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Asking What They Shall Receive: FERC's Notice of Inquiry into Base Returns on Equity

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ROE Legal Framework

- ROE (at least prior to incentives) should be set at cost of equity
- Cost of equity = what investors require to be induced to devote their capital to the assets used in providing the regulated service
- Bedrock principle under Supreme Court *Hope* and *Bluefield* cases and many subsequent cases, including unchallenged ruling in FERC Opinion 531
- Recent FERC briefing and NOI orders also refer to equity's "cost"
- So ROE litigation should be principally a factual inquiry into what the subject utility's equity now costs

Section 206 and Refunds

- Section 206 ROE reduction requires two findings:
 - Existing ROE is unreasonable.
 - Specified reduced ROE is reasonable.
 - Both findings can invoke the same record-based finding of the updated cost of equity, but connection must be explained (*Emera Maine*)
- 1988 Amendment to Federal Power Act permits 15 months of refunds per complaint (more if utility dilatory). Pipeline regulation statutes still don't provide for refunds.
- FERC allows successive ROE complaints, using new data for later period (But see *Gentile v. Pomper* in April/June Public Utilities *Fortnightly*)

FERC DCF method to infer co\$t

- Unlike bond interest, can't see equity cost directly
- But we know what stock buyers are paying now for rights to a revenue stream (future dividends) sourced in future corporate earnings per share ("EPS")
- Implicit equity cost = the NPV "discount rate" that aligns recent stock prices with the expected stream of dividend

FERC DCF method (cont'd)

- Select proxy stocks with comparable risk
- FERC methods centers on credit (bond) ratings, by Moody's, S&P
- Proxy ratings must be within one "notch" of the subject utility's ratings
- Exclude at outset companies engaged in major mergers & acquisitions that could distort their DCF results
- Also exclude some proxy results based on their level and relationship to other proxy results

FERC DCF method (cont'd)

- Derive each proxy's Implied Cost of Equity ("ICOE")
- Representative dividend yield over 6 recent months
- Forecast sustainable dividend growth rate (g) based on near-term and long-term (macroeconomic constraint) EPS growth
 - Stage 1, weighted 2/3: analysts' projected 3-to-5-year EPS growth
 - Stage 2, weighted 1/3: 50-year forecast GDP growth (~4.3%, including ~2% inflation),
- Adjust yield slightly for payment timing [recent yield*(1+ g /2)]
- Adjusted Dividend Yield + Composite Growth = ICOE

FERC DCF method (cont'd)

- Filter out proxies with ICOEs considered illogically low or low
 - Too low: $<$ current bond yields $+ \sim 100$ basis points
 - Too high: Circa 2005-2008, FERC excluded ICOEs $> 17.7\%$, $g > 13.3\%$
 - Now considering alternate tests
- Array of retained ICOEs
- General method (single-utility and most RTOs): median of array
- 2006 MISO case: midpoint of array, IF not overly skewed
- Opinions 531 (New England, since vacated) and 551 (MISO, rehearing pending): upper midpoint
- PATH, Opinion 554 (halted Mid-Atlantic project): lower median

Opinion 531 Array and Upper Midpoint

Customers' *Emera Maine* Brief, Showing Opinion 531 DCF Distribution:



Grey fill: Below 10.57%

Crosshatch: Above 10.57%

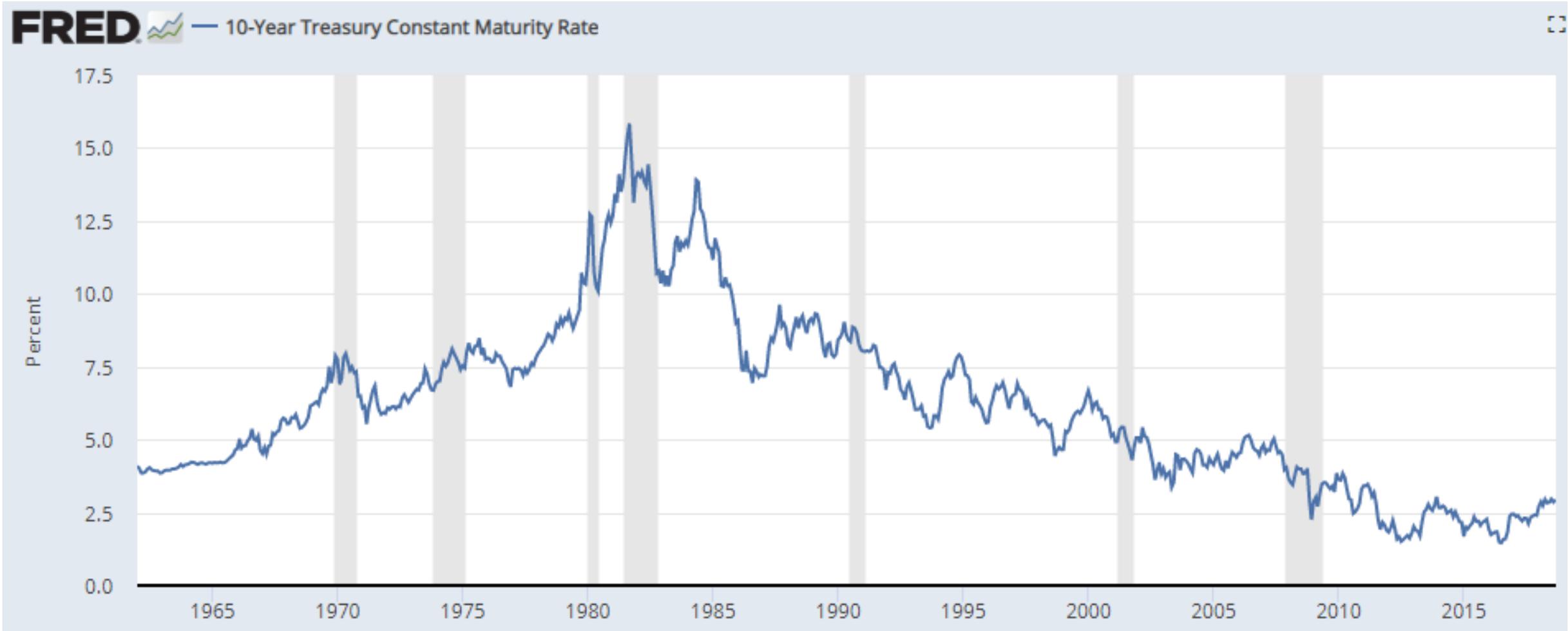
False premise for vacated Opinion 531

- NETOs predicted (Docket No. EL11-66 Exceptions at 33-35) that in the “very near future,” upon termination of the Federal Reserve’s then-ongoing “Quantitative Easing,” interest rates and DCF inputs and outputs would all rise substantially. FERC seemed to rely on that prediction, citing 10-year treasury yields then below 2%. See Opinion 531, PP 130, 142, 145 & n.285.
- But 10-year treasury yields have since exceeded 3% at times. Yet utility stock prices continued to rise, dividend yields continued to fall, and DCF medians are now consistently well below 9%. Opinion 531 DCF results were not “anomalous.”

Treasury Yields have risen...



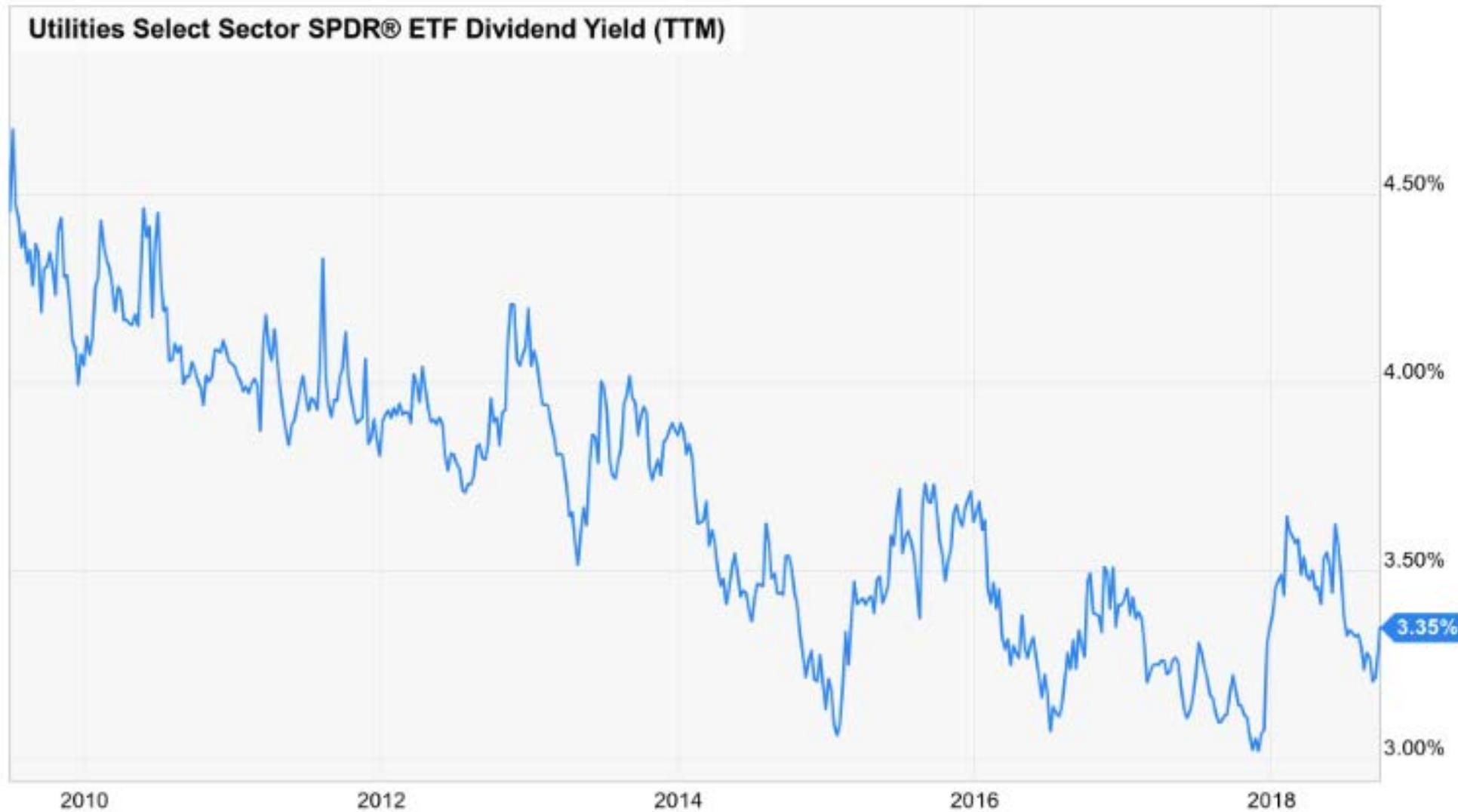
...and align with long-term trend



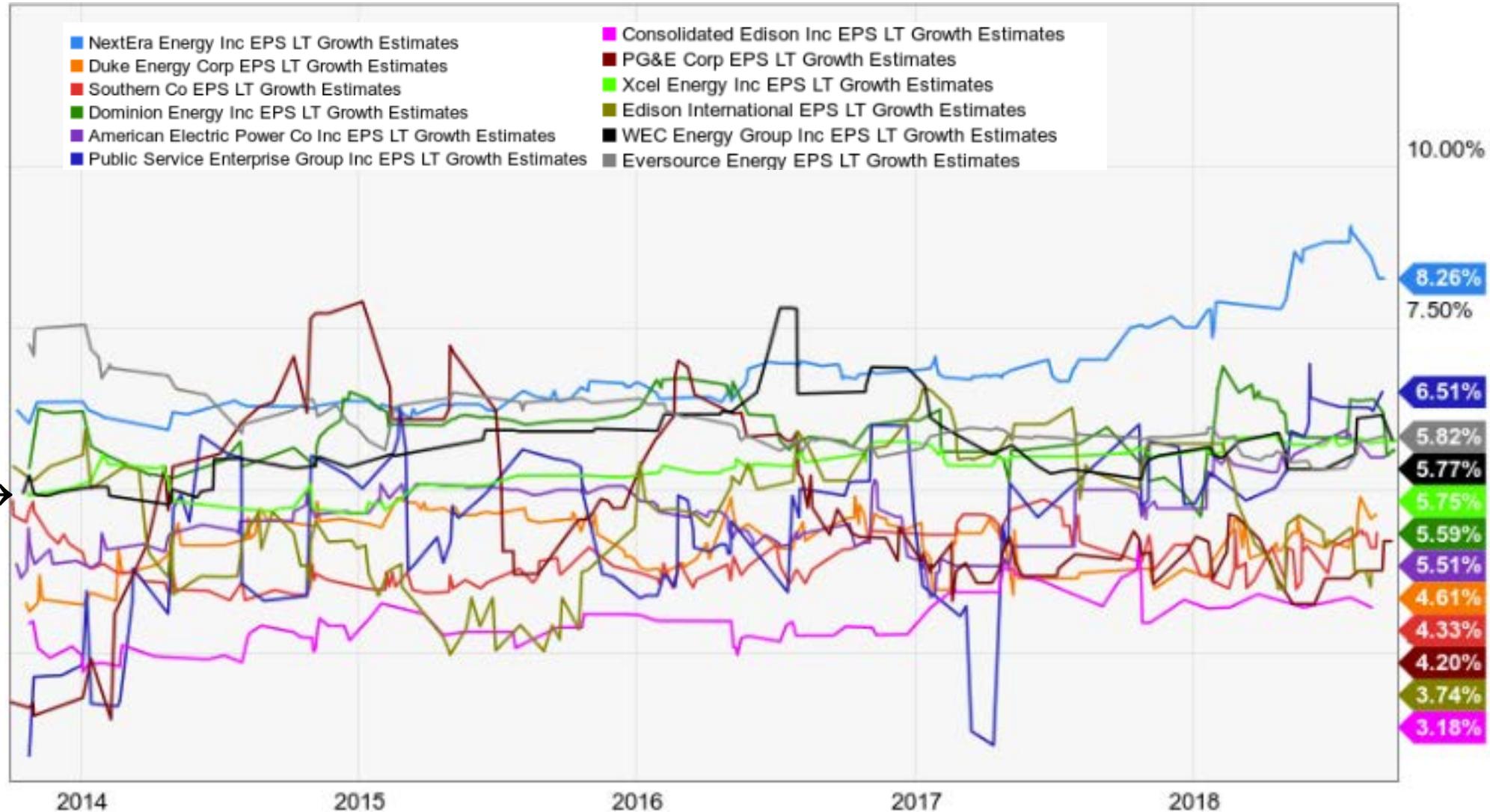
Yet utility stock prices have kept rising



... utility dividend yields have thus dropped...



...while analyst estimates for utility earnings-per-share growth over 3-5 years remained relatively flat in the aggregate (and varied wildly in the particular)



Median →

← Median

DCF Median Results Now < 9%

Company	S&P Bond Rating	Moody's Bond Rating	Dividend Yield	Adjusted Dividend Yield	GDP Growth Forecast	IBES Long Term Growth Rate Forecast	Combined Growth Rate	Implied Cost of Equity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ALLETE	BBB+	WR	2.94%	N/A	4.24%	N/A	N/A	-
Alliant Energy	A-	WR	3.13%	3.25%	4.24%	7.25%	6.25%	9.49%
Amer. Elec. Power	A-	Bas1	3.49%	3.59%	4.24%	5.74%	5.24%	8.83%
American Corp.	BBB+	WR	2.84%	2.95%	4.24%	7.70%	6.55%	9.49%
CMS Energy Corp.	BBB+	Bas1	2.90%	3.01%	4.24%	7.00%	6.08%	9.09%
DTE Energy	BBB+	Bas1	3.21%	3.30%	4.24%	5.49%	5.07%	8.37%
Entergy Corp.	BBB+	Bas2	4.27%	4.19%	4.24%	-3.77%	-1.10%	-----
Energy Inc.	A-	Bas2	3.28%	3.43%	4.24%	9.20%	7.55%	10.98%
MOE Energy	AA-	NA	2.12%	N/A	4.24%	N/A	N/A	-
OCIE Energy	BBB+	WR	3.74%	3.70%	4.24%	-2.25%	-0.09%	-----
Otter Tail Corp.	BBB	WR	2.80%	N/A	4.24%	N/A	N/A	-
WEC Energy Group	A-	Bas1	3.20%	3.28%	4.24%	4.70%	4.55%	7.83%
AVANGRID Inc.	BBB+	NA	3.57%	3.75%	4.24%	9.20%	7.55%	11.28%
Consol. Edison	A-	Bas1	3.68%	3.74%	4.24%	2.90%	3.34%	7.08%
Duke Energy	A-	Bas1	4.44%	4.54%	4.24%	4.41%	4.35%	8.89%
Eversource Energy	A+	Bas1	3.16%	3.25%	4.24%	5.83%	5.30%	8.55%
Fusion Corp.	BBB+	Bas2	3.11%	3.25%	4.24%	8.77%	7.26%	10.51%
FirstEnergy Corp.	BBB	Bas3	3.84%	3.72%	4.24%	-6.61%	-2.99%	-----
NextEra Energy	A-	NA	2.57%	2.67%	4.24%	7.45%	6.38%	9.05%
PPL Corp.	A-	NA	5.40%	5.59%	4.24%	3.59%	3.81%	9.59%
Public Serv. Enterprise	BBB+	Bas1	3.40%	3.52%	4.24%	7.21%	6.22%	9.34%
Southern Co.	A-	Bas2	5.29%	5.33%	4.24%	1.68%	2.53%	7.86%
Unitil Corp.	BBB+	NA	2.92%	2.98%	4.24%	3.70%	3.88%	6.86%
Edison Int'l	BBB	Bas3	3.92%	3.99%	4.24%	3.75%	3.91%	7.90%
El Paso Electric	BBB	Bas1	2.55%	2.61%	4.24%	5.10%	4.81%	7.43%
Hawaiian Elec.	BBB-	WR	3.42%	3.59%	4.24%	7.80%	6.61%	10.16%
IDACORP Inc.	BBB	Bas1	2.53%	2.56%	4.24%	2.60%	3.15%	-----
NorthWestern Corp.	BBB	Bas2	3.65%	3.69%	4.24%	2.59%	3.14%	6.83%
Pinnacle West Capital	A-	WR	3.47%	3.54%	4.24%	4.16%	4.16%	7.73%
PNM Resources	BBB+	Bas3	2.66%	2.72%	4.24%	4.10%	4.15%	6.86%
Portland General	BBB+	WR	3.13%	3.21%	4.24%	5.05%	4.78%	7.99%
Sempra Energy	BBB+	Bas1	3.13%	3.27%	4.24%	8.69%	7.21%	10.48%
Xcel Energy Inc.	A-	A3	3.10%	3.20%	4.24%	6.60%	5.81%	9.01%
Minimum								6.83%
Maximum								11.28%
Median								8.86%
Midpoint								9.06%
Upper End of FERC ZOR								11.28%
Upper Midpoint								10.17%

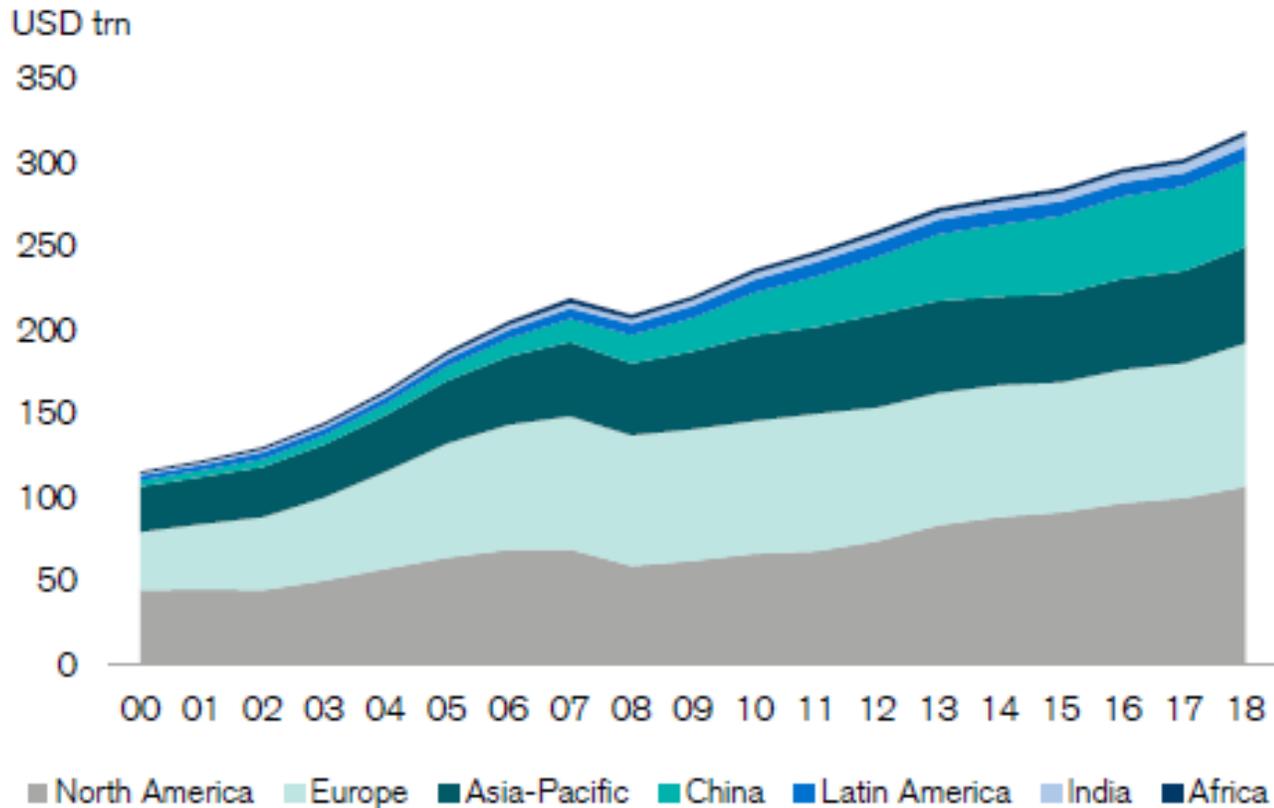
← **8.86%**

Source:
FERC Docket No.
ER19-1553
eLib. 20190411-5001
SCE-27
Table No. BV-3
IBES-Based DCF
Dr. Villadsen (Brattle)
For So. Cal. Ed.

Study Period:
July-Dec. 2018

Reduced equity cost reflects economic fundamentals: supply and demand.

Figure 2: Total global wealth 2000–18, smoothed exchange rates



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2018

EEI, APPA+ ROE Whitepapers

- EEI (Dec. 2017):
 - De-emphasize DCF, look to state ROEs, CAPM, earnings on book-value equity, prior ROE allowances, gas pipeline ROEs
 - And/or tweak DCF to raise its results (raise low threshold, eliminate, dilute, or raise GDP as growth constraint, use higher-risk proxies)
 - Impose procedural limits on ROE complaints
- APPA, NRECA, OMS, TAPS *et al.* (May 2018):
 - Rebuts EEI analysis
 - DCF is a time-tested equity cost estimation method
 - Variability in high-profile case findings is due to midpointing, not DCF
- EEI (Aug. 2018)
 - Bar or raise barriers to successive (“pancaked”) ROE complaints
 - Resolve on initial papers whether existing ROE is excessive, before initiating hearings to set replacement ROE

Oct. 2018 forward: briefing orders

- Oct. '18, NE; Nov. '18, MISO, Nov. '18, other pending electric cases; Feb. '18, Trailblazer (gas pipeline). FERC calls for briefing on “whether and how” to:
- Apply DCF, CAPM, E/B, and Risk Premium at equal weight?
 - De-emphasize DCF
 - Look equally to CAPM, earnings/book, prior ROE allowances
- Presume Prior ROEs remain reasonable?
 - Establish a composite DCF, CAPM, E/B range
 - For region-wide ROEs, shield level = 5/8 point of composite range
 - For single-utilities, shield level = composite average of 50th, 75th percentiles? Or 65.5th percentile?

March 2019: Notices of Inquiry

- PL19-3: Electric Transmission Incentives Policy
- PL19-4: Policy for Determining Return on Equity
- Repeats prior briefing order proposals, and asks more questions
- Invites comments from anyone
- Comments in each due June 26
- Incentives Replies due August 26
- Base ROE replies remain due July 26, as FERC denied that part of extension requested jointly by APPA/EEI/NRECA.
Signal on merits?

Capital Asset Pricing Model (CAPM)

- Riskless return + (β * [market-wide return – riskless return])
- \pm size adjustment?
- Riskless return typically measured by US Treasuries
- β = volatility relative to market; for utility stocks, ≈ 0.7
- \therefore CAPM result for utilities is generally below market-wide return
- Huge disparities in market-wide return forecasts
 - Long-term historical average $\approx 10\%$, declining over time
 - Independent experts, pensions expect $\approx 7\%$ going forward
 - TO FERC witnesses use $\approx 13\%$, based on near-term EPS forecasts

Expected Earnings (on book equity)

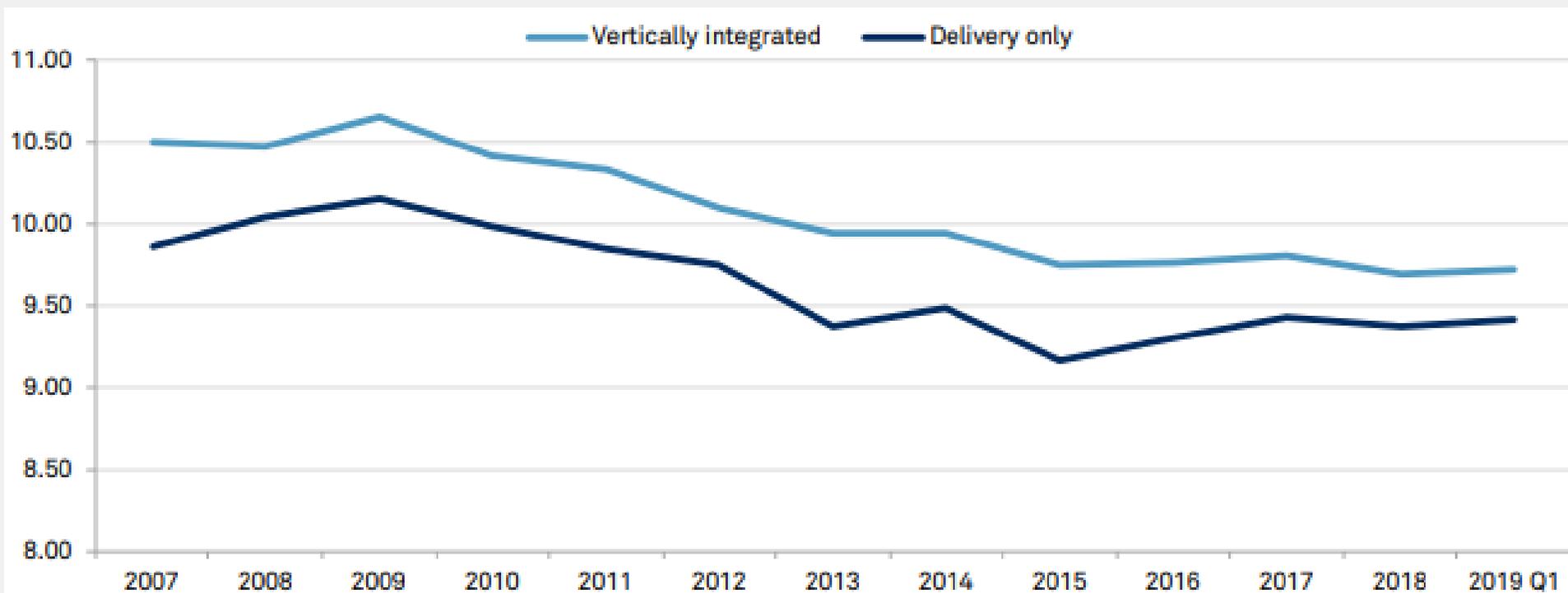
- Based on projected (~ 5 years out) earnings/book value equity
- Utility stocks' market/book ratio is generally > 1 (avg ≈ 1.7)
- $\text{Earnings/Book} = (\text{Earnings/Price}) * (\text{Price/Book})$
- \therefore At historically typical P/E (market price/earnings) ratio of 15x, expected earnings $\approx (1/15) * 1.7 = 11.33\%$
- Not a market-based method; investor opportunity is to purchase equities at *market* price, rather than book price

Risk Premium

- Echo past base ROE cases, adjusting for bond yields now vs. then
- As applied by TO witnesses at FERC, past-case data points include settlements, extensions of regional base ROEs to new RTO members, approvals of incentives w/out revisiting base ROE
- Thus confounded, past ROEs didn't vary much with bond yields
- \therefore Risk premium method indicates ROEs are invariate

State-regulated returns

Average authorized electric ROEs (%)



Data compiled April 9, 2019.

Source: Regulatory Research Associates, a group within S&P Global Market Intelligence

“[R]eflecting the increased risk associated with ownership and operation of generation assets. ... [t]he industry average ROE for vertically integrated electric utilities was 9.72% ... for the first quarter of 2019, versus 9.70% in full year 2018. For electric distribution-only utilities, the industry average ROE authorized in [Q1] 2019 was 9.42% versus 9.38% in full year 2018.” RRA Regulatory Focus

Main Study-Method Issues

- Include Earnings/Book Equity?
 - On what basis, given that investors must pay market price?
 - E.g.: Investor who pays \$20 for a share book-valued at \$10 and expected to annually earn \$1.60. The company's expected E/B is 16%, but the investor's expected earnings/investment is 8%.
 - If use E/B, account for business cycle, M/B ratios?
- For CAPM, what's the expected equity-market-wide return?
 - How could diversified equities sustain >10% growth, >13% market returns, outpacing U.S. equities over the 1870-1970 "American Century," when US GDP is expected to grow ~4.25%/year (including inflation)?

Multi-Methods Distribution vs. Range

- Median vs. Midpoint
 - Midpoints were always statistically bogus, as DC Circuit affirmed in 2013
 - By midpoint, the “representative” state size = $(AK+RI)/2 > TX$.
 - Rationales for midpoint (established practice, and “Highest Proxy maps to riskiest TO member”) don’t apply under NOI proposal
 - NOI rightly asks whether median should apply MISO and NE as it does elsewhere; conversely, SCE and AEP are seeking to universalize midpoint
- Average across methods for each proxy vs. distinct ranges
 - “Model error” basis for using multiple methods implies integrating them at proxy level
 - E.g., In EL11-66 (NE Complaint 1), applying the 3 proxy methods NETOs’ way, the highest integrated-methods proxy result is CMS Energy Corp. at 11.29% (averaging DCF (9.43%), CAPM (11.05%), and E/B (13.4%)). Don’t cherry-pick a 12.81% range top by averaging UIL Holdings DCF (11.74%) and Otter Tail CAPM (13.28%) with CMS E/B (13.4%).

Main Legal Issues

- Presumption that ROEs exceeding equity cost remain j&r
 - FERC may deem an existing ROE still-reasonable even if it exceeds the updated equity cost by $>1/8$ of the composite range (or an equivalent percentiles delta).
 - How so, if ROEs are meant to reflect the cost of equity?
- When multiple proceedings concerning the same utility's ROE are open concurrently, what is the "existing" rate that must be found unreasonable before a new ROE may be set?
 - ROE in effect at time of filing?
 - ROE charged each day, after accounting for rate changes/refunds in other proceedings?
 - Outcome of prior-numbered complaint?

Questions?

