Date Filed: October 09, 2026

Witness: Rima Hyder, Matthew Fallon and Ann Bulkley
Request from: ALLCO

Question:

(Market-to-book evidence.) (a) For each year-end 2015 through 2025 and for the most recent practicable date, state for Eversource Energy: the closing market price of its common shares; common shares outstanding; total common shareholders' equity per the consolidated balance sheet; book value per common share; and the resulting market-to-book ratio. (b) For the same dates, state the Company's common shareholder's equity as reported in its FERC Form 1 (or the equivalent PURA annual report), and the Company's share of Eversource Energy's consolidated common equity and of its consolidated net income. (c) For each company in each Proxy Group, state the market-to-book ratio at the date the ROE Witness's analysis was performed and at each year-end 2020 through 2025, and the average and median for the group. State whether the ROE Witness considered the market-to-book ratio of Eversource Energy or of the Proxy Group in arriving at the recommended return, and if not, why not. (e) State whether the Company agrees that, when a utility's authorized return on book equity equals its market cost of equity, the market value of its common equity would be expected to approximate its book value, and if the Company disagrees, state each reason and produce every analysis supporting its position.

Response:

a. Please refer to ALLCO-137, Attachment 1, for the requested information.

b. Please refer to ALLCO-137, Attachment 1, for the requested information.

c. Ms. Bulkley did not find the market-to-book ratios of the proxy group relevant in the determination of the cost of equity for the subject company.

a. - e. Not necessarily. The foundation of the conclusion that a market-to-book ratio equal to 1.0 is indicative of regulatory returns equaling the cost of equity is the Efficient Market Hypothesis (EMH). The EMH theory contends that all information currently known by investors is already reflected in current stock prices. For example, the theory of the DCF model is that the current share price is equal to the present value of all expected future dividends. Therefore, if markets were fully efficient changes in share prices could only be explained by new information that results in a change to the expected dividends. However, as Dr. Lawrence Kolbe and Dr. Michael Vilbert outlined in a 2016 presentation (see ALLCO-137, Attachment 2) to the California Public Utilities Commission, there is no

consensus among economists regarding whether the theory of the EMH holds true and share prices are rationally priced, and even assuming for the sake of argument that the EMH does in fact hold true, there is also no consensus regarding which model produces reasonable estimates of the cost of equity.

Nobel Prize-winning economist Dr. Robert Shiller and others have provided compelling evidence against the EMH, concluding that share prices are not rationally priced and that the DCF model does not fully explain changes in share prices and thus will not accurately estimate the required return of investors. For example, in his 1981 study titled "Do Stock Prices Move Too Much to be Justified by Subsequent Changes in Dividends?," (See ALLCO-137, Attachment 3), Dr. Shiller examined whether the volatility in share prices could be fully explained by new information regarding future dividends. Dr. Shiller found that the historical volatility of share prices has been far too high to be fully explained by changes in expectations for future dividends. There are numerous practical examples supporting this position (e.g., large sudden declines in the market such as Black Monday in 1987, the Great Recession of 2008/09, the COVID-19 crash in March 2020, and the "tech bubble" of the late 1990s) that cannot be explained by new information regarding dividends.

While the examples discussed above provide evidence of market inefficiencies that could very well prove that the EMH does not hold and stocks are not rationally priced, it could also be that the correct asset pricing model to determine expected returns is not known by economists. For example, in the text Corporate Finance, finance professor Ivo Welch states (See ALLCO-137, Attachment 4):

> Of course, few people doubt that big U.S. financial markets are, to such a first approximation, efficient – we all know that you just can't earn that much. But there is a large gray zone where it is difficult to distinguish between model error and market inefficiency. Because no one knows for sure what the correct model of expected returns is, no one can tell you affirmatively whether the stock market set the price of ABC stock so as to offer investors an expected rate of return on ABC of, say, 10 percent a year or 12 percent a year.

Welch further noted that "we are not sure and cannot agree whether ABC should earn 10 percent, 20 percent, or 30 percent a year." Similarly, In the text *Behavioral Finance: The Second Generation*, Meir Statman noted (Please refer to ALLCO-137, Attachment 5):

> The CAPM was accepted as the correct asset pricing model as long as it served to show that markets are hard to beat and value efficient. But the CAPM was largely replaced by the three factor model when the former

> indicated that markets are not efficient, yielding abnormal returns to investors in small capitalization and value stocks.
>
> The three factor model was judged as faulty when it failed to account for abnormal returns yielded by the momentum factor. And the four factor model was declared faulty when it failed to account for abnormal returns associated with investment and profitability, idiosyncratic volatility, and net stock issues, among many others.

This is important because it shows that existing asset pricing models are continually being adjusted to better predict prices in the market and explain deficiencies and that currently there is not one correct asset pricing model.

Since academic research demonstrates that markets are not fully efficient and the correct asset pricing model is not known, it is unreasonable rely on the market to book ratio as an indicator for whether the authorized return is equivalent to the cost of equity.