UNREASONED DECISIONMAKING: FERC'S EVER-CHANGING METHODOLOGY FOR ESTIMATING THE RETURN ON EQUITY

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Synopsis: The financial crisis that began in 2008 led to unprecedented actions by the U.S. Federal Reserve (Fed) to lower interest rates and stimulate the economy. The Fed kept interest rates low through 2020, long after the financial crisis had ended. The low-interest-rate environment contributed to lower return on equity (ROE) estimates produced using the Federal Energy Regulatory Commission's (FERC) discounted cash flow (DCF) methodology. In response, FERC revised its DCF methodology and introduced several new approaches, including the Capital Asset Pricing Model (CAPM) and a Risk Premium (RP) model, effective with Opinion No. 531 in 2014.[1] FERC continued to modify its methodologies in Opinion No. 551 and its progeny, culminating in Opinion No. 569-A in 2020.[2] FERC recently reaffirmed those methodologies in Opinion No. 594. Nevertheless, none of these changes meet the standard for reasoned decision-making.[3]

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1. Opinion No. 531, *Coakley. v. Bangor Hydro-Elec. Co.*, 147 FERC ¶ 61,234 (2014) [hereinafter Opinion No. 531], *order on paper hearing*, Opinion No. 531-A, 149 FERC ¶ 61,032 (2014) [hereinafter Opinion No. 531-A], *reh'g denied*, Opinion No. 531-B, 150 FERC ¶ 61,165 (2015) [hereinafter Opinion No. 531-B], *rev'd sub nom.,* Emera Maine v. FERC, 854 F.3d 9 (D.C. Cir. 2017), *order on remand and initial decisions,* Opinion No. 594, 194 FERC ¶ 61,208 (2026) [hereinafter Opinion No. 594].

2. Opinion No. 551, *Ass'n. of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator*, 156 FERC ¶ 61,234 (2016) [hereinafter Opinion No. 551], *order on reh'g*, Opinion No. 569, 169 FERC ¶ 61,129 (2019) [hereinafter Opinion No. 569], *order on reh'g*, Opinion No. 569-A, 171 FERC ¶ 61,154 (2020) [hereinafter Opinion No. 569-A], *order on reh'g*, *reh'g*, Opinion No. 569-B, 173 FERC ¶ 61,159 (2020), *rev'd sub nom.*, MISO Transmission Owners v. FERC, 45 F.4th 248 (D.C. Cir. 2022), *order on remand*, 189 FERC ¶ 61,036 (2024) [hereinafter 2024 Order on Remand], *order addressing arguments raised on reh'g*, 190 FERC ¶ 61,184 (2025) [hereinafter Rehearing Order]. The MISO Transmission Owners and the Louisiana Public Service Commission have filed separate appeals of these last two orders, which, as of this writing, are pending before the United States Court of Appeals for the D.C. Circuit in Case Nos. 25-1045 *et al*.

3. Ohio v. EPA, 603 U.S. 279, 292 (2024) ("An agency action qualifies as 'arbitrary' or 'capricious' if it is not 'reasonable and reasonably explained.' . . . In reviewing an agency's action under that standard, a court may not 'substitute its judgment for that of the agency.'. . . But it must ensure, among other things, that the agency has offered 'a satisfactory explanation for its action[,] including a rational connection between the facts found and the choice made.' Accordingly, an agency cannot simply ignore 'an important aspect of the problem.'") (internal citations omitted); Dept. of Com. v. New York, 588 U.S. 752, 785 (2019) ("The reasoned explanation requirement of administrative law, after all, is meant to ensure that agencies offer genuine justifications for important decisions, reasons that can be scrutinized by courts and the interested public. Accepting contrived reasons would defeat the purpose of the enterprise. If judicial review is to be more than an empty ritual, it must demand something better than the explanation offered for the action taken in this case"); Allentown Mack Sales & Serv., Inc., v. NLRB, 522 U.S. 359, 375 (1988) ("Reasoned decisionmaking, in which

Instead, FERC's rationales for the changes it has made since 2014 have been unsupported, contradictory, and lack grounding in economic and financial fundamentals. FERC has yet to provide an economically coherent justification for its repeated methodological shifts, or even to respond to some of the more pressing challenges to these shifts.[4] The lack of economic and financial coherence in FERC's approach to ROE undermines the agency's mission to help consumers obtain "efficient energy services at a reasonable cost"[5] by (1) denying consumers the benefits of a lower market cost of capital and (2) inflating regulated ROE values. This article provides a history of FERC's methodological changes, identifies the underlying economic fallacies contained within them, and recommends methodologies the Commission can adopt that meet the "comparative risk" standard established by *Bluefield*[6] and *Hope.*[7]

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the rule announced is the rule applied, promotes sound results, and unreasoned decisionmaking the opposite. The evil of a decision that applies a standard other than the one it enunciates spreads in both directions, preventing both consistent application of the law by subordinate agency personnel (notably [administrative law judges]), and effective review of the law by the courts."). *See also* Motor Vehicle Mfrs. Assn. of U.S. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1982) ("The scope of review under the 'arbitrary and capricious' standard is narrow and a court is not to substitute its judgment for that of the agency. Nevertheless, the agency must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'") (quoting Burlington Truck Lines, Inc. v. U.S., 371 U.S. 156, 168 (1962)).

4. *See* discussion *infra* Section II.C.

5. *About FERC*, FERC (last updated Oct. 6, 2025), https://www.ferc.gov/what-ferc. *See also* NAACP v. Fed. Power Comm'n, 425 U.S. 662, 669-670 (1976) ("In the case of the Power and Gas Acts it is clear that the principal purpose of those Acts was to encourage the orderly development of plentiful supplies of electricity and natural gas at reasonable prices."); *see also* Pa. Water & Power. Co. v. Fed. Power Comm'n, 343 U.S. 414, 418 (1952) ("A major purpose of the [Federal Power] Act is to protect consumers against excessive prices."); Xcel Energy Servs., Inc. v. FERC, 815 F.3d 947, 952 (D.C. Cir. 2016) ("It is long-established that the 'primary aim [of the FPA] is the protection of consumers from excessive rates and charges.'") (quoting Mun. Light. Bds. of Reading and Wakefield, Mass. v. FPC, 450 F.2d 1341, 1348 (D.C. Cir. 1971), *cert. denied*, 405 U.S. 989 (1972)).

6. *See generally* Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n of W. Va., 262 U.S. 679 (1923).

7. *See generally* Fed. Power Comm'n v. Hope Nat. Gas Co., 320 U.S. 591 (1944).

I. INTRODUCTION

Determining a just and reasonable allowed return on equity for regulated companies is a crucial aspect of the cost-based regulation approach employed by FERC and most state utility regulators.[8] As enunciated in *Hope*, to ensure regulated companies have sufficient access to capital to maintain reliable service, they must provide investors with an expected return that reflects prevailing market conditions at the time. However, because such a just and reasonable return on equity is not observable, it must be estimated, and various methodologies have been developed to do so. Some of these, including the DCF and CAPM, are market-based, that is, they account for current conditions in financial markets. Others, such as the Comparable Earnings approach, are not.[9]

The allowed ROE is a component of a regulated firm's overall cost of capital, which includes all sources of investment funds, principally equity and debt. Ascertaining the expected return on equity investors require, given current market conditions, which is defined as the market cost of equity capital,[10] "is a standard of finance resting on stubborn facts."[11] Any reasoned analysis of the market cost of equity capital rests on the efficient market hypothesis (EMH), which is "[t]he cornerstone of modern investment theory."[12] As the Court stated in *Tennessee*, "[i]n its 'semi-strong' form, the hypothesis says that stock prices will react promptly to new public releases of information."[13] Thus, under the EMH, the price of a stock today is based on investors' collective expectations of the present value of the stock's future cash flows. Moreover, the EMH means that only a return that reflects current market conditions can satisfy the comparative risk requirements of *Hope* and *Bluefield*,[14] and the Commission's "mandate to ensure that rates are

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8. *See generally* CHARLES F. PHILLIPS, JR., THE REGULATION OF PUBLIC UTILITIES (3d. ed. 1993).

9. The Comparable Earnings method evaluates historical book returns on equity. *See, e.g.,* Opinion No. 94, *Union Elec. Co.,* 12 FERC ¶ 61,239, at 61,584 (1980) ("In any event, when a stock's market price varies from its book value . . . earnings-price ratios and growth or expected growth in such ratios would be of little value to an investor in deciding what price would be justified for its stock. That decision is more commonly made by estimating a probable rate of return on an investment compared to estimated rates on other available investment opportunities of similar risk."). It is thus an accounting-based methodology, rather than a market-based one.

10. Order No. 461-A, *Generic Determination of Rate of Return on Common Equity for Public Utilities*, 38 FERC ¶ 61,160, at p. 61,440 (1987) (finding "compelling economic justification for relying on the market cost of capital as the standard for rate of return decisions") (quoting Order No. 461, *Generic Determination of Rate of Return on Common Equity for Public Utilities*, 37 FERC ¶ 61,287 (1986), 52 Fed. Reg. 11, at 29 (1987) (to be codified at 18 C.F.R. pt. 37)).

11. Colo. Interstate Gas Co. v. Fed. Power Comm'n, 324 U.S. 581, 605 (1945).

12. Tenn. Gas Pipeline Co. v. FERC, 926 F.2d 1206, 1210 (D.C. Cir. 1991) (quoting ROGER A. MORIN, UTILITIES' COST OF CAPITAL 140, n. 4 (1984)). *See also* Basic Inc. v. Levinson, 485 U.S. 224, 246 (1988) (". . . empirical studies have tended to confirm . . . [the] premise that the market price of shares traded on well-developed markets reflects all publicly available information . . .").

13. *Tenn. Gas Pipeline Co*., 926 F.2d at 1210.

14. *See* Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n of W. Va., 262 U.S. 679, 692 (1923) (stating "[the] public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are **attended by corresponding risks and uncertainties** . . .") (emphasis added). *See also* Fed. Power Comm'n v. Hope Nat. Gas Co., 320 U.S. 591, 603 (1944) (stating "the return to the equity owner should be commensurate with returns

neither less than compensatory to the seller nor excessive to the consumer."[15] The EMH means that unexploited (legal) opportunities for arbitrage cannot exist, and that all arbitrage is quickly reflected in the price of a stock.[16] And, although it has been challenged, the EMH is a fundamental tenet of finance.[17]

For a regulated company, its cost of capital typically refers to its overall weighted average cost of capital, based on the company's capital structure, i.e., the proportions of debt, equity, and other sources of capital held by the company, and their respective costs. The weighted average cost of debt, for example, is typically calculated as the weighted-average effective interest rate on all long-term debt instruments. (Typically, the cost of short-term debt is omitted from the calculation because such debt, by definition, will be retired in the near future.)[18]

Economists define the required rate of return on a particular investment as the expected return that investors require by making that investment instead of an alternative investment having comparable risk. This is known as the opportunity cost of capital. Although the cost of debt is easily observable, the required return on equity is not, which is why regulators like FERC developed methodologies to estimate the required return on equity. Moreover, in many cases, regulated firms are not publicly traded, either because they are privately held or are subsidiaries of parent companies that may or may not be publicly traded. Thus, in setting an allowed rate of return on invested capital that meets the requirements established by the *Bluefield* and *Hope* decisions, regulators like FERC must: (1) identify risk-comparable firms, and (2) apply one or more analytical methodologies to estimate an appropriate allowed ROE.[19]

The global financial crisis that began in 2008 prompted the Fed to undertake large-scale purchases of U.S. Treasury bonds and mortgage-backed securities beginning in November 2008[20] to lower interest rates and, it was hoped, to stimulate the U.S. economy. Unlike other monetary policy actions, which are designed to influence short-term interest rates, the Fed's actions, known as

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on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise so as to maintain credit and attract capital.").

15. *Bangor Hydro-Electric Co.*, 122 FERC ¶ 61,038 P 14 (2008).

16. Arbitrage consists of buying and selling securities to exploit price differences. For example, suppose a bond pays 5% interest (called the "coupon rate"). If interest rates fall to, say, 4%, then an arbitrager could borrow money at 4% and buy bonds at 5%, thus making unlimited profits. In reality, the price of the 5% bond increases until the realized yield falls to 4%, thus eliminating that possibility.

17. *See generally* Burton G. Malkiel, *The Efficient Market Hypothesis and Its Critics*, 17 J. ECON. PERSP. 59 (2003).

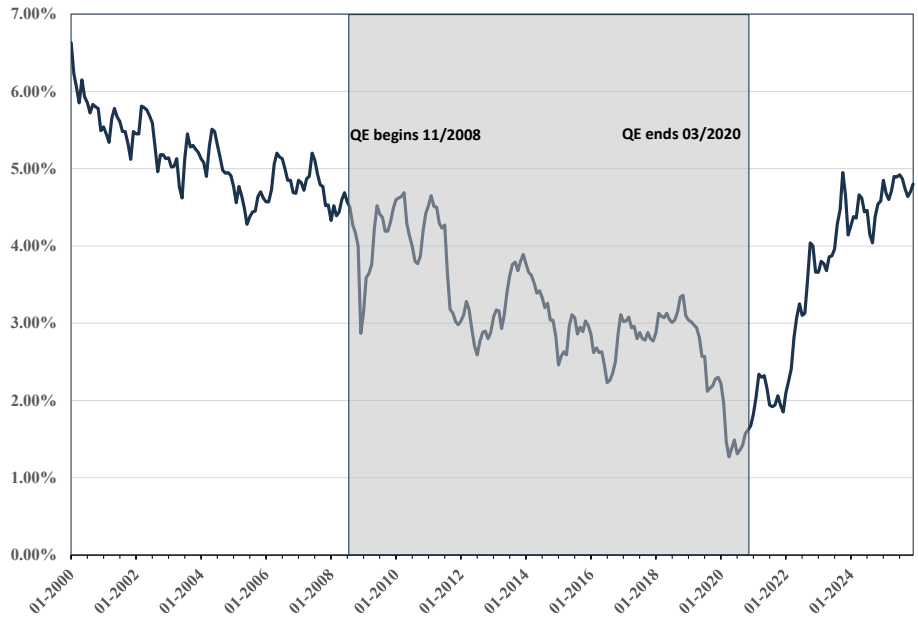
18. Long-term debt is defined as debt that does not mature for at least 12 months. *See Long Term Debt*, CORP. FIN. INST. (Mar. 21, 2020), https://corporatefinanceinstitute.com/resources/accounting/long-term-debt-ltd/. The effective interest rate on a debt issuance equals the interest payments divided by the net debt issuance, i.e., the net amount after the regulated firms pays a bank or other bond agency underwriting fees.

19. For a discussion of evaluating risk comparability, see generally Jonathan A. Lesser & Emma Nicholson, *Abandon All Hope? FERC's Evolving Standards for Identifying Comparable Firms and Estimating the Rate of Return*, 30 ENERGY L. J. 105 (2009).

20. John Weinberg, *The Great Recession and Its Aftermath*, FED. RSRV. HIST. (Nov. 22, 2013), https://www.federalreservehistory.org/essays/great-recession-and-its-aftermath.

"quantitative easing" (QE), are intended to affect long-term interest rates.[21] Although the Fed's purchases of securities had slowed by 2019, the COVID-19 pandemic caused the Fed to renew its QE efforts, increasing its holdings from about $4 trillion in 2019 to almost $9 trillion by 2022.[22]

Figure 1: Yields on 30-year U.S. Treasury Bonds, January 2000 – December 2025



Source: Federal Reserve Bank of St. Louis, FRED Database

Coupled with lower inflation, the actions taken by the Fed did indeed lower nominal long-term interest rates (Figure 1). Short-term interest rates fell further, hovering near zero between 2009 and 2017.[23] The decrease in interest rates led a group comprised of transmission customers, state regulators, and state attorneys general to file a complaint under section 206 of the Federal Power Act (FPA)[24] in 2011, challenging the lawfulness of the then-current ROE of 11.14% for New England Transmission Owners (NETOs) that were being recovered through ISO

21. For a brief history of QE, see generally Stephen Williamson, *Quantitative Easing: How Well Does This Tool Work*, FED. RSRV. BANK OF ST. LOUIS, REG'L ECONOMIST (Aug. 18, 2017), https://www.stlouisfed.org/publications/regional-economist/third-quarter-2017/quantitative-easing-how-well-does-this-tool-work.

22. Tim Sablik, *The Fed Is Shrinking Its Balance Sheet. What Does That Mean?* FED. RSRV. BANK OF RICHMOND, ECON. FOCUS (Third Quarter 2022), https://www.richmondfed.org/-/media/RichmondFedOrg/publications/research/econ_focus/2022/q3/federal_reserve.pdf.

23. *Market Yield on U.S. Treasury Securities at 1-Month Constant Maturity, Quoted on an Investment Basis*, FED. RSRV. BANK OF ST. LOUIS (last updated Mar. 16, 2026), https://fred.stlouisfed.org/series/DGS1MO.

24. 16 U.S.C. § 824e (2006).

New England's Open Access Transmission Tariff (OATT).[25] That Complaint not only set in motion years of litigation,[26] but also set in motion FERC's numerous changes to its previous ROE methodology. The remainder of this article reviews these changes and explains why they lack an underlying economic rationale, instead appearing to have been driven by a results-oriented desire to avoid lower ROE values.

II. THE ROE METHODOLOGY PRIOR TO OPINION NO. 531

A. FERC's DCF Methodology

The DCF methodology arises from the EMH because the price of a stock today reflects the collective expectations of investors regarding the expected present value of all future cash flows from holding the stock, including future dividend payments and price appreciation.

The general form of the DCF methodology is shown in equation (1).

$$P_0 = \frac{D_1}{(1+R_E)} + \frac{D_2}{(1+R_E)^2} + \frac{D_3}{(1+R_E)^3} + \cdots + \frac{D_t}{(1+R_E)^t} + \frac{P_t}{(1+R_E)^t} \quad (1)$$

where "P_0" is the price of the stock today, "D_1, D_2, . . ., D_t" are the expected dividend payments at the end of each future period, and "R_E" is the cost of equity capital, which reflects investors' collective view of the time value of money. However, for the purpose of estimating the allowed ROE, an infinite holding period is assumed.[27] Consequently, the last term in equation (1), $P_t / (1 + R_E)^t$, which reflects expected future price appreciation, vanishes.[28] Hence, the DCF model becomes:

$$P_0 = \frac{D_1}{(1+R_E)} + \frac{D_2}{(1+R_E)^2} + \frac{D_3}{(1+R_E)^3} + \cdots + \frac{D_t}{(1+R_E)^t} + \ldots (2)$$

In applying the DCF methodology, one solves equation (2) for R_E to determine the discount rate that equates the discounted present value of the expected future dividend payments to the stock's price today. If one further assumes that future dividend payments will grow at a constant rate, g, i.e., that $D_1 = D_0 \times (1 + g)$, $D_2 = D_1 \times (1 + g)$, etc., then equation (2) becomes:

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25. Notice of Complaint, *Coakley v. Bangor Hydro-Elec. Co*., 76 Fed. Reg. 62,396, 62,397 (Oct. 7, 2011) (showing that Complainants sought a 9.2% ROE) [hereinafter 2011 Complaint].

26. Opinion No. 594 was issued in March of 2026, nine years after the Court of Appeals overturned Opinion No. 531 in 2017. *See supra* note 1.

27. Canadian Ass'n of Petroleum Producers v. FERC, 254 F.3d. 289 (D.C. Cir. 2001).

28. *See, e.g*., Corrected Initial Decision, *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator*, 153 FERC 63,027 P 33 (2015).

$$P_0 = \frac{D_0(1+g)}{(1+R_E)} + \frac{D_2(1+g)^2}{(1+R_E)^2} + \frac{D_3(1+g)^3}{(1+R_E)^3} + \cdots + \frac{D_t(1+g)^t}{(1+R_E)^t} + \ldots (3)$$

It can be shown that equation (3) reduces to:

$$P_0 = \frac{D_0 \times (1+g)}{(R_E - g)} (4)$$

Solving equation (3) for R_C yields:

$$R_E = \frac{D_1}{P_0} + g = \frac{D_0 \times (1+g)}{P_0} + g \ (5)$$

where "D_0" is the current dividend payment. Equation (4) is called the "Gordon growth model."[29] Owing to when the next dividend payment will be received over the next year, FERC assumes it will take place one-half year from the current date. Consequently, FERC's DCF model uses a slightly different format, specifically

$$R_E = \frac{D_0 \times (1+g/2)}{P_0} + g \ (6)$$

The key variable in the DCF methodology is the expected growth rate, *g*. FERC has traditionally relied on analysts' three-to-five-year earnings growth forecasts, as published by the Institutional Brokers' Estimate System (IBES).[30] The underlying assumption is that future dividend payments will grow at the same rate as future earnings.

There are several variants of the Gordon growth model, which modify the constant dividend growth assumption and the timing of the initial dividend payment in equation (4). FERC assumes that the initial dividend payment will be received one-half year from today.[31] Consequently, the current dividend payment, D_0, is multiplied by $(1 + g/2)$.

A second variant is to adopt a multi-stage growth model, where *g* is assumed to apply in the short run (usually for five years) and thereafter a long-term growth rate. This variant reflects the fact that no company's earnings can grow at a rapid rate forever and, in the long run, will grow at the same rate as the overall

29. *See generally* MYRON J. GORDON, THE COST OF CAPITAL TO A PUBLIC UTILITY (1974).

30. *I/B/E/S Estimates*, LSEG DATA & ANALYTICS, https://www.lseg.com/en/data-analytics/financial-data/company-data/ibes-estimates (last visited Jan. 27, 2026) (I/B/E/S is now owned and published by the London Stock Exchange Group through its subsidiary, Refinitiv).

31. Although most companies pay dividends on a quarterly basis, FERC uses annualized dividend payments in its DCF methodology.

economy.[32] Nevertheless, prior to Opinion No. 531, FERC relied on the short-term growth model for electric utilities.[33]

For pipelines, FERC used a weighted-growth approach, assigning a 2/3 weight to the short-term analyst growth rate forecasts and a 1/3 weight to the long-term growth rate, which is based on forecasts of future Gross Domestic Product (GDP).[34] Over FERC's assumed fifty-year timeframe,[35] this weighting assumes short-term growth rates continue for 33 1/3 years followed by 16 2/3 years of growth at the overall rate of the economy.

To circumvent the problem of unreasonable short-term growth rates being assumed to continue indefinitely for electric utilities, FERC initially applied a high-end outlier test, rejecting companies whose growth rate forecasts exceeded 13.3% or whose overall DCF values exceeded 17.7%.[36] Both of those values were arbitrary, although FERC correctly stated that growth rates above 13.3% could not be sustained indefinitely.[37] FERC also employed an ad hoc low-end outlier test based on the yield of long-term utility bonds.[38] Subsequently, beginning with Opinion No. 531, FERC abandoned the previous 13.3% growth rate and 17.7% overall DCF value thresholds and instead adopted the same weighted growth rate

32. *See* ROGER A. MORIN, NEW REGULATORY FINANCE 308 (2006).

33. FERC based its reliance on short-term growth rates for its DCF analysis of electric utility ROEs on its belief that "[u]nlike the gas pipeline industry, which was nearly through with major restructuring at the time we issued Opinion No. 396-B, on June 11, 1997, the electric industry is just beginning a significant new phase of its restructuring" and accordingly declined to apply the weighted average growth rate methodology it had applied in pipeline rate cases. *See* Opinion No. 445, *S. Cal. Edison Co.*, 92 FERC ¶ 61,070, 61,261 (2000) [hereinafter Opinion No. 445]. In addition to analysts' earnings growth forecasts, FERC also used what is called the "sustainable" or "br + sv" growth rate calculation and then averaged the two resulting DCF estimates for each proxy group company. *Id.* at p. 61,263. *See also* MORIN, *supra* note 32, at 303.

34. FERC relies on an average of the long-term GDP forecasts prepared by the U.S. Energy Information Administration (EIA), the Social Security Administration Board of Trustees Report (SSA), and the S&P Global Connect Long-term Macroeconomic Forecast. The first two are prepared annually; the latter is prepared quarterly.

35. *See Williston Basin Interstate Pipeline Co.*, 104 FERC ¶ 61,036 P 32 (2003).

36. *ISO New England*, 109 FERC ¶ 61,147 P 205 (2004).

37. *ITC Holdings Corp. v. Interstate Power & Light Co.*, 121 FERC ¶ 61,229 PP 28, 42 (2007); *Potomac-Appalachian Transmission Highline, L.L.C.*, 122 FERC ¶ 61,188 P 100 (2008), *order on reh'g*, 133 FERC ¶ 61,152 PP 20, 40, 64 (2010); *see also S. Cal. Edison Co.*, 131 FERC ¶ 61,020 P 57 (2010); *S. Cal. Edison Co*., 139 FERC ¶ 61,042 PP 54, 60 (2012); *RITELine Ill., LLC*, 137 FERC ¶ 61,039 PP 68-73 (2011); *N. Pass Transmission LLC*, 134 FERC ¶ 61,095 PP 46, 52-54 (2011). These limits were initially adopted in 109 FERC ¶ 61,147 at P 205, based on the propositions that (1) "17.7 percent cost of equity is an extreme outlier and the inclusion of this number in the calculation in an unreliable ROE that will skew the results" and (2) "a 13.3 percent growth rate is not a sustainable growth rate over time and therefore does not meet threshold tests of economic logic.".

38. *See* Opinion No. 445, *supra* note 33, at 61,266 (excluding firms whose return is below cost of utility debt); *Pioneer Transmission, LLC*, 126 FERC ¶ 61,281 P 94 (2009), *reh'g denied*, 130 FERC ¶ 61,044 (2010) (setting presumptive threshold for low-end outlier exclusion at 100 basis points above the cost of utility debt, but applying the nearest "natural break point" in implied costs of equity as the relevant threshold for exclusion); 109 FERC ¶ 61,147 P 205 (excluding high-end outliers with "unsustainable" growth rates (13.3% in that case) and resulting high ROEs (17.7% in that case)).

approach that it had previously employed for inferring pipeline ROEs.[39] But in Opinion 569-A, FERC changed the 2/3 – 1/3 weighting it had adopted in Opinion No. 531, instead weighting the short-term earnings growth forecasts by 80% and the long-term GDP by 20%.[40] The rationale given by FERC was that

> average electric utility IBES growth projections are only marginally higher than GDP growth projections. Under these circumstances, investors are likely to view electric utility IBES growth projections as more sustainable than the substantially higher natural gas pipeline IBES growth projections when the Commission established its two-thirds/one-third weighting policy.[41]

FERC's stated rationale lacks any foundation and, as Commissioner Glick explained, gave the appearance of a results-oriented change.[42] FERC offered no evidence about investors' views, nor how it was defining "marginally higher." Moreover, applying FERC's logic, the weights assigned to the short-term forecast earnings growth rates of each proxy group company should vary in some unknown way depending on the ratio of their short-term forecast earnings growth rates to the overall forecast growth rate of GDP.[43]

B. Medians and Midpoints

Finally, when selecting a specific ROE value, FERC uses the median of the proxy group values for a single utility or pipeline. For a group of transmission companies, such as transmission owners in a Regional Transmission Operator (RTO) or Independent System Operator (ISO), FERC uses the midpoint value, calculated as the average of the lowest and highest DCF values in the proxy group range of reasonableness.[44]

As FERC itself found, the median is a robust measure of central tendency because it is not affected by outliers.[45] The midpoint, by contrast, depends *solely* on the endpoints of a range because it equals the average of the lowest and highest values within the range of reasonableness. The Commission explained that "…because the ROE was going to apply to a diverse group of companies, rather than to a single company of average risk, it was important to consider the entire range of results yielded by the proxy group. The Commission further explained

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39. Opinion No. 531, *supra* note 1, at P 13. FERC changed its weighting for electric utilities to 80% for the short-term growth rate and 20% for the long-term growth rate. *See* Opinion No. 569-A, *supra* note 2, at P 57. This is discussed below.

40. Opinion No. 569-A, *supra* note 2, at P 57.

41. *Id*. at P 58. *See also* Opinion No. 594, *supra* note 1, at PP 142, 160-61.

42. Opinion No. 569-A, *supra* note 2, at PP 1, 3 (Glick, Comm'r, concurring in part and dissenting in part).

43. More recently, the forecast earnings growth rates for gas pipeline proxy groups have been lower, on average, than those for electric utility proxy groups, thus negating FERC's stated rationale in Opinion Nos. 569 and 594. *See* Opinion No. 569, *supra* note 2, at P 152; Opinion No. 594, *supra* note 1, at PP 160-61.

44. *See Midwest Indep. Transmission Sys. Operator, Inc*., 106 FERC ¶ 61,302 PP 8-10 (2004); *see also* 109 FERC ¶ 61,147, at P 203.

45. Opinion No. 414-A, *Transcontinental Gas Pipe Line Corp*., 84 FERC ¶ 61,084 (1998), *aff'd*, Opinion No. 414-B, 85 FERC ¶ 61,323 (1998), *petition for review denied*, N.C. Utils. Comm'n v. FERC, 203 F.3d 53 (D.C. Cir. 2000); *see also Williston Basin Interstate Pipeline Co.*, 84 FERC ¶ 61,081 (1998) (relying on Opinion No. 414-A and stating that the median is preferable to the midpoint in setting ROE because it lessens the impact of atypical outliers in the proxy group). For an introduction to robust statistics, see PETER J. HUBER & ELEVEZIO M. RONCHETTI, ROBUST STATISTICS (2d. ed. 2009).

that the midpoint considers the wide range of returns because it is derived directly from the endpoints of the range."[46] In other words, considering only the lowest and highest values must, by definition, consider all values in between. That is statistical chicanery. If the goal of setting an allowed ROE is to reduce the influence of outliers, then the median, which is least affected by outliers, is the appropriate value to use.

FERC further stated in the *Midwest ISO Order on Remand,* when setting the allowed ROE for a group of transmission utilities,

> it is less concerned about distortions that may occur because of the highest or lowest number. . . instead, it must ensure that the base ROE sufficiently supports the entities that have ventured into the RTO membership and that it results in a reasonable rate of return as applied to all the companies in the group. In the Order on Remand, the Commission noted that the median places more weight on the middle values of a range of values than does the midpoint, and thus, it potentially produces a value that is not appropriate for a diverse group of utilities. The Commission explained that it was not seeking the most refined measure of central tendency, which might be achieved with the median, because it was not establishing an ROE for a single company of average risk.[47]

Although FERC stated that the Court of Appeals upheld the *MISO Remand Order* on appeal,[48] the above language is, by FERC's own admission, a results-oriented determination, rather than one based on reasoned decision making, to say nothing of basic statistics. There is no linkage between basing an allowed ROE solely on the lowest and highest values of a range of values and risk comparability. If the group of utilities is diverse, then it must be the case that the base ROE awarded will not be risk comparable; some will be awarded too low an ROE, while others will be awarded too high a ROE. Selecting the midpoint does nothing to address this issue. Thus, FERC's rationale for using a midpoint to set the allowed ROE for a diverse group of utilities lacks any economic or financial foundation.

C. Opinion No. 531: FERC Begins Changing the Rules

The 2011 Complaint was brought based on changes to capital market conditions since 2006 when the allowed Base ROE for the NETOs[49] had been set to 11.14%.[50] Specifically, the Complainants claimed that the lower interest rates and bond yields prevailing in 2011 had caused a "flight to quality"[51] that resulted in lower DCF values.[52] In the Initial Decision, the Presiding Judge agreed that the 11.14% ROE was no longer just and reasonable, and set the prospective ROE at

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46. 131 FERC ¶ 61,020, at P 90, *aff'd sub nom*, S. Cal. Edison Co. v. FERC, 717 F.3d 177 (D.C. Cir. 2013) (citing 106 FERC ¶ 61,302, at PP 8-15).

47. 131 FERC ¶ 61,020, at P 91.

48. Rehearing Order, *supra* note 2, at P 21. *See also* Opinion No. 594, *supra* note 1, at P 381.

49. The NETOs are identified in Opinion No. 531. *See* Opinion No. 531, *supra* note 1, at P 1, n. 3.

50. Opinion No. 489. *Bangor Hydro-Elec. Co.*, 117 FERC ¶ 61,129 P 2 (2006), *order on reh'g*, 122 FERC ¶ 61,265 (2008), *order granting clarification*, 124 FERC ¶ 61,136 (2008), *aff'd sub nom.*, Conn. Dep't of Pub. Util. Control v. FERC, 593 F.3d 30 (D.C. Cir. 2010). The 11.14% Base ROE was augmented by the fifty basis-point incentive adder awarded by the FERC for RTO participation. *See* 106 FERC ¶ 61,280, at PP 245-50.

51. Opinion No. 531, *supra* note 1, at P 3, n. 9.

52. *Id*. at P 3.

9.7%.[53] Responding to the flurry of opposing exceptions, in 2014, FERC issued Opinion No. 531, which adopted a new set of ROE methodologies and procedures.

The NETOs challenged the Initial Decision, asserting that the results of the DCF methodology understated their true cost of equity, owing to what they claimed were "anomalous" market conditions, specifically, the low interest rate environment that had arisen owing to the Fed's quantitative easing, which they expected would soon end.[54] The NETOs further asserted that the FERC DCF methodology suffered from "model risk," which they defined as "the risk that a theoretical model that is used to value real-world transaction fails to predict or represent the real phenomenon that is being modeled."[55]

Based on claims that FERC's DCF methodology was not reliable, the NETOs proposed five alternative methodologies and estimated ROE values for each. These were: (1) the Capital Asset Pricing Model (CAPM), (2) a Risk Premium (RP) methodology based on past FERC allowed ROE values and bond yields, (3) use of FERC's natural gas pipeline DCF methodology; (4) an Expected Earnings (EE) analysis, and (5) a non-utility DCF analysis.[56] FERC agreed, finding that unspecified anomalous capital market conditions gave them "less confidence" that the midpoint DCF results would be sufficient to meet the capital attraction standards of *Bluefield* and *Hope.*[57]

FERC rejected the NETO's use of gas pipeline and non-utility DCF analyses, but agreed that the CAPM, RP, and EE methods could be used.[58] That agreement, coupled with additional changes to its DCF methodology, set in motion numerous court challenges[59] and additional methodological changes in subsequent FERC

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53. *Id*. at P 5.

54. *Id*. at P 130 (of course, interest rates remained low for the next seven years).

55. Opinion No. 531, *supra* note 1, at P 145, n. 286.

56. *Id*. at P 131 (the NETOs claimed that, because all models have shortcomings, testing DCF results against other models and benchmarks was appropriate).

57. *Id*. at P 145.

58. *Id*. at P 146 (asserting that "[i]n considering these other methodologies, we do not depart from our use of the DCF methodology; rather, we use the record evidence to inform the just and reasonable placement of the ROE within the zone of reasonableness established in the record by the DCF methodology.") However, after accepting usage of certain of the NETOs' proposed alternative ROE methodologies, FERC never considered whether they, too, could be affected by allegedly "anomalous" market conditions. Opinion No. 531, *supra* note 1, at P 146.

59. The first branch of FERC's reformulation of its historical reliance on the DCF methodology to determine the market cost of equity capital appeared in a section 206 proceeding initially filed on September 30, 2011. *See* Opinion No. 531, *supra* note 1; Opinion No. 531-A, *supra* note 1; Opinion No. 531-B, *supra* note 1, at P 7 (expressing discomfort with reliance solely on DCF results based on unspecified "anomalous" capital market conditions); Emera Maine v. FERC, 854 F.3d 9 (D.C. Cir. 2017) (vacating and remanding Opinion No. 531). As a consequence of the D.C. Circuit's vacatur, on October 16, 2018, FERC issued an Order Directing Briefs in *Coakley* and three additional section 206 complaint cases that had been filed during the *Coakley* litigation. *See generally Coakley v. Bangor Hydro-Electric Co.*, 165 FERC ¶ 61,030 (2018) [hereinafter Briefing Order] (outlining and inviting briefing concerning a new FERC ROE methodology, in which FERC proposed to rely on the DCF methodology and three other methodologies – Capital Asset Pricing Model (CAPM), Expected Earnings, and a retrospective Risk Premium (RP) methodology based on historical differences between FERC-accepted returns on common equity and Baa-rated utility bond premia – a construct of "risk quartiles" which FERC hypothesized would allow higher returns to riskier transmission owners. The second branch of FERC's

Opinions, including Opinion No. 551, No. 569, No. 569-A, and No. 594 . These methodological changes reveal that FERC continues to pursue a "results-oriented" approach to setting allowed ROE, rather than an approach based on economic and financial fundamentals.

III. THE EMH CONTROVERTS THE NOTION OF BIASED ROE ESTIMATES CAUSED BY ANOMALOUS MARKETS

Neither the NETOs nor FERC ever defined the conditions under which the market would be considered normal, as opposed to anomalous. Although both the NETOs and FERC focused solely on interest rates, "the market" cannot be reduced to a single metric. And, even if, *arguendo*, interest rates were the sole determinant of the market's "normality," neither the NETOs nor FERC identified a range of "normal" interest rates. In the early 1980s, for example, the Fed tightened the money supply to combat high inflation, which resulted in yields on 10-year U.S. Treasury bonds exceeding 10.0% between 1980 and 1985 (Figure 2).[60] Over the 65-year period shown in Figure 2, yields on these bonds averaged 5.77%. As can be seen on the figure, the deviation from that average was far greater during the 1980 – 1985 period than during the period during which the Fed employed quantitative easing (the shaded rectangle in Figure 2). One can thus ask whether markets were also anomalous in that earlier period and, if so, when did markets return to "normal?" The inability to define "normal" market conditions exposes a key fallacy of FERC's reasoning.

reformulation involves complaints challenging the ROE allowed for investor-owned transmission owners in the Midcontinent Independent System Operator (MISO)). *See generally* Rehearing Order, *supra* note 2 (section 206 complaint challenging the 12.38% return on equity initially awarded in *Midwest Ind. Transmission Sys. Operator Inc.*, 100 FERC ¶ 61,292 (2002), *reh'g denied*, 102 FERC ¶ 61,143 (2003), *rev. denied in relevant part sub nom.,* Pub. Serv. Comm'n of Ky. v. FERC, 397 F.3d 1004 (D.C. Cir. 2005)). The history of that litigation (except for the Louisiana Public Service Commission's mandamus application to compel the FERC to issue a decision is recited in FERC's most recent order on remand from the D.C. Circuit's decision in *MISO Transmission Owners v. FERC*, 45 F. 4th 248 (D.C. Cir. 2022). *See* Rehearing Order, *supra* note 2, at PP 4-26, *rev. pending sub nom.,* MISO Transmission Owners v. FERC, FERC Docket Nos. 25-1045 *et al.* (D.C. Cir. filed Jan. 31, 2025).

60. The Federal Reserve does not directly set interest rates on bonds. Rather, the Fed's actions affect the money supply, which then affects interest rates. The Fed does set the federal funds rate, which is the rate banks can borrow money from each other for overnight loans to meet reserve requirements. Short-term bond yields are most heavily influenced by Fed actions affecting the money supply. Long-term bond yields may be affected, but reductions in short-term rates can actually lead to higher long-term rates if investors believe the Fed's actions will contribute to higher long-run inflation. For a detailed discussion of interest rates, see CARL E. WALSH, MONETARY THEORY AND POLICY (MIT Press, 4th ed. 2017).

Figure 2: Yields on 10-Year U.S. Treasury Bonds, January 1960 – December 2025

Furthermore, neither the NETOs nor FERC ever identified any specific mechanisms that would cause anomalous market conditions, however defined, to affect DCF analysis results uniquely and introduce "model risk,"[61] while leaving the results of other market-based ROE methodologies unaffected. Furthermore, the magnitude of the assumed impacts was never estimated. In fact, in Opinion No. 551, FERC again asserted that market conditions were anomalous, but it admitted that, "how each anomalous capital market condition specifically distorts the DCF analysis…given the complexities of capital markets and how various phenomena could affect the DCF methodology results."[62] Asserting the existence of a bias in DCF results, while acknowledging that the underlying economic mechanisms causing the bias and its magnitude are unknown, cannot be considered reasoned decision-making. Instead, FERC's anomalous market claims

61. In Docket No. EL15-45-000, a witness for the Midcontinent Transmission Owners defined "model risk" as relying on model results when market conditions are outside of their normal range. *See Prepared Answering Testimony and Exhibits of Ellen Lapsom on Behalf of the Miso Transmission Owners*, at p. 36 (FERC issued Oct. 20, 2015). Never having defined what the "normal range" was, however, meant that this definition is meaningless. Moreover, it implies the EMH is only valid when market conditions are "normal," which has no basis in fact.

62. Opinion No. 551, *supra* note 2, at P 125.

were the financial market equivalent of U.S. Supreme Court Justice Stewart's famous aphorism about hard-core pornography.[63]

Subsequently, in its *Briefing Order*, the Commission concluded there was model risk in the DCF methodology because the Dow Jones Utility Average (an index of the stock prices of a group of 15 utilities)[64] had increased by almost 70% over the 62-month period, October 2012 – December 2017, but neither the observed nor the forecast earnings had increased by a comparable amount.[65] The Commission's reasoning, that stock prices must move in tandem with observed and forecast earnings for the DCF model to be "accurate," is incorrect; it ignores all other factors that can affect stock prices, notably the stock's risk *relative* to other investments.[66] A simple examination of the concept of "model risk" asserted by the NETOs to be caused by anomalous market conditions and its acceptance by FERC also reveals that the notion of such mechanisms directly contravenes the EMH. To understand this, consider the general form of the DCF methodology previously shown in equation (1). FERC accepted the NETO's argument that the DCF results were returning ROE estimates that were too low and not reflective of market conditions.[67] In other words, if model risk exists, then equation (1) becomes an *inequality*. Specifically, if the cost of equity values calculated using the DCF are too low, then the true, higher (but unobservable) cost of equity means that the price of a stock must be *greater* than the present value of its expected future cash flows. Hence, using the infinite time horizon of equation (2), for a dividend-paying utility stock with current share price, P_0, it would have to be the case that

$$P_0 > \frac{D_1}{(1+R_C)} + \frac{D_2}{(1+R_C)^2} + \frac{D_3}{(1+R_C)^3} + \cdots \quad (3')$$

To restore (3') to an equality, there must exist an *additional* valuation factor, *V*, that is *unrelated* to the stream of future cash flows, but which nevertheless increases the current share price of a utility stock. In other words,

$$P_0 = \frac{D_0(1+g)}{(1+R_E)} + \frac{D_2(1+g)^2}{(1+R_E)^2} + \frac{D_3(1+g)^3}{(1+R_E)^3} + \cdots V \quad (3'')$$

63. Jacobellis v. Ohio, 378 U.S. 184, 197 (1964) ("I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description; and perhaps I could never succeed in intelligibly doing so. But I know it when I see it . . .").

64. For a list of the individual utilities that currently comprise the index, see *Dow Jones Utility Average Index*, YAHOO! FIN., https://finance.yahoo.com/quote/%5EDUX/components/ (last visited Apr. 4, 2026).

65. Briefing Order, *supra* note 59, at P 45.

66. This can be seen by examining equation (2). A decrease in relative risk lowers R_E, raising the stock's price, even if there are no changes to the expected earnings. However, the Commission's conclusion incorrectly assumes that R_E remains constant regardless. Ironically, this is the "flight to quality" argument that the NETOs argued was the cause of "model risk."

67. Opinion No. 531, *supra* note 1, at PP 144-45.

where $V > 0$ and exists only in the presence of anomalous capital markets. Given the low-interest-rate environment, V is some unknown function of market interest rates and the observed stock price, P_0. We can write $V = \lambda P_0$, where $0 \leq \lambda < 1$.[68] Using this formulation, the Commission's DCF application of equation (4) becomes

$$R_E = \left[\frac{D_0}{P_0} \times (1 + g/2) + g \right] / (1 - \lambda) \quad (6')$$

Thus, the only difference is that the dividend yield is adjusted upwards by the factor. For example, suppose the calculated DCF value for a utility stock is 10.00%. If $\lambda = 0.10$, then the "adjusted" DCF value would be [10% / (1 – 0.10)] = 11.11%. If we could somehow estimate λ empirically for every utility stock affected by "anomalous" capital markets, then the adjustment to the Commission's calculated DCF methodology results would be a straightforward mathematical exercise. However, in Opinion No. 551, the Commission effectively concluded that lambda cannot be estimated.[69]

The larger problem is that the existence of $V > 0$ would violate the EMH. If investors were to impute an additional value to utility stocks that are not supported by expected future cash flows, then other investors can (and should) take advantage of this. The reason is that, once capital markets return to "normal," however defined, then utility share prices will fall because V is forced back to zero. For example, if investors anticipated QE ending and rising interest rates, they could "short" (i.e., sell forward) utility stocks in anticipation of future price declines. ("Shorting" a stock means selling a stock you do not own.) In effect, you "borrow" from a broker for the right to sell a stock in the future. If the stock price drops, you buy the stock back at the lower price, making a profit. As more and more investors short a stock, it puts more downward pressure on the market price of the stock until the equality in equation (1)—the standard DCF model—is restored.

Arguments regarding anticipated increases in interest rates also failed to consider the EMH. Specifically, if investors collectively expect interest rates to increase, those expectations will be reflected in stock and bond prices. For example, suppose the coupon yield on a $100,000 corporate bond is 4.0%.[70] If investors expect interest rates for bonds issued by similar companies to remain constant at 4.0%, then the bond will sell at its face value. If, instead, investors expect interest rates (and therefore bond yields) to increase to 5.0%, the price of the 4.0% bond will fall until the effective yield, that is, the coupon payment plus

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68. If $\lambda \geq 1$, it would imply that the discounted present value of all future cash flows arising from holding the stock is either zero or negative. The former could be true only if (i) the stock paid no dividends and was not expected to, and (ii) the expected future price of the stock at time T was exactly zero. No rational investor having such expectations would ever purchase such a stock. If $\lambda > 1$, then the discounted present value of all expected future cash flows would have to be negative, which is impossible. Therefore, it must be the case that $0 \leq \lambda < 1$.

69. Opinion No. 551, *supra* note 2, at P 125.

70. *See Understanding Bond Yield and Return*, FINRA (Aug. 11, 2022), https://www.finra.org/investors/insights/bond-yield-return

price appreciation, reaches 5.0%. The same is true of the price of equities; all else equal, when interest rates rise, stock prices tend to fall, and vice versa. Consequently, there is no need to incorporate expectations about future interest rates because those expectations are already reflected in current yields.

IV. FERC'S IMPLEMENTATION OF THE CAPM

The CAPM evolved from the theory of portfolio risk and the insight that the risk of holding a portfolio of many assets ultimately reflects only their relative risk to one another, known as covariance risk.[71] The theory assumes that rational investors can maximize their return for a given level of risk by holding a mix of the "market" portfolio made up of all financial assets, and a risk-free asset, usually assumed to be a U.S. government Treasury bond.

FERC first accepted CAPM results in Opinion No. 531 as a check on its DCF methodology results.[72] Subsequently, in 2018, it proposed fully incorporating the CAPM methodology to determine an overall range of reasonableness by averaging the low values and high values of the different methodologies.[73] FERC formally accepted the equal weighting of CAPM results with DCF results in Opinion No.569.[74]

Under the CAPM, the expected return for any risky asset, such as the stock of a regulated company, is a linear relationship, called the "security market line," based on the risk-free rate of interest and the "price" of risk (Figure 3). For any risky asset, A, the expected return on A, E(R_A), is:

$$\mathrm{E}(R_\mathrm{A}) = r_f + [\mathrm{E}(R_\mathrm{M}) - r_f] \times \frac{\mathrm{cov}(R_\mathrm{A}, R_\mathrm{M})}{\mathrm{var}(R_\mathrm{M})} \quad (7)$$

The term $[\mathrm{E}(R_\mathrm{M}) - r_f]$ is called the market risk premium (MRP) and equals the difference between the expected return on the market portfolio and the risk-free rate, multiplied by the quantity of risk, called "beta." Beta is just the covariance of the returns between a risky asset, *A*, and the market portfolio *M*, divided by the variance of the market return, i.e.,[75]

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71. The theory of portfolio risk dates back over 70 years. *See* Harry Markowitz, *Portfolio Selection*, 7 J. FIN. 77–79 (1952). Markowitz developed the theory further in subsequent publications. *See, e.g.,* HARRY M. MARKOWITZ, PORTFOLIO SELECTION: EFFICIENT DIVERSIFICATION OF INVESTMENTS (1959). For a thorough explanation of Markowitz's theory, see EDWIN J. ELTON, ET AL., MODERN PORTFOLIO THEORY AND INVESTMENT ANALYSIS (9th ed. 2014).

72. Opinion No. 531, *supra* note 1, at P 147, n. 292.

73. *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, 165 FERC ¶ 61,118 P 32 (2018). In its' Briefing Order, the Commission also included the results produced by the Expected Earnings model to derive a range of reasonableness. *Id*.

74. Opinion No. 569, *supra* note 2, at P 57.

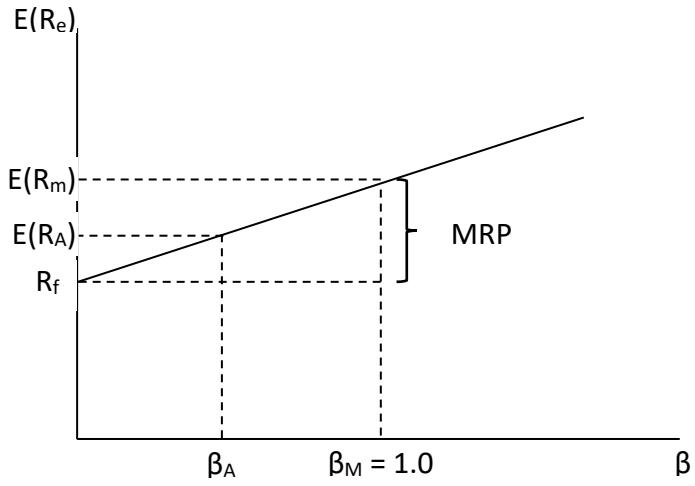
75. The beta values FERC uses are "adjusted" betas that reflect the tendency of a stock's betas to move towards the market beta of 1.0 over time. *See* Marshall E. Blume, *On the Assessment of Risk*, 26 J. Fin. 1-10 (1971). However, FERC has been inconsistent about which sources of adjusted beta values should be used in its CAPM methodology. Initially, it relied on beta values published by Value Line, which are calculated using the

$$\beta_A = \frac{\text{cov}(R_A, R_M)}{\text{var}(R_M)} \quad (8)$$

Hence, the CAPM can be written as:

$$E(R_A) = r_f + \beta_A \times [E(R_M) - r_f]. \quad (9)$$

Figure 3: The CAPM



FERC's implementation of the CAPM incorporates an additional term, called a "size premium."[76] The size premium is based on an empirical observation that the observed returns for publicly traded stocks did not follow the strict tenets of the CAPM. Instead, the returns for smaller companies (measured in terms of their market capitalization) tended to be higher than would be predicted by the CAPM, while the returns for the largest companies tended to be lower than would be predicted by the CAPM.[77]

New York Stock Exchange as a proxy for the "market." Subsequently, FERC recognized that betas sourced from Bloomberg, which use the S&P 500 as the market proxy, were appropriate because FERC's estimation of the market risk premium was based on the S&P 500. *See Constellation Mystic Power, LLC,* 176 FERC ¶ 61,019 P 85 (2021), *reh'g denied*, 176 FERC ¶ 62,127 (2021), *and modified* 177 FERC ¶ 61,106 (2021), *reh'g denied* 178 FERC ¶ 62,028 (2022), *and modified* 178 FERC ¶ 61,116 (2022), *dismissed sub nom.* Constellation Mystic Power, LLC v. FERC, 2024 WL 4863867 (D.C. Cir. 2024). *See also* Opinion No. 879, *DATC Path 15*, 177 FERC ¶ 61,115 P 111 (2021). Most recently, however, in Opinion No. 594, FERC states "We continue to find reasonable the use of *Value Line* adjusted betas in the CAPM methodology …" *See* Opinion No. 594, *supra* note 1, at P 261.

76. Opinion No. 594, *supra* note 1, at P 255.

77. *See generally* Rolf W. Banz, *The Relationship Between Return and Market Value of Common Stocks*, 9 J. FIN. ECON. 3 (1981).

Although Banz first discovered the discrepancy between observed and predicted returns, he was unable to determine any underlying theory that would explain it. Moreover, the existence of a size premium remains disputed. For example, New York University Prof. Aswath Damodaran disputes the use of size premiums in valuation analysis and lists seven reasons why: (i) the size premium, while strong prior to 1980, appears to have dissipated since then; (ii) the phenomena is limited to the smallest "microcap" firms; (iii) historical equity return estimates are "noisy" and the resulting estimated risk premiums have large standard errors; (iv) the "January" effect, i.e., that almost all of the observed small cap premiums are earned in January each year; (v) the small-cap premium is small, or non-existent in many international financial markets; (vi) the premium can be attributed to other factors, such as illiquidity; and (vii) the size-premium is found *only* when firm size is measured by market capitalization, even though there are other factors that can describe firm size.[78] Recently, research has shown that the size premium may result from changes in monetary policy.[79] But ultimately, both the existence and magnitude of the size premium remain disputed. Nevertheless, FERC's application of the CAPM includes a size premium that is calculated annually by the University of Chicago Center for Research in Public Securities (CRSP) and published by the financial firm Kroll.[80]

A. FERC's Miscalculation of the Expected Market Return

FERC first adopted the CAPM as a tool for estimating the market cost of equity capital in Opinion No. 531. In its implementation of the CAPM, FERC estimates the expected market return based on a simplified one-step DCF analysis. Specifically, FERC sums the weighted average dividend yields and the weighted average short-term earnings growth rates of the companies listed in the S&P 500, which FERC uses as a proxy for the entire market.[81] In addition, FERC eliminates stocks that have negative earnings growth rate forecasts and forecasts that exceed 20.0%.[82] And, unlike the DCF methodology FERC applies to both electric utilities

78. Aswath Damodaran, *The Small Cap Premium: Where is the Beef?*, MUSING ON MARKETS: BLOG (Apr. 11, 2015), http://aswathdamodaran.blogspot.com/2015/04/the-small-cap-premium-fact-fiction-and.html; *see also* Mathijs A. van Dijk, *Is Size Dead? A Review of the Size Effect in Equity Returns*, 35 J. BANKING AND FIN. 3263 (2011).

79. Marc W. Simpson & Axel Grossmann, *The Resurrected Size Effect Still Sleeps in the (Monetary) Winter*, 92 INTL. REV. FIN. ANALYSIS, MAR. 2024, at 1, 8..

80. *Cost of Capital Navigator*, KROLL, https://www.kroll.com/en/tools-and-platforms/cost-of-capital (last visited Mar. 3, 2026).

81. Opinion No 531*, supra* note 1, at P 147, n. 292 (FERC first accepting this CAPM approach). Some analysts justify this approach by citing to a single article that analyzed data from the 1980s. *See generally* Robert S. Harris & Felicia C. Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, 21 FIN. MGMT. 22 (1992). FERC cited to this Harris and Marston article, as well as two subsequent articles by these authors in 1993 and 2003, to justify its approach to calculating the MRP. *See* Opinion No. 569, *supra* note 2, at PP 245, 270. *See also* Opinion No. 594, *supra* note 1, at P 233.

82. *Inquiry Regarding the Commission's Policy for Determining Return on Equity*, 171 FERC ¶ 61,155 P 39 (2020). For this analysis, FERC does not adjust the current dividend yield by (1 + g/2), as it does in its DCF methodology. Nor does FERC attempt to reconcile its embrace of 20% short-term growth rates in calculating the MRP component of the CAPM with its observation that "a 13.3 percent growth rate is not a sustainable growth rate over time and therefore does not meet threshold tests of economic logic." *See* 109 FERC ¶ 61,147, at P 205.

and oil and gas pipelines, this DCF analysis does not account for the fact that firms cannot grow rapidly forever and, ultimately, their growth cannot exceed the overall growth rate in the economy.[83] FERC first justified this approach in Opinion No. 531-B, stating:

> The rationale for incorporating a long-term growth rate estimate in conducting a two-step DCF analysis of a specific group of utilities does not necessarily apply when conducting a DCF study of the companies in the S&P 500. That is because the S&P 500 is regularly updated to include only companies with high market capitalization. While an individual company cannot be expected to sustain high short-term growth rates in perpetuity, the same cannot be said for a stock index like the S&P 500 that is regularly updated to contain only companies with high market capitalization, and the record in this proceeding does not indicate that the growth rate of the S&P 500 stock index is unsustainable.[84]

Subsequently, in Opinion No. 569, FERC stated:

> [T]he dividend paying members of the S&P 500 constitute a large portfolio of stocks, they include companies at all stages of growth. Some are relatively young companies with new products that have not yet fully penetrated the markets and thus are likely to have quite high [I/B/E/S] growth rates. However, other companies are mature companies with limited growth potential which are likely to have quite low [I/B/E/S] growth rates.[85]

Based on that statement, the Commission then claimed that "using the [I/B/E/S] growth rates of all dividend paying S&P 500 companies, without using a long-term GDP growth projection can reasonably reflect investors' consensus expectations about the S&P 500 Index as a whole."[86]

FERC's rationale suffers from two fundamental flaws. First, the second rationale given by the Commission in the above-quoted text – that the S&P 500 includes "mature" companies that are not growing fast – is contradicted by its first reason – that the S&P 500 is regularly updated to remove companies whose growth rates are slow and whose capitalization is thus overtaken by fast-growing companies.

Second, and more importantly, even though the individual firms that comprise the S&P 500 change over time, the overall market return cannot perpetually grow faster than the economy as a whole. Although the composition of the S&P 500 changes over time as individual firms are added or dropped, the MRP underlying the CAPM is based on the entire universe of marketable securities, not just the stock of the S&P 500 members. Unlike the S&P 500, assets cannot be added or dropped from the "market" because, by definition, all of those securities *remain in* the market, whether or not those securities are part of the S&P 500. Thus, whereas historical earnings of the S&P 500 show relatively high growth, 12.23% over the period 1926 – 2025,[87] it is unreasonable to assume that earnings for the entire *market* can grow at that rate forever because, in effect, the

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83. MORIN, *supra* note 32.

84. Opinion No. 531-B, *supra* note 1, at P 113*; see also* Opinion No. 551, *supra* note 2, at P 170.

85. Opinion No. 569, *supra* note 2, at P 265. *See also* Opinion No. 594, *supra* note 1, at P 233.

86. Opinion No. 569, *supra* note 2, at P 265.

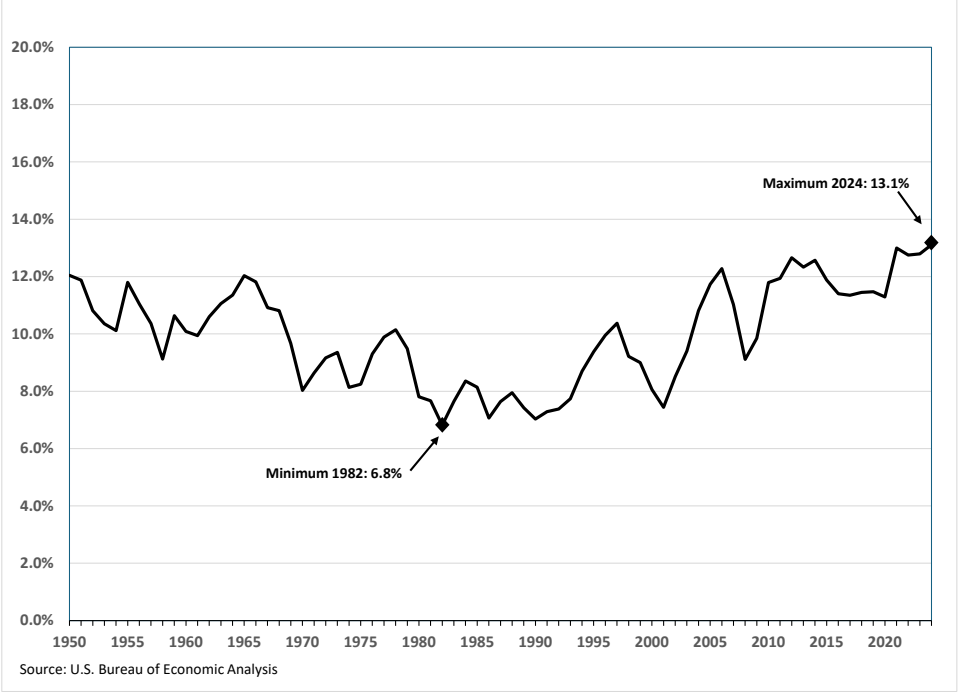
87. *See Cost of Capital Navigator*, *supra* note 80.

market represents the economy as a whole. In other words, in the long run, the "market" cannot grow faster than the economy because it is the economy.

FERC's rationale, as quoted above, overlooks this fundamental point. Although the Commission is correct that the composition of the S&P 500 changes over time as firms are added and dropped based on their capitalization, mergers, or acquisitions, this conclusion cannot be applied to the market as a whole. In other words, a firm does not vanish from the "market" simply because it is no longer included in the S&P 500. And, even in the case of a merger or acquisition, the firm's assets and business continue to exist, even if it is no longer a separate, traded entity in the market.[88] Thus, the Commission's methodology for estimating the expected return for the market as a whole is inconsistent with basic economic and capital finance theory. Consequently, using the Commission's method to calculate the expected MRP introduces an inherent upward bias in the estimated values of the MRP by assuming that earnings of the S&P 500 can grow at a high rate forever.

A simple way to evaluate the reasonableness of the FERC approach to estimating the MRP is to compare historical earnings of the S&P 500 relative to U.S. GDP (Figure 4).

Figure 4: U.S. Pre-tax Corporate Earnings as a Percentage of U.S. GDP, 1950 - 2024



88. The same is true of a firm that declares bankruptcy and whose assets are then sold off.

As Figure 4 shows, over the seventy-five-year period 1950 – 2024, pre-tax corporate profits as a percentage of GDP ranged between a low of 6.8% in 1982 to a high of 13.1% in 2024. The average value over this period was 10.0% of GDP. Hence, a test of FERC's S&P 500 market return methodology is to compare the earnings that the methodology forecasts with the forecasts of GDP growth FERC uses to determine the long-term growth rate in its DCF methodology.

FERC uses two publicly available forecasts of GDP growth, prepared annually by the U.S. Energy Information Administration (EIA) and the U.S. Social Security Administration (SSA), as well as one proprietary forecast, prepared by S&P Global Connect.[89] The most recent (as of this writing) forecast prepared by the EIA shows a nominal GDP of approximately $78.6 trillion in 2050.[90] The most recent forecast prepared by the SSA projects GDP in 2050 to be $81.4 trillion.[91] The SSA projection extends beyond 2050. By 2075, corresponding to FERC's assumption that a fifty-year projection is equivalent to infinity,[92] the SSA forecasts GDP to be $213.8 trillion.

In May 2025, using the FERC methodology, FERC Staff estimated an expected market return of 12.41%, that is, the annual percentage increase in corporate profits.[93] FERC uses a six-month average of yields on thirty-year U.S. Treasury bonds as the risk-free rate of interest. For the six-month period ending in April 2025, the average yield was 4.66%, implying an MRP of (12.41% – 4.66%) = 7.75%.

In 2024, the Bureau of Economic Analysis (BEA) estimated U.S. corporate profits to be just over $2 trillion in 2024.[94] Assuming a 12.41% growth rate, U.S. corporate profits would increase to approximately $41.9 trillion by 2050,[95] over 50% of the forecast GDP. That percentage is almost four times greater than the highest observed value of 13.1%. At a 12.41% annual growth rate, U.S. corporate profits would increase to $690 trillion by 2075, more than three times larger than the forecasted GDP.[96] That is impossible because corporate profits are a *component* of GDP.

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89. *See supra* note 16.

90. *Annual Energy Outlook 2025*, U.S. ENERGY INFO. ADMIN. tbl. 20, (Apr. 15, 2025), https://www.eia.gov/outlooks/aeo/tables_ref.php.

91. BD. OF TRS. OF THE FED. OLD-AGE AND SURVIVORS INS. & FED. DISABILITY INS. TR. FUNDS, THE 2025 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND FEDERAL DISABILITY INSURANCE TRUST FUNDS tbl. VI.G.6 (2025).

92. *Ozark Gas Transmission Sys.*, 68 FERC ¶ 61,032, 61,105 (1994); *Williston Basin Interstate Pipeline Co.*, 81 FERC ¶ 61,033, 61,176 (1997).

93. *Sw. Power Pool, Inc.*, *Exhibit Containing Supporting Schedules of Commission Trial Staff Witness Jacob B. Nye*, *Exhibit No. S-0015*, FERC Docket No. ER24-254-002, at p. 26 (FERC filed May 14, 2025), https://elibrary.ferc.gov/eLibrary/filedownload?fileid=DF6F8792-1620-CB2D-ACBD-96D3E1A00000 [hereinafter *Exhibit Containing Supporting Schedules*].

94. *National Income and Product Accounts*, BUREAU OF ECON. ANALYSIS. tbl. 1.12 (last updated Mar. 13, 2026), https://apps.bea.gov/iTable/?reqid=19&step=2&isuri=1&categories=survey#eyJhcHBpZCI6MTksInN0ZXBzIjpbMSwyLDNdLCJkYXRhIjpbWyJjYXRlZ29yaWVzIiwiU3VydmV5Il0sWyJOSVBBX1RhYmxlX0xpc3QiLCI1MyJdXX0=.

95. Calculated as: ($2.0 trillion) × $(1 + 0.1214)^{(2050 - 2024)}$ = $41.88 trillion.

96. Calculated as: ($2.0 trillion) × $(1 + 0.1214)^{(2075 - 2024)}$ = $699.0 trillion.

A simple correction to FERC's current approach would be to use the same weighting of short-term earnings growth forecasts and the long-term GDP forecast. For example, the same Staff testimony noted above used a long-term GDP forecast of 4.08%.[97] Using the 12.41% expected market return and the FERC's 2/3 short-term, 1/3 long-term weights it uses for its pipeline DCF methodology, the resulting expected market return would be (2/3) × (12.17%) + (1/3) × (4.08%) = 9.47%. Subtracting the 4.66% average yield on 30-year U.S. Treasury bonds results in an MRP of 4.81%. That is far closer to financial firms' estimates of the MRP, such as those prepared by Kroll, which the Commission relies on for size premium data.[98]

V. FERC'S RISK PREMIUM METHODOLOGY

The RP methodology shares similarities with the CAPM. However, unlike the CAPM, the RP methodology is based on the historically observed premium between equity returns and bond yields. In Opinion No. 531, the Commission accepted a version of the RP methodology used by the NETOs, which was based on a simple linear regression model of previously authorized ROE values versus utility bond yields (Figure 4).[99] Specifically, the model estimated was:

$$\mathrm{RP}_{j,t} = a + b \times \mathrm{Y}_{b,t} + \varepsilon_{e,t}, \quad (10)$$

where $\mathrm{RP}_{j,t} = (\mathrm{ROE}_{j,t} - \mathrm{Y}_{b,t})$ is the risk premium associated with previous FERC decision j, $Y_{b,t}$ is the average yield on long-term utility bonds at the time of each decision, a and b are constants to be estimated, and $\varepsilon_{e,t}$ is an error term. In some cases, the historical data is based on annual averages, while in others it may be based on the allowed ROE at the time of each FERC decision.

Figure 5 provides an example calculation of the RP based on FERC data between 2006 and 2016.[100] As shown, the resulting regression is RP = 0.0872 – 0.6806×Y. FERC uses the estimated equation (which changes depending on the data used to estimate it) to calculate a risk premium based on the average Baa-bond yield over the particular study period. For example, if the average bond yield was 5.0%, then RP = 0.0782 – 0.6806 × 0.05 = 4.42%. Hence, the corresponding allowed ROE would equal 5.0% + 4.42% = 9.42%.

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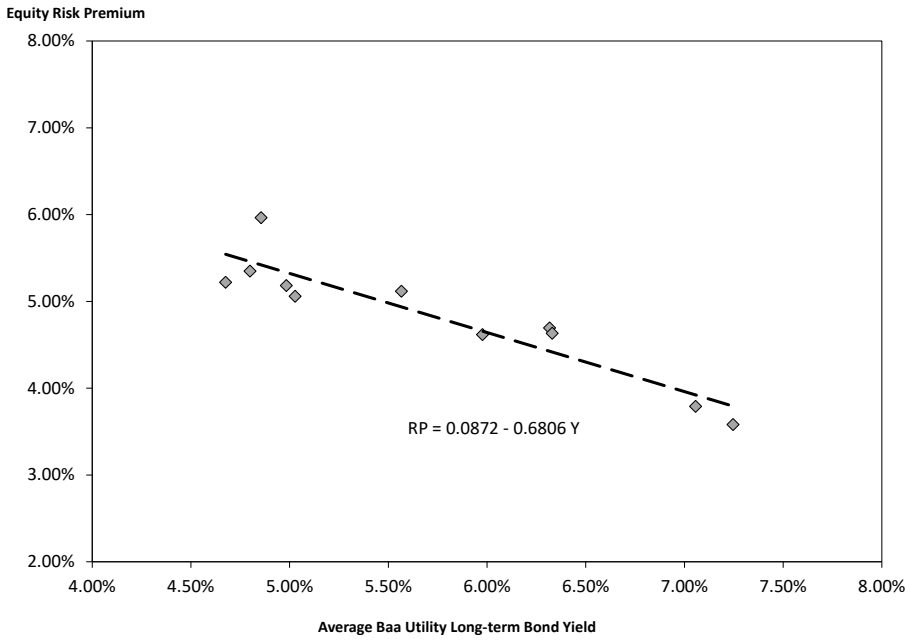
97. *Exhibit Containing Supporting Schedules*, *supra* note 93, at p. 49.

98. For example, on September 3, 2025, it lowered the estimate to 5.0% from 5.5%. *See* KROLL, KROLL COST OF CAPITAL INPUTS UPDATED TO REFLECT A DE-ESCALATION OF TRADE TENSIONS AND ECONOMIC SUPPORT FROM MONETARY AND FISCAL POLICIES 2 (2025). Since 2008, Kroll's recommended MRP has never been greater than 6.0%. *See* KROLL RECOMMENDED U.S. EQUITY RISK PREMIUM (ERP) AND CORRESPONDING RISK-FREE RATES (R_F); JANUARY 2008 – PRESENT, KROLL (2025), https://edge.sitecorecloud.io/krollllc17bf0-kroll6fee-proda464-0e9b/media/Cost-of-Capital/kroll-uk-erp-rf-table-new-2022-updated.pdf.

99. Opinion No. 531, *supra* note 1, at P 146 (FERC subsequently rejecting the risk premium methodology); *see also* Opinion No. 569, *supra* note 2, at PP 344-50.

100. 2005 was the first full year following the NETO's November 2004 filing of its formula transmission rate for regional network service under Docket No. ER04-157-000. In its implementation of the RP methodology, FERC accepted the NETOs' analysis, which excluded allowed ROE values set before 2005. The reason for this was never explained. *See* Opinion No. 531-B, *supra* note 1, at P 97.

Figure 5: Risk Premium Regression Model



The empirical distinction between using average ROE values over a given period such as a year or individual allowed ROE values to estimate the risk premium relationship in equation (8) is unimportant because of the underlying fundamental flaws in the RP methodology adopted by FERC.

To see this, note that in equation (10) the bond yield appears on both sides of the equation. Hence, we can separate out the ROE and bond yield terms and rewrite the regression model as:

$$\mathrm{ROE}_{j,t} = a + (1-b) \times \mathrm{Y}_{b,t} + \varepsilon_{e,t}. \quad (11)$$

In other words, the allowed ROE is simply a function of utility bond yields and no other factors, including business and financial risk. It also means that allowed ROE values can never fall below the constant term *a*, whose value will depend on the period over which the regression is estimated.

In the case of the example data between 2006 and 2016, the resulting regression is thus: ROE = 0.0872 + 0.3194 × Y. First, this specification implies that the allowed ROE can *never* be lower than 8.72%, regardless of how low bond yields are. Although equity investors will expect a return greater than a bond yield, owing to their junior claim over a company's asset relative to bond holders, there is no underlying economic or financial basis to conclude that an allowed ROE can never be below 8.72% or some other specific estimate based on a similar regression. Second, from a practical standpoint, the allowed ROE values in a

majority of the historical decisions FERC has used to estimate these regressions are settlement values.[101] As such, those values represent unknowable tradeoffs made amongst the parties in each proceeding. Consequently, it is highly unlikely that the ROE values produced by this mathematical exercise accurately reflect market conditions.[102] Third, because the methodology is based on previous FERC decisions, it is inherently circular, which the Commission itself recognized in Opinion No. 569, stating that the circularity problems were "particularly direct and acute."[103] Fourth, and perhaps most importantly, unlike the CAPM, FERC's RP methodology excludes any consideration of the actual business and financial risk of the company under review. Yet, assessing comparable risk lies at the heart of *Bluefield* and *Hope*.

FERC rejected the RP methodology in Opinion No. 569, based on an extended and cogent critique of that methodology's flaws.[104] It resurrected the methodology just six months later in Opinion No. 569-A. The rationale for this resurrection can only be described as specious. The Commission concluded that its RP methodology was still useful, despite the numerous and serious flaws it identified in Opinion No. 569.[105] Regarding the inherent circularity, for example, FERC stated:

> Upon reconsideration, we agree with MISO TOs and find that, while it contains some circularity, the averaging of the results with those of the DCF and CAPM models sufficiently mitigates that circularity. Additionally, all of the models contain some circularity. And, upon consideration of the rehearing requests, we believe that the level of circularity in the Risk Premium model is acceptable.[106]

FERC never explained the nature of the circularity in the DCF and CAPM models. FERC may have meant that the forecast I/B/E/S short-term earnings growth rates used in the DCF analysis were affected by previous FERC decisions for the proxy group companies. However, such a link, if any, would be tenuous given the myriad other factors potentially affecting analysts' forecasts, including changes in wholesale power markets, state utility commission regulations, broader energy policy considerations, and company strategic plans, among others.

FERC's additional claim that the averaging of alternative model results somehow mitigates the RP methodology's inherent circularity also lacks any basis

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101. Opinion No. 569, *supra* note 2, at P 343.

102. Order No. 225, 18 C.F.R. § 385.602(e) (1982) (establishing confidentiality for settlement negotiations); Order No. 578, 18 C.F.R. § 385.606 (1982). Thus, the actual tradeoffs made by the participants in those proceedings to agree to settlements cannot be known.

103. Opinion No. 569, *supra* note 2, at P 343. As discussed later in this article, in Opinion 569-A, the Commission reversed itself, concluding that, despite the inherent circularity of its RP methodology, the methodology was still useful. *See* Opinion No. 569-A, *supra* note 2.

104. Opinion No. 569, *supra* note 2, at PP 340-52 (noting that any "additional robustness that the Risk Premium model adds to the ROE determination is outweighed by the disadvantages of its deficiencies" and "the model requires methodological decisions that would likely undermine transparency and predictability in Commission outcomes, which are valued by both investors and customers"). FERC continued to reject the RP model in Opinion No. 594, although it also stated that it would not "foreclose the use of a Risk Premium model in future proceedings" if parties can somehow overcome the methodological issues. *See* Opinion No. 594, *supra* note 1, at P 323.

105. Opinion No. 569, *supra* note 2, at PP 344-50.

106. Opinion No. 569-A, *supra* note 2, at P 106 (internal citation omitted).

in fact. It is no wonder that Commissioner Glick, in his partial dissent of Opinion No. 569-A, stated:

> Today's order is yet another twist in the Commission's decade-long effort to adapt its methodology for setting public utilities' return on equity (ROE) to the low-interest rate conditions that have prevailed since the late 2000s. . . . It is hard for me to believe that anyone buys that this latest twist is a genuine reassessment of those technical minutiae or that those details are what led Chairman Chatterjee to express his eagerness to consider rehearing requests at the December 2019 Open Meeting, before those requests were even filed. Instead, it appears that the Commission again has chosen a path directed by the results, in this case the perceived need to award a higher ROE, rather than the law and the facts.[107]

Another limitation of the RP methodology, as noted in Opinion No. 569, is that it returns a single value rather than a range of values, the latter being the first step in determining a zone of reasonableness.[108] To overcome that limitation, in Opinion No. 569-A, FERC determined it could impute a zone of reasonableness based on the ranges estimated using the DCF and CAPM methodologies. Specifically, FERC stated:

> To remedy this problem, we will impute the average width of the zones of reasonableness from the CAPM and DCF models onto the ROE produced by the Risk Premium model, with that ROE serving as the measure of central tendency of the zone of reasonableness. Doing so creates a zone of reasonableness for the ROE from the Risk Premium model, which can then be averaged with those of the other models in the first prong of the section 206 analysis.[109]

FERC justified this approach "because the average width of those zones of reasonableness from models that produce a zone of reasonableness is the best estimate of how far a zone of reasonableness should span from a single point like that produced by the Risk Premium model."[110] It then stated it would average the DCF, CAPM, and the newly created RP lower and upper bounds to develop an overall range of reasonableness.[111]

There is no statistical justification to support FERC's reasoning. FERC proposed averaging the breadth of the DCF and CAPM ranges to create a hypothetical range for the RP methodology and then using that hypothetical range to establish a new range of reasonableness based on the average of the now three low values and three high values.

Imputing a range of reasonableness for a single RP value based on the ranges produced using the DCF and CAPM does not create new information; it merely repackages existing information. Doing so adds nothing to address the inherent weaknesses of the RP methodology, especially its failure to account for risk, which is the *sine qua non* of establishing a just and reasonable allowed ROE.

The illogic of FERC's complete about-face regarding the RP methodology in Opinion No. 569-A surely influenced the DC Circuit, which found that FERC

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107. *Id*. at PP 1, 3 (Glick, Comm'r, concurring in part and dissenting in part).

108. Opinion No. 569, *supra* note 2, at P 352.

109. Opinion No. 569-A, *supra* note 2, at P 107.

110. *Id*.

111. *Id*.

failed to "provide a 'reasoned explanation' for its decision to disregard 'facts and circumstances that' justified its prior choice."[112] The DC Circuit's findings contributed to FERC admitting that its previous adoption of the RP methodology was not reasonable.[113]

VI. THE EXPECTED EARNINGS METHODOLOGY

Having rejected the Comparable Earnings (CE) methodology in the late 1980s[114] as not market-based, FERC nevertheless resurrected it in Opinion No. 531-B. To do that, FERC rechristened the CE methodology as the "Expected Earnings" (EE) methodology and agreed with the NETOs that the EE was similar to the "comparable earnings standard that originated in *Hope*, and the fact that it is used by investors to estimate the ROE that a utility will earn in the future."[115]

The CE methodology examines returns on book equity of a comparable group of companies, defined as Net Income Available to Common Equity (NIAC) divided by the book value of common equity. For example, in 2024, American Electric Power Company (AEP) reported net income of $305.6 million and common shareholder's equity of $3,884.1 million, for a return on book equity of 7.87%.[116]

The EE methodology makes a similar calculation based on *forecast* net income and shareholder equity values. It also adjusts for expected changes in capital structure. Specifically, it adjusts for forecast changes in the common equity percentage of total capitalization, using an adjustment approach FERC used when it relied on the so-called "sustainable growth" methodology to adjust DCF estimates.[117] The source of the forecast data are the Value Line Investment Survey reports, which FERC uses to select proxy group companies. For example, the June 2025 Value Line report for AEP shows an expected return on common equity of 11.0% for the years 2028 - 2030.[118] The common equity ratio is expected to

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112. Miso Transmission Owners v. FERC, 45 F.4th 248, 263-64 (D.C. Cir. 2022) (citing FCC v. Fox Television Stations, Inc., 556 U.S. 502, 515-16 (2009)).

113. 2024 Order on Remand, *supra* note 2, at P 21. Notwithstanding its concession to the judicial critique of FERC's reanimation of the Risk Premium methodology in Opinion No. 569-A, FERC's 2024 Order on Remand hedged that FERC did not "foreclose the use of a Risk Premium model in future proceedings if parties can demonstrate the concerns discussed above have been addressed" and asserted that it "could consider the use of a blended historical and forward-looking risk premium in the CAPM in future proceedings as a potential means to mitigate volatility concerns with the Commission's ROE methodology." *Id*. at P 24. The refusal of the 2024 Order on Remand to acknowledge the irretrievable flaws in using a backward-looking approach to infer the current market cost of equity capital portends further results-oriented, rather than reasoned, decision making. In the Rehearing Order, FERC again indicated it was not accepting the Risk Premium model. *See* Rehearing Order, *supra* note 2, at P 71.

114. Opinion No. 314, *Orange & Rockland Utils., Inc.*, 44 FERC ¶ 61,253, 61,952 (1988).

115. Opinion No. 531-B, *supra* note 1, at P 120 (internal citation omitted).

116. Am. Elec. Power Co., Annual Report (Form 10-K), at 149-50 (Feb. 13, 2025), https://docs.aep.com/docs/investors/filings/docs/AEP_10K_2024.pdf.

117. The sustainable growth or "br+sv" approach is described in MORIN, *supra* note 32, at 303-06. *See also* Opinion No. 531, *supra* note 1, at P 25 (citing 92 FERC ¶ 61,070, at 61,263).

118. *Am. Elec. Power*, *Value Line Investment Survey*, VALUE LINE (June 6, 2025), https://www3.valueline.com/File/Handler?productCode=investment-survey&key=reports\zk3tw%2Be6tJztcfdGl42sUAn6KFkuVpcypHDcKeaYOtPT4K3ieHhivVRjbw9tgsb2.

change from 42.4% in 2024 to 42.5% in the 2028-2030 time frame. As such, the 11.0% value would be multiplied by a factor reflecting the forecasted slight increase in the equity ratio.[119]

Unlike the DCF and CAPM methodologies, the EE methodology is *not* based on market conditions. That, in itself, should have precluded its use as violating the comparable risk standard of *Bluefield* and *Hope*. Ironically, FERC claimed that *Hope* justifies using the EE methodology because *Hope* relied on book returns to identify comparable risk.[120] FERC also justified the EE methodology because "returns on book equity help investors determine the opportunity cost of investing in that particular utility instead of other companies of comparable risk" and, as a result, an "expected earnings analyses to help estimate the opportunity cost of investing in a particular activity, we find this type of analysis can be useful in corroborating whether the results produced by the DCF model may have been skewed by the anomalous capital market conditions reflected in the record."[121]

The fallacies of FERC's rationale stem from its attempt to distinguish the EE methodology from the long-rejected CE methodology. As described by Roger Morin, the CE methodology examines the book returns of a proxy group of *unregulated* companies deemed to have comparable risk to the company under review,[122] the rationale being that the company under review should earn a similar book return as these unregulated companies. Importantly, unregulated companies are selected to avoid a circularity problem arising by selecting a group of FERC-regulated companies and evaluating their book returns, which are affected by previous FERC decisions, to establish a return for a FERC-regulated company. Yet, FERC's EE methodology was based on the same proxy group of utilities used for the DCF and CAPM analyses. As with the RP methodology, the EE methodology is inherently circular because book returns of regulated companies will be determined, in part, by FERC's setting of allowed ROEs.

Another fundamental problem with using book returns is that those returns will differ depending on how companies account for their costs. Although U.S. companies follow Generally Accepted Accounting Practices (GAAP), [123] those practices do not ensure absolute uniformity in how different companies treat certain costs. For example, different companies will depreciate capital investments at different rates. Book returns also depend on capital structure, the timing of capital investments, and how those investments are financed.

Contrary to what FERC stated, the EE methodology is not consistent with the requirements of *Hope* and *Bluefield*. The EE methodology is not based on prevailing market conditions and thus provides no information on comparable risk.

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119. MORIN, *supra* note 32, at 305 (discussing the adjustment factor as: $2 \times (1 + g) / (2 + g)$, where g is the expected annual growth rate in the equity ratio).

120. Fed. Power Comm'n v. Hope Nat. Gas Co., 320 U.S. 591, 603 (1944) (at the time, the DCF methodology did not exist).

121. Opinion No. 531-B, *supra* note 1, at PP 128-29. In Opinion No. 594, the Commission concluded, "it is not appropriate to use the Expected Earnings model in our methodology for analyzing base ROEs under FPA section 206 in these proceedings." Opinion No. 594, *supra* note 1, at P 190.

122. MORIN, *supra* note 32, at 381.

123. *GAAP*, CORP. FIN. INST. (Oct. 6, 2019), https://corporatefinanceinstitute.com/resources/accounting/gaap/.

Moreover, its inherent circularity further nullifies any comparative risk assessment. The EE methodology, like its CE counterpart, should be dismissed in its entirety.

VII. THE CURRENT STATE OF AFFAIRS

It seems that, for the moment, FERC has abandoned its RP and EE methodologies and will instead rely solely on the DCF and CAPM methodologies. Nevertheless, FERC continues to shift the goalposts by adjusting these two methodologies.

For example, in Opinion No. 569-A, FERC increased the weight given to the short-term earnings growth rate forecasts for electric utilities. Rather than the previous (2/3), (1/3) weights for the short-term and long-term growth rates, respectively, which FERC adopted for electric utilities in Opinion No. 531 and which it still uses for oil and gas pipelines, FERC increased the short-term growth rate weight to 80% and reduced the long-term growth rate weight to 20%. The rationale FERC gave for this change was that:

> We grant rehearing to give the short-term growth rate 80% weighting and the long-term growth rate 20% weighting… Since the Commission established its one-third weighting policy of the GDP in the long-term growth rate, short-term growth rate projections for electric utilities have declined and are now closer to the current GDP growth projection than those from the 1990s when the Commission adopted the two-step DCF using one-third weighting for GDP in the long-term growth rate for natural gas and oil pipelines that was subsequently adopted for public utilities.[124]

As noted earlier,[125] FERC justified its change in weighting based on an erroneous assumption that earnings growth rates for natural gas utilities are higher than those of electric utilities. In addition to FERC's justification being what former Commissioner Glick described as results-oriented reasoning, FERC's assertion depends on when such forecasts are made, and which companies constitute a proxy group. For example, in June 2025, the average of the reported IBES earnings growth rate forecasts for the twenty-eight investment-grade electric utilities listed by Value Line that had earnings growth rate forecasts was 7.12%.[126] Moreover, financial analysts expect additional short-term growth in utilities due to increasing electricity demand, primarily driven by investments in data centers and artificial intelligence.[127]

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124. Opinion No. 569-A, *supra* note 2, at P 57 (internal citations omitted).

125. See Opinion No. 569-A, *supra* note 2, at PP 1, 3. (Glick, Comm'r, concurring in part and dissenting in part). *See also* Opinion No. 594, *supra* note 1, at P 161.

126. *Research Firm: I/B/E/S Estimates from Refinitiv*, FIDELITY, https://research2.fidelity.com/fidelity/research/reports/release2/Research/RefinitivIBES.asp (last visited Apr. 4, 2026) (calculating 7.2% based on individual values report). Of the 35 electric utilities listed by Value Line at the time of this writing, two (Hawaiian Electric and Pacific Gas & Electric) have below investment-grade credit ratings, as reported by Standard & Poor's and Moody's Investment Service, and one (TXNM Energy) is being taken private. Of the remaining 32 utilities, four do not have reported I/B/E/S earnings growth forecasts.

127. *AI is Poised to Drive 160% Increase in Data Center Power Demand*, GOLDMAN SACHS (May 14, 2024), https://www.goldmansachs.com/insights/articles/AI-poised-to-drive-160-increase-in-power-demand.

For example, in Opinion No. 885, the Commission established a proxy group of five companies (Enbridge Energy, Kinder Morgan, National Fuel Gas, TC Energy, and The Williams Companies) with an average short-term growth rate of 4.45% .[128] Furthermore, given the fifty-year time frame assumed by FERC, these weights imply that high short-term growth rate can continue for forty years. However, as the previous discussion of FERC's methodology for estimating the MRP in the CAPM demonstrated, this approach can yield absurd results.

In its 2024 Remand Order, FERC abandoned the RP methodology owing to its flaws but kept the door open for its future use if those flaws are addressed.[129] It also maintained its DCF and CAPM methodologies, including the higher weighting for short-term growth rates in electric utilities. However, FERC also stated it would consider modifying the calculation of the MRP by using a "blended historical and forward-looking risk premium . . . to mitigate volatility concerns with the Commission's ROE methodology,"[130] even though previous FERC orders have not raised that issue. Such a blending would not address the fundamental error of FERC's forward-looking MRP methodology. Finally, the EE methodology is not discussed in the 2024 Remand Order, leaving intact (at least for the time being) FERC's thoughtful and well-reasoned repudiation of that methodology in Opinion No. 569.[131]

Although one might have concluded that FERC has reached a "steady-state" regarding its ROE methodologies, in its 2025 Rehearing Order, FERC reaffirmed that there was no reason to abandon its one-stage approach for estimating the MRP values because, as the Court of Appeals stated, FERC had "adequately explained that decision."[132] Whether this means FERC will no longer consider a blended MRP remains to be seen.

Thus, history makes it difficult to predict with confidence whether FERC will again retrench and embrace ROE estimates based on flawed methodologies in future proceedings. At least for the present, the compelling logic underlying FERC's rejection of the RP and EE methodologies in Opinion Nos. 569 and 594 remains intact. However, the DCF and CAPM methodologies remain in flux.

VIII. CONCLUSIONS AND RECOMMENDATIONS

With its issuance of Opinion No. 531 and its progeny, FERC abandoned reasoned decision-making in favor of a results-oriented approach towards setting allowed ROE values. This results-oriented approach has been rationalized in ways that have contradicted economic and financial theory. The result has been excessive costs paid by pipeline shippers and, especially, electric transmission customers. According to the Edison Electric Institute, electric transmission companies plan to invest about $120 billion in new lines and equipment over the

128. Opinion No. 885, *Panhandle E. Pipe Line Co. & Sw. Gas Storage Co*., 181 FERC ¶ 61,211 P 168 (2022).

129. 2024 Order on Remand, *supra* note 2, at P 24. *See also* Opinion No. 594, *supra* note 1, at P 323.

130. 2024 Order on Remand, *supra* note 2, at P 24.

131. Opinion No. 569, *supra* note 2, at PP 200-28.

132. Rehearing Order, *supra* note 2, at P 44 (citing MISO Transmission Owners v. FERC, 45 F.4th 248, 259-60 (D.C. Cir. 2022)).

next three years alone, in addition to the over $200 billion invested between 2018 and 2024.[133] At those levels of new investment alone, small increases in allowed ROE have increased customer costs by hundreds of millions of dollars annually, which has contributed to higher retail electric rates that, in turn, cause economic harm.

Nine years after Opinion No. 531 was overturned by the Court of Appeals,[134] FERC issued Opinion No. 594 in 2026. The Commission maintained its previous (and appropriate) rejection of the non-market-based Risk Premium and Expected Earnings pseudo-methodologies, although it left the methodological door slightly ajar for their future use, if FERC determines that those methodologies' inherent weaknesses can somehow be overcome. (They cannot.) Moreover, whereas FERC's DCF and CAPM methodologies are market-based, they remain beset by unreasonable gimmickry.

So, where should FERC go from here? Clearly, FERC will continue to be confronted with opposing views on setting appropriate risk-comparable allowed ROEs, based on differing interpretations of economic and financial theory (including this author's) and varying opinions on the reasonableness of those interpretations.

Nevertheless, FERC can establish a roadmap that provides clarity for setting allowed ROEs. First and foremost, such a roadmap begins by basing ROE decisions on economic and financial fundamentals, rather than unverifiable theories, such as the alleged impacts of "anomalous" capital markets on DCF analysis results, and only DCF analysis results.

Although there are benefits to using multiple methodologies, given the potential uncertainties in any individual one, FERC should explicitly consign non-market methodologies such as the RP and EE to the dustbin. Both suffer from inherent circularity. FERC's RP methodology is based on a simplistic, inaccurate relationship between historical allowed returns and bond yields, which ignores other aspects of business and financial risk that must be considered. FERC's EE methodology is simply its long-rejected non-market-based CE methodology, only with a new name.

Second, FERC should avoid incorporating new estimation methodologies or changing existing ones when, as Commissioner Glick stated, FERC's actions appear to be results-oriented.[135] That was why, after all, that FERC, concerned that its DCF methodology was yielding results that were too low, adopted the CAPM methodology in Opinion No. 531.[136] There was nothing wrong, in my opinion, with FERC adopting the CAPM methodology *per se*. Indeed, using both the DCF and CAPM can address potential uncertainties or even errors in reported data. This is especially important when the proxy groups are small. But as I

133. *Actual and Projected Transmission Investments*, EDISON ELEC. INST. (last updated Jan. 2026), https://www.eei.org/-/media/Project/EEI/Documents/Resources-and-Media/bar_actual_and_projected_trans_investment.pdf?la=en&hash=C7C308E6F8F404A5A3BC5EFE7B07257E2B2F81D0.

134. *See supra* note 1.

135. Opinion No. 569-A, *supra* note 2, at PP 1, 3 (Glick, Comm'r, concurring in part and dissenting in part).

136. Opinion No. 531, *supra* note 1, at PP 144-45.

discussed earlier in this article, FERC has adopted a form of the CAPM that yields financially impossible results. Relying on the results of such a model to set allowed ROEs is not reasoned decision-making.

Third, in its DCF methodology, FERC should, at the least, return to its previous 2/3 – 1/3 weighting of short-term and long-term growth rates, respectively, which would at least provide consistency with how it applies the DCF methodology in pipeline proceedings. Better still would be to adopt an actual multi-stage DCF model that assumes growth rates mirror that of the economy as a whole sooner than 33 1/3 years.

Fourth, under the CAPM and because it fails to understand the financial theory underlying that methodology, FERC's approach to estimating the expected market return is clearly unreasonable and leads to nonsensical and financially impossible results. A far better solution would be to apply a true multi-stage DCF methodology approach to the S&P 500 as a whole. A second-best solution would be to apply the 2/3 – 1/3 weightings to the S&P 500 company earnings growth forecasts, while still rejecting growth rates that result in long-term average growth rates that are unsustainable. Currently, FERC eliminates companies whose short-term annual forecast earnings growth rates are 20% or higher – notwithstanding its previous recognition that a short-term growth rate of 13.3% or higher is not sustainable "and therefore does not meet threshold tests of economic logic."[137] Using the 2/3 – 1/3 weighting still allows for fifty-year average growth rates of almost 15%, assuming long-term forecast GDP growth of 4.0%. Although no company can grow at such a high rate forever, adopting the weighted growth rate approach would restore some semblance of reality to FERC's MRP estimates.

The changes I suggest are economically and financially justifiable. They are also straightforward to implement. Doing so will help to restore FERC's credibility as an independent regulator, while appropriately balancing the needs of investors and consumers, as rate regulation should.

137. 109 FERC ¶ 61,147, at P 205.