Exhibit No.: _____
Issue(s): Rate of Return (ROR)/Capital Structure/ Revenue Stabilization Mechanism (RSM)/ COVID-19 AAO
Witness/Type of Exhibit: Murray/Rebuttal
Sponsoring Party: Public Counsel
Case No.: WR-2020-0344

REBUTTAL TESTIMONY

OF

DAVID MURRAY

Submitted on Behalf of the Office of the Public Counsel

MISSOURI-AMERICAN WATER COMPANY

CASE NO. WR-2020-0344

** **

Denotes Confidential Information that has been Redacted

January 15, 2021

PUBLIC

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water Company's Request for Authority to Implement General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas	)))))	Case No. WR-2020-0344

VERIFICATION OF DAVID MURRAY

David Murray, under penalty of perjury, states:

1. Attached hereto and made a part hereof for all purposes is my rebuttal testimony in the above-captioned case.

2. My answer to each question in the attached rebuttal testimony is true and correct to the best of my knowledge, information, and belief.

/s/David Murray
David Murray
Utility Regulatory Manager
Office of the Public Counsel

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REBUTTAL TESTIMONY

OF

DAVID MURRAY

MISSOURI AMERICAN WATER COMPANY

FILE NO. WR-2020-0344

Q. What is your name and business address?

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

Q. Are you the same David Murray who filed direct testimony in this case?

A. Yes.

Q. What it the purpose of your testimony?

A. I will respond to the direct testimonies of Missouri American Water Company's ("MAWC") witnesses, Anne L. Bulkley and Brian LaGrand. I will also respond to the rate of return ("ROR") section of Staff's Cost of Service Report, which Staff witness, Seoung Joun Won (Dr. Won) sponsored.

Q. What issues does Ms. Bulkley address in her direct testimony?

A. Ms. Bulkley sponsors MAWC's return on common equity ("ROE") recommendation and the reasonableness and appropriateness of Mr. LaGrand's capital structure recommendation.

Q. What issues does Mr. LaGrand address in his direct testimony?

A. Mr. LaGrand addresses several revenue requirement issues, including MAWC's recommended capital structure for purposes of setting MAWC's allowed ROR.

Q. Can you address MAWC's witnesses by issue rather than by witness?

A. Yes.

Q. What issue will you address first?

A. Capital structure.

CAPITAL STRUCTURE

Q. What capital structure does MAWC recommend for purposes of setting its allowed ROR?

A. Mr. LaGrand recommends the Commission adopt his pro-forma estimate of MAWC's capital structure for MAWC's proposed future test year, May 31, 2022. Mr. LaGrand's proposed capital structure consists of 53% common equity and 47% long-term debt. Mr. LaGrand suggests it is appropriate to set MAWC's ratemaking capital structure based on long-term capital balances he expects MAWC's per books balance sheet to show for the 13-months ended as of the future test year, May 31, 2022.

Q. Does Mr. LaGrand rely on MAWC's per books pro forma balance sheet for his recommended capital structure?

A. Yes. Mr. LaGrand's capital structure recommendation is based on his view that MAWC's per books balance sheet fairly represents the amount of leverage, i.e. debt, that MAWC's assets support.

Q. Does Mr. LaGrand provide his determination of MAWC's capital structure as of the test year, December 31, 2019?

A. Yes. Mr. LaGrand identifies MAWC's capital structure as of December 31, 2019, on page 2 of Schedule BWL-4 attached to his direct testimony. Mr. LaGrand includes preferred stock and short-term debt in MAWC's capital structure as of this date. In order to compare the proportion of common equity and long-term debt as of December 31, 2019, to MAWC's pro forma estimated capital structure as of the future test year, I eliminated preferred stock and short-term debt as of December 31, 2019. The resulting capital structure ratio is 52.74% common equity and 47.26% long-term debt, which is similar to the ratios MAWC targets for the proposed future test year.

Q. What capital structure ratios has MAWC targeted in recent years?

A. As is clear from the consistent proportion of common equity ratios in the range of 50.07% to 52.43% over the last five years, as seen on page 3 of Schedule DM-D-9 attached to my direct testimony, MAWC is managing its capital structure to achieve common equity ratios in the low 50% range.

Q. Is MAWC managing its capital structure for purposes of raising third-party debt financing?

A. No.

Q. What is American Water's practice as it relates to managing its regulated utility subsidiaries' capital structures?

A. As stated in the attached Schedule DM-R-1, MAWC's parent company, American Water Works Company ("American Water"), ** ———————————————————————————— **

Q. Has the Commission ** ———————————————— ** for MAWC?

A. No.

Q. If the Commission set MAWC's common equity ratio at 53%, are you aware of any benefit MAWC ratepayers would receive in return for paying for this higher-cost capital structure as compared American Water's more cost efficient capital structure?

A. No.

Q. Does MAWC have any third-party debt outstanding on its balance sheet?

A. Yes. MAWC still has a small amount of third-party debt outstanding that it issued in the 1990s. All of the other debt outstanding on MAWC's books represents affiliate notes

MAWC issued to American Water's financing subsidiary, American Water Capital Corporation ("AWCC").

Q. How much of MAWC's outstanding debt is third-party debt?

A. $23.5 million of MAWC's $818.35 million of debt outstanding at June 30, 2020, is third-party debt, which represents only 2.87% of MAWC's outstanding debt as of June 30, 2020.

Q. How did MAWC raise the other ~97% of long-term debt in its capital structure?

A. Through intercompany notes issued to AWCC.

Q. Does MAWC have a formal agreement with AWCC that governs the terms and conditions of the financing proceeds it receives from AWCC?

A. Yes. MAWC executed a Financial Services Agreement ("FSA") with AWCC on June 20, 2000.[1]

Q. What was the objective of this FSA?

A. As stated in Paragraph 13 of Missouri-American's application filed in Case No. WF-2002-1096:

> Applicant [MAWC] proposes to implement some or all of the long-term debt portion of its financing program primarily through an affiliate, American Water Capital Corp. ("AWCC"). AWCC is a wholly-owned subsidiary of American Water Works Company, Inc., ("AWW") established for the purpose of providing financial services to AWW and its water and wastewater utility subsidiaries (including Applicant) by pooling the financing requirements of such companies (the "Participants"), thereby creating larger and more cost efficient debt issues at more attractive interest rates and lower transaction costs than would otherwise be available.

The Application goes on further to state in Paragraph 14:

> In the past, Applicant, and its constituent predecessors in interest, provided for debt financing needs primarily through short-term bank borrowings and the sale by private placement of long-term bonds issued pursuant to mortgages on plant and

[1] Appendix 2 attached to MAWC's Application in Case No. WF-2002-1096.

> property in this State including the Indenture of Mortgage and, when available, tax exempt bond issues. Changes in financial markets and federal securities regulation have made the public securities market an attractive alternative to the traditional, secured, privately placed bonds and bank borrowings upon which Applicant has traditionally relied. However, borrowers can derive the benefits of the public market only if the amounts they borrow are large enough, and their credit rating high enough, to meet that market's significant entry level requirements. Standing alone, Applicant does not have the borrowing requirements large enough to finance in the public markets. However, by financing through AWCC, Applicant and its sister companies in other states have sufficient borrowing power to finance in the public market and thereby obtain the advantageous terms available therein.

The Application goes on further to state in Paragraph 14:

> Generally, each year the Participants provide AWCC with an estimate of the borrowing requirements which they propose to finance through AWCC for the coming year and for one (1) to three (3) years in advance. On the basis of this information, AWCC arranges borrowing commitments and programs to provide the funds necessary to meet these requirements. All long term debt incurred by AWCC and the corresponding long-term indebtedness of each Participant will be match-funded. That is to say, AWCC borrows long term funds only to meet specific borrowing needs of one or more participants.

Q. Is MAWC restricted from issuing third-party debt pursuant to the FSA it has with AWCC?

A. No. The "Non-exclusivity" clause states the following:

> Nothing in this Agreement prohibits or restricts the Company from borrowing from third parties, or obtaining services described in this Agreement from third parties, whenever and on whatever terms it deems appropriate.

Q. Has MAWC borrowed from third-parties since it executed the FSA in 2000?

A. Yes. MAWC issued $57,460,000 of third-party debt through the State Environmental Improvement and Energy Resource Authority ("EIERA") in 2006. However, I am not aware of MAWC issuing any other third-party debt since this time.

Q. Does MAWC anticipate issuing third-party debt on a going-forward basis?

A. Yes, but not a significant amount. Mr. LaGrand indicates in his direct testimony that he anticipates MAWC will execute a loan of $10,315,000 with the Missouri Department of Natural Resources through Drinking Water Refunding Revenue Bonds ("State Revolving Fund"). MAWC's periodic use of state programs, such as EIERA or the State Revolving Fund, is consistent with its past practice of taking advantage of these low-cost, tax advantaged financing sources when available.

Q. Does MAWC anticipate issuing any traditional independent corporate debt, as it had prior to its execution of the FSA?

A. No. MAWC has not issued any traditional third-party corporate debt since at least 2002, and Mr. LaGrand's pro forma capital structure information does not show MAWC issuing its own third-party corporate debt at least through MAWC's proposed future test year of May 31, 2022.

Q. What percentage of MAWC's planned debt issuances through its proposed future test year are third-party debt issuances?

A. MAWC's planned State Revolving Fund debt represents 3.27% of the ~$315 million of debt MAWC plans to issue both internally (to AWCC) and externally. MAWC's plans to execute ~$305 million in affiliate notes with AWCC for the period January 1, 2020 through May 31, 2022.[2]

Q. Are there any financial covenants in MAWC's debt agreements that require it to maintain less financial risk than its parent company, American Water?

A. I am not aware of any. The only financial covenant I am aware of in MAWC's Indenture of Mortgage for bonds issued in the 1990s is that MAWC's indebtedness shall not exceed 65% of its total capitalization.[3]

[2] LaGrand Direct, pages 13-14.
[3] MAWC Application in Case No. WF-2002-359.

Q. Does Mr. LaGrand provide information about projected equity infusions into MAWC?

A. Yes. Mr. LaGrand indicates that American Water plans to invest $183 million of equity in MAWC for the period May 31, 2020 through March 1, 2022.

Q. Does American Water issue equity to fund its equity infusions into its subsidiaries?

A. No. Although American Water has received minor amounts of equity proceeds from its employees through stock incentive plans as well as dividend reinvestment plans (~$236.44 since 2010), American Water receives most of its capital by means of loans from AWCC.

Q. Do you know how much American Water has borrowed from AWCC since 2010?

A. No. I believe I could easily determine such if I was allowed the opportunity to review American Water's stand-alone financial information over this period. However, MAWC has objected to OPC's request for American Water's stand-alone information.[4]

Q. Do you know the amount of debt American Water had outstanding to AWCC as of December 31, 2019?

A. Yes. According to MAWC's response to Staff DR No. 48, American Water has $2.25 billion in loans outstanding to AWCC as of December 31, 2019.

Q. Should the amount of funds American Water borrowed from AWCC since 2010 be higher than the outstanding balance as of December 31, 2019?

A. Yes. The amount of loan proceeds American Water used to invest in its subsidiaries should be higher than this amount to the extent American Water has redeemed loans from AWCC since 2010.

[4] MAWC's January 8, 2021 Objection to OPC DR Nos. 3019 through 3021.

Q. How much equity has American Water infused into MAWC since 2010?

A. $274 million.

Q. Does American Water plan to issue new equity anytime in the future to reduce the proportion of debt in its capital structure?

A. Yes. American Water has communicated to investors that it plans to issue $500 million of new equity around the mid-point (2022) of its current five-year capital plan (2020 – 2024).

Q. If American Water has not issued equity to finance its equity infusions in its subsidiaries, such as MAWC, how does it fund its equity infusions?

A. By inter-company borrowings from AWCC.

Q. Is it possible that American Water retains some of the dividends it receives from its subsidiaries to fund a portion of its equity infusions into subsidiaries?

A. It's possible. If I had access to American Water's stand-alone financial information, I believe I could make this determination, but MAWC has objected to providing this information. American Water claims it doesn't generate stand-alone financial statements. However, in my experience evaluating other holding company business structures, the holding company typically generates stand-alone financial statements at least once a year, but also generates internal financial reports that show the holding company's stand-alone financing and investing cash flows. OPC witness, Robert Schallenberg, CPA, has advised me that American Water is required to produce stand-alone financial information for purposes of preparing American Water's consolidated federal tax returns. Therefore, to the extent MAWC desires to clear the record regarding American Water's financing flows, this should be within its control.

Q. Considering American Water borrows from AWCC for purposes of funding its equity infusions in its subsidiaries, are these financing transactions an abuse of MAWC's affiliation with its parent company?

A. Yes. American Water's embedded cost of debt on a stand-alone basis was ** ——— ** as of December 31, 2019. Based on current extremely low costs of debt for investment-grade companies, this embedded cost of debt will only decrease further. American Water used the proceeds from these debt issuances to purchase equity in MAWC. If the Commission authorizes MAWC an ROE of 9.25% based on a 53% equity ratio compared to the 41% it actually has invested in its subsidiaries, this would allow American Water to earn a ** ———** margin over its cost. After considering the tax deduction American Water takes for the interest expense at the holding company, it generates a margin of ** ——— ——————— ** for its equity investors.

Q. How much additional revenue requirement would this generate for American Water's shareholders?

A. Based on Staff's recommended rate base of $1.409 billion, if American Water is allowed to charge MAWC for a cost of capital higher than its cost of borrowed funds, then this generates an additional ** ——————— ** for shareholders through a higher revenue requirement.

Q. Do MAWC and its sister subsidiaries borrow from the same pool of funds that American Water borrows from?

A. Yes. In fact, in certain circumstances, they receive loans from the same debt issuance. If the debt is loaned to MAWC, then MAWC is charged based on the underlying cost of the debt. However, if the debt is loaned to American Water and infused as equity into MAWC, then MAWC is charged an equity return, as I already described.

Q. Has MAWC had any debt assigned to it that is not directly tied to a third-party debt transaction?

A. Yes. Mr. LaGrand identifies a $20 million internal debt obligation MAWC assumed in 2013. The proceeds from the original 5.77% debt issuance were loaned in part to American Water. According to Mr. LaGrand's testimony, American Water redeemed the $20 million affiliate debt obligation in 2013. However, the third-party bond issued to procure the proceeds for the $20 million loan was still outstanding. Therefore, AWCC needed to assign this $20 million loan to another company. AWCC reassigned this loan to MAWC by executing an affiliate loan agreement with MAWC in 2013. AWCC decided to impute an estimated market rate of 3.4% to the affiliate note it assigned to MAWC because interest rates had decreased since the issuance of the 5.77% bond.

Q. As of June 30, 2020, does MAWC have any debt assigned to it that cannot be directly reconciled to the terms of an AWCC debt issuance?

A. Yes. Approximately $111.7 million of MAWC's debt outstanding cannot be reconciled to third-party debt transactions - six loans in 2012, totaling $102.7 million and one loan for $9 million in 2013. The $9 million loan is the amount remaining from the $20 million loan discussed above. AWCC loaned MAWC $11 million of the proceeds from a $600 million, 2.95% coupon bond issued on August 10, 2017, in order to refinance $11 million of the $20 million assigned to MAWC.

Q. Why wasn't the entire $20 million replaced with the 2.95% coupon bonds?

A. I do not know, but this would have been logical considering MAWC claimed refinancing the $11 million resulted in a net interest cost savings, which would eventually result in lower capital costs charged to ratepayers.

Q. Are there any other issues you can identify that show the problems with accepting the cost of debt assigned to MAWC?

A. Yes. Although many of the debt issuances assigned to MAWC are based on the terms of the underlying AWCC debt issuances, in recent years, AWCC has only been assigning the

longest-maturity bonds (30-years) to MAWC despite the fact that it has also been issuing 10-year bonds at the same time. This causes MAWC to have a higher cost of debt as compared to AWCC on a stand-alone basis. As of June 30, 2020, MAWC's embedded cost of debt was 4.86%, while AWCC had an embedded cost of debt of ** ——— ** Because AWCC's embedded cost of debt is a function of all third-party debt issuances, and its weighted-average maturity is managed to achieve a cost-efficient cost of debt capital, this cost should be combined with MAWC's outstanding debt from the 1990s, to determine the allowed debt cost for MAWC, which I determined to be 4.29% in my direct testimony.

Q. Does Mr. LaGrand or Ms. Bulkley address whether short-term debt should be included in the authorized capital structure?

A. Not directly. However, Mr. LaGrand's recommended pro forma capital structure for the future test year is based on adjustments he made to MAWC's per books capital structure as of December 31, 2019. According to Mr. LaGrand's workpapers, if the Commission used a test-year of December 31, 2019, MAWC's ratemaking capital structure should include a 2% weighting for short-term debt at a cost of 1.85%.

Q. Based on OPC's discovery regarding the methodology that MAWC is using to calculate its AFUDC rate, does Mr. LaGrand's capital structure need to be adjusted to include more short-term debt?

A. Yes. OPC discovered MAWC is not following the Uniform System of Accounts' (USOA) prescribed formula used to determine the AFUDC rate (for a more detailed discussion of the proper methodology for calculating AFUDC, please see OPC witness, Robert Schallenberg's direct testimony). MAWC is not giving 100% weight to short-term debt balances for purposes of calculating its AFUDC rate. Instead, MAWC's AFUDC rate as of August 2020 gave the following weights to the various classes of capital: 1.01% to short-term debt, 48.29% to long-term debt, and 50.70% to common equity.[5] Because MAWC is not giving 100% weight to short-term debt balances that are equal to or below

[5] MAWC's Response to OPC DR No. 1113.

CWIP balances, CWIP balances should not offset short-term debt for purposes of determining MAWC's authorized ROR in this case.

Q. If the Commission does not require MAWC to change how it calculates AFUDC, should the full balance of short-term debt be included in MAWC's authorized capital structure in this case?

A. Yes. Therefore, if the Commission were to adopt MAWC's per books capital structure as of December 31, 2019, it should include a 5.01% ratio of short-term debt (*see* Schedule DM-R-2). If the Commission updates MAWC's capital structure through June 30, 2020, then MAWC's capital structure should include a 4.31% ratio of short-term debt, which would reduce MAWC's common equity ratio to 47.7% (*see* Schedule DM-R-3).

Q. What cost should the Commission assign to the short-term debt ratio in the capital structure?

A. A cost based on the current commercial-paper rate since this is MAWC's likely cost for the next several years. High-grade commercial paper currently requires a return of 0.25%. This is the interest rate that the Commission should apply to the short-term debt ratio in MAWC's capital structure.

Q. Are there any complicating factors as it relates to short-term debt in this case?

A. Yes. The Accounting Authority Order ("AAO") granted in Case No. WU-2020-0417 allows for MAWC to track short-term interest expense related to a $500 million term loan AWCC executed on March 20, 2020 in order to provide liquidity during the market disruptions that occurred at the onset of the COVID-19 pandemic. Although this term loan was issued to fund a $500 million cash balance at American Water, based on MAWC's data request responses and financial statements, AWCC decided to use the term loan to provide capital to its subsidiaries, including MAWC, for purposes of funding capital expenditures. Therefore, to the extent the Commission orders MAWC to properly calculate its AFUDC rate with the short-term debt reflected on its books, MAWC will recover the costs of the portion of the term loan assigned to it through its inclusion in its AFUDC rate.

Restated, allowing recovery of tracked interest expense associated with the term loan, which is supporting MAWC's CWIP balances, results in a double recovery of the interest expense assigned to the term loan. Therefore, MAWC customers should not be charged any additional short-term interest expense other than that allowed in the AFUDC rate.

Q. What do all of these internal accounting and debt assignments demonstrate as it relates to an appropriate capital structure and cost of debt?

A. The only true market-tested and objective capital structure and capital costs are those based on American Water's market transactions. The weighted-average maturity of AWCC's bonds are the most consequential as it relates to American Water's management of its capital costs and its refinancing risks. Additionally, the short-term debt issued by AWCC contains all of its market transactions, including term loans, revolving credit facilities and commercial paper issuances, rather than the assigned short-term capital to MAWC, which currently only consists of its assigned allocation of the term loan. Finally, and most importantly, American Water's consolidated debt ratio (currently approximately 60%) reflects the amount of debt capacity generated by American Water's regulated utility subsidiaries, which includes MAWC.

Q. What aspects of MAWC's recommended capital structure does Ms. Bulkley address?

A. Ms. Bulkley primarily focuses on her opinion that MAWC's requested common equity ratio of 53% is reasonable because she finds it is within the range of the equity ratios of the operating subsidiaries owned by the publicly-traded holding companies in her proxy group. Consistent with her comparison of MAWC's proposed common equity ratio to other operating subsidiaries' capital structures, it is her position that it is inappropriate to use American Water's capital structure for purposes of determining MAWC's authorized ROR because MAWC needs to be evaluated based on the "stand-alone" principle. Ms. Bulkley describes the "stand-alone" principle as determining MAWC's ROR and capital structure based on the hypothetical situation in which it raises its own capital based on its own business risks and credit metrics.[6] Apparently, her position is that MAWC's assets could

[6] Bulkley Direct, p. 85.

not support as much leverage (i.e. debt) as American Water's assets, while still maintaining a strong credit profile with a similar cost of equity ("COE"). She indicates that American Water is likely to have less volatility in its revenues than MAWC due to American Water being diversified across many regulatory jurisdictions with varying regulatory mechanisms.[7] Additionally, because she views Missouri's regulatory environment as less credit supportive, she maintains it is appropriate to capitalize MAWC with more common equity than American Water.

Q. Has Ms. Bulkley compared MAWC's capital structure to that of its sister subsidiaries to determine if American Water manages the capital structures of its various subsidiaries to consider varying risk characteristics?

A. No.

Q. What was the book value of MAWC's assets as of June 30, 2020?

A. $2.577 billion.

Q. Do any of Ms. Bulkley's comparable publicly-traded water utility holding companies have a smaller book value of assets as of June 30, 2020?

A. Yes. American States Water Company ("American States") (unrelated to American Water), Middlesex Water Company and York Water Company have a smaller book value of assets than MAWC as of June 30, 2020.

Q. Do any of the other water companies in Ms. Bulkley's proxy group have relatively similar book value amount of assets as of June 30, 2020?

A. Yes. California Water Services Group ("California Water") had a $3.36 billion book value of assets as of June 30, 2020 and SJW Group had $3.21 billion book value in assets as of the same date.

[7] Bulkley Direct, pages 85-86.

Q. Are these five companies generally considered small-to-mid capitalization companies based on the market value of their outstanding common equity?

A. Yes. American States and California Water are considered mid-cap companies because the market value of their equity as of June 30, 2020, was slightly above $2 billion. Middlesex, SJW Group and York Water Company are generally considered small-cap companies because the market value of their equity is below $2 billion.

Q. What is the market value of MAWC's common equity?

A. Because MAWC's common equity is not publicly-traded, there is no observable market value. However, I can estimate the market value by applying American Water's market-to-book ratio to the book value of MAWC's common equity. Applying American Water's market-to-book ratio of 4.33x to MAWC's equity book value of $824.11 million, results in an implied market capitalization of $3.568 billion, implying it would have a larger market capitalization level than five of the seven water companies in Ms. Bulkley's proxy group.

Q. Are the smaller water utility companies in Ms. Bulkley's proxy group concentrated in specific geographies and regulatory jurisdictions?

A. Yes. American States, California Water and SJW Group ("SJW") are all concentrated in the western part of the United States with a majority of their operations in California. Middlesex Water Company's ("Middlesex Water") water utility operations are predominately in New Jersey and Delaware. York Water Company's ("York Water") water utility operations are solely in Pennsylvania.

Q. Why is the above information important?

A. Because Ms. Bulkley indicates that "stand-alone" water and utility companies cannot carry as much leverage as a large, diversified holding company such as American Water. As I will demonstrate, this is not true.

Q. What are the common equity ratios of these smaller, more regionally confined companies?

A. As can be seen in Schedule DM-R-4, three of these smaller companies currently have common equity ratios that range from a low of 37.61% for SJW to a high of 56.64% for York Water. Two of the smaller water utilities in Ms. Bulkley's proxy group, California Water and SJW, have equity ratios below 40% as of June 30, 2020, yet California Water still has an 'A+' S&P credit rating and SJW has an 'A-' S&P credit rating. American Water, which is a much larger, geographically diverse holding company, has an 'A' S&P credit rating.

Q. What are the funds-from-operations-to-debt (FFO/debt) ratios[8] for these smaller, more geographically confined companies?

A. California Water's FFO/debt ratios have been in the 13% to 17% range over the last five years and it is expected to have FFO/debt ratios in the 15% to 18% range over the next couple of years. SJW's historical FFO/debt ratios are not reflective of its expected financial risk going forward because of its acquisition of Connecticut Water Services Company in 2019, but going forward it should have FFO/debt ratios in the 10% to 11% range. York Water had FFO/debt ratios in the 22% to 27% range over the last five years and should have FFO/debt ratios in the 19% to 22% range over the next couple of years. American States had FFO/debt ratios in the 22% to 33% range over the last five years and should have FFO/debt ratios in the range of 25% to 26% range next year. While S&P did not provide historical FFO/debt data on Middlesex Water, in its most recent report on Middlesex Water, S&P indicated it expected its FFO/debt ratios to be in the range of 12% to 15% over the next couple of years.[9]

[8] FFO/Debt ratios are a measure of the consistent cash flow produced by a company's assets as compared to its fixed obligations (this is primarily debt, but can include other obligations such as leases and pensions). FFO/debt ratios are given the most weight by rating agencies such as S&P and Moody's when assessing a company's financial risk.
[9] S&P Global Ratings: RatingsDirect: American States Water Company, June 9, 2020, California Water Service Co., April 17, 2020, Middlesex Water Co. November 3, 2020, SJW Group, November 19, 2020 and The York Water Co., October 21, 2020.

Q. This is a very wide range of FFO/debt ratios. Does this information provide much guidance to assist with determining MAWC's estimated "stand-alone" rating if it accessed capital markets directly?

A. No. Considering that S&P assigns an 'Excellent' business risk profile to all of these smaller water utility companies, but they have such widely variant FFO/debt ratios, it would be reasonable to expect a wider range of credit ratings. However, S&P assigns all of these companies a corporate credit rating within the range of 'A-' to 'A+'. As result, it is difficult to discern a consistent pattern in S&P's ratings assignment. For example, although California Water is much more leveraged than American States and both companies have a majority of their water utility assets in California, S&P rates both companies 'A+'. The same is true for York Water and Middlesex Water. York Water has significantly less leverage than Middlesex Water and both companies have geographically concentrated water utility systems (York Water's assets are in Pennsylvania and Middlesex Water's are predominately in New Jersey and Delaware), yet S&P assigns both an 'A+' rating.

Q. What are MAWC's recent FFO/debt ratios?

A. I estimated MAWC's FFO/debt ratios to be consistently in the low 20% range over the last several years.

Q. Based on your review of the comparable companies FFO/debt ratio and the ratings assigned to each comparable company, is there any reason to conclude that MAWC would be assigned a rating lower than an 'A-' if its capital structure were similar to American Water's?

A. No.

Q. Ms. Bulkley indicates that MAWC's revenues are more volatile and uncertain than those for American Water.[10] Does she provide any financial analysis to support her testimony?

A. No.

Q. Do you agree with Ms. Bulkley that variability in revenues is the primary measure of a company's business-risk profile?

A. No. While investors are certainly interested in revenues, their primary concern is whether the company's expenses are correlated with changes in revenues. For example, if revenues decrease because the company lowered its prices to reflect lower operating costs, then the investor is made whole. Investors are primarily concerned about cash flow available to the firm (both debt and equity investors) or the equity investor (after payment of fixed obligations).

Q. Did you compare the volatility of MAWC's revenues to American Water's to determine if Ms. Bulkley's testimony was accurate?

A. Yes. I calculated the standard deviation (a statistical measure of volatility) of MAWC's revenues and American Water's revenues for the last five years, which were 7.84% and 6.31%, respectively.

Q. Over the last five years, have MAWC's or American Water's cash flows been more volatile?

A. American Water's cash flows have been more volatile than MAWC's cash flows over the last five years as measured by the standard deviation of each company's funds from operations (FFO), which I determined to be 6.31% and 5.09%, respectively.

[10] Bulkley Direct, pages 85-86.

Q. For the water utility companies in Ms. Bulkley's proxy group, how many operating subsidiaries does she review for purpose of the capital structure data on Schedule AB-7?

A Thirty-five – twenty operating subsidiaries for Essential Utilities, three for California Water, five for Middlesex Water, one for American States, six for SJW and one for York Water.

Q. Have you reviewed all of these subsidiaries to determine if they are financed on a stand-alone basis?

A. No.

Q. Is financial information readily available for the operating subsidiaries of the publicly-traded water utility companies in Ms. Bulkley's proxy group?

A. No. Ms. Bulkley's workpapers indicate she did not have financial information from 2019 for twenty-two of the operating subsidiaries. If an operating subsidiary does not have publicly-traded debt, it is not required to file financial statements with the Securities and Exchange Commission ("SEC"). If a utility company is not required to file financial statements with the SEC, then the only other potential publicly-available filing database in which they may be available are with the Federal Energy Regulatory Commission or state regulatory commissions. As I will demonstrate below, the Commission should not rely on the information Ms. Bulkley provided on operating subsidiary equity ratios to determine the reasonableness of an allowed equity ratio in this case.

Q. Have you reviewed some of these subsidiaries to highlight the problems with relying on operating subsidiary information financial data to evaluate the proxy companies' capital structures?

A. Yes. I focused on American States and SJW because these companies' holding company common equity ratios are much lower than those that are implied by summing the operating subsidiary's equity ratios. However, I note that Ms. Bulkley's sum of Spire's operating subsidiaries capital structures results in a presumed 61.6% common equity ratio, which is

much lower than Spire's consolidated equity ratio due to the significant amount of debt Spire issued to acquire Alagasco and other smaller utility systems in Alabama and Mississippi.

Q. What is the main problem with how Ms. Bulkley determined the equity ratio for American States?

A. She did not consider short-term debt when determining American States' common equity ratio. Based on my review of American States' December 31, 2019, balance sheet, its capital structure contained 16% short-term debt at the end of December 31, 2019. That is the same time period Ms. Bulkley evaluated in Schedule AB-7. If she had appropriately considered the amount of short-term debt in American States' capital structure, this would have reduced the common equity ratio to 55.60% rather than the 65.94% shown in Ms. Bulkley's Schedule.

Q. Why would American States' operating subsidiary, Golden State Water Company, imply such a high common equity ratio?

A. Because it has had sizeable intercompany short-term borrowings from American States' credit facility from the period December 31, 2019 through June 30, 2020. Golden State refinanced its intercompany borrowing with a long-term debt issuance in the third quarter of 2020. As of September 30, 2020, Golden State's common equity ratio when only considering long-term capital (long-term debt and common equity) dropped to 53.72% from 66.62% as of June 30, 2020.

Q. What are American States' and Golden State's credit ratings?

A. S&P assigns an 'A+' credit rating to American States and Golden State. Moody's assigns a rating of 'A2' to Golden State. Moody's does not rate American States.

Q. Has Ms. Bulkley's exclusion of short-term debt of any of the other water utility operating subsidiaries skewed her reported common equity ratios?

A. Yes. For the period June 30, 2019 through June 30, 2020, Middlesex Water's and SJW's common equity ratios are overstated by 4.15% and 2.40%, respectively.

Q. Does American Water provide information to its investors regarding authorized ROEs and equity ratios for its water utility subsidiaries?

A. Yes. Please see the attached Schedule DM-R-5 for the details provided by American Water's investor presentation that accompanied its third quarter 2020 earnings conference call. American Water's allowed ROE ranged from 9.1% to 10.0% and its allowed equity ratios ranged from 46% to 55.39%.

Q. Have you reviewed the details of each of the cases identified in Schedule DM-R-5?

A. No. I had requested information on ROR details for American Water's other subsidiaries, but MAWC did not provide much detail.[11] In fact, I was able to garner more detail (allowed equity ratios) from the investor presentation.

Q. Have you been able to determine why Virginia and New York decided to allow a 46% common equity ratio, which is much lower than that requested by MAWC?

A. Yes. The Virginia Corporation Commission used American Water's consolidated capital structure to set Virginia American Water Company's ROR. New York did the same for New York American Water Company's authorized ROR.

Q. Based on the information you have reviewed, do you believe there is a more reasonable proxy for MAWC's authorized capital structure other than that of American Water's on a consolidated basis?

A. No. Ms. Bulkley's arguments that MAWC has more business risk than American Water on a consolidated basis is not supported by actual financial results. MAWC has not

[11] MAWC Responses to OPC DR Nos. 3000 and 3001.

provided any evidence to prove that it can't issue debt independently at a lower cost than it is charged by AWCC. For example, if MAWC issued its own debt, it could attach a mortgage to such debt, which could potentially allow for a lower cost due to the lower-risk associated with secured debt. However, MAWC has not provided any evidence to prove that the unsecured debt it receives from AWCC is the lower-cost option.

The more consequential issue for MAWC's ratepayers is the fact American Water is managing MAWC's capital structure for ratemaking purposes rather than for purposes of achieving a lower-cost of capital. The only market-tested, objectively quantified capital structure that fully captures the amount of debt capacity allowed by MAWC's assets, is that of American Water's on a consolidated basis.

REBUTTAL OF MS. BULKLEY'S ROE TESTIMONY

SUMMARY:

Q. What is Ms. Bulkley's recommended allowed ROE for MAWC?

A. Ms. Bulkley recommends the Commission allow MAWC an ROE of 10.50% based on her view that a range of 10.00% to 10.80% is fair and reasonable.[12]

Q. What is the premise underlying Ms. Bulkley's recommended allowed ROE?

A. Ms. Bulkley estimates MAWC's cost of equity ("COE") to be in the range of 10.00% to 10.80% based on her application of a three primary COE methodologies: (1) the constant-growth discounted cash flow ("DCF") method, (2) the Capital Asset Pricing Model ("CAPM") – a standard CAPM and an empirical CAPM, and (3) an expected earnings analysis.

[12] Bulkley Direct, p. 6.

Q. Do you and Ms. Bulkley agree on some fundamental issues in this case?

A. Yes. We both agree that utility stocks have been trading at historically high valuation levels over the last several years. We also agree that this has primarily been driven by low long-term interest rates.

Q. If you both agree that utility stock valuation levels are higher due to lower long-term interest rates, why do you arrive at distinctly different conclusions about the implications such market conditions should have on utilities' cost of capital and therefore, your recommended allowed ROEs?

A. I accept the signals the market is providing to us, which is that utilities' cost of capital is at historically low levels justifying a reduction to utility companies' allowed ROEs. Ms. Bulkley dismisses current market conditions as temporary. In her opinion, low long-term rates are not sustainable. Therefore, she concludes, high utility stock valuation levels are not sustainable. Consequently, she gives less weight to her constant-growth DCF results, which directly incorporate utility stock prices into a COE estimate. Instead, she gives more weight to her CAPM methods, which can be manipulated by using irrational expected market returns to justify a higher COE estimate.

PROXY GROUP:

Q. Does Ms. Bulkley's inclusion of natural gas distribution companies in her proxy group cause an additional upward bias in her recommended ROE?

A. Yes. Ms. Bulkley relies primarily on her CAPM results to inform her ROE recommendation. The average Value Line beta for Ms. Bulkley's water utility companies and gas utility companies is 0.625 and 0.85, respectively. The average Bloomberg beta for Ms. Bulkley's water utility companies and gas distribution companies is 0.752 and 0.805, respectively. Value Line betas are calculated based on 5-years of historical weekly returns, while the betas Ms. Bulkley provided from the Bloomberg database were based on 10-years of historical weekly return. I reviewed updated Value Line beta information for Ms. Bulkley's gas and water companies. The updated spread in Value Line betas for the two

industries is closer to the spread implied by the 10-year betas Ms. Bulkley retrieved from the Bloomberg database. However, even this narrower beta difference of 0.053 (0.805 - 0.752) causes a 0.63% upward bias to Ms. Bulkley's COE estimates for MAWC.

Q. Why didn't you include any other utility subsectors in your proxy group other than water utility companies?

A. As I explained in my direct testimony, water utility companies have higher growth expectations over a longer period of time than the electric and gas segments of the utility industry. For example, American Water has consistently had projected 5-year compound annual growth rates ("CAGR") in earnings per share ("EPS") of the high single-digits (7%-10%) over the last several years. The higher growth in quality EPS (cash flows produced from earnings) has also allowed American Water to grow dividends per share ("DPS") at a consistently higher rate than electric and gas utility companies. Furthermore, because the water utility industry has higher growth expectations due to significant capital expenditure programs, its dividend payout ratios and dividend yields have been lower than that of gas and electric utilities.

Q. Is it helpful to compare and contrast the water utility industry to other subsectors to the utility industry?

A. Yes. Although I didn't directly incorporate electric utility companies into my proxy group for purposes of my direct testimony, I compared electric utility valuation information to water utility valuation information in order to provide as much insight as possible to determine if MAWC should be authorized an ROE that deviates from those authorized Missouri's electric utilities. My conclusion is no. Because Ms. Bulkley incorporated gas utility companies into her proxy group, I'll provide the Commission with contextual information to judge whether gas distribution utility companies have a significantly different cost of equity profile than the water utility industry.

RELEVANCE OF AMERICAN WATER:

Q. Ms. Bulkley maintains that it is inappropriate to analyze American Water to estimate MAWC's COE, capital structure and ultimate cost of capital.[13] Do you agree with Ms. Bulkley?

A. No. MAWC is linked inextricably to its parent company, American Water, due to American Water's financing strategies to achieve a low cost of capital while still maintaining a strong investment-grade credit rating. American Water created its financing subsidiary, AWCC, in 2000 in order to consolidate all of its debt financing needs (both long-term and short-term) at one company. In fact, other than MAWC issuing an occasional bond through the State of Missouri's Energy and Environmental Improvement Energy Resource Authority ("EIERA"), MAWC has relied on American Water entirely for its access to debt and equity. MAWC had less than 3% of independently issued bonds on its balance sheet as of June 30, 2020, which MAWC issued in the 1990s before American water created AWCC.

While the consolidation of American Water's subsidiaries' financing needs at AWCC allows for economies of scale (larger debt issuances that can be more widely marketed to investors), it also disconnects MAWC's internally managed capital structure from its cost of capital. With the exceptions I already discussed in the capital structure section of this testimony, the promissory notes MAWC executes with AWCC are supposed to reflect the underlying terms of the bonds AWCC issued to third-party debt investors. However, the debt investors purchasing the AWCC bonds determine the price they are willing to pay based on American Water's capital structure and business risks. The Commission should not ignore this fact when estimating a fair and reasonable allowed ROR for MAWC. Although the debt loaned to MAWC from AWCC is typically based on the cost of the underlying arms-length transaction, the same is not true as it relates to American Water's equity infusions into MAWC. In this case, MAWC is requesting the Commission allow

[13] Bulkley Direct, p. 11.

American Water a margin of approximately ** —— ** over American Water's cost of funds as of December 31, 2019 ** ———————— **.

If American Water managed its consolidated capital structure to a proportion of debt similar to what it assigns MAWC, then its financial risk would be much lower. This would allow AWCC to issue debt at a lower cost, and therefore, the cost of debt assigned to MAWC would be lower. In this situation, although it would be reasonable to charge MAWC for the higher common equity ratio in American Water's capital structure, the cost of the equity would be slightly lower because of the reduced financial risk to equity investors. MAWC ratepayers would benefit from paying for this more equity-rich capital structure because American Water would have a stronger financial risk-profile, allowing for more financial flexibility and a lower cost of debt, especially during uncertain periods such as were recently experienced at the onset of the COVID-19 pandemic.

American Water's cost of equity is based on the collective business risks of its various subsidiaries, which includes MAWC, as well as the financial risk it incurs at the consolidated level. Because American Water's business operations are predominately regulated water and wastewater utilities, its capital structure and cost of equity are appropriate proxies for estimating MAWC's cost of capital.

Q. Ms. Bulkley maintains that it is important to authorize MAWC a ROR based on an ROE and capital structure that will allow it to attract capital on a stand-alone basis and within the American Water system.[14] Did Ms. Bulkley compare her recommended ROR for MAWC to American Water's other subsidiaries?

A. No. In response to OPC DRs 3012 through 3014, Ms. Bulkley indicated she did not compare MAWC's risk-profile, ROR or capital structure to American Water's other subsidiaries.

[14] Bulkley Direct, p. 17.

Q. Based on the factual circumstances American Water presents to the Commission due to its financial management strategies, is it reasonable and appropriate to use information related to American Water's cost of capital (both debt and equity) in determining a fair and reasonable allowed ROR for MAWC?

A. Yes. Therefore, this includes estimating American Water's cost of equity, which most directly reflects MAWC's cost of capital.

INTERPRETATION OF MARKET CONDITIONS:

Q. What is Ms. Bulkley's solution for her view that utility stocks are trading at "unsustainably high" levels?[15]

A. Her solution is to give less weight to DCF methods, which directly incorporate utility stock prices, and give more weight to her methods that rely on equity risk premium estimates, such as the CAPM.

Q. If stock prices are at unusually high valuation levels, what does this imply about expected market risk premiums?

A. They are lower, or at least they have remained constant as the risk-free rate declines, causing the overall expected market return to decline.

Q. What has been causing broad-based market valuation levels to increase to levels not seen since the late 1990s?

A. Increased market valuations have been caused by an expectation for the Federal Reserve ("Fed") to be accommodating and keep short-term rates low for a prolonged period of time even if inflation should exceed its 2% target at times.[16] A recent WSJ article explained current market dynamics as follows: most recently addressed the Fed's actions, indicating the following:

[15] Bulkley Direct, p. 12
[16] Justin Lahart, "Fed's Rate Vow Could Be Yield of Dreams," *Wall Street Journal*, p. B10, December 29, 2020.

> The only way to argue that stocks aren't wildly expensive is to say that something fundamental has changed about the market environment.
>
> Thanks to the Federal Reserve, such a change might actually have occurred—but investors could pay a heavy price if they turn out to be wrong…
>
> The S&P 500 trades at 22 times analysts' expected earnings—its most expensive level since the dot-com bubble. It also trades at its richest multiple to its inflation-adjusted earnings over the past decade—the valuation method popularized by economist Robert Shiller —in nearly 20 years. The total value of U.S. stocks as a percentage of the U.S. economy, which Warren Buffett once called "the best single measure of where valuations stand at any given moment," is now higher than at any point during the dot-com years.
>
> One argument for stocks may not be as expensive as they seem is that interest rates are extremely low. When the 10-year Treasury note yields just 0.95%, today's P/E multiple looks less outlandish than it would at a 5% yield.
>
> But the Fed this year revamped how it sets policy, abandoning its practice of pre-emptively raising rates to head off inflation. In its efforts to help the economy recover, it has committed to hold short-term rates near zero until inflation reaches 2% and "is on track to moderately exceed 2% for some time." That means that rates over the next several years will be lower than they would have been under the Fed's previous policy. Perhaps stocks can carry higher multiples and still be reasonably valued…
>
> Maybe the Fed's actions this year have changed how investors should think about valuations, but it is early going and that hypothesis has yet to be put to the test.[17]

A prolonged period of low long-term risk-free interest rates (US Treasuries in the 10 to 30-year range) results in investors using lower discount rates to estimate the present value of future expected cash flows, especially if those cash flows aren't expected to be realized until several years into the future. This explains why investors have bid up stock prices of growth companies. Most growth companies are in the early stages of their development and may not even be turning a current profit, let alone current discretionary cash flows to the investor. Because investors don't expect to receive cash flows until well into the future,

[17] Justin Lahart, "Valuations Raise Questions About Laws of Investing: The virus has hammered the economy but stocks are at rarely seen levels that typically end in tears," Wall Street Journal, December 24, 2020, p. B11.

the present value of these cash flows becomes much greater when discount rates are much lower. This fact justifies higher valuation levels of the S&P 500, particularly growth-related stocks. This also explains the widening valuation gap between the water utility industry as compared to the electric and gas utility industries. Current prices of UST bonds reflect investors' expectations of long-term capital market and economic conditions. To suggest otherwise, as Ms. Bulkley does, violates the basic tenets of efficient capital markets and the fact that current bond prices and stock prices already reflect investors' forward expectations.

Q. How are market indices, such as the S&P 500, currently trading?

A. They are trading at levels not experienced since before 2000.

Q. Give that answer, are Ms. Bulkley's estimates of S&P 500 market returns of 13.18% on a going-forward basis rational?

A. No. If Ms. Bulkley had used expected market returns consistent with the current low discount rate environment, her CAPM analysis would have corroborated the rational lower COE estimates from a DCF analysis. Therefore, it is not her methodology that causes Ms. Bulkley to estimate a higher cost of equity in the current capital market environment, it is her use of expected market returns that are not consistent with current market conditions.

Q. Ms. Bulkley discusses "current market conditions" on pages 13 through 21 of her direct testimony. Have capital market conditions improved since the March to May 2020 period she evaluated in her direct testimony?

A. Yes. While I agree with Ms. Bulkley that the disruption in the capital markets at the onset of the COVID-19 pandemic caused increases in required returns for even low-risk assets, such as regulated utility companies, I do not agree that the rebound in capital markets due to aggressive and quick Federal Reserve and Federal Government action should be discounted when setting MAWC's ROR. As I explained in my direct testimony, American Water has been able to raise corporate debt at extremely low costs. Following Ms. Bulkley's logic of not recognizing current low costs of equity in determining a fair and

reasonable allowed ROE, it would also be inappropriate to pass through the lower debt costs American Water realizes when issuing debt in this low cost of capital environment. I disagree.

Q. Based on recent trades on American Water's debt, how cheap would it be for American Water to issue new debt?

A. American Water's long-term debt has been trading at a yield-to-maturity of around 2.7% to 2.8% recently. To put this in perspective, American Water issued 30-year bonds around the time of MAWC's last rate case in 2017, at a coupon of 3.75%.[18]

Q. Has MAWC been assigned any of the cheaper debt issued by American Water this year?

A. Yes. American Water assigned $110 million of the 3.45%, 30-year debt AWCC issued on April 14, 2020. However, American Water did not assign any of the cheaper 2.8% 10-year debt issued on the same day.

Q. If American Water issued debt at a coupon of 2.75% based on the current YTM, would this lower cost of debt be in part due to the Federal Reserves' support for the long-term corporate bond markets?

A. Yes.

Q. Should the cost of this debt be adjusted upwards to reflect the fact that American Water is able to issue cheaper debt because of the Fed's intervention in capital markets?

A. No. The lower cost of this debt should be passed along to ratepayers in the form of lower debt costs assigned to the debt in the capital structure.

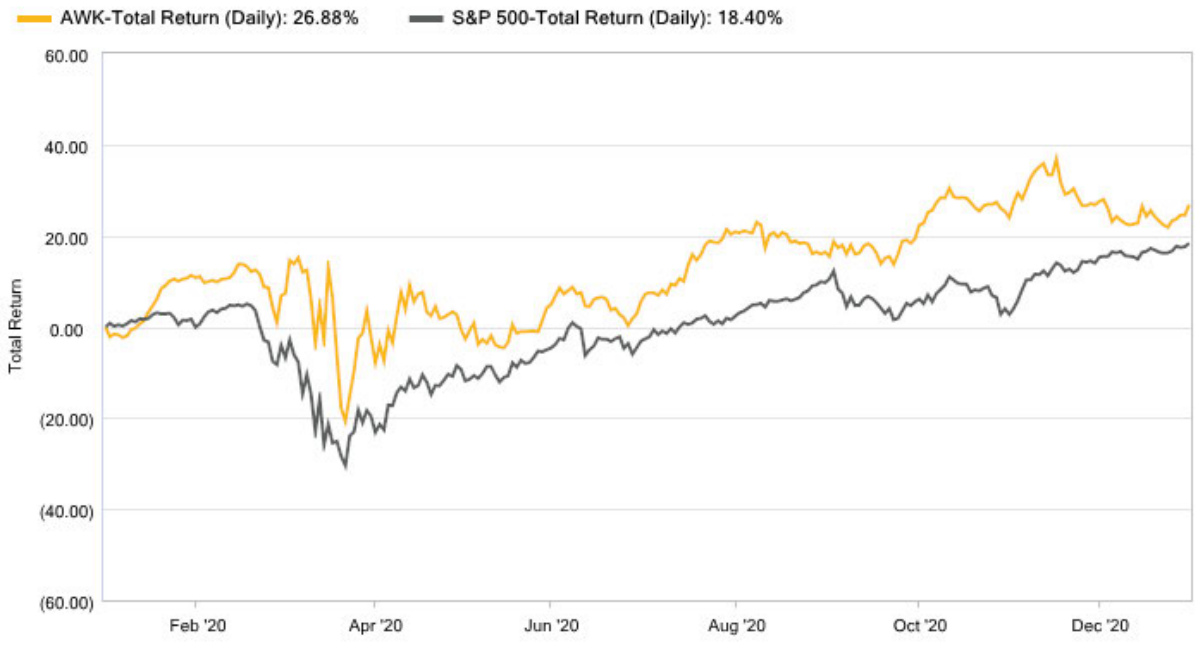
[18] American Water Capital Corporation Bond issued on August 10, 2017, CUSIP-03040WAR6.

Q. Should the same hold true for the allowed ROE?

A. Yes. It is wholly inappropriate and unfair to ratepayers to dismiss current equity capital market conditions as Ms. Bulkley attempts to do by ignoring the rapid increase in American Water's shareholders' wealth. The reason American Water's shareholder wealth has continued to increase is because of lower discount rates. If American Water's allowed ROEs are held static while the cost of capital declines, then American Water's shareholders' wealth will continue to increase as American Water deploys capital investments in its subsidiaries, including MAWC, which earns a higher margin over its cost of capital than in previous years.

Q. What was the compound annual return for the 2020 calendar year for an investment in American Water compared to an investment in the S&P 500?

A. 26.88% and 18.40%, respectively. See the following chart for a visual that shows the decline in returns for American Water and the S&P 500 during the March to April 2020 period coinciding with the onset of the pandemic:



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Q. On pages 21 through 32 of her direct testimony, Ms. Bulkley provides her view on how the Commission should consider the impact of market conditions when setting MAWC's allowed ROR. What is your reaction to her testimony?

A. We completely disagree about the signals provided by capital market data. While Ms. Bulkley admits that utility securities have been highly-valued over the last several years, and even after the onset of the pandemic, she explains that these higher valuation levels are abnormal and should not cause the Commission to authorize lower returns. She reasons that because MAWC's rates will be in effect for the next 3 to 4 years, it is important to attempt to set the ROE based on her view that utility stocks will deflate in value over the period rates are in effect. She even claims that the gradual increase in valuation levels for utility stocks over the last decade have been abnormal due to the Fed's intervention post the Financial Crisis and recession at the end of the first decade of the twenty-first century (2000 – 2010).[19]

Ms. Bulkley suggests that the Commission treat the most recent ten years as an aberration and not likely to be indicative of the utility industry's cost of capital going forward. Her suggestion is not supported by the reality evident from domestic and international markets. This is neither wise nor consistent with efficient markets in which market prices reflect investors' consensus expectations.

Ms. Bulkley and I reviewed the same capital market information over the last ten years and arrived at starkly different conclusions. I embrace the capital market information that the utility industry's cost of capital has been declining steadily over the last ten years and represents a fundamental shift in market valuations. Ms. Bulkley uses these facts to argue that the DCF method, which directly incorporates higher utility stock prices, is not reliable for determining a fair and reasonable allowed ROE. She is wrong. The fact that the DCF provides lower cost of equity estimates reflects the reality of domestic and international economic and capital market conditions.

[19] Bulkley Direct, pp. 23

Q. On page 31 of her direct testimony, Ms. Bulkley indicates that recent capital market conditions reflect "short-term exogenous shocks that are not expected to persist over the long-term." She also refers to recent market conditions as "atypical." Does she specify exactly what "short-term" and "atypical" market conditions she believes will not continue to persist over the period MAWC's rates are in effect?

A. No. Ms. Bulkley's testimony discussing capital market conditions addressed the period post the 2008-2009 Financial Crisis as well as the most recent market instability during the onset of the COVID-19 pandemic. On page 26 of her direct testimony, she indicates that utility stock prices briefly "traded more like historical averages" at the beginning of the pandemic. Apparently, Ms. Bulkley believes the capital market conditions in March and April of 2020 were more typical for the utility industry and what should be expected going forward. Her position is at odds with investors, because utility equity analysts have consistently raised their baseline P/E ratios to reflect the consistent and sometimes unexpected decline in interest rates. However, during the decline in interest rates over the last several months, other than water utilities, the utility industry's P/E ratios have not expanded to levels prior to the pandemic, despite even lower interest rates now than before the pandemic.

Q. If Ms. Bulkley were correct that utility stocks are overvalued and will revert to historical valuation levels, is she correct in her conclusion that a properly applied constant-growth DCF analysis results in an underestimated cost of equity?

A. No.

Q. Would it actually cause an overestimation of the cost of equity in a properly applied constant-growth DCF analysis?

A. Yes. Ms. Bulkley claims that utility stocks are currently overvalued and do not reflect "normal" capital market conditions. If Ms. Bulkley is correct, then investors buying utility stocks are factoring in a contraction in P/E ratios. Ms. Bulkley's constant-growth DCF does not consider this expected contraction.

Q. Is there a means to adjust the constant-growth DCF method to account for Ms. Bulkley's anticipated changes to utilities' P/E ratios?

A. Yes. The constant-growth model can be extended to include expected changes in the P/E ratio. This version of the constant-growth DCF is referred to as the "Grinold- Kroner" model.[20] It is expressed algebraically as:

$$k = D_1/P_0 + g + \Delta PE$$

Where:
k = the cost of equity;
D_1 = the expected next 12 months dividend;
P_0 = the current price of the stock;
g = the dividend growth rate; and
ΔPE = the per period change in the P/E multiple

Q. If Ms. Bulkley had used this derivative of the constant-growth DCF method to estimate the cost of common equity, how would this impact her cost of equity estimates?

A. They would be lower.

Q. How much lower would Ms. Bulkley's DCF estimates be if she had factored in her expectation of a contraction in the P/E ratios?

A. It depends on how quickly she expects this contraction to occur. Her testimony indicates that she expects long-term rates to return to "normal" over the period MAWC's rates are in effect. This suggests a rapid contraction in utility stock prices from the 30.78x P/E ratio Ms. Bulkley determined for the period February 19, 2020 through May 29, 2020 to the 21.71x average Ms. Bulkley appears to consider "reasonable." If Ms. Bulkley is correct, then her proxy group's P/E ratios would have to contract by 9.07x (30.78 – 21.71) over the next few years.

[20] 2010 CFA® Program Curriculum, Level III, Volume 3, p. 35.

Q. How would factoring in a contraction in P/E ratios impact Ms. Bulkley's DCF cost of equity estimates?

A. Again, it depends on how quickly one assumes the repricing will occur. Assuming Ms. Bulkley's proxy groups' P/E ratios contract by 9.07x in the next five years, then the required returns estimated by Ms. Bulkley would need to be reduced by 6.74%/year, which would result in an implied required return for her proxy group of approximately 2.86%. If the P/E ratios contracted by the same amount over ten years, then the required return would need to be reduced by 3.43%/year, which results in a required return of 6.17%.

Q. If investors did expect a return to historical average P/E ratios, wouldn't this already be factored into the price they are willing to pay for the stock today?

A. Yes. The Grinold-Kroner extension of predicting changes in market P/E ratios are primarily used by active portfolio managers who are trying to achieve alpha (excess return over expected market returns). The objective of utility rate of return witnesses, including Ms. Bulkley and me, should be to provide insight on current market required returns, which is an underlying assumption for cost of capital models, including the CAPM.

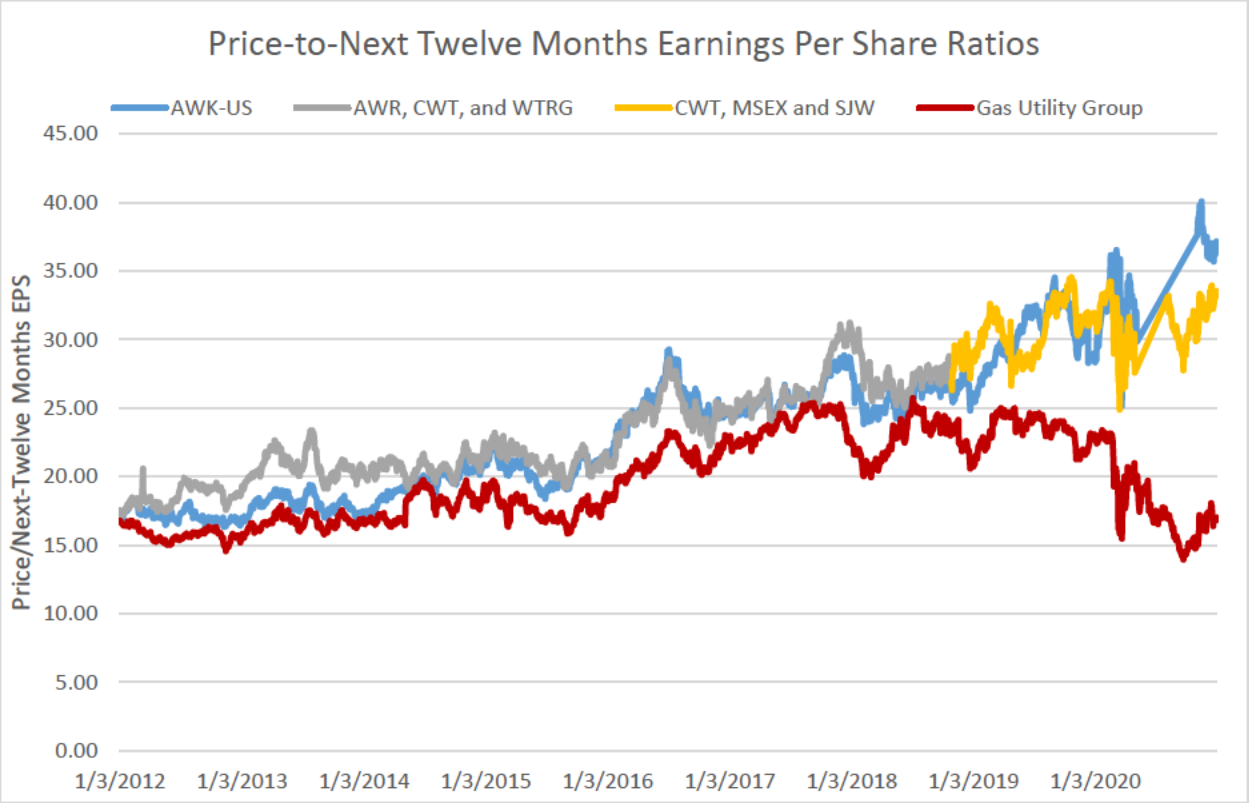
Q. Do you have an opinion as to whether investors are factoring in a change in the P/E ratio due to macroeconomic expectations, such as projected changes in interest rates?

A. Over the last several years, to the extent utility equity analysts have factored in forward yields, most have consistently factored in projected increases in bond yields when estimating a justified P/E ratio. This explains why when there has been an unexpected drop in long-term interest rates, this has typically resulted in an increase in utility stock prices. Therefore, utility stock prices, and consequently their P/E ratios, already reflect a potential increases in interest rates, if this is in fact the consensus. This perhaps explains why electric and gas utility P/E ratios have not expanded with the recent decline in interest rates. For example, Bank of America and Citigroup expect 10-year USTs to return to approximately 1.5% by the end of the year. Wells Fargo indicates that 10-year UST would have to

increase to 2.4% before utility stocks valuation levels would trade expensive based on historical correlations between interest rates and earnings yields.[21]

Q. Can you provide an update of the P/E ratios of the gas and water utility companies in Ms. Bulkley's proxy group?

A. Yes, for some of them. Unfortunately, the price-to-next-twelve-months EPS (P/NTM-EPS) for the some of the smaller water utility companies in her proxy group are not widely available. I also excluded ONE Gas Inc. from the gas P/NTM-EPS because it was not publicly-traded for the full period I reviewed. The P/NTM-EPS for the period January 1, 2012 through December 31, 2020 are shown in the below graph:



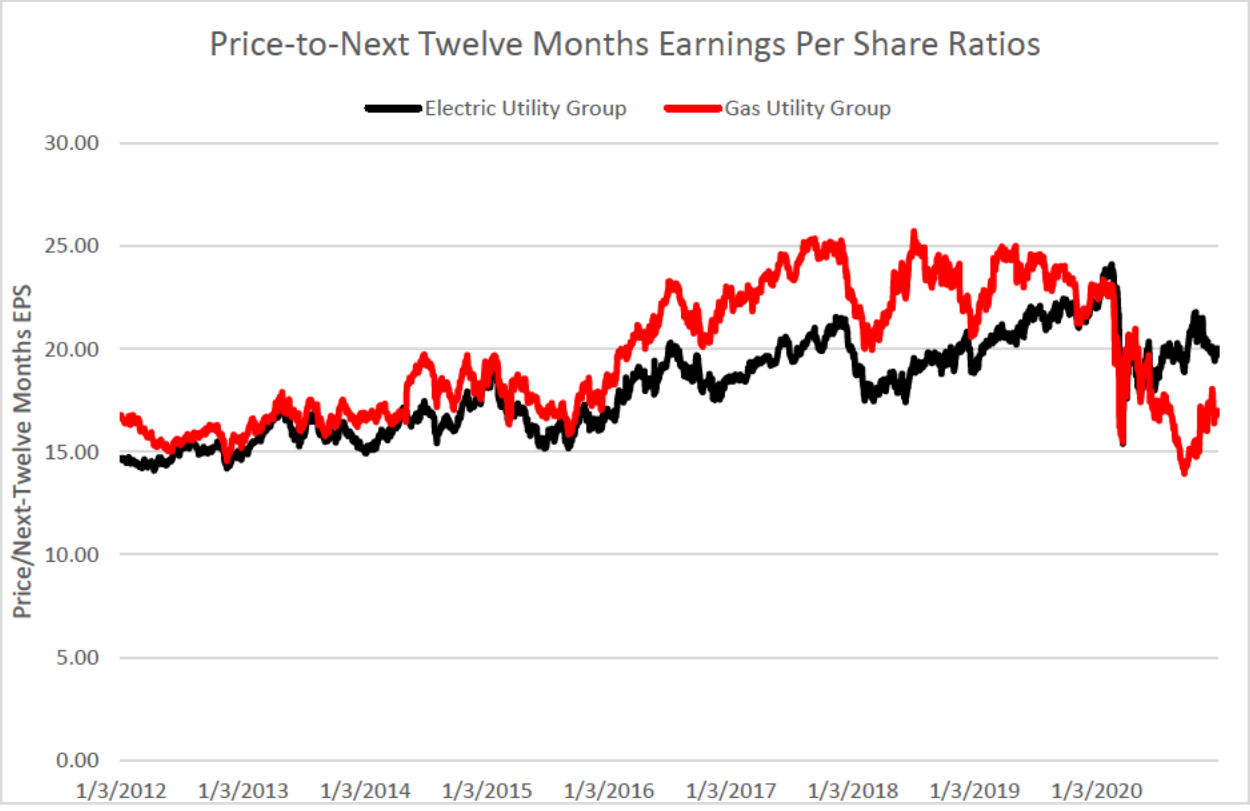
As can be seen, water utility companies' P/E ratios have resumed their expansion since they contracted briefly during the onset of the pandemic. However, as also can be seen, the P/E ratios for the gas utility proxy group actually declined since they recovered after

[21] Neil Kalton, et. al., "Utility Sector Outlook – Looking Forward to 2021," Wells Fargo, January 6, 2021, p. 6.

the pandemic. Undoubtedly, the election of Joseph Biden as President, has caused investors to place less value on gas distribution stocks since gas companies are likely to be out of favor under an administration that will pursue policies that reduce greenhouse gas emissions. It will be important to continue to analyze whether it appears P/E ratios for the various subsectors of the utility industry are changing primarily due to changes in growth expectations, changes in the cost of capital, or both. In transitory capital market and policy environments such as now, I argue it is even more important to select a targeted proxy group that operates in the same industry as the subject company.

Q. How do electric utility P/E ratios compare to gas utility P/E ratios?

A. See the below chart, which shows that the electric utility industry's P/E ratios have returned to levels more in line with what Ms. Bulkley characterizes as "unsustainable."



The utility valuation levels before the pandemic had become the new "normal" given that before the pandemic, utility stock P/E ratios had been expanding over the previous ten

years. Utility stock P/E ratios continued to expand because the reality of "lower for longer" had settled in. The lower-for-longer was no longer a function of the Fed's QE programs, which terminated in 2014, but rather a function of market forces.[22] This explains why utility P/E ratios expanded significantly for the next several years until the onset of the pandemic.

TAX CUT AND JOBS ACT:

Q. Do you think the Commission needs to consider the Tax Cut and Jobs Act ("TCJA") of 2017 when setting MAWC's allowed ROE?

A. No. Regulators and utility companies have already addressed issues related to the TCJA. Besides, American Water has actually been more aggressive with its use of debt since the passage of the TCJA, while still increasing its dividend by 10%/year since 2018. If American Water was concerned about the impacts of the TCJA on its cash flows, it would have initiated more conservative financial policies.

DISCOUNTED CASH FLOW ASSUMPTIONS:

Q. Although Ms. Bulkley dismisses her DCF estimates for purposes of her recommended ROE, do you agree with the assumptions Ms. Bulkley used in her DCF analysis?

A. No. Ms. Bulkley argues that her constant-growth DCF results under-estimate the water utility industry's COE because she doesn't believe current higher stock prices are sustainable. As I indicated previously, this is incorrect. However, even without an adjustment for changes in P/E ratios, her DCF analysis overestimates the COE. Ms. Bulkley's DCF analysis assumes her proxy groups' DPS can grow in perpetuity at the same rate as equity analysts' projected 5-year CAGR in EPS. This is not how equity analysts determine fair prices to pay for utility stocks.

[22] https://www.investopedia.com/terms/q/quantitative-easing.asp

CAPM ASSUMPTIONS:

Q. Why are Ms. Bulkley's CAPM cost of equity estimates so high?

A. Because she uses irrational expected market returns. Ms. Bulkley estimates a total compound annual market return for the S&P 500 of 13.18% for the foreseeable future (perpetually based on her use of a constant-growth DCF to estimate S&P 500 returns). Subtracting long-term risk-free rates from Ms. Bulkley's estimated market return results in her equity risk premium estimates of 10.18% to 11.86%. Therefore, Ms. Bulkley's expected equity risk premiums are approximately double the equity risk premiums used by utility equity analysts to determine a fair price to pay for utility stocks.

Q. How is Ms. Bulkley able to achieve such high equity risk premium estimates?

A. Because she assumes that the S&P 500 can grow its earnings at a compound annual rate of 11.20% in perpetuity.

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

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

Q. What academic support are you aware of?

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

> Earnings growth rate = GDP growth rate + Excess corporate growth (for the index companies)
>
> where the term *excess corporate growth* may be positive or negative depending on whether the sectoral composition of the index companies is viewed as higher or lower growth than that of the overall economy. If the analyst has chosen a broad-based equity index, the excess corporate growth adjustment, if any, should be small.[23]

Considering that the S&P 500's current dividend yield is approximately 1.5% and projected long-term growth in U.S. nominal GDP is around 4.0%, it seems that investment professionals' forecasts of long-term returns for the S&P 500 of around 5%[24] are consistent with the above-prescribed formula.

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

A. Yes. This valuation metric provides a sanity check on potential growth for capital markets. Warren Buffett made it popular when he provided insight on how high the market, as measured by the Wilshire 5000, became valued as compared to U.S. GDP. At that time, the Wilshire 5000 was around 1.4x that of GDP. Currently it is around 1.7x, implying if anything, equity risk premiums are lower than historical averages.

Q. What would this ratio be in 50 years if the market grew at the 11.2% compound annual growth rate Ms. Bulkley suggests is appropriate?

A. The Wilshire 5000 index would be approximately 50x times the GDP level. Based on the market capitalization of the Wilshire 5000 of approximately $36.98 trillion as of September 30, 2019, the Wilshire 5000 would have a market capitalization of $7.47 quadrillion in 50 years. U.S. GDP was $21.17 trillion as of the same date. Based on a 4.0% long-term growth rate for the U.S. economy, GDP would be approximately $150.45 trillion in 50 years. It is not rational to assume corporate wealth will become much larger than the

[23] 2010 CFA® Program Curriculum, Level III, Volume 3, p. 34.
[24] Murray Direct, p. 28, lines 18-19.

economy in which it operates, let alone 50x the size of the economy. This explains why the CFA Program advises not using a perpetual growth rate much, if any, higher than the GDP growth rate of the economy(ies) in which a company operates.

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

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

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

A. Yes.

Q. Can you explain?

A. Yes. Ms. Bulkley assumes a market risk premium of approximately 10.18% to 11.86% compared to more rational estimates used by investors of approximately 5% to 6%. If Ms. Bulkley had used a more reasonable market risk premium of 6%, her ECAPM would have only been approximately 38 basis points higher than her standard CAPM. Because Ms. Bulkley uses extremely high market risk premiums and because these market risk premiums received more weight in her ECAPM, this causes her ECAPM results to be 65 to 75 basis points higher than her standard CAPM.

EXPECTED EARNINGS ANALYSIS:

Q. What are your thoughts on Ms. Bulkley's expected earnings analysis?

A. Ms. Bulkley's expected earnings analysis should be rejected because it is circular. Investors' projections for earned ROEs are heavily dependent on expected rate case outcomes. If investors believe commissions will lower allowed ROEs, then they will lower

their expected ROEs. If they expect commissions to hold allowed ROEs constant, then they will project ROEs based on current levels.

Not only is Ms. Bulkley using projected ROEs that are already circular in nature, but she is making a further upward adjustment to Value Line's ROE projections because she believes the book value of the equity is overstated in Value Line's projections. Ms. Bulkley makes an adjustment to Value Line's book value per share in order to provide her own projection of the average book value per share over the period of Value Line's projections. Ms. Bulkley is already using figures based on a projected 3-year average for the years 2023 through 2025; the overall impact of Ms. Bulkley's adjustment is to increase the average projected return on common equity by an additional 28 basis points over the average of Value Line's direct estimates.

REVENUE STABILIZATION MECHANISM

Q. If the Commission allows MAWC to implement its requested revenue stabilization mechanism ("RSM"), should there be an adjustment to the allowed ROR?

A. Yes. This can be accomplished either of two ways – (1) lower the equity ratio in the authorized capital structure to recognize the additional debt capacity this creates for American Water or (2) lower the allowed ROE by an amount consistent with a one-notch upgrade to American Water's credit rating.

Q. What approach do you recommend?

A. I recommend the second of the two approaches. Although American Water would likely take advantage of the lower business-risk by continuing to use more leverage at the consolidated level, at this time I am not sure how much additional leverage an RSM would allow. As a result of my research in the recent Empire and Ameren Missouri rate cases, Case Nos. ER-2019-0374 and ER-2019-0355, it was apparent to me that the investment community (both equity analysts and ratings analysts) views revenue decoupling favorably from a risk reduction perspective. Therefore, I believe it is reasonable to make a downward adjustment to MAWC's allowed ROE by an amount consistent with 1/3 of the difference

between and 'A'-rated and 'BBB'-rated bond. This quantification is consistent with the logic that absent an increase in MAWC's use of debt to offset its lower business risk, its credit rating would improve by one notch. The spread between 'A'-rated and 'BBB'-rated bonds has been approximately 30 basis points over the past six months. Therefore, I recommend the Commission reduce MAWC's allowed ROE by 10 basis points if it authorizes the RSM.

STAFF TESTIMONY

Q. Do you have any concerns with Staff's ROR recommendation?

A. Yes, but only as it relates to their recommended allowed ROE, and not their recommended capital structure or cost of debt.

Q. Who sponsored Staff's ROR recommendation?

A. Seoung Joun Won ("Dr. Won").

Q. What is Dr. Won's recommended allowed ROE?

A. 9.55%, which is the mid-point of his recommended allowed ROE of 9.30% to 9.80%.

Q. How did Dr. Won arrive at his recommended allowed ROE range?

A. Dr. Won used the ROEs (9.5% to 10.0%) specified by the parties in the Stipulation and Agreement in Case No. WR-2017-0285 as his starting point. He then performed cost of capital analyses based on current capital market conditions to determine if he believed current conditions justified a different ROE than the range specified in the settlement.

Q. What ROE within the 9.5% to 10.0% range did Dr. Won use to arrive at his point ROE recommendation?

A. He used the mid-point of the ROE range, which was 9.75%. Dr. Won estimated that the water utility industry's COE has declined by 20 basis points since the 2017 rate case. Therefore, he subtracted the high-end and the low-end of the ROE range by 20 basis points

for his recommended ROE range of 9.3% to 9.8%. He recommends the mid-point of this range, which is 9.55%.

Q. Do you know how the ROE range of 9.5% to 10.0% was deemed to be reasonable for purposes of the settlement in MAWC's last rate case?

A. Not entirely because I was not involved in those settlement discussions.

Q. Do you know if Staff or OPC used 9.5% or 10.0% to determine a reasonable revenue requirement for purposes of settlement in the 2017 rate case?

A. I do not know. Additionally, the ROE range is not meaningful unless the settlement specified a capital structure, which it did not. Therefore, using terms from a settlement as potential precedent for a future case is of questionable relevance.

Q. What was Staff's recommended allowed ROE for MAWC in its 2017 rate case?

A. 8.5% to 9.5% with a point recommended allowed ROE of 9.25%.

Q. What was OPC's recommended allowed ROE for MAWC in the 2017 rate case?

A. 9.0% based on the mid-point of a range of 8.6% to 9.4%.

Q. What was MAWC's recommended allowed ROE for MAWC in the 2017 rate case?

A 10.8% based on the upper-end of Ms. Bulkley's recommended range of 10.0% to 10.8%.

Q. What was the basis for Staff's recommended allowed ROE in the 2017 rate case?

A. Staff based its 9.25% allowed ROE recommendation on its conclusion that the water utility industry has a lower cost of capital than the electric utility industry. Staff noted that the Commission had authorized KCPL an allowed ROE of 9.5% in Case No. ER-2016-0285, and considered it reasonable to authorize MAWC a lower allowed ROE.

Q. Considering investors view the water utility industry as having less business risk than the electric utility industry, why didn't you recommended MAWC be authorized a ROE lower than the Commission's recent decision in The Empire District Electric Company rate case, Case No. ER-2019-0374?

A. Because I recognized that the cost of equity for MAWC is fairly similar to electric utility companies as long as its capital structure reflects the amount of debt its assets support, which is the amount of debt carried by American Water. Applying a 9.25% allowed ROE to my recommended equity ratio of 41.10% (excluding short-term debt) or 39.18% (including short-term debt) recognizes the lower cost of capital MAWC's less-risky water assets support.

Q. Do you agree with Dr. Won's characterization of his DCF methodology as a two-step approach?

A. No. Dr. Won's DCF's approach is based on an approach used in utility proceedings before the Federal Energy Regulatory Commission ("FERC"). While I understand that this variant of the DCF is also characterized as a two-step method in FERC proceedings, this is a mischaracterization. A two-step approach allows for two specific stages of growth. The first stage may be based on applying a growth rate to expected cash flows in the near-term (e.g. the next 5-10 years), and then the second stage is usually based on some estimate of the sustainable/perpetual growth rate. The approach used by Dr. Won is still a constant-growth DCF (one growth rate applied to dividends from year 0 to infinity), but it gives 2/3 weight to equity analysts' projected 5-year CAGR in EPS and 1/3 weight to long-term GDP growth. This one, constant growth rate (6.52% in Dr. Won's DCF analysis) is applied to the current DPS from the current year until infinity.

Q. Are you aware of any investment analysts who perform utility stock valuation analysis similar to the approach used by Dr. Won and FERC?

A. No.

Q. What is your reaction to Dr. Won's CAPM analysis?

A. Dr. Won used a very wide range of equity risk premiums. While there is support from the investment community for equity risk premiums in the 4% to 6% range, I am not aware of any support for Dr. Won's use of an 11.79% equity risk premium.

Q. Does Dr. Won rely on his CAPM analysis for purposes of estimating the change in the cost of common equity since MAWC's last rate case?

A. No.

Q. Do you think he should have?

A. Not necessarily. I agree with Dr. Won that there can be a ridiculously wide range of estimated equity risk premiums as exemplified by Ms. Bulkley's irrational long-term market return expectations of over 13% for the S&P 500. Additionally, with the significant changes in risk-free rates in recent years, it becomes more difficult to determine a consensus equity risk premium. Duff & Phelps (D&P) attempts to do so by evaluating various equity risk premium estimates. On December 9, 2020, D&P lowered its recommended equity risk premium to 5.5% from 6.0%.[25] D&P's recommended equity risk premium is conditional on the use of a risk-free rate of 2.5%. Based on D&P's estimates, the cost of equity for the market (S&P 500) is 8%. This compares to Goldman Sachs' estimate of the unconditional equity risk premium of 6.3% as of August 14, 2020. Goldman Sachs' equity risk premium was based on the 10-year risk-free rate of approximately 0.7% at the time, which translates into an expected long-term market return of 7%.

[25] https://www.duffandphelps.com/insights/publications/cost-of-capital/duff-and-phelps-recommended-us-equity-risk-premium-decreased-december-2020

Q. Dr. Won indicates that lower utility debt yields looked at in isolation, support lowering the ROE range from the 2017 rate case to 9.3% to 9.8% from 9.5% to 10.0%.[26] Is he correct?

A. No. As Dr. Won indicated, on page 19, lines 30-31 of the Staff COS Report, utility bond yields have declined by 107 basis points since MAWC's last rate case. Looked at in isolation, this indicates an allowed ROE of 8.5% to 9.0% would be reasonable, based on his use of the ROE range specified in the 2017 Stipulation and Agreement.

Q. Dr. Won indicates a simple and objective method to determine a company's COE is to add a risk premium of 4% to 6% to the yield-to-maturity on the company's bond.[27] Is this your understanding of a typical risk premium added to a company's long-term bond yield?

A. No. Dr. Won cites to a textbook used in the Chartered Financial Analyst (CFA) Program (*see* footnote 39 in his testimony). An updated cite from the CFA Program curriculum is as follows:

> For companies with publicly traded debt, the **bond yield plus risk premium method** provides a quick estimate of the cost of equity. The estimate is
>
> > BYPRP cost of equity = YTM on the company's long-term debt + risk premium
>
> The YTM on the company's long-term debt includes a real interest rate and a premium for expected inflation, which are also factors embodied in a government bond yield; and a default risk premium.
>
> The default risk premium captures factors such as profitability, the sensitivity of profitability to the business cycle, and leverage (operating and financial) that also affect the returns to equity. The risk premium in Equation 13 is the premium that compensates for the additional risk of the equity issue compared with the debt issue (recognizing that debt has a prior

[26] Staff COS Report, p. 19, line 26, through page 20, line 10.
[27] Staff COS Report, p. 27, lines 1-7.

claim on the cash flows of the company). In US markets, the typical risk premium added is 3%–4%, based on experience.[28]

Q. What sources did Dr. Won use to determine a 4-6% equity risk premium?

A. In response to OPC DR No. 332, Dr. Won indicated he relied on three source for his estimate. The first source was an article by Jeremy Siegel in the Financial Analysts Journal in 1992. This article addresses the excess return of investing in the market as compared to returns achieved on risk-free government bonds. Dr. Siegel did not analyze excess returns to invest in a company's stock over its bond, which is the basis for the statement in my testimony. If a 4% to 6% equity risk premium is applied to a current 30-year US Treasury Bond yield of approximately 1.85%, this would translate into an expected market return of 5.85% to 6.85%.

The second source was an article by Gregory E. Scheig that studied allowed ROEs as compared to utility bond yields and US Treasury bond yields. The conclusion arrived at in this article is that allowed ROEs have not decreased at the same rate as bond yields, which results in a higher spread between allowed ROEs and debt yields. Many of the equity research reports I have reviewed express some bewilderment as to the "stickiness" of allowed ROEs despite the obvious decline in the utility industry's COE.

Dr. Won's third source was the book used for the Certified Rate of Return Analyst ("CRRA') designation, "The Cost of Capital – A Practitioner's Guide," by David Parcell. I am not aware of any specific advice of appropriate equity risk premiums in this book, but the book does cite to several sources that provide equity risk premium data, such as the first article Dr. Won cited. It appears that most of the risk premium information discussed in this book relates to market returns over US Government Bonds rather than a company's own bonds or its industry's bonds.

[28] 2021 CFA Program – Level II Refresher Reading, Equity Valuation, p. 35.

Q. Based on your consideration of the various materials you cited and Dr. Won relied upon, is it clear why the risk premiums Dr. Won cited are higher than risk premiums advised in the CFA curriculum?

A. Yes. The CFA curriculum suggests adding 3% to 4% to a company's bond yield. A company's bond yield will already contain a risk premium for the potential of default or rating downgrade. This risk premium reflects the bond investor's assessment of the risk profile of that specific bond issuer. The 4% to 6% risk premiums Dr. Won cited are over a risk-free rate, which do not reflect any company-specific or industry-specific risk. Based on recent trades on American Water's long-term bonds, they trade at a YTM of approximately 2.7% to 2.8%. Adding 3% to this bond yield implies a COE of approximately 5.75%.

Q. Although you believe Dr. Won's COE estimates are too high, what is the primary difference between you and Dr. Won as it relates to your recommendations?

A. It is my opinion that the Commission should not set MAWC's ROE any higher than the Commission just authorized Empire in Case No. ER-2019-0374. Dr. Won is using the ROE range from the settlement in MAWC's last rate case to determine what he considers reasonable in this case. My analysis shows that the water utility industry has a lower cost of capital than the electric utility industry, specifically for American Water since it takes advantage of lower debt costs at the holding company. In the 2017 rate case, Staff estimated that the water industry's COE is 25 basis points lower than the electric industry's. This implies a 9.0% allowed ROE is reasonable in this case. However, because American Water is offsetting the lower business risk of its regulated water and wastewater utility assets with more financial risk, I believe a 9.25% allowed ROE is reasonable if applied to the more leveraged capital structures recommended by Dr. Won and myself. If the Commission does not adopt our more leveraged capital structure recommendations, then MAWC's authorized ROE should be at the low end of my recommended range, which is 8.5%.

SUMMARY AND CONCLUSIONS

Q. Can you summarize the main points of your rebuttal testimony?

A. Yes. American Water does not manage MAWC's per books capital structure for purposes of achieving the lowest reasonable cost of capital for ratepayers, but rather to attempt to achieve a higher revenue requirement. This higher revenue requirement supports a more cost efficient capital structure at the holding company, where American Water is able to take full advantage of the debt capacity created by its regulated utility subsidiaries, including that of MAWC. It is clear that American Water has been targeting an equity ratio for MAWC in the low 50% range for the last several years and plans to target this equity ratio for the foreseeable future. However, there is no evidence of any benefit MAWC ratepayers receive in return for paying for this higher-cost capital structure.

Although I disagree with the use of MAWC's per books capital structure, if the Commission were to adopt it, it would need to include short-term debt without an offset for CWIP. This is because MAWC has been calculating the AFUDC rate improperly. If the Commission orders MAWC to give 100% weight to short-term debt in its AFUDC calculations, then the amount of short-term debt can be offset by CWIP balances.

Ms. Bulkley and I agree that utility stocks and bonds have been trading at higher values due to low interest rates. We disagree about how this should impact MAWC's allowed ROR. It is clear that capital markets are not requiring a high return on utility stocks and bonds. This should reflected in MAWC's allowed ROR. The low cost of capital environment picked up where it left off right before the pandemic, which was the new "normal" for the United States' low interest rate environment. Regardless of Ms. Bulkley's views on whether she considers this "normal," utility companies are able to earn a significant premium over their cost of capital due to a resistance to reduce allowed ROEs. A 9.25% allowed ROE is more than reasonable, even when applied to my more leveraged capital structure recommendation. If the Commission authorizes the RSM, then the allowed ROE should be reduced by 10 basis points to 9.15%.

Staff and I agree that the cost of capital has decreased since 2017. However, Staff used the mid-point of a range identified in a settlement to determine the ROE it considers reasonable in this case. To the extent the Commission needs context as to a fair and reasonable allowed ROE in this case, I suggest it use its own recent allowed ROE in the Empire rate case, Case No. ER-2019-0374. Considering the overwhelming amount of investor sentiment that water utilities have lower business-risk than gas and electric utilities, it is fair and reasonable to set MAWC's allowed ROE similar to Empire's.

Q. Does this conclude your testimony?

A. Yes.