE. Ameren Corporation's own internal COE estimates contradict Mr. Hevert's estimates. Being that Ameren Corporation uses its internal COE estimates for financing and investment strategies, rather than to justify a revenue requirement, this COE estimate is more objective and credible.

Q. Does Mr. Walter's inflate some of his COE estimates because of his general discomfort with the current low COE environment?

A. Yes. Although Mr. Walters' recommended ROE of 9.2% is reasonable if applied to my lower recommended common equity ratio, it is apparent from his testimony he is not comfortable with some of the higher assumptions he used to estimate the COE. After providing some of his higher estimates, he consistently qualifies these estimates by providing other market information that implies a lower COE.

Q. Does Mr. Smith use the absolute value of his COE estimates to determine his recommended allowed ROE for this case?

A. No. Mr. Smith uses the Commission's Spire Missouri allowed ROE of 9.8%[1] as his starting point for determining whether Ameren Missouri should be authorized a different ROE. He analyzes macroeconomic and capital market conditions to determine if the current environment still supports a 9.8% ROE for gas utilities. After concluding it does not, he then compares the risk levels of gas utilities and electric utilities to determine that a 9.25% allowed ROE is reasonable for Ameren Missouri's electric utility assets.

Q. Do you agree that the Commission's 9.8% allowed ROE for Spire Missouri's gas assets is the appropriate reference to determine what is fair and reasonable for Ameren Missouri?

A. No. The Commission indicated in its Report & Order in the Spire Missouri case that 9.8% was reasonable because this was a recent average allowed ROE for gas utilities. As a witness in that case, I testified that Spire Missouri should be authorized a lower ROE than Missouri's vertically-integrated electric utilities because its gas distribution operations have lower business risk. Although there was a slight increase in interest rates at the time of the Spire Missouri gas rate case, the overall trend since 2015 has been a continued decline in the cost of capital. To be frank, the Commission went in the wrong direction in that case. Also, I note the Commission indicated that it believed it was authorizing an ROE consistent with average allowed ROEs for gas distribution companies. In fact, the average allowed ROE for gas companies then was closer to 9.6% after eliminating the 11.88%

[1] Case Nos. GR-2017-0215 and GR-2017-0216.

outlier that was included in the average at that time.[2] For this reason, the relevant benchmark for this case is Ameren Missouri's last authorized ROE of 9.53%. Additionally, the Commission should be cognizant of the ROR allowed for the electric utility assets of Ameren Missouri's affiliate, Ameren Illinois Company.

Q. Do Mr. Walters and Mr. Smith recommend ROE ranges?

A. Yes. Mr. Walters recommends an ROE range of 8.8% to 9.5% and Mr. Smith recommends an ROE range of 8.75% to 9.75%. The most material difference between my recommended ROE compared to their ROEs is the upper end of the range of reasonableness. The evidence I provide in my direct testimony proves that Ameren Missouri's previous 9.53% allowed ROE is not reasonable because capital market evidence shows Ameren Missouri has a significantly lower cost of capital now. Therefore, the upper ends of Mr. Smith's and Mr. Walter's ranges should be dismissed, because they do not recognize the changes in capital costs since Ameren Missouri was awarded a 9.53% ROE.

Q. What are the primary differences in the positions as it relates to the recommended capital structure in this case?

A. Mr. Sagel and Mr. Walters' recommend using Ameren Missouri's capital structure per figures specific to Ameren Missouri's books, which results in a common equity ratio of 51.91%. Mr. Smith recommends Ameren Missouri's common equity ratio be set at 50% in order to recognize Ameren Corp's more leveraged capital structure and the fact that this is the common equity ratio accepted for ratemaking in Illinois, per statute, for the Ameren Illinois' utilities. I recommend Ameren Missouri's common equity ratio be set at 48%, which is consistent with how Ameren Corp is capitalized.

ROBERT HEVERT'S RECOMMENDED ROE

Q. How did Mr. Hevert determine his recommended ROE range of 9.8% to 10.6%?

[2] RRA Regulatory Focus, Major Rate Case Decisions January – September 2017, October 26, 2017.

A. Mr. Hevert recommends this ROE range because he suggests it is consistent with Ameren Missouri's COE. Rational use of cost of equity models, utility investor assumptions, Ameren Corp.'s internal financial models and simple tests of reasonableness all prove that Ameren Missouri's COE is most likely around 6% or less. Mr. Hevert indicates his COE estimate of 9.80% to 10.60% is conservative.[3] It is hard to fathom how any rational investor would consider Mr. Hevert's COE estimate as conservative when utility bond yields are at their lowest levels in at least 60 years and utility P/E ratios are at all-time highs. The only reason I can surmise that Mr. Hevert is so determined to provide higher COE estimates is because he testifies that if Ameren Missouri is afforded "a reasonable opportunity to earn its market-based Cost of Equity, neither customers nor shareholders should be disadvantaged,"[4] Given such testimony, Mr. Hevert must estimate a higher COE range in order to justify his recommended ROE.

Q. What COE methods did Mr. Hevert use?

A. Mr. Hevert used the following methods/models: (1) Constant-Growth Discounted Cash Flow ("DCF") method; (2) the Capital Asset Pricing Model ("CAPM") and Empirical ("ECAPM"); and (3) the Bond Yield Plus Risk Premium method.

Q. Does Mr. Hevert acknowledge that it is important to understand how investors compare and analyze their investment opportunities?

A. Yes. He points this out when discussing recent FERC cases. If this is truly important, then it only makes sense to seek to understand how investors actually value utility stocks and the COE they use to determine target prices for utility stocks.[5] I have done so, and I can testify that investors do not perform analyses or make assumptions as Mr. Hevert suggests in his testimony.

[3] Hevert Direct, p. 3, l. 12.
[4] *Id.*, p. 9, ll. 10-11.
[5] *Id.,* p. 14, ll. 8-9 and ll 17-19.

Q. What COE methodologies does Mr. Hevert rely on most heavily to support his recommended ROE range of 9.8% to 10.60%?

A. He appears to be giving the most weight to his CAPM and risk premium methodologies. Mr. Hevert's mean constant-growth DCF results are around 9%, which are below his recommended ROE range.

Q. Do you agree with Mr. Hevert's constant-growth DCF assumptions?

A. No. Mr. Hevert assumes that his proxy groups' dividends per share ("DPS") will grow in perpetuity at a compound annual growth rate ("CAGR") of approximately 5.67%. Mr. Hevert's claims that because stock prices reflect consensus equity analysts' estimates, this proves investors use these analysts' projected CAGR in earnings per share ("EPS") as a proxy for expected growth in DPS in perpetuity. They do not. Mr. Hevert's conclusion is not corroborated by actual investment analysts' practices, and assuming such results in upwardly-biased COE estimates. As I demonstrated in my Direct Testimony, equity analysts do not project DPS will grow at a rate consistent with these higher near-term forecasted growth rates in EPS. They assume DPS will grow in perpetuity at a rate consistent with long-term industry averages, which is closer to 3%. They then discount these expected dividends by a cost of equity of around 6% or lower.

Q. If you used the same COE used by investors and assumed Ameren Corp's DPS could grow at a 5.67% rate forever into the future, what would Ameren's stock be worth?

A. $612 per share.

Q. What is Ameren Corp's stock worth if you use a 6% COE and a reasonable perpetual growth rate of 3%?

A. $67.33.

Q. What is Ameren Corp's stock price right now?

A It has been trading at around $77.

Q. Do you think Ameren Corp.'s higher stock price means that Ameren's cost of equity is likely lower or the perpetual growth rate used by investors is higher?

A. Considering the high valuation levels of utility stocks over the last several months, coupled with sustained levels of low long-term interest rates, it is more rational to expect it is the former rather than the latter, but it may be a combination of both.

Q. How can you be sure?

A. Historical electric utility industry growth has only been in the 2% to 3% range. **

[6] ** Additionally, assuming a growth rate higher than this after the U.S. economy underwent a fundamental shift post the financial crisis and recession in 2008/2009 timeframe, defies reason.

Q. But doesn't Mr. Hevert cite several studies to support his position regarding EPS being used as a proxy for DPS in the constant-growth DCF?[7]

A. Yes, but these studies do not prove that investors use analysts' forecasted CAGR in EPS as proxy for DPS in perpetuity. However, they do conclude that equity analysts' recommendations influence stock prices.

Q. Can you describe the foundational study that is misinterpreted as proof that investors use equity analysts' EPS CAGR estimates as a proxy for constant-growth in DPS?

A. Yes. The foundational study cited to support the use of equity analysts' 5-year EPS growth rate forecasts in the DCF is that of Burton G. Malkiel and John G. Cragg, "*Expectations and the Structure of Share Prices*." This academic study's conclusion was that equity analysts' expectations had a greater influence on stock prices compared to simple extrapolations of historical financial data. This conclusion is logical considering the vast amounts of resources dedicated to the discipline of securities analysis. However, I am not

[6] Highly Confidential Schedule DM-D-13, p. 6.
[7] Hevert Direct, pp. 46-47.

sure how subsequent studies concluded that the results of this study somehow translated into a proof that investors use 5-year EPS forecasts as a constant growth rate in the single-stage DCF methodology. In fact, the Cragg and Malkiel paper does not even use the DCF valuation model when testing their hypothesis regarding the influence of analysts' projections on stock prices. It is more plausible to conclude that, because investors rely on equity analysts' expectations, they rely on these analysts' investment recommendations (e.g. buy, sell or hold). Equity analysts' investment recommendations are based on their assessment of the intrinsic value of a given stock. Analysts' methodologies for estimating a fair price varies, but most at least assess the current price-to-forward earnings ratios both on a consensus basis and on the analysts' own estimates.

Cragg and Malkiel specifically indicated the following in their study:

> We would not argue that these estimates necessarily give an accurate picture of general market expectations. It would, however, seem reasonable to suggest that they are representative of opinions of some of the largest professional investment institutions and that they may not be wholly unrepresentative of more general expectations. **Since investors consult professional investment institutions in forming their own expectations, individuals' expectations may be strongly influenced—and so reflect—those of their advisers**. That several of our participating firms find it worthwhile to publish these projections and provide them to their customers provides prima facie evidence that a certain segment of the market places some reliance on such information in forming its own expectations. Also, insofar as other security analysts and investors follow the same sorts of procedures as those used by our sample analysts in forming expectations, general investors' expectations would resemble those of the analysts. Consequently, these predictions may well serve as acceptable proxies for general expectations and surely seem worthy of detailed analysis. (emphasis added)

Considering the above, in which the foundation for the study concludes that investors rely and depend on their investment advisors, and therefore, stock prices reflect these expectations, it is much more reasonable to conclude that the COE assumptions used by these investment analysts are reflected in share prices. To assume that investors utilize the information provided by equity analysts in a way that is wholly inconsistent with how these analysts use the data in their own analysis, is not credible. Equity analysts often use the

dividend discount model ("DDM") to estimate a fair price to pay for the stock. The DDM is synonymous with the DCF in utility ratemaking settings. The DCF in utility ratemaking is simply solving for the required return/cost of equity variable. In valuation, the goal is to solve for the fair price of the stock. Consequently, if equity analysts are of value to their clients, then the stock prices will reflect their estimates of future dividends and the required return on these dividends. Consequently, if one accepts the studies that security analysts' expectations influence investors, which is the conclusion made by Malkiel and Cragg, then this means that stock prices reflect the cost of equity used by these very same analysts. My experience has been that these equity discount rates are much lower than Mr. Hevert's cost of equity estimates and even lower than my own COE estimates.

However, equity analysts do not expect commissions to set ROEs equivalent to the market-implied cost of equity. If allowed ROEs were set equal to the cost of equity, this would cause downward pressure on the stock price of a company whose earnings rely primarily on the regulated utility operations. This downward pressure is because investors are accustomed to regulators showing resistance to reducing allowed ROEs, even if market evidence supports doing so.

Consider further how one of the co-author's of the Cragg and Malkiel paper has estimated required returns on stocks in his past studies and how he estimated required returns recently. In his May 1979 study, "*The Capital Formation Problem in the United States*," Malkiel estimated the required returns on the Dow Jones Industrial Average by using Value Line growth rates for the first five years. This growth rate was then reduced over time to that of the expected real growth rate of the economy, which was 3.6% at the time.

Mr. Malkiel has been consistent with his views on constraints on long-term growth for the market. Mr. Malkiel has provided expected long-term market returns at various times during the past decade.[8] In his long-term return projection, he made at the end of 2012, he used a projected growth rate of 5% based on the long-run history of earnings and dividend

[8] Burton G. Malkiel, "Where to Put Your Money in 2012," *Wall Street Journal*, January 5, 2012; Burton G. Malkiel, "A 2015 'Rebalancing' Act for Investors," *Wall Street Journal,* December 31, 2014.

growth in the United States. Mr. Malkiel simply added the long-term growth rate of 5% to the S&P 500 dividend yield of approximately 2% for a total return estimate of 7%.

The focus on earnings growth rates is understandable considering that most security analysts' stock predictions are based on a multiple of P/E ratios, but security analysts provide this information to evaluate potential P/E ratios as they compare to consensus P/E ratios. The ability of the analyst to accurately project future earnings and justified P/E ratios will determine whether that analyst is successful. Consequently, the focus on analysts' EPS projections is understandable in this context, but it is not the focus for absolute valuation methods such as a discounted cash flow analysis.

Q. Which of Mr. Hevert's models seem to provide the main support for his higher COE estimates?

A. Models that use risk premium estimates, which are heavily influenced by subjective estimates.

Q. Does Mr. Hevert's testimony summarize the results of his risk premium influenced models?

A. Yes. Table 4 on page 19 of his testimony shows various results for both versions of his Capital Asset Pricing Model and his Bond Yield Plus Risk Premium Model.

Q. What do these results indicate?

A. Other than the standard CAPM using Bloomberg Beta Coefficients, the rest of his risk premium methodologies imply COE estimates of around 9.5% to over 11%.

Q. What market risk premium does Mr. Hevert use for purposes of his CAPM analyses?

A. Mr. Hevert assumes market risk premiums of 11.00% and 12.04% for purposes of his CAPM estimates.

Q. Are market risk premiums synonymous with total expected market returns?

A. No. Market risk premiums are added to a risk-free rate to provide a projected total market return.

Q. What does Mr. Hevert suggest investors project for total equity market returns in the U.S.?

A. Mr. Hevert suggests that investors expect total market returns of 13.85% to 15.07% for U.S. broad equity indices, such as the S&P 500. Mr. Hevert adds his estimated market risk premiums to a current and projected risk-free rate of 2.85% and 3.03%, respectively to arrive at these expected market returns.

Mr. Hevert's estimate of total returns on the S&P 500 is twice that of expectations from such reputable sources as The Survey of Professional Forecasters and JP Morgan Asset Management. They are even higher than JP Morgan Asset Management's expected returns for emerging markets of 9.2% to 11.15%.[9]

Q. But doesn't Mr. Hevert indicate that he derives his market risk premium estimates from two investor recognized sources, Bloomberg and Value Line?

A. Yes. However, he did not rely on the sources for direct market risk premium estimates. He simply used these sources for financial data that he incorporated into his own method of estimating market risk premium estimates. Although the fact that Mr. Hevert's market risk premium estimates are twice as high as estimates from reputable investor sources is sufficient to dismiss his estimates, I will address how Mr. Hevert achieved such extremely high expected market returns.

Q. How did Mr. Hevert achieve such high market risk premium estimates?

A. Mr. Hevert claims he is trying to emulate expected market returns by adding consensus 5-year CAGR in EPS to a current dividend yield to determine a projected return for the S&P

[9] https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/2019/survq119; and
https://am.jpmorgan.com/us/en/asset-management/gim/protected/adv/ltcma/executive-summary

500. The reason Mr. Hevert labels his market risk premium estimates as "Bloomberg" and "Value Line" derived market risk premium estimates is because these were the sources for analyst estimates of a long-term CAGR in EPS. I know of no authoritative source that suggests this is a rational or reasonable approach for purposes of estimating market returns. In fact, I know of several authoritative sources that do not recommend using a growth rate higher than GDP for purposes of determining the expected return for a broad index, such as the S&P 500.

Q. What academic support are you aware of?

A. The 2010 curriculum for Level III of the Chartered Financial Analyst ("CFA") Program discussed how analysts often use the Gordon growth model (synonymous with the constant growth DCF model used in utility ratemaking) to formulate the long-term expected return for the broader equity markets. In the case of a broad-based equity index, such as the S&P 500, it is reasonable to estimate the long-term potential capital gains for the index by using estimated nominal GDP over a long-term period. The curriculum specifically provided the following formula for estimating the constant growth rate with an explanation that follows:

> Earnings growth rate = GDP growth rate + Excess corporate growth (for the index companies)
>
> where the term *excess corporate growth* may be positive or negative depending on whether the sectoral composition of the index companies is viewed as higher or lower growth than that of the overall economy. If the analyst has chosen a broad-based equity index, the excess corporate growth adjustment, if any, should be small.[10]

Considering the fact that the S&P 500's dividend yield is approximately 2% and projected growth in U.S. nominal GDP is approximately 4.0%, it seems most investment professionals' forecasts of returns in the 6% range are consistent with above-prescribed formula.

Q. What long-term growth rate is embedded in Mr. Hevert's expected market returns?

A. 11.7% to 12.7%.

[10] 2010 CFA® Program Curriculum, Level III, Volume 3, p. 34.

Q. Are you aware of any common valuation metrics that show how irrational Mr. Hevert's market growth rate expectations are?

A. Yes. This valuation metric provides a sanity check on potential growth for capital markets. It was made popular by Warren Buffett when he provided insight on how high the market, as measured by the Wilshire 5000, became valued as compared to U.S. GDP. At that time, the Wilshire 5000 was around 1.4x that of GDP. Currently it is at a similar level.

Q. What would this ratio be in 50 years if the market grew at around 12% per year as Mr. Hevert suggests?

A. The Wilshire 5000 index would be approximately 50x times the GDP level. Based on the market capitalization of the Wilshire 5000 of approximately $33 trillion as of September 30, 2019, the Wilshire 5000 would have a market capitalization of $9.5 quadrillion in 50 years. U.S. GDP was $21.543 trillion as of the same date. Based on a 4.5% long-term growth rate for the U.S. economy, GDP would be approximately $194.6 trillion in 50 years. This shows the magnitude of Mr. Hevert's irrational market growth rate assumptions.

Q. What expected equity risk premiums does Ameren Corporation use for its strategic financing decisions?

A. ** ** [11]

Q. What financial entity provided this equity risk premium estimate to Ameren Corporation?

A. JP Morgan.

Q. When was that equity risk premium estimated?

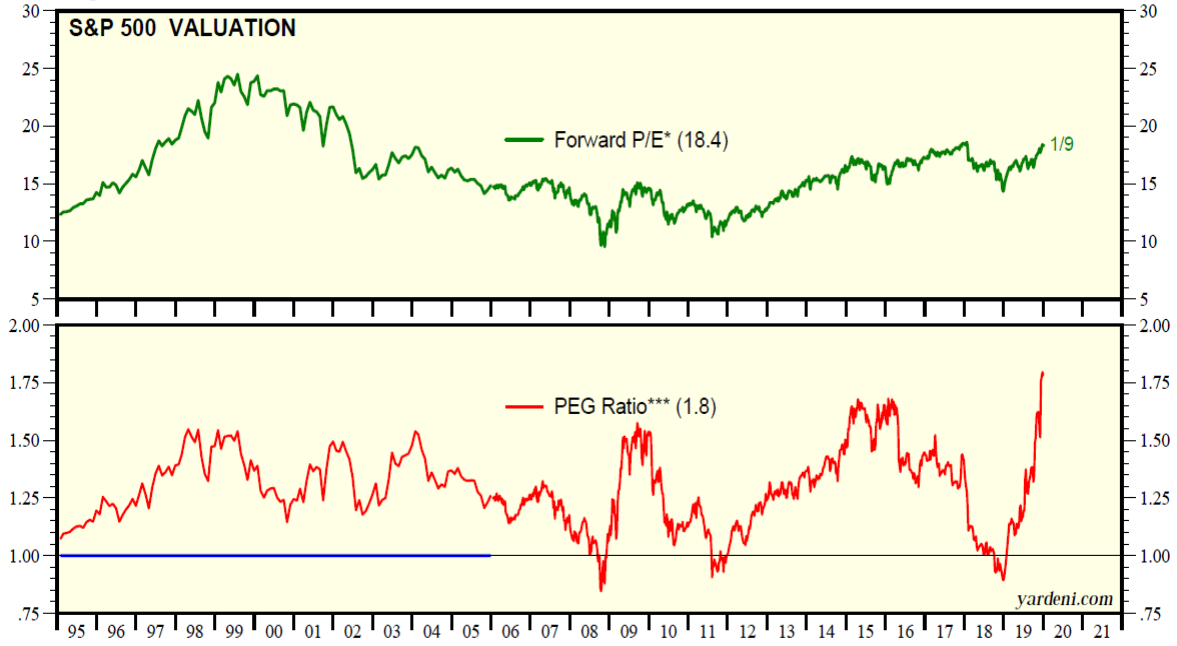
A. July, 2019.

Q. How has the S&P 500 performed since July, 2019?

[11] See Schedule DM-D-16 attached to my Direct Testimony.

A. The S&P 500 achieved a total return of 12.15% for the period through January 15, 2020. Although it is not prudent to annualize such figures for purposes of reporting investment performance, if this return was annualized, it would equate to an annual return of 22.43%. The S&P 500's price-to-2020-estimated-earnings was 15.99x as of June 28, 2019. As of January 15, 2020, it was 18.76x.[12] This expansion in the S&P 500 P/E ratio occurred despite little change in the expected long-term growth in EPS for the S&P 500. The price-to-earnings/estimated 5-year EPS CAGR ("PEG") ratio was 1.47x as of June 28, 2019 and 1.65x as of January 15, 2020. The significant increase in both the S&P 500's P/E and PEG ratios are shown in the following charts from Yardeni Research:

Figure 5.



* Price divided by 12-month forward consensus expected operating earnings per share.
** Sector or industry forward P/E relative to S&P 500 forward P/E.
*** Sector or industry forward P/E relative to sector or industry consensus 5-year LTEG forecast.
Source: I/B/E/S data by Refinitiv.

[13]

[12] https://my.spindices.com/indices/equity/sp-500
[13] https://www.yardeni.com/pub/spearnrevalgrpeg.pdf

Q. What is the relevance of this information to your testimony on market risk premiums?

A. Market risk premiums are impacted by the valuation levels of the broader markets, with the S&P 500 being a primary market index analyzed to determine implied market risk premiums. Because Ameren Corp used a JP Morgan market risk premium estimate from July, 2019, when the S&P 500 valuation levels were lower than they are today, it is logical that JP Morgan's current market risk premium estimate would be even lower.

Q. Did JP Morgan provide Ameren an estimate of a market risk premium during a past period in which the S&P 500 valuation levels were similar to what they are currently?

A. Yes. Page 3 of Schedule DM-D-12 attached to my Direct Testimony shows that as of January 2018, JP Morgan calculated Ameren's cost of capital using a market risk premium of ** **. In January 2018, the S&P 500 traded at a P/E multiple of around 18x, which is similar to where it trades today.

Q. What does JP Morgan's estimated market risk premium prove?

A. It proves that Ameren Corp would not rely on Mr. Hevert's market risk premium estimates for purposes of making strategic financing decisions to achieve the lowest cost of capital. The COE is a market-driven concept and determining a reasonable estimate should not depend on the person's role.

Q. Why are Mr. Hevert's ECAPM results so much higher than the standard CAPM results?

A. The results are higher because Mr. Hevert's ECAPM gives 25% weight to the unadjusted market risk premium and 75% weight to the utility beta adjusted market risk premium. Being that utility betas cause an adjustment factor of close to 50% to the market risk premium, this amplifies the bias inherent in Mr. Hevert's high risk premiums.

Q. Does this mean that the larger the market risk premium estimate, the more widely divergent the ECAPM results will be compared to the standard CAPM?

A. Yes.

Q. Can you provide an example?

A. Yes. Mr. Hevert assumes a market risk premium of approximately 11.5% compared to more rational estimates of approximately 6%. If Mr. Hevert had used a more reasonable market risk premium of 6%, his ECAPM results using a 0.5 beta would have been approximately 6.75% compared to a standard CAPM result of 6%, a difference of 75 basis points. Using Mr. Hevert's 11.5% equity risk premium, his ECAPM results would be approximately 10.1875% compared to a standard CAPM estimate of 8.75%, a difference of 144 basis points. While the adjustment to the risk premium is proportional to the total risk premium in both circumstances, the absolute value of the difference grows with higher market risk premium estimates.

Q. Has Mr. Hevert sponsored ROR testimony for Ameren Missouri in the past?

A. Yes. He has sponsored ROR testimony for all of Ameren Missouri's general rate cases since 2011, which includes the following docket numbers: ER-2011-0028, ER-2012-0166, ER-2014-0258 and ER-2016-0179.

Q. Has Mr. Hevert sponsored ROR testimony for Missouri's other electric utility companies?

A. Yes. He has sponsored testimony on behalf of KCPL and GMO since 2014 and he recently started sponsoring testimony on behalf of Empire.

Q. Has he made a significant change to the methods he employs to develop his recommended ROR for purposes of this case?

A. Yes. Mr. Hevert used to sponsor a detailed multi-stage DCF analyses in which he allowed for a variation in estimated cash flows over time. He then estimated a terminal cash flow by either using a constant-growth DDM or an estimated terminal P/E multiple.

Q. Do you know why Mr. Hevert is no longer sponsoring the multi-stage DCF he used ever since he started testifying in Missouri about a decade ago?

A. No.

Q. Had he embraced DCF approaches in the past when making ROE recommendations to this Commission?

A. Yes. In Case No. ER-2012-0166, Mr. Hevert indicated he was placing primary weight on both his multi-stage DCF analysis and his constant-growth DCF analysis because he understood that the Missouri Public Service Commission placed primary weight on these approaches in their decision in Case No. ER-2011-0028.[14]

Q. How did Mr. Hevert determine the terminal expected cash flow when he performed his multi-stage DCF analyses in Case No. ER-2011-0028?

A. Mr. Hevert estimated the terminal value using two methods. In the first method, he used the constant-growth DCF to estimate the terminal value. In the second method, he applied a P/E multiple to his terminal EPS estimate to determine the terminal cash flow to the investor. For purposes of estimating this terminal P/E multiple, he applied an historical median P/E multiple of 13.56x to the terminal EPS estimate.[15]

Q. Has Mr. Hevert always estimated the terminal cash flow using an historical median terminal P/E ratio?

A. No. He ceased using an historical median in Missouri rate cases after that 2011 rate case. Subsequent to the 2011 rate case, utility P/E ratios increased well above the historical medians, which if Mr. Hevert had continued to assume such, this would have caused his multi-stage DCF results to be very low.

Q. Did he still estimate a terminal value using a P/E multiple in subsequent rate cases?

[14] Robert Hevert Direct, Case No. ER-2012-0166, p. 3, ll. 12-14
[15] Robert Hevert Direct, Case No. ER-2011-0028, Schedule RBH-E2.

A. Not in Case Nos. ER-2012-0166 and ER-2014-0258, but he resumed doing so in Case No. ER-2016-0179.

Q. What terminal P/E multiple did he use in that case?

A. 19.54x.[16]

Q What was Mr. Hevert's support for this terminal P/E multiple?

A. Mr. Hevert calculated a recent 30-day average P/E multiple for his proxy group near the time he filed his testimony.[17] He assumed that his proxy group's P/E multiple would remain the same at the terminal year, in 2031.

Q. What was the last rate case in Missouri in which Mr. Hevert performed multi-stage DCF analyses for purposes of arriving at his ROE recommendation?

A. The KCPL rate case, Case No. ER-2018-0285.

Q. What terminal multiple did he use in that case?

A. He used a terminal P/E multiple of 23.56x in his direct testimony.

Q. If Mr. Hevert had still performed a multi-stage DCF analyses in this case and still estimated a terminal cash flow based on a current P/E ratio, what would this P/E ratio be?

A. Based on the workpapers he provided with his direct testimony in this case, the average P/E ratio for his proxy group was 23.91x in May 2019. Therefore, if Mr. Hevert used a current P/E multiple to estimate a terminal cash flow, then his terminal cash flow would be determined using the electric utility industry's recent all-time high valuation levels.

Q. Why is this information relevant to evaluating Mr. Hevert's recommendation in this case?

[16] Robert Hevert Direct, Case No. ER-2016-0179, Schedule RBH-2.
[17] *Id.,* p. 56, ll. 3-4.

A. This information is relevant because Mr. Hevert is putting more weight on his methodologies that use an irrational equity risk premium. In the past, when utility stocks had much lower valuation levels, due to higher costs of capital, it was easier and more credible to justify a higher cost of equity using lower terminal P/E ratios. Not that I personally consider current utility P/E multiples as irrational, considering the current and expected prolong period of low long-term interest rates. The quandary for Mr. Hevert is that in past testimonies, he has consistently indicated that utility valuation levels are unsustainably high and will revert to an historic mean. However, at the same time, for purposes of estimating the COE using his DCF methods, he found himself making the contradicting assumption that they will remain high. If Mr. Hevert were to factor in an expected contraction in P/E ratios, this implies that utility investors would actually receive lower capital gains than those supported by industry growth fundamentals. However, if one makes the assumption that current P/E ratios will be sustained, which is consistent with the efficient markets hypothesis, then one is admitting that investors expect the cost of capital to remain low for a sustained period.

Q. Mr. Hevert indicates that the sudden decline in interest rates appears more transitory than a fundamental change in investor sentiment. Do you agree?

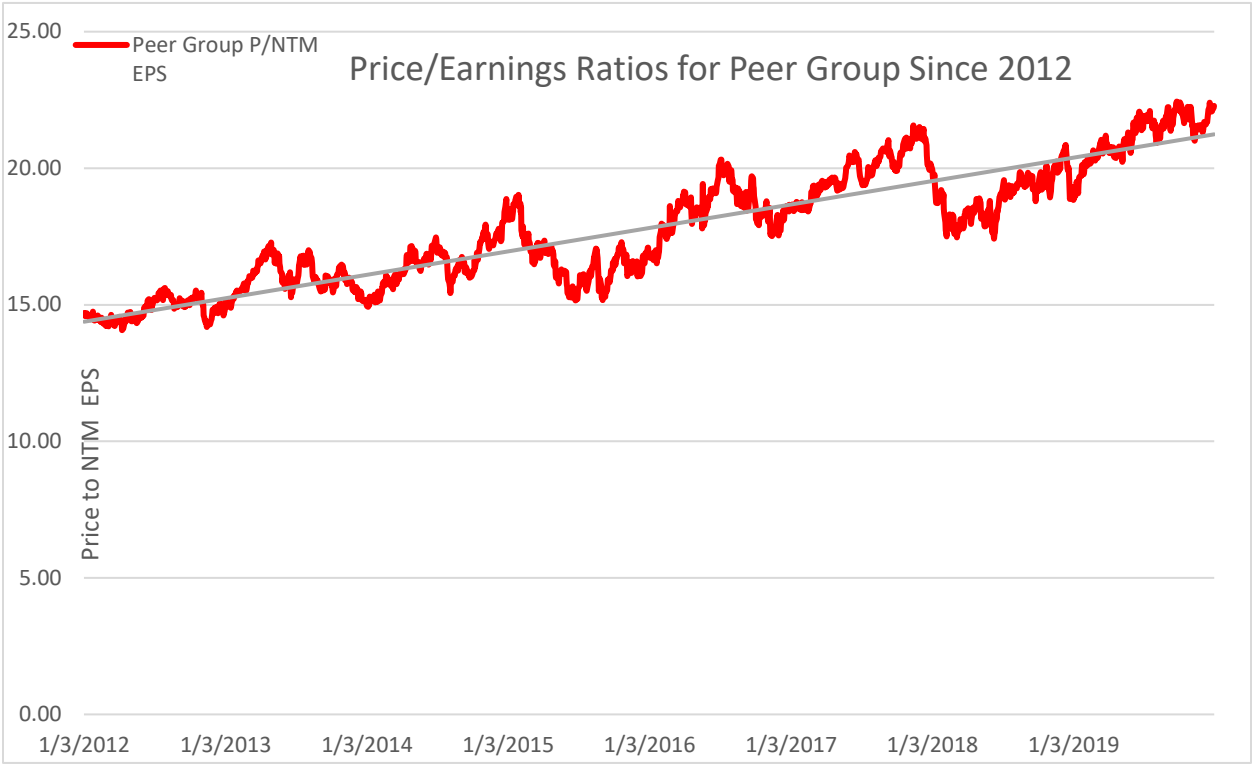
A. No, but more importantly, the market doesn't agree. Again, although I perform my own cost of common equity studies, I also recognize that I am not an asset manager or providing professional stock advice. This is why it is important to have an awareness of the analysis and communication provided to investors. Although the fact that electric utility stocks have been trading at sustained P/E ratios of 22x provides a fairly clear signal that investors accept lower long-term rates as a fundamental change, and there is no need to just rely on my or Mr. Hevert's interpretation of this market data when this information is readily available in the market. My review of this information shows that investors are factoring in a fundamental change in long-term interest rates. While there was merit in not factoring in a "lower for longer" situation when the Fed took extraordinary quantitative easing measures earlier in the last decade, this is no longer the cause of low long-term rates. It is now a function of market forces, both domestic and international.

Q. Does Mr. Hevert express concern about the current high utility P/E ratio situation?

A. Yes. Mr. Hevert indicates that "utility valuations have a limit, even when investors look to them for an alternate source of income as interest rates fall."[18] He further states that "investors will not accept the incremental risk of capital losses when utility valuation levels become 'stretched'."[19]

Q. Has the absolute value of utility P/E ratios been increasing over the last decade?

A. Yes. The following chart shows the consistent and gradual increase in the price-to-next twelve months (P/NTM) EPS for the proxy groups I combined from my analysis in Ameren Missouri's 2012 and 2014 rate cases:



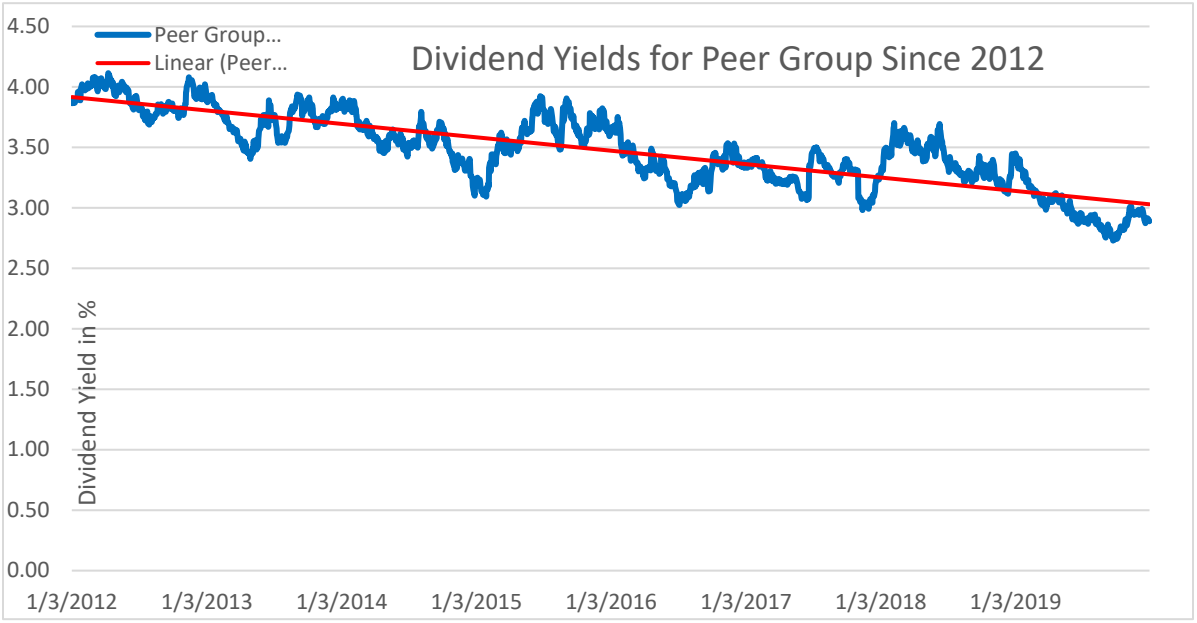
As is obvious from the above chart, electric utility stocks haven't suddenly increased to their current high valuation levels. While there have been intermediate expansions and

[18] Hevert Direct, p. 40, ll. 6-7.
[19] *Id,* p. 39, ll. 8-9.

contractions during this period, the trend has been a consistent and sustained expansion. I added a trend line to emphasize the undeniable trend during the past decade.

Q. Have utility dividend yields reacted as would be expected with a consistent expansion in P/E ratios?

A. Yes. Please see the below chart showing the downward trend in dividend yields:



Q. Do you and Mr. Hevert have a fundamental difference in opinion about how the Commission should consider high utility valuation levels?

A. Yes. Utility share prices are increasing significantly because the present value of utilities' expected cash flows are higher due to lower costs of equity. The increase in P/E ratios is not due to a fundamental shift in utility industry's growth rates, but rather a structural shift in the cost of capital. Lower costs of capital cause higher utility share prices if returns to shareholders aren't reduced. If bond prices increase due to macroeconomic factors, utility bond yields decrease. When an investor buys a bond they are offered a return consistent with the required yield to attract debt investors, not the historical coupon rate at which the bond was issued. Utility equity investors should not be immune from this relationship.

The value of utility stocks has increased because the required return on equity has decreased. It is time to recognize the lower cost of this equity in the allowed ROR charged to ratepayers.

Q. Has Mr. Hevert been reducing his reliance on DCF methods to estimate the COE?

A. Yes. While Mr. Hevert still performed his multi-stage DCF analyses in all Missouri rate cases until this one, before he eliminated the multi-stage DCF altogether, he advised the Commission not to place too much weight on the implied COE estimates derived from DCF analyses. Mr. Hevert had the same opinion five years ago, because in his opinion utility P/E ratios were too high and not sustainable then.

Q. What did Mr. Hevert state in Ameren Missouri's 2014 rate case about high valuation levels at that time?

A. Mr. Hevert stated the following in his rebuttal testimony in the Ameren Missouri rate case, Case No. ER-2014-0258:

> For example, the market prices used to calculate the dividend yield portion of the Constant Growth Discounted Cash Flow model were taken from a period during which utilities in general, and the proxy companies in particular, traded at unusually high, and likely unsustainable, levels.
>
> In fact, during Opposing ROE Witnesses' study period, utility Price/Earnings ("P/E") ratios exceeded their long-term average, to the point that they were greater than the market P/E ratio (as measured by the Standard & Poor's ("S&P") 500). As would be expected, utilities (including the proxy group companies), generally have traded below the market P/E ratio; there is no reason to believe that the currently elevated P/E ratios will remain in perpetuity. Yet, several of the Opposing ROE Witnesses give considerable weight to the Constant Growth Discounted Cash Flow model, which assumes that the current P/E ratio will not change, ever. The inconsistency between model assumptions and market data should cause us to view those results with great caution rather than giving them undue weight in developing ROE recommendations.[20]

Mr. Hevert went on to state the following in his surrebuttal testimony:

[20] ER-2014-0258, Hevert Rebuttal, p.5, l. 9 – p. 6, l. 2.

> The notion that the Commission should dramatically reduce the Company's ROE based on the current utility valuation multiples also is misplaced. P/E ratios tend to revert back toward their mean over time; various forward-looking market indices support that view. If the Opposing ROE Witnesses believe that the current levels represent a fundamental shift in how investors value stocks in general, and utility stocks in particular, they have not explained that position. If they see the shift as temporary change based on trading, rather than fundamental valuation precepts, they have not adequately reflected that change in the assumptions included in their ROE estimation methods and recommendations. In either case, the conclusion that the Commission should reduce the Company's ROE simply is not supported by observable and relevant market data.[21]

Consequently, Mr. Hevert has been consistent in his denial of the obvious decline in the utility industry's COE, which is clearly and logically captured using the DCF method. While I understand that the Commission may not want to react suddenly and dramatically to each extreme expansion in utility valuations or each extreme contraction in utility valuations, the above chart of P/E ratios shows that the overall trend since 2012 has been an expansion.

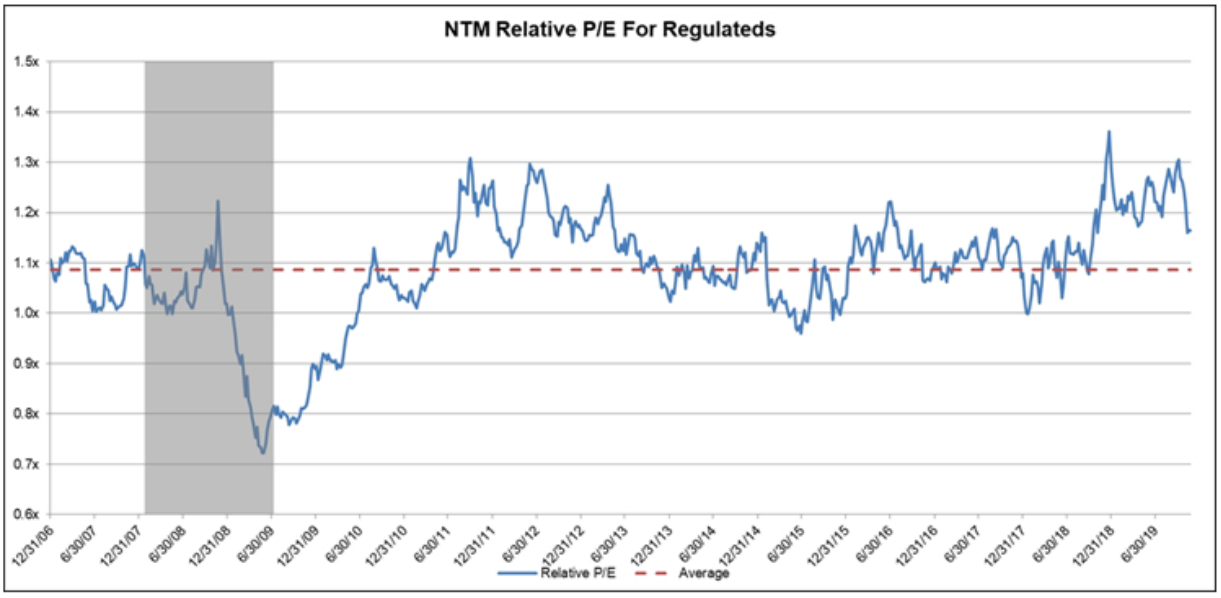
Q. Is there anything in Mr. Hevert's previous testimony about P/E ratios that may provide insight about why he may have abandoned his multi-stage DCF analyses?

A. Yes. He indicates that utility P/E ratios tend to revert to their mean over time. This was consistent with how Mr. Hevert approached his multi-stage DCF analyses in 2011, but not in 2016.

Q. Mr. Hevert also indicates that it isn't normal for utilities' P/E ratios to trade at a premium to the S&P 500. Do you agree?

A. Yes. This was not normal until the past decade. The following table was included in the Evercore ISI report I attached as Schedule DM-D-14 to my Direct Testimony:

[21] ER-2014-0258, Hevert Surrebuttal, p. 13, l. 15 – p. 14, l. 2.



[22]

As shown, utilities have been trading at a premium to the S&P 500 for almost the entire period since the U.S. economy entered the current era of low long-term rates. This is not because utilities are expected to have higher earnings growth than the S&P 500, it is simply because regulated utilities' fairly certain cash flows are valued much higher in a low cost of capital environment. Of course, it is because of this paradigm that investors should price in an expectation that regulatory commissions will eventually lower utility companies' allowed ROEs to reflect this sustained lower cost of capital. In fact, some investors have expressed some bewilderment as to the "stickiness" of allowed ROEs in light of the clear and obvious evidence that allowed ROE and long-term interest rate levels have widened considerably in recent years. Although I am not familiar with a policy goal or economic theory that suggests utility stock P/E ratios should revert to the traditional discount to the S&P 500, it is certainly an intriguing issue. In my opinion, the fact that the S&P 500 trades at a lower P/E ratio than utilities, despite their higher growth expectations, supports lowering allowed ROEs. Allowing the utility industry's allowed ROE to COE spread to widen only perpetuates such distortions.

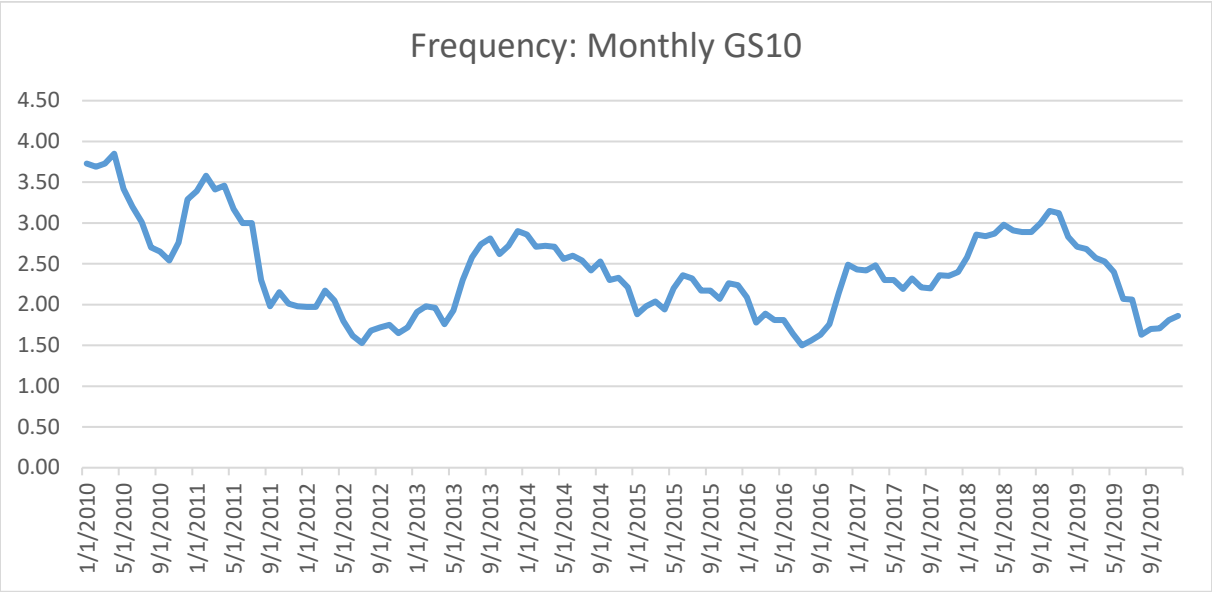
Q. At what interest rate levels do utilities typically trade at a premium to the S&P 500?

[22] Greg Gordon, et. al, "Regulatory Risk Is Starting To Be More Pronounced. Utilities Have Lagged The S&P 500 By 6.6% Since Late October," November 27, 2019, Evercore ISI, p. 9.

A. As consistently discussed by Goldman Sachs in its equity research, this relationship typically occurs when 10-year United States Treasury ("UST") trade at yields below 3%.

Q. How often has the 10-year UST been yielding less than 3% over the past decade?

A. Most of the time, as can be seen in the below chart:



There was a brief surge in late 2018, but as concerns grew once again about sustainability of higher long-term growth, 10-year UST yields returned to levels significantly below 3%, which drove the utility industry's relative premium to the S&P 500 back to around 1.3x, near all-time highs.

Q. Does Mr. Hevert's Bond-Yield-Plus Risk Premium approach perpetuate the market distortion Mr. Hevert observes as being abnormal?

A. Yes. Mr. Hevert's Bond-Yield-Plus Risk Premium is a regression analyses of allowed ROEs to interest rates. Mr. Hevert's conclusion from his analysis is that because allowed ROEs don't fall as much as interest rates, an offsetting adjustment needs to be made to smooth out the reduction in allowed ROEs for this convexity. This approach does not allow sufficient compression of allowed ROEs versus the utility industry's COE. It only serves to support the premium at which utilities trade to the S&P 500.

CAPITAL STRUCTURE

Q. Do you agree with the other parties positions on capital structure in this case?

A. No, but at least Staff's witness Mr. Smith scrutinized whether Ameren Missouri's capital structure was logical and consistent within the family of companies it is held. Mr. Sagel sponsored Ameren Missouri's proposed capital structure in this case and MIEC witness, Mr. Walters simply adopted this recommended capital structure. Mr. Walters indicates that he considers the requested common equity ratio reasonable because it is in line with average common equity ratios awarded to other electric utilities. However, his testimony does not discuss Ameren Missouri's capital structure as it relates to the rest of its family.

Q. Does Ameren Missouri's capital structure deserve higher scrutiny in this case?

A. Absolutely. While I have laid out my argument for a more leveraged capital structure in significant detail in my Direct Testimony and don't need to repeat it here, I still want to emphasize that market evidence clearly indicates that Ameren Missouri's reduced business risk profile due to plant-in-service-accounting ("PISA") has benefited Ameren Corporation's share price and its debt capacity. Being that Ameren Missouri's ratepayers are the source of the more certain rate of return that allow for this higher debt capacity, they should receive the benefit of this higher debt capacity by paying for a less costly capital structure, i.e. lower common equity ratio. It simply defies basic risk and return principles for Ameren Missouri to have the same common equity ratio, (52%), for the last ten years regardless of regulatory, economic and/or capital market conditions. The only capital structure that has been of primary importance to Ameren Corp for purpose of achieving the lowest reasonable capital cost is that of Ameren Corp on a consolidated basis. This was evident from my review of Board of Director materials that showed credit ratings that achieve the lowest cost of capital under various economic and capital market conditions.

Q. Do you consider Mr. Smith's common equity ratio recommendation of 50% as reasonable?

A. It is more reasonable than Ameren Missouri's constant equity ratio of approximately 52%. However, I'll note that if Missouri were to approach authorizing Ameren Missouri a common equity ratio similar to how Illinois does for AIC, then it should not be fixed at this level. Illinois has actually codified AIC's authorized equity ratio in law and AIC has targeted this amount of equity in its capital structure ever since. As is evident from Ameren Corp's issuance of greater amounts of holding company debt over the last few years, if it is able to have reasonable assurance it will be authorized equity ratios it manages for its subsidiaries, its consolidated leverage will continue to creep higher than that which it manages for its subsidiaries.

SUMMARY AND CONCLUSIONS

Q. Can you summarize your main conclusions after reviewing the various ROR recommendations in this case?

A. Yes. Mr. Hevert is the only witness that appears to be steadfast in trying to hold onto the notion that even as interest rates are declining and staying low, this shouldn't be interpreted as meaning the utility industry has a low cost of capital. Mr. Hevert has abandoned one version of his DCF and who knows when he may abandon the DCF altogether. Because the DCF uses utility stock prices and fundamentals, it should be embraced rather than abandoned. Utility industry long-term growth rates don't change much so a declined in utility dividend yields provides a fairly clear view of the decline in the cost of equity. The correlation of utility stock prices (and therefore the COE) to debt yields is not controversial among capital market participants. In fact, they continue to openly express surprise and bewilderment that commissions haven't lowered allowed ROEs to respond to the obvious decline in the cost of capital. The other witnesses are trying to provide reliable information on capital market conditions, even if they recommend a higher ROE than necessary.

Although capital structure is a very important issue in this case, the other witnesses have not provided much detail supporting their recommendations. Consequently, I have not provided much additional testimony on capital structure. I hope to provide the Commission

with more helpful information about capital structure when I respond to other parties' rebuttal on my capital structure recommendation.

Q. Does this conclude your testimony?

A. Yes.