

Missouri Public Service Commission

Respond Data Request

Data Request No.	0472
Company Name	Office of the Public Counsel-(All)
Case/Tracking No.	ER-2022-0337
Date Requested	1/11/2023
Issue	Rate of Return - Cost of Capital (Equity/Debt)
Requested From	David Murray
Requested By	Jeff Keevil
Brief Description	P/E Ratio
Description	On pages 10-22, in his Direct Testimony, Mr. Murray analyzed capital market conditions using the P/E ratio. (1) Please provide any peer-reviewed papers that explain how utility COE or ROE can be determined by only using the P/E ratio. (2) Please provide any peer-reviewed papers that explain how utility COE or ROE can be determined by using the P/E ratio with other variables. (3) Absent any peer-reviewed papers produced for 1 or 2, please provide the source of this theory and/or analysis and provide a copy in PDF format. Requested by: Seoung Joun Won (Seoungjoun.won@psc.mo.gov)
Response	(1) Mr. Murray did not analyze P/E ratios for purposes of directly estimating the cost of common equity. Mr. Murray analyzed P/E ratios for purposes of assessing the relative value being assigned to electric utility stocks as compared to changes in long-term interest rates. Mr. Murray found that electric utility stocks have maintained their approximate 20x valuation ratio despite recent increases long-term interest rates. This demonstrates that investors' equity risk premium for investing in electric utility stocks as compared to bonds is lower than usual. Although Mr. Murray did not directly estimate the cost of common equity using P/E ratios, the inverse of P/E, or E/P, has been used in certain situations to estimate the COE (see "The Cost of Capital – A Practitioner's Guide," 2020 Edition, by David Parcell, pages 90 and 183 – 185). (2) Mr. Murray has not researched papers to determine the various ways P/E ratios may be used to estimate the cost of equity. (3) Investors frequently use a terminal P/E ratio to estimate a final cash flow (i.e. sale of the stock) in a multi-stage DCF analysis. The Chartered Financial Analyst ("CFA") Program's curriculum discusses such scenarios. Mr. Murray will make this material available for Staff's review at a mutually convenient place and time. Also, please note that Ameren Missouri's previous ROR witness, Robert Hevert, used a P/E multiple for the terminal cash flow in his multi-stage DCF analysis.
Objections	NA

The attached information provided to **Missouri Public Service Commission** Staff in response to the above data information request is accurate and complete, and contains no material misrepresentations or omissions, based upon present facts of which the undersigned has knowledge, information or belief. The undersigned agrees to immediately inform the **Missouri Public Service Commission** if, during the pendency of Case No. **ER-2022-0337** before the Commission, any matters are discovered which would materially affect the accuracy or completeness of the attached information. If these data are voluminous, please (1) identify the relevant documents and their location (2) make arrangements with requestor to have documents available for inspection in the **Office of the Public Counsel-(All)** office, or other location mutually agreeable. Where identification of a document is requested, briefly describe the document (e.g. book, letter, memorandum, report) and state the following information as applicable for the particular document: name, title number, author, date of publication and publisher, addresses, date written, and the name and address of the person(s) having possession of the document. As used in this data request the term "document(s)" includes publication of any format, workpapers, letters, memoranda, notes, reports, analyses, computer analyses, test results, studies or data, recordings,

transcriptions and printed, typed or written materials of every kind in your possession, custody or control or within your knowledge. The pronoun "you" or "your" refers to **Office of the Public Counsel-(All)** and its employees, contractors, agents or others employed by or acting in its behalf.

Security : Public
Rationale : NA