

1 **Q. Are you aware of any authoritative sources, academic or practical, that use Ms.**
2 **Bulkley's approach for estimating market returns?**

3 A. No. I know of no authoritative source that suggests this is a rational or reasonable approach
4 for purposes of estimating market returns. In fact, I know of several authoritative sources
5 that recommend against using a growth rate higher than GDP for purposes of determining
6 the long-term expected return for a broad index, such as the S&P 500.

7 **Q. What academic support are you aware of?**

8 A. The 2010 curriculum for Level III of the Chartered Financial Analyst ("CFA") Program
9 discusses how analysts often use the Gordon growth model (synonymous with the constant
10 growth DCF model used in utility ratemaking) to formulate the long-term expected return
11 for the broader equity markets. In the case of a broad-based equity index, such as the S&P
12 500, it is reasonable to estimate the long-term potential capital gains for the index by using
13 estimated nominal GDP over a long-term period. The curriculum specifically provides the
14 following formula for estimating the constant growth rate with an explanation that follows:

15
$$\text{Earnings growth rate} = \text{GDP growth rate} + \text{Excess corporate growth (for the}$$

16
$$\text{index companies)}$$

17 where the term *excess corporate growth* may be positive or negative
18 depending on whether the sectoral composition of the index companies is
19 viewed as higher or lower growth than that of the overall economy. If the
20 analyst has chosen a broad-based equity index, the excess corporate growth
21 adjustment, if any, should be small.³¹

22 Considering that the S&P 500's current dividend yield is approximately 1.6% and projected
23 long-term growth in U.S. nominal GDP is around 4.0%, it seems that investment
24 professionals' forecasts of long-term returns for the S&P 500 of around 5%³² are consistent
25 with the above-prescribed formula.

³¹ 2010 CFA® Program Curriculum, Level III, Volume 3, p. 34.

³² Murray Direct, p. 26, lines 18-19.

1 **Q. Are you aware of any common valuation metrics that dispute Ms. Bulkley's market**
2 **growth rate expectations?**

3 A. Yes. This valuation metric provides a sanity check on potential growth for capital markets.
4 Warren Buffett made it popular when he provided insight on how high the market, as
5 measured by the Wilshire 5000, became valued as compared to U.S. GDP at the time of
6 the "dot com" bubble around March 2000. At that time, the Wilshire 5000 was around
7 1.4x that of GDP. Currently it is around 2x, implying very a very low market cost of equity.

8 **Q. What would this ratio be in 50 years if the market grew at the 12.45% compound**
9 **annual growth rate Ms. Bulkley suggests is appropriate?**

10 A. The Wilshire 5000 index would be approximately 100x times the GDP level. Based on the
11 market capitalization of the Wilshire 5000 of approximately \$45.99 trillion as of June 30,
12 2021, the Wilshire 5000 would have a market capitalization of \$16.24 quadrillion in 50
13 years. U.S. GDP was \$22.74 trillion as of the same date. Based on a 4.0% long-term
14 growth rate for the U.S. economy, GDP would be approximately \$161.61 trillion in 50
15 years. It is not rational to assume corporate wealth will become much larger than the
16 economy in which it operates, let alone 100x the size of the economy. This explains why
17 the CFA Program advises not using a perpetual growth rate much, if any, higher than the
18 GDP growth rate of the economy(ies) in which a company operates.

19 **Q. Why are Ms. Bulkley's ECAPM results higher than her standard CAPM results?**

20 A. The results are higher because Ms. Bulkley's ECAPM gives 25% weight to the unadjusted
21 market risk premium and 75% weight to the utility beta adjusted market risk premium.
22 Being that Ms. Bulkley's utility betas at least reduce her high equity risk premium estimates
23 by 10% to 20%, because her ECAPM allows for a 25% weighting to an unadjusted risk
24 premium, this amplifies the bias inherent in Mr. Bulkley's high risk premiums.

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

27 A. Yes.

1 **Q. Can you explain?**

2 A. Yes. Ms. Bulkley assumes a market risk premium of approximately 11.33% to 12.36%
3 compared to more rational estimates used by investors of approximately 5% to 6%. If Ms.
4 Bulkley had used a more reasonable market risk premium of 6%, her ECAPM adjustment
5 would have been approximately half the adjustment she made in the range of 30 to 33 basis
6 points higher than her standard CAPM.

7 *BOND YIELD PLUS RISK PREMIUM ANALYSIS*

8 **Q. What are your thoughts on Ms. Bulkley's Bond-Yield-Plus Risk Premium**
9 **("BYPRP") analysis?**

10 A. Ms. Bulkley's BYPRP analysis is a regression analysis of allowed ROEs to interest rates.
11 Ms. Bulkley concludes from her regression analysis that because allowed ROEs haven't
12 declined as much as interest rates, an adjustment needs to be made to recognize that
13 regulators have been hesitant to reduce allowed ROEs as much as lower interest rates
14 would suggest. This approach does not allow sufficient compression of allowed ROEs
15 versus the utility industry's COE. It only serves to maintain the current wide spread
16 between the utility industry's COE and allowed ROE.

17 *CONSIDERATION FOR SPECIFIC BUSINESS AND REGULATORY RISK*

18 **Q. What is your response to Ms. Bulkley's discussion related to her views on Ameren**
19 **Missouri's specific business and regulatory risks as it relates to its gas utility?**

20 A. Ms. Bulkley maintains that because Ameren Missouri's gas utility is only a small part of
21 the overall company, a small size risk premium should be considered. Although Ms.
22 Bulkley does not make a specific adjustment to her COE results to take into consideration
23 the fact that Ameren Missouri's gas utility assets are only approximately 3% of Ameren
24 Missouri's overall assets, she claims that this small size could justify up to a 226 basis point
25 (2.26%) increase to her CAPM COE estimates.³³ If this is the case, then I am perplexed as

³³ Bulkley Direct, p. 57, Ins. 5-9.

1 to why she recommends a lower authorized ROE for Ameren Missouri's gas utility as
2 compared to Ameren Missouri's electric utility. Although Ms. Bulkley subjectively
3 described the additional business risks related to Ameren Missouri's large construction
4 program for its electric utility, she did not provide a quantification that would suggest its
5 ROE should be up to 226 basis points higher than her base COE estimates. Regardless,
6 Ms. Bulkley also recognized that her proxy group is smaller than the average capitalization
7 of a company in the broader market. Therefore, instead of making another upward
8 adjustment to her already inflated CAPM COE estimates, she could have simply given
9 more weight to her DCF COE estimates, which directly capture investors' perception of all
10 risks related to the company (including smaller size) through the price they are willing to
11 pay for the stock. However, because Ms. Bulkley believes the DCF is also unreliable
12 without adjustments, it may be difficult to decide which model she believes is more
13 deficient.

14 Ms. Bulkley's upward adjustment also pretends that Ameren Missouri's gas utility is a
15 separate stand-alone company. If she is making this assumption, then she should carry her
16 assumptions further for the fact that LDCs typically carry a much higher percentage of
17 short-term debt in their capital structure to support their assets. This was evident in my
18 analysis of Spire Missouri in the currently pending rate case, Case No. GR-2021-0108.
19 Instead, I simply recommend the Commission ignore these hypotheticals and authorize a
20 ROR based on the reality of the current financing and ownership structure associated with
21 Ameren Missouri's gas utility.

22 *DR. WON'S RECOMMENDED ROE:*

23 **Q. How does Dr. Won approach his recommended allowed ROE in this case?**

24 A. Dr. Won uses the Commission's authorized ROE of 9.8% for Spire Missouri in its 2017
25 local natural gas distribution rate case³⁴ as his starting point for determining whether he
26 believes capital market conditions justify authorizing Ameren Missouri's gas utility a
27 different ROE. Dr. Won relies primarily on implied DCF COE estimates from the period

³⁴ Case No. GR-2017-0215, Amended Report and Order, March 7, 2018.

1 of Spire Missouri's 2017 rate case to current implied DCF COE estimates in order to
2 conclude that the COE has decreased by 30 basis points since the Commission made its
3 decision in the 2017 rate case. Dr. Won uses his estimate of the decrease in the COE to
4 support the mid-point of his recommended ROE range of 9.25% to 9.75%.

5 **Q. Do you agree that it is appropriate to consider the Commission's 9.8% allowed ROE**
6 **in the 2017 Spire Missouri rate case for purposes of determining a fair and reasonable**
7 **ROE for Ameren Missouri's gas distribution system?**

8 A. No.

9 **Q. Why?**

10 A. The Commission indicated in its Report & Order in the Spire Missouri 2017 rate case that
11 9.8% was reasonable because this was a recent average allowed ROE for gas utilities. As
12 a witness in that case, I testified that Spire Missouri should be authorized an ROE of 9.25%
13 based on capital market conditions at the time showing LDCs were trading at a premium
14 to electric utilities due to lower business risk. I considered the Commission's consistent
15 authorization of an approximate 9.5% ROE for Missouri's largest electric utilities (Ameren
16 Missouri, Kansas City Power & Light Company, and KCP&L Greater Missouri
17 Operations) since 2014 to be the appropriate reference point. Although there was a slight
18 increase in interest rates at the time of the Spire Missouri gas rate case, the overall trend
19 since 2015 had been a continued decline in the cost of capital. To be frank, my analysis
20 showed that the Commission went in the wrong direction in that case. Also, I note the
21 Commission indicated that it believed it was authorizing an ROE consistent with average
22 allowed ROEs for gas distribution companies. In fact, the average allowed ROE for gas
23 companies then was closer to 9.6% after eliminating the 11.88% outlier that was included
24 in the average at that time.³⁵

³⁵ RRA Regulatory Focus, Major Rate Case Decisions January – September 2017, October 26, 2017.

1 **Q. Based on this information, what should be the ceiling of a fair and reasonable**
2 **authorized ROE for Ameren Missouri's gas utility?**

3 A. No higher than 9.5%, which recognizes a ceiling of 9.25% for Ameren Missouri's electric
4 utility and the fact that LDCs are trading at a discount to regulated electric utility
5 companies.

6 **Q. Do you agree that capital market conditions justify an allowed ROE of up to 9.75%?**

7 A. No. Considering the Commission authorized Ameren Missouri a 9.53% ROE in its 2014
8 rate case, Case No. ER-2014-0258, it is illogical to consider an ROE any higher than this
9 level. Although LDCs are currently trading at a relevant discount to electric utilities, for
10 the period since 2014, capital market conditions for the utility industry are much more
11 favorable now than they were in 2015.

12 **SUMMARY AND CONCLUSIONS**

13 **Q. Can you summarize your main conclusions and views as it relates to an authorized**
14 **ROR in this case?**

15 A. Yes. Staff and the Company recommend the Commission authorize Ameren Missouri a
16 ROR based on Ameren Missouri's capital structure balances. As I have demonstrated,
17 Ameren Missouri's common equity ratio has been managed to approximately 52% over
18 the past decade. Because Ameren Missouri's business risk has declined with its ability to
19 elect PISA, it is illogical that Ameren Missouri's capital structure should remain static.
20 Instead of managing Ameren Missouri's capital structure to allow Ameren Missouri's
21 ratepayers to receive the benefit of lower capital costs their rates support, Ameren Corp is
22 retaining this savings for shareholders. The Commission needs to correct this
23 misappropriation of debt capacity by authorizing a lower common equity ratio for purposes
24 of setting Ameren Missouri's ROR.

25 Additionally, it simply makes no sense to authorize an ROE at a level consistent with that
26 which the Commission determined reasonable over five years ago when interest rates were

1 higher and utility stock valuation levels were lower. Ms. Bulkley's recommended ROE
2 does not recognize this decline and in fact, dismisses current low cost of capital conditions
3 as being unsustainable. Staff views the current cost of capital for utility companies as being
4 slightly lower than when the Commission decided a 9.8% ROE for Spire Missouri was
5 appropriate. However, as I explained, the Commission's support for its 9.8% authorized
6 ROE in the Spire Missouri rate case was based on an average ROE biased by one data
7 point. Staff's assessment does not consider the longer-term trend since the Commission
8 deemed 9.5% ROEs as being reasonable starting in 2015. Interest rates are lower and utility
9 stock valuation levels are higher than they were five years ago. The longer-term trend
10 continues to support lower authorized returns. In fact, investors still factor in risks of
11 authorized ROEs being reduced due to the continued low cost of capital environment.

12 **Q. Does this conclude your testimony?**

13 **A. Yes.**

**LAST SEVEN QUARTERS OF AMEREN CORP AND
AMEREN MISSOURI CAPITAL STRUCTURES
BASED ON GAAP BALANCES
(dollars in thousands)**

AMEREN CORP

Capital Components	12/31/2019	3/31/2020	6/30/2020	9/30/2020	12/30/2020	3/30/2021	6/30/2021	Average	CWIP Adjusted
Common Equity	\$8,059,000	\$8,085,000	\$8,227,000	\$8,489,000	\$8,938,000	\$9,148,000	\$9,353,000	\$8,614,143	\$8,614,143
Long-Term Debt ¹	\$9,130,000	\$9,472,000	\$10,265,000	\$10,266,000	\$10,830,000	\$11,279,000	\$12,244,000	\$10,498,000	\$10,498,000
Preferred Stock	\$142,000	\$142,000	\$142,000	\$142,000	\$142,000	\$129,000	\$129,000	\$138,286	\$138,286
Short-Term Debt ²	\$440,000	\$615,000	\$120,000	\$272,000	\$490,000	\$889,000	\$431,000	\$465,286	\$0
Total	\$17,771,000	\$18,314,000	\$18,754,000	\$19,169,000	\$20,400,000	\$21,445,000	\$22,157,000	\$19,715,714	\$19,250,429

Capital Structure	12/31/2019	3/31/2020	6/30/2020	9/30/2020	12/30/2020	3/30/2021	6/30/2021	Average	CWIP Adjusted
Common Equity	45.35%	44.15%	43.87%	44.29%	43.81%	42.66%	42.21%	43.76%	44.75%
Long-Term Debt ¹	51.38%	51.72%	54.73%	53.56%	53.09%	52.60%	55.26%	53.19%	54.53%
Preferred Stock	0.80%	0.78%	0.76%	0.74%	0.70%	0.60%	0.58%	0.71%	0.72%
Short-Term Debt ²	2.48%	3.36%	0.64%	1.42%	2.40%	4.15%	1.95%	2.34%	0.00%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Capital Structure	12/31/2019	3/31/2020	6/30/2020	9/30/2020	12/30/2020	3/30/2021	6/30/2021	Average
Common Equity	46.50%	45.68%	44.15%	44.92%	44.89%	44.50%	43.05%	45.11%
Long-Term Debt ¹	52.68%	53.52%	55.09%	54.33%	54.39%	54.87%	56.36%	54.15%
Preferred Stock	0.82%	0.80%	0.76%	0.75%	0.71%	0.63%	0.59%	0.75%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

AMEREN MISSOURI COMPANY TOTAL CAPITALIZATION

Capital Components	12/31/2019	3/31/2020	6/30/2020	9/30/2020	12/30/2020	3/30/2021	6/30/2021	Average	CWIP Adjusted
Common Equity	\$4,269,000	\$4,259,000	\$4,411,000	\$4,708,000	\$5,130,000	\$5,290,000	\$5,471,000	\$4,677,833	\$4,677,833
Long-Term Debt ¹	\$3,961,000	\$4,304,000	\$4,304,000	\$4,305,000	\$4,848,000	\$4,848,000	\$5,370,000	\$4,428,333	\$4,428,333
Preferred Stock	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000
Short-Term Debt ²	\$234,000	\$130,000	\$144,000	\$0	\$0	\$204,000	\$0	\$118,667	\$0
Total	\$8,544,000	\$8,773,000	\$8,939,000	\$9,093,000	\$10,058,000	\$10,422,000	\$10,921,000	\$9,304,833	\$9,186,167

Capital Structure	12/31/2019	3/31/2020	6/30/2020	9/30/2020	12/30/2020	3/30/2021	6/30/2021	Average	CWIP Adjusted
Common Equity	49.96%	48.55%	49.35%	51.78%	51.00%	50.76%	50.10%	50.23%	50.92%
Long-Term Debt ¹	46.36%	49.06%	48.15%	47.34%	48.20%	46.52%	49.17%	47.60%	48.21%
Preferred Stock	0.94%	0.91%	0.89%	0.88%	0.80%	0.77%	0.73%	0.86%	0.87%
Short-Term Debt ²	2.74%	1.48%	1.61%	0.00%	0.00%	1.96%	0.00%	1.30%	0.00%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Capital Structure	12/31/2019	3/31/2020	6/30/2020	9/30/2020	12/30/2020	3/30/2021	6/30/2021	Average
Common Equity	51.37%	49.28%	50.15%	51.78%	51.00%	51.77%	50.10%	50.89%
Long-Term Debt ¹	47.67%	49.80%	48.94%	47.34%	48.20%	47.45%	49.17%	48.23%
Preferred Stock	0.96%	0.93%	0.91%	0.88%	0.80%	0.78%	0.73%	0.88%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

SPREAD BETWEEN AMEREN CORP AND AMEREN MISSOURI EQUITY RATIOS

	12/31/2019	3/31/2020	6/30/2020	9/30/2020	12/30/2020	3/30/2021	6/30/2021
Ameren Corp Equity Ratio	45.35%	44.15%	43.87%	44.29%	43.81%	42.66%	42.21%
Ameren Missouri Equity Ratio	49.96%	48.55%	49.35%	51.78%	51.00%	50.76%	50.10%
Equity Spreads	4.62%	4.40%	5.48%	7.49%	7.19%	8.10%	7.88%

1. Long-term debt includes current or maturing portion of long-term debt

2. Short-term debt excludes current or maturing portion of long-term debt

Source: SEC 10-K Filing Information through S&P Global Market Intelligence

**LAST SEVEN QUARTERS OF AMEREN CORP AND
AMEREN MISSOURI CAPITAL STRUCTURES
BASED ON CARRYING VALUES
(dollars in thousands)**

AMEREN CORP

Capital Components	12/31/2019	3/31/2020	6/30/2020	9/30/2020	12/30/2020	3/30/2021	6/30/2021	Average	CWIP Adjusted
Common Equity	\$8,059,000	\$8,085,000	\$8,227,000	\$8,489,000	\$8,938,000	\$9,148,000	\$9,353,000	\$8,614,143	\$8,614,143
Long-Term Debt ¹	\$9,008,709	\$9,389,298	\$10,186,681	\$10,190,825	\$10,757,443	\$11,208,838	\$12,177,317	\$10,123,632	\$10,123,632
Preferred Stock	\$142,546	\$142,546	\$142,546	\$142,546	\$142,546	\$130,159	\$130,159	\$140,482	\$140,482
Short-Term Debt ²	\$440,000	\$615,000	\$120,000	\$272,000	\$490,000	\$889,000	\$431,000	\$465,286	\$0
Total	\$17,650,255	\$18,231,844	\$18,676,228	\$19,094,372	\$20,327,989	\$21,375,997	\$22,091,476	\$19,343,543	\$18,878,257

Capital Structure	12/31/2019	3/31/2020	6/30/2020	9/30/2020	12/30/2020	3/30/2021	6/30/2021	Average	CWIP Adjusted
Common Equity	45.66%	44.35%	44.05%	44.46%	43.97%	42.80%	42.34%	43.95%	45.63%
Long-Term Debt ¹	51.04%	51.50%	54.54%	53.37%	52.92%	52.44%	55.12%	52.99%	53.63%
Preferred Stock	0.81%	0.78%	0.76%	0.75%	0.70%	0.61%	0.59%	0.71%	0.74%
Short-Term Debt ²	2.49%	3.37%	0.64%	1.42%	2.41%	4.16%	1.95%	2.35%	0.00%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Capital Structure	12/31/2019	3/31/2020	6/30/2020	9/30/2020	12/30/2020	3/30/2021	6/30/2021	Average
Common Equity	46.83%	45.89%	44.34%	45.10%	45.05%	44.65%	43.18%	45.01%
Long-Term Debt ¹	52.35%	53.30%	54.90%	54.14%	54.23%	54.71%	56.22%	54.26%
Preferred Stock	0.83%	0.81%	0.77%	0.76%	0.72%	0.64%	0.60%	0.73%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

AMEREN MISSOURI COMPANY TOTAL CAPITALIZATION

Capital Components	12/31/2019	3/31/2020	6/30/2020	9/30/2020	12/30/2020	3/30/2021	6/30/2021	Average	CWIP Adjusted
Common Equity	\$4,269,000	\$4,259,000	\$4,411,000	\$4,708,000	\$5,130,000	\$5,290,000	\$5,471,000	\$4,791,143	\$4,791,143
Long-Term Debt ¹	\$3,871,922	\$4,249,112	\$4,250,871	\$4,251,936	\$4,795,473	\$4,796,662	\$5,318,221	\$4,504,885	\$4,504,885
Preferred Stock	\$81,828	\$81,828	\$81,828	\$81,828	\$81,828	\$81,828	\$81,828	\$81,828	\$81,828
Short-Term Debt ²	\$234,000	\$130,000	\$144,000	\$0	\$0	\$204,000	\$0	\$101,714	\$0
Total	\$8,456,749	\$8,719,939	\$8,887,699	\$9,041,764	\$10,007,301	\$10,372,490	\$10,871,049	\$9,479,570	\$9,377,856

Capital Structure	12/31/2019	3/31/2020	6/30/2020	9/30/2020	12/30/2020	3/30/2021	6/30/2021	Average	CWIP Adjusted
Common Equity	50.48%	48.84%	49.63%	52.07%	51.26%	51.00%	50.33%	50.52%	51.09%
Long-Term Debt ¹	45.78%	48.73%	47.83%	47.03%	47.92%	46.24%	48.92%	47.49%	48.04%
Preferred Stock	0.97%	0.94%	0.92%	0.90%	0.82%	0.79%	0.75%	0.87%	0.87%
Short-Term Debt ²	2.77%	1.49%	1.62%	0.00%	0.00%	1.97%	0.00%	1.12%	0.00%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Capital Structure	12/31/2019	3/31/2020	6/30/2020	9/30/2020	12/30/2020	3/30/2021	6/30/2021	Average
Common Equity	51.92%	49.58%	50.45%	52.07%	51.26%	52.02%	50.33%	51.09%
Long-Term Debt ¹	47.09%	49.47%	48.62%	47.03%	47.92%	47.17%	48.92%	48.03%
Preferred Stock	1.00%	0.95%	0.94%	0.90%	0.82%	0.80%	0.75%	0.88%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

SPREAD BETWEEN AMEREN CORP AND AMEREN MISSOURI EQUITY RATIOS

	12/31/2019	3/31/2020	6/30/2020	9/30/2020	12/30/2020	3/30/2021	6/30/2021
Ameren Corp Equity Ratio	45.66%	44.35%	44.05%	44.46%	43.97%	42.80%	42.34%
Ameren Missouri Equity Ratio	50.48%	48.84%	49.63%	52.07%	51.26%	51.00%	50.33%
Equity Spreads	4.82%	4.50%	5.58%	7.61%	7.29%	8.20%	7.99%

1. Long-term debt includes current or maturing portion of long-term debt

2. Short-term debt excludes current or maturing portion of long-term debt

Source: SEC 10-K Filing Information through S&P Global Market Intelligence and Ameren Missouri responses to Staff Data Request No. 114.