Exhibit No.	
Issues:	Return on Equity and Capital Structure
Witness:	Ann E. Bulkley
Exhibit Type:	Surrebuttal
Sponsoring Party:	Missouri-American Water Company
Case No.	WR-2017-0285 SR-2017-0286
Date:	February 9, 2018

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. WR-2017-0285
CASE NO. SR-2017-0286

SURREBUTTAL TESTIMONY

OF

ANN E. BULKLEY

ON BEHALF OF

MISSOURI-AMERICAN WATER COMPANY

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

IN THE MATTER OF MISSOURI-AMERICAN WATER COMPANY FOR AUTHORITY TO FILE TARIFFS REFLECTING INCREASED RATES FOR WATER AND SEWER SERVICE	)))))	**CASE NO. WR-2017-0285** **CASE NO. SR-2017-0286**

AFFIDAVIT OF ANN E. BULKLEY

Ann E. Bulkley, being first duly sworn, deposes and says that she is the witness who sponsors the accompanying testimony entitled "Surrebuttal Testimony of Ann E. Bulkley"; that said testimony was prepared by her and/or under her direction and supervision; that if inquiries were made as to the facts in said testimony, she would respond as therein set forth; and that the aforesaid testimony is true and correct to the best of her knowledge.

Ann E. Bulkley

State of Massachusetts
County of Middlesex
SUBSCRIBED and sworn to
Before me this 8 **day of** February **2018.**

Notary Public

My commission expires:

LAUREEN G. SASSEVILLE
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
October 19, 2023

SURREBUTTAL TESTIMONY
ANN E. BULKLEY
MISSOURI-AMERICAN WATER COMPANY
CASE NO. WR-2017-0285
CASE NO. SR-2017-0286

TABLE OF CONTENTS

SURREBUTTAL TESTIMONY

ANN E. BULKLEY

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Ann E. Bulkley. I am a Senior Vice President of Concentric Energy Advisors, Inc. ("Concentric"). My business address is 293 Boston Post Road West, Suite 500, Marlborough, Massachusetts 01752.

Q. On whose behalf are you submitting this testimony?

A. I am testifying on behalf of Missouri-American Water Company ("MAWC" or the "Company"), a wholly-owned subsidiary of American Water Works Company, Inc. ("AWW").

Q. Did you previously provide Direct and Rebuttal Testimony in this proceeding?

A. Yes. I filed Direct Testimony on June 30, 2017, and Rebuttal Testimony on January 17, 2018.

Q. What is the purpose of your Surrebuttal Testimony?

A. The purpose of my Surrebuttal Testimony is to respond to the Rebuttal Testimony of Missouri Public Service Commission Staff ("Staff") witness Jeffrey Smith and the Rebuttal Testimony of Michael P. Gorman on behalf of the Missouri Office of Public Counsel ("OPC") and the Missouri Industrial Energy Consumers ("MIEC"). I also address

testimony offered by Staff witness Busch and OPC witness Marke with respect to the Company's proposed revenue stabilization mechanism ("RSM").

II. EXECUTIVE SUMMARY

Q. Please summarize your key conclusions regarding the Rebuttal Testimonies of Staff witness Smith and OPC/MIEC witness Gorman.

A. My key conclusions are as follows:

1) Both Mr. Smith and Mr. Gorman spend many pages of their respective Rebuttal Testimony disputing my application of the DCF and CAPM models, and Mr. Gorman explains why he believes those models are producing reasonable results under current market conditions. However, Mr. Gorman and Mr. Smith essentially abandon the results of the traditional ROE estimation models, or base their recommendation on the high results of those models while simultaneously arguing that the models are producing reasonable results and that MAWC has the same risk profile as the proxy group. Despite these claims, and in essence, in refutation of them, Mr. Gorman only uses the high results of his Constant Growth DCF analysis and his high CAPM result to support his ROE recommendation of 9.0 percent, and Mr. Smith does not rely on the results of any of his ROE estimation models to support his 9.25 percent recommendation.

2) The authorized ROE must meet all three standards from *Hope* and *Bluefield* – financial integrity, capital attraction, and comparable returns. Mr. Gorman only considers whether his recommendation meets the financial integrity standard and fails to recognize that equity investors have different requirements than bond investors. Mr. Smith does not specifically address any of the three standards, but simply benchmarks the return for MAWC against what was

awarded to KCPL – a different company in a different industry at a different time. As shown in my Rebuttal and Surrebuttal Testimonies, the respective ROE recommendations of Mr. Smith and Mr. Gorman do not meet the comparable return or capital attraction standards of *Hope* and *Bluefield*.

3) Mr. Gorman criticizes the inputs and assumptions in my DCF and CAPM analyses even though he uses many of those same inputs and assumptions in his own DCF and CAPM analyses (e.g., projected risk-free rate in CAPM; analyst's projected EPS growth rates in DCF; and forward-looking market risk premium in CAPM). These internal inconsistencies between Mr. Gorman's Direct and Rebuttal Testimony cast doubt on his results and on his critique of my methodologies.

4) While Mr. Smith criticizes the inputs and assumptions used in my models, many of these same assumptions also have been relied on by Mr. Gorman. In contrast, the assumptions that Mr. Smith relied on to develop the ROE estimation models presented in his testimony do not produce ROE results that he can rely on for his recommended ROE. So in the end he abandons his models and relies on an adjustment to the KCPL ROE.

5) Mr. Smith compares the variability in return recommendations between my prior testimonies and those offered by Mr. Gorman. He suggests that the Cost of Equity is a single number that can be applied in all cases in a given time period. He argues that because there is variability in my recommendations, my recommendations "preclude reasonable consideration". To the contrary, the *Hope* and *Bluefield* standards require that an ROE provide a return that is

comparable to the returns offered for similar risk investments. To meet that standard an analyst should review the specific factors for each individual company, taking into consideration the differences in risk factors between the company and the proxy group. It would be highly unlikely that in the analyses prepared for 47 individual companies since the fall of 2017, the diverse regulatory environments, sizes, capital programs and other key risk factors could possibly result in a single cost of equity or require similar adjustment to the proxy group to justify a return that is in a very narrow band. Furthermore, considering the returns that have been authorized by regulatory commissions over the time-period provided by Mr. Smith, it is clear that regulators do not share his belief that the cost of equity can be defined by a single value or a tight range of values. As demonstrated in Mr. Smith's data, the range of returns authorized for water utilities in 2017 was 140 basis points, very similar to the range observed in my recommendations across vertically integrated electric utilities, transmission and distribution electric utilities, natural gas distribution companies and water utilities.

6) Staff witness Busch and OPC witness Marke both suggest that approval of a decoupling mechanism should result in a reduction in the ROE or equity ratio for MAWC. Neither of these witnesses offers any evidence that demonstrates that the implementation of decoupling reduces the investor-required return on equity. As I have discussed in response to Mr. Smith, the ROE is established based on a review of the market returns for a proxy group of comparable companies. As part of that analysis, it is important to review the revenue

stabilization mechanisms that have been implemented by the proxy companies to determine whether the proposed decoupling mechanism is indeed risk mitigating as compared to that group. As shown in Schedule 9 of my Direct Testimony, the proxy companies have decoupling mechanisms and future test years which provide similar revenue stabilization and recognize the expense levels and plant that will be serving customers when new rates take effect. Therefore, even if their respective claims had a theoretical basis, it is not necessary to make any adjustment to the ROE or the equity ratio proposed by MAWC in this proceeding for the implementation of a decoupling mechanism because to do so would double count any such effect.

III. RESPONSE TO ISSUES RAISED IN THE REBUTTAL OF MR. SMITH AND MR. GORMAN

A. Financial Integrity Standard

Q. Please summarize OPC/MIEC witness Gorman's testimony regarding whether his ROE recommendation supports the credit ratings and financial integrity of MAWC.

A. Based on Mr. Gorman's analysis of MAWC's credit metrics, he claims that at his recommended ROE of 9.0 percent, and a ratemaking capital structure with a 50 percent common equity ratio, MAWC's credit metrics will be in line with an investment grade bond rating, and will continue to support the Company's financial integrity and access to capital under reasonable terms and conditions.[1] Mr. Gorman testifies that a return on

[1] Rebuttal Testimony of Michael P. Gorman, at 10-11.

equity is fair if it is adequate to cover the cost of the utility's dividend, and its cost of funding future growth. According to Mr. Gorman, a 9.0 percent return on equity accomplishes these objectives.[2]

Q. Do you agree that Mr. Gorman has demonstrated that his return meets the *Hope* and *Bluefield* standards?

A. No, I do not. As discussed in my Direct Testimony, the *Hope* and *Bluefield* U.S. Supreme Court decisions form the legal basis for determining whether a return is just and reasonable.[3] These decisions set forth three standards, each of which must be met in order for the return to be considered just and reasonable:

1) Comparable return standard
2) Financial integrity standard
3) Capital attraction standard

The analysis in Mr. Gorman's Rebuttal Testimony only addresses the second of these standards, financial integrity. He assumes that if an equity return is sufficient to support an investment grade credit rating (which can be as low as 'BBB-' on the S&P scale, compared with American Water's current 'A' rating from S&P) that same return is sufficient to meet the return requirements of equity investors. It is important to recognize that equity investors face different risks associated with ownership of common equity including: 1) the risk that dividends on the common stock are not guaranteed and; 2) the risk that they are the residual claimants on the Company's assets in the event of bankruptcy. Mr. Gorman fails to demonstrate that his ROE recommendation of 9.0 percent offers equity

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[2] *Id.*, at 14.
[3] Direct Testimony of Ann E. Bulkley, at 10-11..

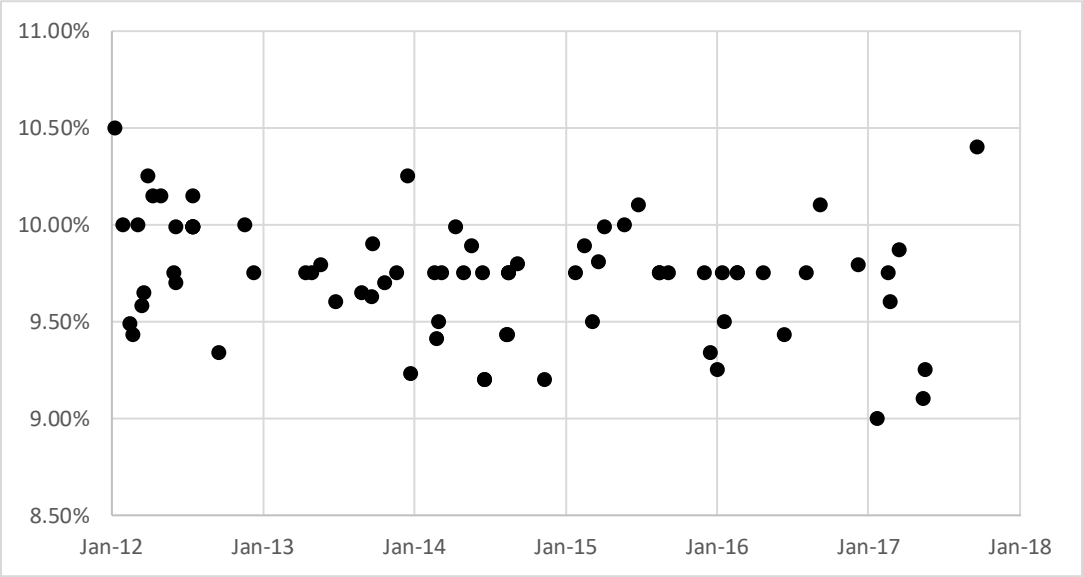
investors a return that is comparable to the returns available to investors in alternative investments with commensurate risk. Furthermore, Mr. Gorman fails to demonstrate that his ROE recommendation would allow MAWC to raise equity capital on reasonable terms and conditions. The comparable return and capital attraction standards are particularly important during a period when, as Mr. Gorman acknowledges, MAWC has significant ongoing funding requirements in order to maintain and enhance its water and sewer system and related infrastructure.

Q. Has Staff witness Smith addressed the *Hope* and *Bluefield* standards?

A. Staff witness Smith references the *Hope* and *Bluefield* decisions in his Direct Testimony. While he never directly addresses whether his recommended ROE of 9.25 percent meets the three legal standards of a just and reasonable return, Mr. Smith does provide summary data from Regulatory Research Associates regarding the average authorized ROE for water companies since 2012. Mr. Smith's ROE recommendation is based on benchmarking the ROE for MAWC against the Commission's decision in the KCPL electric rate case without consideration of differences in risk between the two companies. As one example, Mr. Smith does not consider the small size of MAWC, as compared to KCPL, which magnifies operating risk and causes investors to require a higher return.

As shown in Chart 1 of my Rebuttal Testimony, reproduced below for convenience, the vast majority of authorized ROEs for water distribution companies since 2012 have been within a range from 9.50 percent to 10.50 percent. In that context, Mr. Smith's recommendation does not meet the comparable return standard.

Chart 1: Recently Authorized Water Utility ROEs 2012-2017[4]



Considering those data points in Chart 1 that fall within the range of Mr. Gorman's 9.0 percent recommendation and Mr. Smith's 9.25 percent recommendation it is important to understand whether or not those returns represent an industry standard – a true benchmark of investor expectations. It is interesting to note that the majority of the returns in that range (5 of 7 authorized returns between 9.0 and 9.25 percent) were authorized by the New York Public Service Commission ("NYPSC") as part of settlements in those cases. Furthermore, it is important to consider what the regulatory environment provides for cost recovery as compared with the proxy group to determine if there is any need to move beyond the results of the models for that group.

Comparing the regulatory mechanisms available to MAWC and the proxy group, and the companies regulated by the NYPSC, MAWC has less access to progressive cost recovery mechanisms than the proxy group and the NYPSC regulated companies. For example,

[4] Source: SNL Financial.

regulated utilities in New York use fully forecasted test years, have implemented full revenue decoupling mechanisms, and are allowed to recover capital and operating costs through various tracking mechanisms and riders. By contrast, the regulatory framework in Missouri is less credit supportive than New York, with the use of historical test years, limited revenue protection against volumetric risk, and few cost trackers or riders. Although I do not consider the low ROEs authorized in New York to be reasonable, on that basis alone, it is reasonable to expect that investors would require a higher return on equity in Missouri to compensate for the incremental regulatory risk.

In summary, among the three ROE witnesses in this proceeding, only my ROE recommendation is generally consistent with the authorized returns for other water distribution companies in recent years and reflects the company-specific risks of MAWC relative to the proxy group.

B. Comparison to KCPL ROE

Q. Please summarize Staff witness Smith's position regarding the Commission's decision in the KCPL Electric Rate Case.

A. According to Mr. Smith, the main issue the Commission needs to consider is whether the allowed ROE for MAWC should be significantly different from the ROE recently allowed KCPL.[5] Mr. Smith testifies that the Commission should evaluate the witnesses' evidence and opinions of the relative change, if any, in the utility industries' cost of capital environment since the Commission heard evidence in the KCPL rate case.[6] In that regard,

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5 Rebuttal Testimony of Jeffrey Smith, at 16.
6 *Id.*, at 2.

Mr. Smith asserts that I have provided no justification as to why the Commission should allow MAWC a 10.8 percent ROE, a 130 basis point increase compared to the recent allowed ROE granted by this Commission for KCPL.[7]

Q. What is your response to Mr. Smith on this issue?

A. The analytical approaches that I developed to establish my recommended cost of equity are generally consistent with models developed by both Mr. Smith and Mr. Gorman. The primary difference between my recommendation and Mr. Smith's recommendation is that I have relied on the results of the analyses for the water distribution utility proxy group. While the historical authorized returns are in the range of 9.50 percent to 10.50 percent, as shown in my direct testimony, forward-looking analyses demonstrate that the higher end of the range of returns is reasonably 10.80 percent. Relying on that range of results, it is necessary to consider the relative risks of MAWC and the proxy companies. If MAWC does not have the benefit of RSM, future test year ratemaking, and the Company's proposed stand-alone equity ratio, the risks of this company are greater than the proxy group and would be at the high end of this range. To the extent that the Commission authorized RSM and relied on a future test year, MAWC would be more comparable to the proxy group.

While Mr. Smith develops the DCF and CAPM models of a proxy group of water utilities, Mr. Smith's ROE recommendation is not based on the results of those analyses, apparently because he recognizes that the returns produced by those models are unreasonably low and

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[7] *Id.*

do not result in just and reasonable rates for MAWC. Therefore, Mr. Smith abandons the results of the models and relies solely on the Commission's authorized ROE for KCPL in an electric rate case, which he then adjusts for what he considers to be the lower risk of water utilities as compared to electric utilities and a slight decline in the cost of capital since the KCPL decision.

As discussed in my Rebuttal Testimony, it is not reasonable or appropriate to place primary weight on a Multi-Stage DCF analysis that was prepared by Staff but never filed in the KCPL electric rate case, and then use the Commission's authorized ROE in that case as a benchmark to establish the recommended return for MAWC, a water distribution company, without comparing the relative risk of the two companies.[8]

Q. Did Mr. Smith perform any analysis of the relative risk differences between KCPL and MAWC?

A. Not to my knowledge and this is an important failing. As I noted earlier, using an ROE for a different company, in a different industry, with different risk factors, determined at a different time, to set MAWC's ROE does not meet the comparable return standard of *Hope* and *Bluefield*.

[8] Rebuttal Testimony of Ann E. Bulkley, at 32-33.

C. Capital Market Conditions and Effect on Models

Q. Please summarize Staff witness Smith's and OPC/MIEC witness Gorman's testimony regarding current capital market conditions and the impact on the cost of equity for MAWC.

A. Mr. Smith devotes several pages of his Rebuttal Testimony to discussing how capital market conditions have remained relatively stable in the two months since he conducted his cost of equity estimate for MAWC. Mr. Smith notes that while increases in the Federal Funds rate by the Federal Reserve have resulted in increases in short-term rates, the impact on long-term Treasuries has been muted.[9] Additionally, Mr. Smith contends that the cost of equity for regulated utilities has remained relatively constant since he performed his analysis due to the recent performance of utility stocks and utility bonds which has been relatively stable.[10]

Mr. Gorman claims that it is not known if and by how much long-term interest rates will increase from current levels.[11] Mr. Gorman contends that the market may very well have already accounted for increases in the Federal Funds rate and the end of the Federal Reserve's Quantitative Easing program.[12] As such, he concludes that the DCF and CAPM models are producing accurate estimates of the cost of equity for MAWC and other companies with comparable risk.[13]

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9 Rebuttal Testimony of Jeffrey Smith, at 5.
10 *Id.*, at 6-7.
11 Rebuttal Testimony of Michael P. Gorman, at 30.
12 *Id.*, at 31.
13 *Id.*, at 13.

Q. Mr. Smith and Mr. Gorman both assert that interest rates are likely to remain low for longer than expected, and that any increases in short-term rates by the Federal Reserve will not translate into increases in long-term interest rates in the market. Do you agree?

A. No, I do not. Messrs. Smith and Gorman have relied on historical data for long-term Treasuries to arrive at the conclusion that increases in the Federal Funds Rate will not translate into increases in long-term interest rates. However, this assumption does not take into consideration the many economic factors that have impacted the yield on long-term government bonds over the past two years.

Q. What is the market's outlook for interest rates?

A. Several equity analysts have provided recent outlooks that suggest rising interest rates over the next year. As Mohamed El-Erian, former CEO of PIMCO, notes, the yield on long-term government bonds remained relatively stable in 2017 even though short-term interest rates increased due primarily to the continued accommodative monetary policy of foreign central banks such as the Bank of Japan and the European Central Bank and increases in liability driven investment ("LDI")[14] flows as companies monetize the large profits they have gained on stock holdings and reinvest those earnings in long-term government bonds.[15] As a result, the demand for long-term government bonds from investors offset the impact of increases in short-term rates. As Mr. El-Erian explains, the factors that produced

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[14] LDI is an investment strategy where investments are selected based on the cash flows needed to fund future liabilities.

[15] El-Erian, Mohamed A., "Now Is Not The Time to Worry About the Yield Curve." Bloomberg.com, December 21, 2017.

the relatively stable yield on long-term bonds government seen in 2017 are not expected to continue in 2018:

> [L]ooking ahead, there are four factors that will likely moderate the technical influences that have fueled this year's flattening [of the yield curve]:
> - A reduction in central banks' QE purchases, with the ECB already having committed to halving its monthly buys.
> - An increase in the supply to the market of government bonds, for reasons that include loosening of fiscal conditions in the U.S.
> - The currency-hedged yield available to foreign buyers has eroded and, in some cases, is now negative.
> - A reduced pace of LDI activity.[16]

Q. Have other equity analysts provided an outlook on interest rates?

A. Yes. There have been several equity analysts and investment advisors that have released outlooks setting the expectation for rising interest rates including J.P Morgan, Goldman Sachs, Charles Schwab, and Condor Capital management. For example, in a recent bulletin on the effect of tax reform on the U.S. economy and financial markets, J. P. Morgan Asset Management commented on the prospect for higher interest rates:

> In her last press conference as Fed Chair, Janet Yellen noted that most members of the FOMC had factored in the potential impact of tax reform in making their projections. However, their forecasts suggest that they may not have fully done so, and barring any negative shocks to the economy, it is likely unemployment will fall faster, and growth and inflation will rise faster, than the Fed expects in 2018.
>
> In this scenario, we expect the Fed to continue with balance sheet normalization along the path it has already laid out. It may be more aggressive in raising the Federal funds rate than it projects, although with new, perhaps cautious leadership from Jay Powell, this may only amount to four rate hikes rather than three, leaving the federal funds rate in the range of 2.25%-2.50% by the end of 2018. Still, with this rise in short rates, stronger than expected domestic growth and inflation, a booming overseas

[16] *Id.*

> economy, a fast-rising federal budget deficit, tapering of central bank bond purchases overseas and growing bond sales from the Fed, it seems reasonable to expect that most of the increase in short rates will feed through to long-term rates, taking the 10-year Treasury yield from its current 2.40% to above 3.00% by the end of 2018.[17]

This view is further supported by the Investment Strategy Group at Goldman Sachs who noted that:

> Rates should also move higher at the long end of the curve, albeit to a lesser degree. Here, many of the forces that kept 10-year Treasury yields flat in 2017 are likely to abate, particularly the transitory drags from downward inflation surprises and year-end portfolio rebalancing flows following last year's strong equity gains. At the same time, continued gains in US employment should erode labor slack further; putting modest upward pressure on wage growth. Finally, yields at the long end of the curve are likely to get a lift from the many large central banks that have articulated plans to remove some monetary accommodation this year.[18]
>
> ****
>
> Overall, we expect 10-year rates to increase to 2.5-3.0% this year. Given today's scant coupon levels, even the modest increase in yields we expect would result in bonds underperforming cash (see Exhibit 116). As a result, we remain comfortable funding tactical tilts out of investment grade fixed income.[19]

Q. Please summarize the outlooks provided by other equity advisors.

A. In a recent commentary discussing the 2018 market outlook for fixed income assets, Charles Swab noted:

> 2018 could be the year that bond bears finally awaken from their long slumber, sending 10-year Treasury bond yields above the three-year high of 2.6%. Economic growth is picking up both globally and domestically and fiscal policy is becoming more expansive. Most importantly, the era of

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[17] J.P. Morgan Asset Management, "The investment implications of tax reform", December 20, 2017, at 6.
[18] Goldman Sachs Investment Management Division, "Outlook: (Un)Steady as She Goes", January 2018, at 83.
[19] *Id.*

> extremely easy money is coming to an end. The Federal Reserve is tightening monetary policy through rate hikes and balance sheet reduction. The European Central Bank (ECB) is planning to gradually reduce its bond buying program. Even the Bank of Japan (BOJ) is seeing some success with positive inflation while focusing on keeping 10-year bond yields at zero or above. As the easy-money era gradually recedes, we see more upside risk in yields than downside.[20]

Similarly, Condor Capital Management Group, in its discussion on the impact of the unwinding of the Federal Reserve's balance sheet, noted:

> Within the market for Treasuries, Federal Reserve economists have estimated that post-recession Treasury purchases have suppressed the yield on the 10-year by between 0.85% and 1%. With the 10-year's current yield of 2.37% (as of 12/4/17) practically unchanged since the Fed's September announcement, this implies that it could move almost a full percentage point higher over the long-run due to the Fed's unwinding. A recent analysis from Goldman Sachs puts this effect closer to 0.6%, though its timeline for the analysis is nearly four years shorter than the Fed's. Another important factor to note is the forward-looking nature of markets, meaning that this yield increase could potentially be priced into these securities before the balance sheet is fully unwound.[21]

As a result, the investment community fully expects long-term interest rates to increase over the course of 2018 and more specifically during the time that MAWC's rates will be in effect.

Q. Have long-term interest rates increased since Messrs. Smith and Gorman developed their cost of equity estimates for MAWC?

A. Yes. Mr. Smith and Mr. Gorman developed their cost of equity estimates using market data as of the end of October 2017. At that time, the yield on the 10-year Treasury bond

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[20] Jones, Kathy A., "2018 Market Outlook: Fixed Income." Charles Schwab, December 11, 2017.

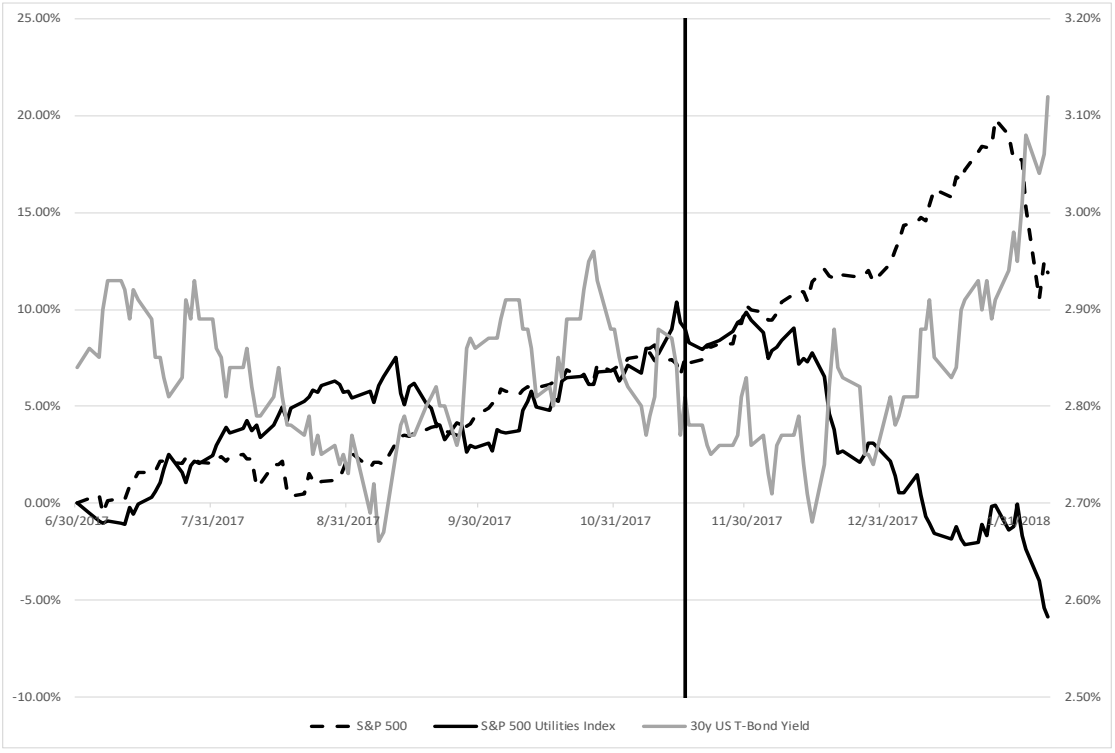
[21] Condor Capital Management, "What Will the Fed's Balance Sheet Reduction Mean for Markets?", December 6. 2017.

was 2.38 percent. As of February 7, 2018, the yield on the 10-year Treasury bond was 2.83 percent, representing an increase of 45 basis points.

Q. How has the S&P Utilities Index responded to recent changes in market conditions?

A. The S&P Utilities Index has been highly sensitive to changes in market conditions. Contrary to Mr. Smith's testimony that the response of utility stock prices has been muted, as shown in **Error! Reference source not found.**, the S&P Utilities Index has declined by approximately 14 percent since the House of Representatives approved the initial version of the tax reform legislation on November 16, 2017, as yields on 30-year Treasury bonds have increased from 2.81 percent to 3.11 percent.

Chart 2: SPUX vs. S&P 500 vs. U.S. Treasury Bond Yield[22]



[22] Source: SNL Financial.

Q. How has the S&P Utilities Index responded to recent changes in market conditions?

A. The S&P Utilities Index has been highly sensitive to changes in Treasury bond yields. Contrary to Mr. Smith's testimony that the response of utility stock prices has been muted, as shown in **Error! Reference source not found.**, the S&P Utilities Index has declined by approximately 10 percent since the House of Representatives approved the initial version of the tax reform legislation on November 16, 2017, as yields on 30-year Treasury bonds have increased from 2.81 percent to 2.93 percent.

Q. Are there other market conditions that should be considered in determining the cost of equity for MAWC?

A. Yes. The effect of the recently passed Tax Reform and Jobs Act should also be considered in the determination of the cost of equity. Several rating agencies have provided summaries of the effect of the Act on utilities. In summary, the expectation is that the Act will reduce utility revenues due to the lower federal income taxes and the requirement to return excess accumulated deferred income taxes. This change in revenue is expected to reduce FFO metrics across the sector and absent regulatory mitigation strategies, is expected to lead to weaker credit metrics and negative ratings actions for some utilities. [23]

Moody's Investors Services provided a summary of the implications of the Act for investor-owned utilities. In that summary Moody's indicated that while the Act was

[23] FitchRatings, Special Report, What Investors Want to Know, "Tax Reform Impact on the U.S. Utilities, Power & Gas Sector", January 24, 2018.

credit positive for many sectors, it has an overall negative credit impact on regulated operating companies of and their holding companies due to the reduction in cash flow metrics that results from the change the federal tax rate and the loss of bonus depreciation.

Moody's states that the rates that regulators allow utilities to charge customers is based on a cost-plus model, with tax expense being one of the pass-through items. In practice, regulated utilities collect revenues from customers on a book tax expense but typically pay much less tax in cash due to tax deferrals. The lower tax rate combined with the loss of bonus depreciation will have a negative effect on utility cash flows for three primary reasons.

1. Utilities will collect less taxes at the lower rate, reducing revenue. While the taxes are ultimately paid out as an expense, under the new law utilities lose the timing benefit, reducing cash that may have been carried over a number of years.
2. Lowering taxes also creates an over collection that must be refunded to customers.
3. The loss of bonus depreciation means that utilities will be paying taxes starting in 2019 and 2020, earlier than under the prior tax law. This increases the taxable income of the utility.[24]

Moody's expects that the effect of these changes will be a decline in key financial cash flow to debt metrics for utilities.

[24] Moody's Investors Services, "Tax Reform- US: Corporate tax cut is credit positive, while effects of other provisions vary by sector", December 21, 2017, at 6-7.

Q. Have other rating agencies commented on the effect of the Act on ratings?

A. FitchRatings has indicated that any ratings actions will be guided by the response of regulators and the management of the utilities. FitchRatings recognized that the solution will depend on the ability to manage the cash flow implications of the Act. Fitch noted that seeking a return of tax savings to customers immediately creates an immediate decline in cash flow. Fitch also notes that there are other measures regulators can take that may provide rate stability and moderate the near-term changes to cash flow, including:

1. Deferral of lower tax expense to use as an offset to expected future rate increases.
2. Return excess unprotected ADIT over a longer-term horizon
3. Increase the authorized equity ratio and/or return on equity
4. Accelerated depreciation on some assets
5. Lower capex.[25]

Fitch suggests that negotiated outcomes that focus on rate stability and creditworthiness may avoid credit rating changes.

Q. What is the effect of tax reform on MAWC's overall risk profile?

A. The potential for increased pressure on cash flow metrics resulting from tax reform and regulatory lag increase risk from investors' perspectives. The loss of bonus depreciation and the effect that this has on cash flow makes the implementation of RSM and a future

[25] FitchRatings, Special Report, What Investors Want to Know, "Tax Reform Impact on the U.S. Utilities, Power & Gas Sector", January 24, 2018.

test year that much more important to stabilize revenue and to alleviate pressure on cash flow metrics.

Q. Mr. Smith contends that the cost of equity has remained constant in the past several months. Mr. Gorman contends that the ROE estimation models are producing reasonable estimates of the cost of equity for MAWC. Do you agree?

A. No, I do not. As shown in **Error! Reference source not found.** above, the S&P Utilities Index has declined over the past two months as long-term Treasury bond yields have increased in response to tax reform legislation and the Federal Reserve's balance sheet unwinding. The decline in the S&P Utilities Index implies that the cost of equity has increased. For example, in the DCF model, the reduction in stock prices results in an increase in the dividend yield and thus the cost of equity estimate.

Moreover, as discussed in my Rebuttal Testimony, investors expect the Federal Reserve will: (a) increase the Federal Funds in 2018 and beyond, and (b) continue to reduce the size of its bond portfolio by no longer reinvesting the proceeds from current bond holdings. Additionally, the passage of the Tax and Jobs Act at the end of 2017 will require the Federal Government to issue more debt to offset the decrease in revenue associated with the reduced tax rates. The Federal Reserve's current policy agenda and the tax reform legislation will place upward pressure on long-term interest rates over the next year. Therefore, ROE estimation models using current market data will likely underestimate the cost of equity for MAWC during the period that rates will be in effect. As a result, I disagree with Mr. Gorman that the DCF and CAPM models are producing reasonable estimates of the cost of equity for MAWC under current market conditions.

Q. Has Mr. Gorman ever expressed concern about the results of the DCF model?

A. Yes. In spite of Mr. Gorman's reliance on and defense of the Constant Growth DCF model in this proceeding, he has previously expressed concern with the results of that model. In Mr. Gorman's May 2008 testimony in a rate case filed by Puget Sound Energy before the Washington Utility and Transportation Commission, Mr. Gorman abandoned the results of his Constant Growth DCF model due to his concern that DCF result was not reliable. Mr. Gorman wrote: "My constant growth DCF analysis result is too high because the growth rate used in this study, 6.66%, is higher than the maximum sustainable growth rate of 4.8% to 5.0%. As a result, this DCF return is not reliable."[26] The growth rate that Mr. Gorman considered too high in the Puget Sound Energy rate case was 6.66 percent. By comparison, the growth rate in Mr. Gorman's Constant Growth DCF analysis in this proceeding (on which he relies as the lower boundary of his range of results) is 6.82 percent, or 16 basis points higher than the growth rate that he dismissed as being unsustainable in the Puget Sound case.

The difference between Mr. Gorman's DCF analysis in the Puget Sound case and his analysis for MAWC is the dividend yield. In Puget Sound, the average dividend yield of the proxy group was 4.73 percent (producing a Constant Growth DCF result of 11.39 percent), while in MAWC the dividend yield is 2.11 percent (producing a mean Constant Growth DCF result of 8.93 percent). Mr. Gorman determined that it was reasonable to discard the Constant Growth DCF model when it was producing results that were "too

[26] Puget Sound Energy, Inc. Docket Nos. UE-72300/UG-72301 (consolidated), filed May 30, 2008, before the Washington Utility and Transportation Commission, at 17.

high" in the case of Puget Sound, but he places primary weight on the Constant Growth DCF model when the results support the lower boundary of his range, as in the MAWC rate filing.

Q. What are your conclusions concerning the impact of capital market conditions on the cost of equity for MAWC?

A. My first conclusion is that the ROE estimation models have been affected by the anomalous market conditions that have resulted from the Federal Reserve's extraordinary accommodative monetary policy since the end of the recession. My second conclusion, which is equally important, is that the current anomalous market conditions are not expected to persist as the Federal Reserve continues to normalize monetary policy. As a result, the current market conditions are not reflective of the market conditions that will be present when the rates for MAWC are in effect. As discussed in my Rebuttal Testimony, several regulatory commissions such as the Federal Energy Regulatory Commission ("FERC") the Illinois Commerce Commission ("ICC"), the Pennsylvania Public Utility Commission ("PPUC") and the Massachusetts Department of Public Utilities ("MDPU") have all considered this issue in recent decisions. In each case, the regulatory commission tried to account for changing capital market conditions by placing additional weight on models that include forward-looking inputs.[27] As discussed in my Direct Testimony, I considered alternative models with forward-looking inputs such as the projected DCF model and the CAPM using forward-looking Treasury yields and a forward-looking market

[27] Rebuttal Testimony of Ann E. Bulkley, at 18-20.

risk premium when developing my estimate of the cost of equity for MAWC.[28] Therefore, my recommended ROE for MAWC takes into consideration the likelihood that capital costs will continue to increase in the near to intermediate term or the period during which MAWC's rates will be in effect.

D. Application of Methodologies to Estimate the Authorized ROE

1) DCF – Growth Rates

Q. Please summarize Staff witness Smith's and OPC/MIEC witness Gorman's criticism of your Constant Growth DCF analysis.

A. Both Mr. Smith and Mr. Gorman argue that the analysts' earnings per share growth rates used in my Constant Growth DCF analysis are unrealistic because they contend it is not reasonable to assume that water companies' stock prices can grow in perpetuity at a rate well above GDP growth, which both Mr. Smith and Mr. Gorman believe places a cap on long-term growth rates for individual companies. Mr. Smith testifies that Staff has consistently held the view that no company can grow in perpetuity at a rate greater than long-run GDP growth, and that it is possible to capture such growth rate differentials through the use of a Multi-Stage DCF model, which according to Mr. Smith produces cost of equity estimates that are much more in line with a reasonable required return in today's capital market and economic environment.[29] Similarly, Mr. Gorman criticizes the growth rate in my Constant Growth DCF analysis of 6.66 percent as too high compared to long-

[28] Direct Testimony of Ann E. Bulkley, at 33-34 and 37-38.
[29] Rebuttal Testimony of Jeffrey Smith, at 20-21.

term sustainable growth in GDP of 4.20 percent. Mr. Gorman concludes that my Constant Growth DCF return estimates should be considered as a high-end estimate of the current market cost of equity.[30]

Q. Do you agree with Mr. Smith and Mr. Gorman that the growth rate in your Constant Growth DCF analysis produces an overstated or high-end estimate of the cost of equity?

A. No, I do not. In response to Mr. Smith's view that a Multi-Stage DCF model produces reasonable cost of equity estimates in today's capital market and economic environment, I note that Mr. Smith's Multi-Stage DCF analysis produces a cost of equity estimate of 6.61 percent for his proxy group of water utilities, which even he acknowledges is well outside the return requirements of investors.

In response to Mr. Gorman's assertion that the growth rate in my Constant Growth DCF analysis is too high compared to a long-term GDP growth rate, I observe that the earnings growth rate in Mr. Gorman's Constant Growth DCF analysis is 6.80 percent, which is higher than the assumptions used in my analyses that Mr. Gorman criticizes as being too high. This internal inconsistency between Mr. Gorman's Direct Testimony and his Rebuttal Testimony is highlighted by the fact that Mr. Gorman uses the median results of his Constant Growth DCF analysis using a 6.80 percent analyst growth rates as the lower boundary of his range of returns for MAWC of 8.60 percent to 9.40 percent.

[30] Rebuttal Testimony or Michael P. Gorman, at 18.

Q. What is your view of the results of the DCF models?

A. As discussed in my Direct and Rebuttal Testimony, neither the Constant Growth DCF model nor the Multi-Stage DCF model is producing reasonable return estimates under current market conditions. This has nothing to do with the growth rate used in either model. Rather, the distortion is attributable to the fact that the low interest rate environment has suppressed the dividend yields for water companies to historically low levels, which are not sustainable going forward as long-term interest rates increase.

Q. What other inconsistencies are there in the assumptions used in Mr. Gorman's analysis?

A. While Mr. Gorman suggests that market conditions are reflected in the dividend yields in the DCF model and that dividend yields are not suppressed, he does not rely on consistent market conditions in his CAPM analysis. Mr. Gorman uses a risk-free rate of 3.60 percent, which is based on a near-term forecast from Blue Chip Financial Forecasts, reflecting an increase in interest rates over the current Treasury bond yields of 79 basis points. Mr. Gorman also notes on page 13 of his Rebuttal Testimony that the current spread between Treasury bond yields (2.81 percent) and the dividend yield for water utilities (2.13 percent) is 68 basis points. This is slightly higher than the average spread since 2009 of 48 basis points, but well within the range over that period. If long-term Treasury yields rise to 3.60 percent, as Mr. Gorman assumes in his CAPM analysis, and assuming the current spread between Treasury bonds yields and dividend yields for water utilities, then the dividend yield for the proxy group would be expected to increase to approximately 3.0 percent.

When combined with Mr. Gorman's earnings per share growth rate of 6.8 percent for his water proxy group, this produces a return estimate of approximately 9.8 percent.

2) Projected DCF Analysis

Q. Please describe Mr. Gorman's criticism of your use of a projected DCF analysis.

A. Mr. Gorman contends that the forecasted stock prices used in my projected DCF analysis do not reflect capital market costs that are determined by market participants in either the current or future markets, but are simply Value Line's estimate of future stock market prices.[31] Mr. Gorman argues that the projections do not measure fair compensation to investors and, therefore, do not ensure that the increase in rates that will be paid by customers is limited to an increase that is necessary to provide fair compensation to investors.[32] Additionally, Mr. Gorman asserts that my projected DCF analysis is similar to my Constant Growth application of the DCF model in that it relies on unsustainably high earnings growth rates that do not reflect the consensus market outlook for future growth.[33] As such, Mr. Gorman concludes that my projected DCF analysis should be rejected.[34]

Q. Do you agree with Mr. Gorman that Value Line's projected stock prices and dividends are not reflective of current or expected capital markets costs?

A. No, I do not. Value Line is well respected in the investment community and considered a reliable source for financial projections. Furthermore, Value Line's outlook is consistent

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31 *Id*., at 19.
32 *Id*.
33 *Id*., at 19-20.
34 *Id*., at 19.

with other equity analysts and investment advisors' expectations of the overall market. In addition, Value Line has recently suggested that water utility stock prices are more than fully valued.

> Indeed, the industry's strong run has lowered the yield on an average water utility stock to a level close to the Value Line median. The yield spread between water stocks and other dividend paying equities in the Value Line Investment Survey is near an all-time low. Thus, we find it hard to recommend these stocks because they appear to be more than fully valued.
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> ***
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> As a result of the substantial rise in stock prices, the yield on these stocks has dropped substantially. As we went to press, the average dividend yield for the nine members of the industry was 2.15%, a measly 15 basis points higher than the average stock we follow. Scarcity is one of the reasons water stocks trade at a premium as the industry's market cap is relatively small: There are two large cap stocks, two medium cap stocks, and the remaining five are all small caps. For example, should institutional investors choose to enter this sector to diversify out of electric or gas utilities, they have to pay a higher relative price because there are so few equities to choose from.[35]

Value Line's outlook, as discussed in their April 2017 report on the water industry has been borne out in recent market conditions, as utility stock prices have declined. As discussed previously, the decline in stock prices will increase the dividend yield and the results of the DCF analysis. As shown in Schedule AEB-1 of my Direct Testimony, the average current dividend yield using a 30-day average stock price for the proxy group including American Water was 2.11 percent, whereas the average dividend yield using Value Line projections shown in Schedule AEB-2 is 2.64 percent which represents a 53-basis point increase. Value

[35] Source: Value Line Investment Survey, Water Industry, April 14, 2017, at 1781.

Line projections are generally consistent with investors' expectations for higher long-term interest rates and the expectations for stock prices and dividend yields.

Q. Have you conducted an analysis to determine how the current low interest rate environment has impacted the valuations of the companies in your proxy group?

A. Yes. To assess how the current low interest rate environment has affected the valuations of the companies in my proxy group, I calculated the dividend adjusted price/earnings to growth ("PEG") ratio for each company. The dividend adjusted PEG ratio is commonly used by investors to determine if a company is considered over- or under-valued.[36] The ratio compares the P/E ratio of a company to the expected growth rate of future earnings. This allow investors to compare companies with similar P/E ratios but different earnings growth projections. If two companies have a P/E ratio of 20, but Company A is growing at a rate of 6 percent and Company B is growing at a rate of 15 percent, then on a relative valuation basis Company B is the better investment. In the case of dividend paying stocks such as utilities, it is important to add the dividend yield to the earnings growth rate because dividends make up a large part of the total return of dividend paying stocks.

As shown in Chart 3, the average dividend adjusted PEG ratio for the proxy group is higher in 2017 than at any other time since mid-2005. In general, stocks with lower long-term dividend adjusted PEG ratios are considered better values. As the dividend adjusted PEG ratio increases above the long-term historical average, as has been the case with the proxy group, then the stock are considered relatively over-valued unless the growth rate increases

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[36] Schwab Trading Insights, "Stock Analysis Using the PEG Ratio: Find out what traders look for and look out for with Price/Earnings/Growth Ratio (PEG Ratio)."

to support the higher valuation. As noted, the dividend adjusted PEG ratio for the proxy group in 2017 is close to 4.5, which indicates that many of the proxy group companies are currently trading at levels well above the historical average. Based on this valuation metric, investors should expect the stock prices of the proxy group companies to decline in the future. This analysis supports the stock price and dividend forecasts produced by Value Line, which as noted above are projecting the stock prices of the proxy group to decrease and the dividend yields to increase. Therefore, I disagree with Mr. Gorman and believe that Value Line's projections are consistent with the capital market costs that investors expect over the period in which MAWC's rates will be in effect.

Chart 3: Dividend Adjusted PEG Ratio for the Proxy Group[37]

Q. Does Mr. Gorman rely on Value Line Projections to calculate the results of his DCF analysis?

A. Yes. While Mr. Gorman criticizes my analysis that relies on three to five-year projections of prices and dividends, in fact, Mr. Gorman relies on Value Line's projections over that same time-period in the development of his DCF analysis. Specifically, Mr. Gorman relies on Value Line's three- to five-year projections of dividends, earnings and book value over the same time-period to calculate the sustainable growth rate for his sustainable growth DCF analysis. As such, Mr. Gorman relies on the very same Value Line projection period and data that he asserts in his Rebuttal Testimony is not reflective of fair compensation to investors.

[37] Source: Bloomberg Professional.

Q. Mr. Gorman also contends that, similar to your Constant Growth DCF model, your projected DCF model relies on unsustainably high earnings growth rates that do not reflect the consensus market outlook for future growth. Do you agree?

A. No. As discussed in Section III.D above, Mr. Gorman's Constant Growth DCF analysis, which sets the lower boundary of his recommended range of returns in this proceeding relies on an earnings growth rate that is higher than the growth rate used in my analysis. This highlights an internal inconsistency between his Direct and Rebuttal Testimony over the use of earning growth rates in the DCF model. I also note in Section III.C above, that the low return estimates produced by the DCF model using current market data are not the result of the earnings growth estimates, but the suppressed dividend yields due to the low interest rate environment. However, the low level of dividend yields for water companies is not expected to be sustainable going forward as yields on long-term government bonds increase.

3) Projected Earned ROE Analysis

Q. Please summarize Mr. Gorman's testimony regarding your analysis of projected earned ROEs from Value Line.

A. Mr. Gorman argues that what he refers to as my "Expected Earnings" analysis should be rejected because this approach does not measure the market required return appropriate for the investment risk of MAWC.[38] Rather, it measures the book accounting return. Mr. Gorman contends that a market return provides a pure measure of fair compensation to

[38] Rebuttal Testimony of Michael P. Gorman, at 20.

investors and allows for setting rates that provide no more than fair compensation. Conversely, the earned return on book equity can cause compensation to be either too high or too low, and rates to be set either too low or too high.[39] Mr. Gorman concludes that the two cannot be used interchangeably because the market ROE is an indication of whether or not earnings are fair and reasonable, whereas the book ROE generally is used to determine whether or not rate revenues for utilities are too high or too low.[40]

Q. Do you agree with Mr. Gorman's position on this issue?

A. No, I do not. The *Hope* and *Bluefield* standards establish that a utility should be granted the opportunity to earn a return that is commensurate with the return on other investments of similar risk. Therefore, it is reasonable to consider the returns that investors are expecting to earn on the common equity of the water utility companies in the proxy group as a benchmark for a just and reasonable return because that it is the expected earned return on equity that the investor will consider in determining whether to purchase shares in the company or to seek alternative investments with a better risk/reward profile.

In addition, the companies in the water proxy group derive almost 100 percent of their operating income from regulated operations, meaning that the expected returns reported by Value Line are based on regulated utility service, not unregulated affiliates. This also supports the assumption that authorized and earned returns should be very similar for these companies. However, as discussed later in my Surrebuttal Testimony, MAWC has

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[39] *Id*., at 20-21.
[40] *Id*., at 21.

consistently been unable to earn its authorized return in Missouri, which primarily reflects the regulatory lag associated with the Missouri regulatory framework.

4) CAPM – Risk Free Rate

Q. Please summarize Mr. Smith's and Mr. Gorman's concerns with the use of projected Treasury bond yields as the risk-free rate in the CAPM.

A. Mr. Smith argues that the current yield on U.S. Treasury bonds reflects investors' expectations of the interest rate environment for the foreseeable future.[41] According to Mr. Smith, evidence shows that allowing the use of forecasted figures would have proven detrimental to rate payers because cost of equity estimates would be erroneously biased upwards.[42] Mr. Smith claims that investors purchasing utility stocks at current higher P/E ratios would have to knowingly be buying utility stocks with the expectation that they will experience a loss in the value of their investments. According to Mr. Smith, it is more plausible that investors have accepted and are willing to incur the risk of change in utility stock prices, given a persistently low risk environment, due largely in part to continued low long-term interest rates, in return for the rewards afforded by utility stocks' regular, predictable income streams.[43] Mr. Gorman expresses concern that the bond yield used in my CAPM analysis is largely based on projections of Treasury bonds five to ten years out.[44] He contends that those projections are highly uncertain and do not reflect the cost

41 Rebuttal Testimony of Jeffrey Smith, at 22.
42 *Id*., at 23.
43 *Id*., at 24.
44 Rebuttal Testimony of Michael P. Gorman, at 25.

of capital in the test period or even the period over the next two to three years.[45] Mr. Gorman concludes that the CAPM methodology should be based on observable bond yields in the market today, or at most reflect bond yield projections over the next two to three years.[46]

Q. What is your response to Messrs. Smith and Gorman regarding the use of a projected risk-free rate in the CAPM analysis?

A. First, Mr. Gorman does not rely on current Treasury bond yields in the CAPM analysis that is used in his final range of results. Mr. Gorman relies on a Treasury bond yield that is 79 basis points above the yield at the time that his analysis was prepared. Mr. Gorman acknowledges that the Treasury bond yield he relies on is a projected yield. While Mr. Smith does use the current Treasury bond yield in his analysis, the results of his analysis are below any return that has ever been authorized for a regulated utility. As a result, he dismisses the results of that analysis.

As explained in my Direct and Rebuttal Testimony, capital markets have experienced a prolonged period of low interest rates as central banks in the U.S. and around the world have taken extraordinary steps to stimulate the economy after the financial crisis and Great Recession. As discussed in my Rebuttal Testimony, utility regulators in other jurisdictions are struggling with how to interpret the results of financial models that are being impacted by what the FERC has characterized as "anomalous" capital market conditions. The Massachusetts DPU recently issued a decision supporting the use of projected Treasury

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45 *Id.*
46 *Id.*

bond yields in the CAPM analysis as one way to adjust the inputs to the models during this period of low interest rates. Such an adjustment is justified given the market's expectation that long-term interest rates will increase from current levels over the period during which rates established in this proceeding will remain in effect.

Following Mr. Smith's argument that current interest rates are the best predictor of future interest rates, the Commission would have based ROE determinations in the early 1980s on government bond yields of 15-18 percent, even though those interest rates had started a long, steady decline. As a result, ratepayers would have been paying unnecessarily high capital costs. Today, the situation is reversed. Interest rates are currently at near historic lows, but are projected to increase rather substantially as the Federal Reserve continues tightening monetary policy and unwinding the asset purchases made after the Great Recession, and as the effects of tax reform and increased government debt flow through to long-term Treasury yields. Setting the cost of equity for MAWC based on the assumption that current interest rates will continue in perpetuity is very likely to under-compensate investors as capital costs increase.

In response to Mr. Smith's contention that investors have accepted that interest rates will remain low for an extended period, which explains why they are purchasing utility stocks at high current valuations, as shown in **Error! Reference source not found.** of my Surrebuttal Testimony, the S&P Utilities Index has already declined significantly since mid-November 2017, as Treasury yields have risen and investors have shifted into more economically sensitive sectors, disproving Mr. Smith's conjecture.

Despite Mr. Gorman's criticism of my use of projected interest rates, his CAPM analysis relies on a forecasted risk-free rate of 3.60 percent, which is 12 basis points higher than the

near-term projected risk-free rate used in my CAPM. With regard to my long-term projected risk-free rate, Mr. Gorman is not correct when he states that my CAPM analysis is based on long-term projections five to ten years out. As shown on Exhibit Schedule-6 of my Direct Testimony, I present three CAPM results: 1) the first is based on current 30-day average Treasury yields; 2) the second is based on near-term projected Treasury yields from Blue Chip; and 3) the third is based on long-term projected Treasury yields from 2019-2023 from Blue Chip.

5) CAPM – Market Risk Premium

Q. Please summarize Mr. Smith's and Mr. Gorman's criticisms of your use of a projected market risk premium in the CAPM.

A. Mr. Smith contends that the projected market risk premium used in my CAPM analysis is not consistent with investor's capital market expectations.[47] Mr. Smith uses historical data from Duff and Phelps to calculate a market risk premium of 5.5 percent, and a report by J.P. Morgan Asset Management, which indicates that the expected market risk premium is 2.5 percent, to support his view that the forecasted market risk premium used in my analysis is unreasonable.[48] Furthermore, Mr. Smith claims that the market return that I calculate using a Constant Growth DCF analysis of the S&P 500 to estimate the market risk premium in my CAPM analysis is unreasonably high and unsustainable given that the estimate is

[47] Rebuttal Testimony of Jeffrey Smith, at 25.
[48] *Id.*

higher than historical average returns and not consistent with projections of economic growth.[49]

Mr. Gorman also believes that my projected market risk premium is overstated as a result of my estimate of the total market return.[50] Mr. Gorman contends that my Constant Growth DCF model uses an estimate of long-term market growth that is too high and inconsistent with long-term projections of U.S. GDP growth.[51] According to Mr. Gorman, actual achieved growth in the market historically has been much less than my current projection (which is based on analyst EPS growth rates for S&P 500 companies) and has historically tracked the growth in U.S. GDP.[52] Mr. Gorman concludes that, while he does not endorse the use of historical growth rates to estimate forward-looking market conditions, historical data can be used to show that my estimate of the market return is unreasonable and inflated.[53]

Q. How do you respond to these criticisms?

A. While I agree that Duff and Phelps and J.P. Morgan are respected sources for investment information, other alternative sources provide reputable forecasts of market returns that are significantly higher than the estimates produced by these sources. In Table 1 below, I provide the S&P 500 return as reported by Bank of America/Merrill Lynch and additional estimations of the S&P 500 return calculated using earnings growth projections from Bloomberg Professional, Yahoo!Finance, and Standards and Poor's. The calculated returns

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49 *Id*., at 28.
50 Rebuttal Testimony of Michael P. Gorman, at 23.
51 *Id*., at 24.
52 *Id*., at 24-25.
53 *Id*., at 25.

for the S&P 500 range from 10.61 percent (Bloomberg Professional) to 15.16 percent (Standard and Poor's). Therefore, the total return for the S&P 500 Index of 13.39 percent that I used to determine the forward-looking market risk premium in my CAPM analysis is within the range of returns shown in Table 1.

Table 1: S&P 500 Return Estimates[54]

Source	Estimate Date	Dividend Yield	Growth Estimate	S&P 500 Return
Bloomberg Professional	January 25, 2018	1.75%	8.79%	10.61%
Bank of America – Merrill Lynch[55]	October 11, 2017	N/A	N/A	11.00%
Yahoo! Finance	January 25, 2018	1.75%	12.00%	13.86%
Standard and Poor's	January 18, 2018	1.75%	13.29%	15.16%

Furthermore, Mr. Smith notes that the equity risk premium is 5.5 percent as reported by Duff and Phelps in its 2017 edition of the "Valuation Handbook: *Guide to Cost of Capital*" and 2.5 percent as reported J.P. Morgan Asset Management.[56] However, the equity risk premiums reported by Mr. Smith fail to reflect the inverse relationship between interest rates and the market risk premium. Based on historical data from Duff and Phelps, the market risk premium from 1926-2016 is 7.0 percent.[57] The historical income only return on government bonds over the same period has been approximately 5.00 percent, while the yields used in the equity risk premium calculations for Duff and Phelps and J.P. Morgan

54 Bloomberg and Yahoo!Finance do not report a dividend yield for the S&P 500; therefore, the 2017 average dividend yield reported in the January 18, 2018, S&P 500 Earnings and Estimate Report was used to calculate the total return.

55 Required Return - Bank of America Merrill Lynch, Quantitative Profiles, October 11, 2017, at 58.

56 Rebuttal Testimony of Jeffrey Smith, at 25.

57 The market risk premium from 1926-2016 is calculated as the average return on large company stocks from 1926-2016 minus the average income only return on long-term government bonds from 1926-2016 (i.e., 12.00 percent – 5.00 percent = 7.00 percent). Source: Duff &Phelps, Valuation Handbook: Guide to Cost of Capital, 2017, p. 2-4.

Asset Management are 3.5 percent and 3.0 percent, respectively.[58, 59] When the long-term yield on government bonds is lower than the historical average of 5.00 percent, the inverse relationship between interest rates and the market risk premium indicates that the market risk premium should be above the historical average of 7.00 percent. However, the analyses published by Duff and Phelps and J.P. Morgan Asset Management suggest that the expected market risk premium would be 150 basis points and 450 basis points, respectively, lower than the historical average.

Q. Is there support for the method you have used to calculate the forward-looking market risk premium in your CAPM analysis?

A. Yes, there is. My approach to conducting a Market DCF analysis is virtually identical to one adopted by the Federal Regulatory Energy Commission ("FERC") in a recent order. In response to arguments similar to those proffered by Mr. Gorman in this proceeding, the FERC concluded:

> We are also unpersuaded that the growth rate projection in the NETOs' CAPM study was skewed by the NETOs' reliance on analysts' projections of non-utility companies' medium-term earnings growth, or that the study failed to consider that those analysts' estimates reflect unsustainable short-term stock repurchase programs and are not long-term projections. As explained above, the NETOs based their growth rate input on data from IBES, which the Commission has found to be a reliable source of such data. Thus, the time periods used for the growth rate projections in the NETOs' CAPM study are the time periods over which IBES forecasts earnings growth. Petitioners' arguments against the time period on which the NETOs' CAPM analysis is based are, in effect, arguments that IBES data are insufficient in a CAPM study. [60]

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58 Source: Duff &Phelps, Valuation Handbook: Guide to Cost of Capital, December 26, 2017, p. 3-50.

59 JP Morgan Asset Management, "2018 Long-Term Capital Market Assumptions", 2017, at 9.

60 150 FERC ¶ 61,165, Docket Nos. EL11-66-002, Opinion No. 531-B, para. 112.

Thus, the FERC did not agree with the argument that analysts' projections for the S&P 500 are unsustainable and not reliable for estimating the cost of capital for a broad-based market index. As such, I conclude that my method of calculating the market return and projected market risk premium is more appropriate and better aligned with investors' expectations of the future market conditions.

E. Review of Recent ROE Recommendations

Q. Please summarize Staff witness Smith's testimony regarding your recommended returns in other recent cases.

A. The premise of Mr. Smith's criticism is that there is a single cost of equity that should be applied uniformly across all companies in what he refers to as 'stable market conditions". Mr. Smith reviews my analyses since the fall of 2016 for various companies across three industries (water, electric and natural gas utilities) and establishes a range of results from 8.43 percent to 10.0 percent (157 basis points) across those cases. Mr. Smith incorrectly identifies these ranges as "ranges of reasonableness" from my testimony. Rather, the low end of this range presented by Mr. Smith are results of the DCF models, which I note have been understating the cost of equity due to market conditions.

Mr. Smith compares the range that he has chosen from my testimony to four cases in which Mr. Gorman participated over the same time-period, noting that Mr. Gorman's analyses converge around a return that is within a very narrow range. Mr. Smith concludes from

this study that the "highly variable nature" of my recommendation since fall 2016 "obscure any reasonable interpretation of how the COE has evolved over the last year".[61]

Mr. Smith is further troubled by the fact that a return for a water utility could be higher than the return for an electric utility. As support for his conclusions, Mr. Smith relies on the average authorized cost of equity for electric and water utilities and states that "there has not been a single year in which the average authorized ROEs for water utilities were higher than those for electric utilities".[62]

Q. How do you respond to Mr. Smith's proposal that the cost of equity should converge across companies?

A. I disagree with the underlying premise of Mr. Smith's argument, that there is a single cost equity for all companies at a given point in time. Consistent with *Hope* and *Bluefield*, the cost of equity that is determined in any case is intended to reflect a return for comparable risk investments. That principle requires that the analysis contemplate the specific risk factors of the utility for which the return is established. If an analyst were to review the bonds of different utilities, issued within a similar time frame, it would be reasonable to expect that the interest rates on those bonds would differ according to the credit metrics of the individual company. It stands to reason then, that those risk factors would also be recognized by equity investors, since they are the last claimants in the event of bankruptcy. In fact, based on the range of returns that have been authorized in a given year, regulatory commissions across the country have demonstrated that there is no one single cost of

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61 Rebuttal Testimony of Mr. Smith, at 17-18.

62 *Id*., at 18.

equity. While Mr. Smith continues to focus on the average return in a given year, as shown in Chart 1 above, the range of returns that have been authorized for water companies in 2017 is from 9.0 percent (one observation), to 10.40 percent. While there are only 7 observations, the majority of those observations have been above 9.50 percent. On this basis, I conclude that Mr. Smith has ignored one of the fundamental conditions of the *Hope* and *Bluefield* decisions in his own analysis of the cost of equity and also in his conclusions regarding my prior recommendations and the recent recommendations of Mr. Gorman.

Q. What other factors are important to consider in the comparable return standard?

A. As discussed in my Direct Testimony, there are several risk factors that need to be considered for the individual company as compared to the proxy group. One category of risk factors that Moody's has identified in developing credit ratings is the regulatory environment. The return that is established has very different implications depending on the regulatory environment in which a utility operates. That regulatory environment includes such important considerations such as the test year used, the recovery mechanisms that have been implemented to assist a utility in recovering its capital investments, the extent to which the regulatory commission properly recognizes the expense levels and plant that will be serving customers, whether the utility has a realistic opportunity to collect its authorized revenue requirement, and the capital structure that is utilized.

An analyst that is applying the comparable risk standard of *Hope* and *Bluefield* will need to understand these factors as compared with the proxy group to determine the relative risk of the company as compared to that group. As shown in Schedule 9 to my Direct Testimony, I conducted that analysis for the proxy companies in this case and for MAWC. The conclusion of that analysis is that the majority of the operating companies have

regulatory constructs that are not available to MAWC. This factor would create more risk for MAWC as compared with the group overall and would suggest a higher cost of equity, all else comparable.

Q. In addition to varying risk among companies in the same industry, does risk vary among companies in the "utility industry?"

A. Yes. Although utilities face many similar risks, such as regulatory risk, the respective risks faced by water, gas and electric utilities at any point in time are not the same. For example, MAWC witness Jenkins' testimony discusses the statement by the National Association of Regulatory Utility Commissioners ("NARUC") that water companies uniquely face issues not faced by other utilities, such as declining use per customer and capital requirements fueled, in part, by having to meet increasing water quality standards, as well as replacing infrastructure. Again, a blanket assumption, for example, that a large electric company faces the same business risk as a small water company, even in the same regulatory jurisdiction, is simply not reasonable.

Q. What is your opinion of Mr. Smith's review of Mr. Gorman's analyses?

A. Mr. Smith testifies that Mr. Gorman has submitted testimony in 47 cases since 2016. Mr. Smith bases his conclusions on four cases in Mr. Gorman's body of work over that time period. The four cases that Mr. Smith references from Mr. Gorman's recent work include two electric companies, a natural gas distribution company and a water utility. The results of my analysis are summarized in Chart 4 below.

Chart 4: Summary of Mr. Gorman's analyses reviewed by Mr. Smith

Company	Service Type	Test Year	Company Recommended Equity Ratio	Tracking Mechanisms	Gorman's ROE Recommendation
Delmarva Power and Light	Electric transmission and distribution company	Historical	49.44%		9.0%
Intermountain Gas Company	Natural gas distribution	Partially forecast	48.0%		9.3%
Indiana-Michigan	Vertically integrated electric utility	Future	35.21%	Partial decoupling and tracker for certain capital investment	9.10%
Aqua IL	Water distribution	Future	53.17%	Infrastructure surcharge	9.10%

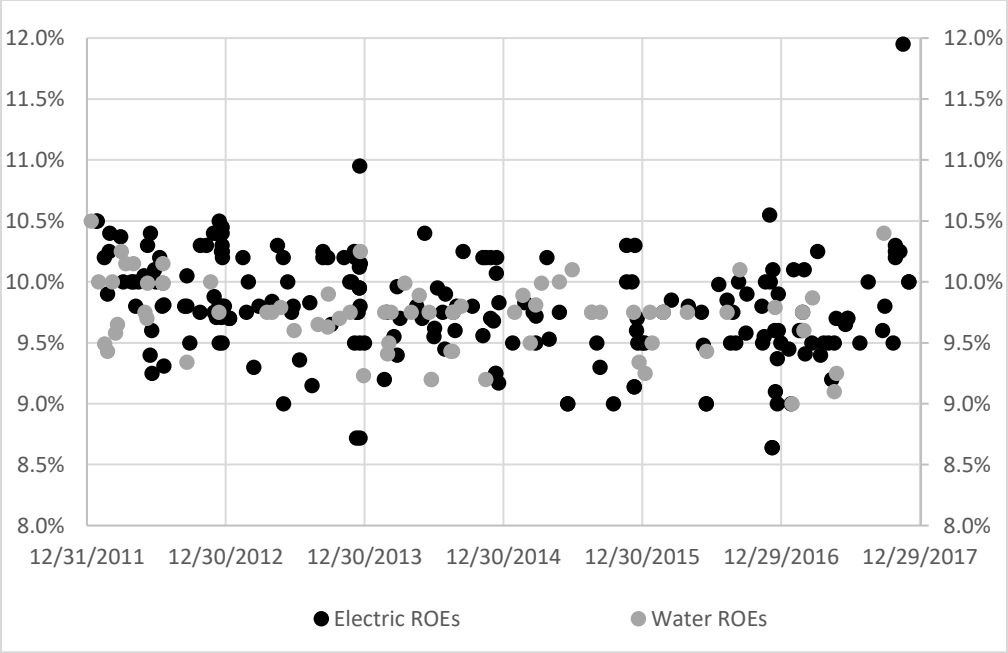
As shown in Chart 4, these four cases present very different risk factors for each of the utilities that are considered. Indiana-Michigan is a vertically integrated electric utility that has significant coal-fired generation in its portfolio. Delmarva is fully deregulated and does not have the risk of generation. The test years relied on vary from historical to fully forecasted and there are varying degrees of rate stabilization and capital recovery across this sample. It would be reasonable to expect that these factors would be considered in the cost of equity.

While I have not reviewed the subject companies, proxy groups, and analyses presented by Mr. Gorman in the remainder of the cases that Mr. Smith references, It would be highly unlikely that in the analyses prepared for 47 individual companies since the fall of 2016, the regulatory environments, size, capital programs and other key risk factors were the same, or required similar adjustment to the proxy group to justify a return that is in a very narrow band.

Q. Is Mr. Smith's analysis of the average authorized ROE's for water and electric utilities meaningful?

A. No, it is not. Mr. Smith suggests that simply because the average return for electric utilities has been higher than water utilities that it is not reasonable to think that the return for an individual water utility could be higher than the return for an individual electric utility. That is not the case. As shown in Chart 5 below, there are many instances where the returns for individual water utilities have been higher than the returns for individual electric utilities. Therefore, Mr. Smith's suggestion that the average authorized ROE is somehow justification for determining that water utility returns should always be lower than electric utility returns is unfounded.

Chart 5: Authorized Returns for Electric and Water utilities 2012-2017



Q. Please summarize your conclusions regarding Mr. Smith's analysis of your recent ROE recommendations.

A. I disagree with Mr. Smith's suggestion that there is an individual Cost of Equity that is constant across companies, even in similar market conditions. Much like the bond market, equity investors consider the relative risk factors of individual investments in order to determine the required return on an investment. Mr. Smith's analysis of my recommendations and those of Mr. Gorman, without consideration of the relative risk factors for the individual company as compared with the proxy group violates the *Hope* and *Bluefield* standards. As I have done in each of my analyses, that standard requires an analyst to review the specific factors for each individual company, taking into consideration how the differences in risk factors affect investors' required return for that company as compared with the proxy group. Furthermore, considering the returns that have been authorized by regulatory commissions over the time-period provided by Mr. Smith, it is clear that regulators do not believe that the cost of equity can be defined by a single value or even a tight range of value. The range of returns authorized for water utilities in 2017 was 140 basis points, much wider, in fact, than the actual ranges of reasonableness that I have recommended in the testimonies I have prepared for vertically integrated electric utilities, transmission and distribution electric utilities, natural gas distribution companies and water utilities.

F. Business Risk

Q. Please summarize OPC/MIEC witness Gorman's testimony regarding MAWC's business risk relative to the proxy group.

A. Mr. Gorman contends that the business risks identified in my Direct Testimony are among those considered in the assigning of a credit rating by the various credit rating agencies.[63] According to Mr. Gorman, this total investment risk of MAWC, in comparison to a proxy group, is fully absorbed into the market's perception of MAWC's risk, and therefore the proxy group fully captures the investment risk of MAWC.[64] Mr. Gorman agrees that the water industry has high capital requirements, and he testifies that the industry as a whole is expected to require access to the external capital markets due to producing less cash flow per share than capital spending per share. However, he contests my assertion that the Company will need to access the capital markets in the near term, arguing that this risk is not unique to MAWC.[65]

Q. How do you respond to Mr. Gorman's position on business risk?

A. First, Mr. Gorman is only considering business risk from the perspective of the credit market. While I agree that the combination of business risk and financial risk can be used to assess overall investment risk, I do not agree that equity investors only consider the credit rating implications of the authorized ROE. Furthermore, while a proxy group is chosen to have similar characteristics to the company whose return is being established,

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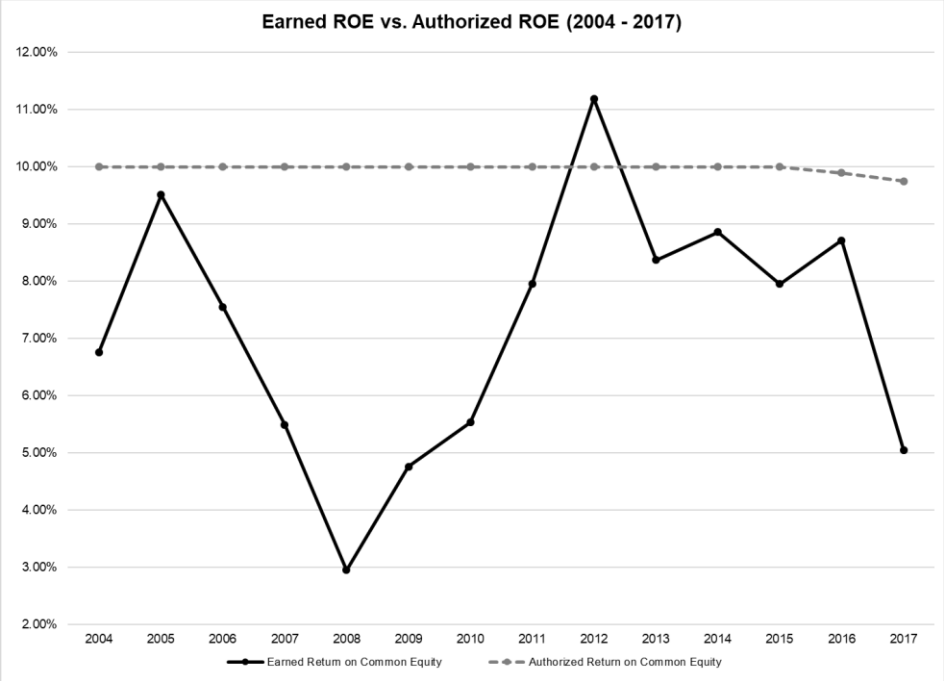
63 Rebuttal Testimony of Michael P. Gorman, at 26.
64 *Id*., at 27.
65 *Id*., at 27-28.

the return is ultimately established based on a relative comparison of the risk of the subject company and the proxy group. This requires a more granular differentiation of business and financial risk between the subject company and the proxy group.

From a practical perspective, if Mr. Gorman is correct that MAWC's business risk is essentially the same as that of other companies in the industry, then it would be reasonable to expect that MAWC is able to earn its authorized ROE on a relatively consistent basis. However, as shown in Chart 6, MAWC has earned its authorized ROE only once in the past fourteen years. On average, MAWC has under-earned its authorized return on equity by 278 basis points per year (i.e., 7.19 percent vs. 9.97 percent).

Chart 6: MAWC Earned vs. Authorized ROE – 2004-2017



This suggests that the regulatory framework in Missouri is not providing MAWC reasonable opportunity to recover its costs on a timely basis and earn a return on the capital used to finance rate base investment. In response to this persistent regulatory lag, MAWC is requesting approval of a revenue stabilization mechanism and that new rates be

determined using a future test period. In summary, I disagree with Mr. Gorman that the authorized ROE for MAWC should be based on the proxy group average.

Q. Are there implications to MAWC's inability to earn its allowed ROE under Missouri's current ratemaking policies?

A. Yes. Especially for companies that face significant capital requirements for the foreseeable future, the ability to attract capital on reasonable terms is critical. Capital is not conscripted and it will flow to where the best risk-adjusted returns are available. This is true whether MAWC attracts capital from outside sources or from its parent company. As Ms. Norton testifies, there is competition for capital among all the American Water subsidiaries, who must vie for limited capital resources within the system. If Missouri's ratemaking policies result in consistently lower achieved rates of return than are achieved by other American Water subsidiaries, then MAWC will suffer in comparison and the capital attraction test will not be met. Therefore, it is equally important that the Commission not only determine what is a just and reasonable ROE for MAWC but that the Commission also find that it is giving the Company a just and reasonable opportunity to achieve that rate of return.

Q. Have you conducted any analysis of the authorized returns for the American Water subsidiary companies?

A. Yes. Since the return to shareholders is composed of the return on equity and the equity ratio, I have considered both the most recently authorized returns and equity ratios for each of the regulated American Water subsidiaries. This analysis excludes Missouri, since that

is the subject of this proceeding. The median return for the other regulated American Water subsidiary companies is 9.77 percent and the median equity ratio is 49.23 percent. The resultant median equity cost rate is 4.87 percent. The recommendations proposed by Mr. Gorman and Mr. Smith fall well below the median equity rate.

Q. What do you conclude from this analysis?

A. It is reasonable to expect that capital will be deployed based on the expected return on that capital. Based on the returns that have been authorize for other subsidiaries, it would be reasonable to expect that the return and capital structure proposed by Mr. Smith would place MAWC among the lowest priorities for capital when reviewed on an overall return basis. While Mr. Gorman's proposal results in a higher equity rate than Mr. Smith's proposal, it is still well below the median, and therefore would still make MAWC a lower priority for capital than many other subsidiaries based on this measure.

Q. Are you aware of the Commission's deliberations with respect to capital structure in the ongoing Spire Missouri, Inc, case (Case Nos. GR-2017-0216 and GR-2017-0215)?

A. Yes, I am aware that several Commissioners have indicated a preference for the use of the consolidated capital structure for reasons that include consistency with the decision in the KCPL case.

Q. Do you agree with the use of the consolidated capital structure for MAWC?

A. No, I do not. As discussed in my Rebuttal Testimony, the use of the consolidated capital structure fails to take into consideration the stand-alone principle, which is a well-established regulatory principle providing that the rate of return (both return on equity and

capital structure) for a regulated utility should be set as if the utility were seeking to attract capital in financial markets based on its own individual merits and risk profile. In addition, it is not appropriate to use the parent company capital structure of American Water as the ratemaking capital structure for MAWC because the additional debt on American Water's balance sheet is being used to fund acquisitions of other water companies, not to finance the operations of MAWC. In addition, my understanding is that all American Water subsidiaries are managed to a 50 percent equity ratio to maintain a strong financial profile for subsidiaries so that they could go to market, if necessary.

Q. How does the American Water consolidated equity ratio compare with the equity ratios of the proxy companies?

A. American Water's consolidated equity ratio of 43.99 percent is below the low end of the range established by the proxy group. As discussed in my Direct Testimony, the median equity ratio of the proxy group is 54.17 percent and the range is 49.31 percent to 60.60 percent.

Q. How does the use of an equity ratio that is well below the range set by the proxy group affect the expected return on equity?

A. The return to investors is based on both the equity ratio and the ROE. To the extent that the equity ratio is set well below the ratio of the proxy group, it would be necessary to increase the ROE to establish a reasonable overall return to investors. As discussed in my rebuttal testimony, relying on a 43.99 percent equity ratio rather than the Company's proposed equity ratio of 51.03 percent would increase the ROE by 135 basis points to achieve the same equity rate.

Q. How does the tax reform affect the appropriate capital structure for MAWC?

A. As discussed previously, rating agencies have concluded that tax reform will be credit negative for utilities due to the loss of bonus depreciation reduction in Federal income taxes. While Moody's has downgraded the outlooks for many utilities from stable to negative, FitchRatings has indicated that it will wait to see how regulators work with utilities to manage the short-term cash flow concerns. One tool that FitchRatings notes for regulators is to increase the ROE or equity ratio to ease pressure on cash flow for utilities. The fact that rating agencies are expecting accommodative measures from regulators to address these concerns supports the use of MAWC's proposed equity ratio of 51.03 percent, not a reduction in the equity ratio to the parent company consolidated equity ratio of 43.99 percent.

IV. RESPONSE TO ISSUES RAISED IN THE REBUTTAL OF MR. BUSCH AND MR. MARKE

Q. How is MAWC proposing to address the persistent regulatory lag that has caused the Company to significantly under-earn its authorized ROE?

A. MAWC is proposing to rely on a future test year from June 1, 2018 through May 31, 2019, which extends almost two years in the future, and MAWC is proposing to implement a RSM, which is designed to stabilize fluctuations in the Company's revenues caused by factors such as weather conditions or failure to meet sales forecasts due to declining residential usage.

Q. Please summarize Staff witness Busch's testimony regarding the effect of the proposed revenue stabilization mechanism ("RSM") on the authorized ROE and capital structure for MAWC.

A. Mr. Busch testifies that if the Commission approves the proposed RSM, Staff recommends that the Commission acknowledge the reduction in business risk that MAWC will face with an RSM in place. According to Mr. Busch, there are two ways the Commission can recognize the reduction in business risk: 1) make a downward adjustment to the authorized ROE by an unspecified amount; or 2) adjust the capital structure to be weighted more heavily on the debt side.[66]

Q. Does OPC witness Marke offer a similar opinion?

A. Yes, he does. And OPC witness Marke also suggests that the Company's return should be reduced if an RSM is implemented. In addition, Mr. Marke suggests that the authorized ROE is a goal for the utility, one that is often not reached. He suggests that the authorized ROE is a ceiling, not a threshold and that achieving the return should be viewed as an ongoing challenge.[67]

[66] Rebuttal Testimony of James A. Busch, at 13.
[67] Rebuttal Testimony of Geoff Marke at 6.

Q. Do you agree with Mr. Busch's recommendation to adjust the authorized ROE or the equity ratio for MAWC as a result of the RSM?

A. No, I do not. As explained in my Direct Testimony, for purposes of evaluating whether the proposed future test year and RSM affect the authorized ROE of MAWC, the relevant question is whether other companies in the proxy group are allowed to use a forecast test year or have similar mechanisms that reduce volumetric risk.[68] As shown in Schedule AEB-9, many of the proxy companies have forward test periods, revenue stabilization mechanisms and capital trackers. In addition, a recent Brattle Group report summarizes several other regulatory mechanisms that have been implemented by the proxy group companies to stabilize revenue and secure timely recovery of costs.[69] The approval of these types of adjustment clauses, revenue decoupling mechanisms such as RSM, ROE incentives riders, trackers, forward test years, and cost recovery mechanisms by regulatory commissions is widespread in the utility business and is already largely embedded in financial data, such as stock prices, bond ratings, and business risk scores. Moreover, it is important to note that investors generally do not associate specific increments to their return requirements with specific rate structures. Rather, investors tend to look at the totality of alternative regulatory mechanisms in place relative to those in place at comparable companies when assessing risk. The evidence demonstrates that the proxy companies have implemented some form of alternative ratemaking mechanism to increase the companies' ability to achieve the revenue requirement that was authorized by the

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[68] Direct Testimony of Ann E. Bulkley, at 50-51.

[69] The Brattle Group, "Alternative Regulation and Ratemaking Approaches for Water Companies: Supporting the Capital Investment Needs of the 21st Century", September 30, 2013.

regulatory commission. Therefore, the returns for the proxy companies already reflect any risk-reducing features of these mechanisms, and, contrary to Mr. Busch's testimony, no adjustment to the authorized ROE or the equity ratio for MAWC is needed.

Q. Is there any empirical evidence on the impact of alternative regulatory mechanisms?

A. Yes, there is. A comprehensive study by the Brattle Group[70] investigated the impact of a particular alternative regulatory mechanism, namely, revenue decoupling, on risk and the cost of capital and found that its effect on risk and cost of capital, if any, is undetectable statistically.

Q. Is OPC witness Marke correct that the authorized ROE should be viewed as a ceiling, not a threshold?

A. No, unless he is recommending that the Commission should set a rate of return on equity for MAWC at the very highest point of the range of reasonable returns. Contrary to OPC witness Marke's contentions, the authorized ROE is a target that a utility should be able to achieve under reasonable ratemaking policies. It is generally recognized that more efficient utilities should be able to achieve their authorized rates of return while less efficient utilities will likely not achieve that authorized rate of return. In this regard, however, I note that MAWC's witnesses explain that the Company has been very successful in containing its costs in the past, demonstrating that the Company has been an efficient utility. Despite

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[70] Wharton, Vilbert, Goldberg & Brown, The Impact of Decoupling on the Cost of Capital: An Empirical Investigation, The Brattle Group, February 2011; Wharton and Vilbert, Decoupling and the Cost of Capital - The Electricity Journal, September 08, 2015

their efficiency, as I noted above, the Company has been unable in most years to achieve its Commission-authorized rate of return. In this regard, it is reasonable to conclude that the reason for MAWC's inability to earn its authorized ROE is more likely based on the regulatory structure that is imposed on it.

Q. Do you agree with OPC witness Marke that the authorized return should be viewed as a goal that is challenging to achieve?

A. No, I do not. The *Hope* and *Bluefield* standards provide that companies should have a reasonable opportunity to earn the authorized return on equity. It is not sufficient that the return be positive, as OPC witness Marke suggests. A return that is merely "positive" can also fall far short of meeting the *Hope* and *Bluefield* standards because a "positive" return – which may fall below even a riskless debt return – is a meaningless indication of the Constitutional requirement. The return on equity is intended to compensate utility investors at a rate that is commensurate with the return on other investments of similar risk.

V. SUMMARY AND CONCLUSIONS

Q. Please summarize your conclusions and recommendations.

A. Nothing in the other ROE witnesses' testimony has caused me to change my range of results or my ROE recommendation. Staff witness Smith does not rely on the results of any of his models to underlie or inform his ROE recommendation of 9.25 percent. His sole reliance on one ROE determination made by the Commission for an electric utility last summer is, for the reasons I pointed out, irrelevant and insufficiently supported. OPC/MIEC witness Gorman's recommended cost of equity is also insupportable when

compared with authorized ROEs nationally or in Missouri. Notably, Mr. Gorman's models, when corrected, both exceed his ROE recommendation and provide support for my recommendation. Finally, as shown in Chart 1, the majority of recently authorized ROEs are within a range from 9.50 to 10.50 percent. The forward-looking analysis demonstrates that the high end of the range for the proxy group is 10.80 percent. While the analytical results of ROE estimation models provide a starting point, my recommendation also considers other factors, including company-specific risk factors, capital market conditions and the capital attraction standard. Market conditions demonstrate that interest rates are increasing and in response, the market prices of utility stocks have been declining recently. This suggests that the cost of equity is increasing. Furthermore, if MAWC does not have the benefit of RSM and future test year ratemaking and a reasonable stand-alone equity ratio, such as what was proposed by the Company, the risks of this company are greater than the proxy group, and therefore, would be at the high end of the range of results for the proxy companies. To the extent that the Commission authorized RSM, relied on a future test year, and authorized the Company's requested stand-alone equity ratio, MAWC would be more comparable to the proxy group.

Q. Does this conclude your Surrebuttal Testimony?

A. Yes, it does.