

The FERC's Return on Common Equity Methodology



BY
ROBERT KEYTON
FINANCIAL ANALYST
FEDERAL ENERGY REGULATORY COMMISSION
4/29/16

Disclaimer: The views expressed in this presentation do not necessarily represent the views of the Commission.

Return on Common Equity Method

2

- A two-step (two-stage) Discounted Cash Flow (DCF) method was adopted by the FERC in Opinion No. 531 (2014)
- Formula
 - ✦ $K = (1 + .5(g))(D/P) + g$
 - ✦ $g = (2/3)(ST) + (1/3)(LT)$

Reason for Methodological Change

3

- **Reason for Change**
 - Mature Industry
 - Narrows the zone of reasonableness
 - Consistency may have been a factor: in general, the same two-step DCF method used in FERC natural gas proceedings

Formation of Proxy Group Companies

4

- **Screening Criteria**
 - Tracked by Value Line
 - Allow companies with plus or minus one credit rating (S&P or Moody's) from subject company's credit rating
 - Pays dividends, no dividend cuts
 - No significant merger or acquisition activity
 - Has a short-term growth estimate

Performing a two-step DCF Analysis

5

- **Inputs to two-step DCF method**
 - Stock prices
 - Dividends
 - Short-term earnings growth estimates
 - Long-term Gross Domestic Product (GDP) growth estimates

Data Period and Effective Period

6

- **Data Period**
 - Six months, in general, is sufficient time to diminish any aberrations in stock prices
- **Prospective effective period**
 - In general, use the most recent six-month data period available
- **Locked-in effective period**
 - In general, use the most recent six-month data period that includes the locked-in period

DCF Analysis Example

7

- Ameren Corporation (AEE) for the six-month data period from July 1, 2015 to December 31, 2015.
- Taken from my filed update testimony in the MISO ROE Complaint case filed at the FERC under Docket No. EL15-45.

Stock prices

8

- **Stock Prices (P)**

- **Source**

- ✦ **Yahoo Finance**

- **Calculation**

- ✦ **Monthly stock price average is the average of the daily high and low closing stock price for the month**

Month	High	Low	Average
Dec-15	44.44	41.33	42.89
Nov-15	44.51	41.88	43.20
Oct-15	44.71	41.46	43.09
Sep-15	42.29	38.15	40.22
Aug-15	43.85	39.66	41.76
Jul-15	41.34	37.55	39.45

Dividends

9

- **Dividends (D)**

- **Source**

- ✦ Standard & Poor's Monthly Stock Guide or equivalent source

- **Calculation**

- ✦ Current dividend (declared) for each month annualized

Month	Declared Dividend	Indicated Dividend
Dec-15	0.4250	1.70
Nov-15	0.4250	1.70
Oct-15	0.4250	1.70
Sep-15	0.4100	1.64
Aug-15	0.4100	1.64
Jul-15	0.4100	1.64

Unadjusted Dividend Yield

10

- Unadjusted Dividend Yield (D/P)

- Calculation

- ✦ Average monthly dividend yield divided by average monthly stock price

Common Stock Prices - Yahoo Finance				P	D	D/P
Month	High	Low	Average	Declared Dividend	Indicated Dividend	Average Dividend Yield
Dec-15	44.44	41.33	42.89	0.4250	1.70	3.96%
Nov-15	44.51	41.88	43.20	0.4250	1.70	3.94%
Oct-15	44.71	41.46	43.09	0.4250	1.70	3.95%
Sep-15	42.29	38.15	40.22	0.4100	1.64	4.08%
Aug-15	43.85	39.66	41.76	0.4100	1.64	3.93%
Jul-15	41.34	37.55	39.45	0.4100	1.64	4.16%
Averages						4.00%

Dividend Adjustment Factor

11

- **Purpose**
 - Compensate investors for potential quarterly dividend increases during the year
- **Calculation**
 - $(1+.5(g))(D/P)$, (g) being the composite growth
 - For AEE, $(1+.5(g))(4\%)$

Composite Growth Rate

12

- **Composite Growth Rate (g)**
 - Purpose
 - ✦ Combines short-term earnings growth (ST) with long-term GDP growth (LT).
 - ✦ Short-term estimates, in general, are more reliable than long-term estimates but may not be sustainable in the long-term
 - Formula
 - ✦ $g = (2/3)(ST) + (1/3)(LT)$

Short-term Earnings Growth Estimate

13

- **Purpose**

- Short-term earnings growth (ST), 3-5 years, used as a substitute for short-term dividend growth.

- **Source**

- Institutional Brokers' Estimate System (IBES) retrieved at Yahoo Finance
- AEE had an IBES estimate of 6% as of January 8, 2016

- **Opinion No. 531**

- IBES or a comparable source.
- Preference for analysis to consist of short-term earnings growth estimates all from one source.

Long-term GDP Growth Estimate

14

- **Purpose**

- Long-term GDP growth (LT), starting in 5 years and limited to 50 years of growth, is a substitute for long-term earnings and dividend growth. In the long-term, a company's earnings are assumed to grow at the rate of GDP.

- **Source**

- IHS Global Insight (updated quarterly), U.S. Energy Information Administration (EIA) (updated annually), Social Security Administration (SSA) (updated annually).

Long-term GDP Growth Estimate

15

- **Calculation**

- Annual GDP Growth Rate for each source=

$$[(\text{Ending Year}/\text{Beginning Year})^{(1/\# \text{ of years})}] - 1$$

- Average the annual GDP Growth Rate for the three sources

Source	Year Beginning	Nominal GDP (\$Billion)	Year Ending	Nominal GDP (\$Billion)	Annual GDP Growth (%)
IHS Global Insight ¹	2020	\$ 22,616	2045	\$ 66,132	4.39%
EIA ²	2020	\$ 22,760	2040	\$ 51,732	4.19%
SSA ³	2020	\$ 23,687	2070	\$ 211,683	4.48%
Average:					4.35%

AEE DCF Result

16

- **Formula**

- $K = (1 + .5(g))(D/P) + g$

- $g = (2/3)(ST) + (1/3)(LT)$

- **Summary of DCF analysis for AEE**

- $K = (1 + .5(g))(4\%) + (g)$

- $g = (2/3)(6\%) + (1/3)(4.35\%) = 5.45\%$

- $K = (1 + .5(5.45\%))(4\%) + (5.45\%) = 9.56\%$

DCF Results

17

- **Screening criteria**
 - Low-end DCF outlier result screen
 - ✦ Based on 100 basis point threshold above corresponding six-month average utility bond yield
 - High-end DCF outlier result screen
 - ✦ No prescribed method reflecting current market conditions
 - ✦ Check for unsustainable or skewed results (Trial Staff)
- **This screening criteria defines the zone of reasonableness (range)**

Measure of Central Tendency

18

- **Central Tendency**
 - Median: single utility
 - Midpoint: establishing an RTO-wide ROE
 - ✦ Multiple utilities may reflect a spectrum of DCF results
 - Upper midpoint (Opinion No. 531) – Anomalous market conditions exist in establishing an RTO-wide ROE
 - In general, for a single utility, if the Commission were to determine that anomalous market conditions exist, Trial Staff believes that the true 75th percentile would be the appropriate measure of central tendency.

Adjustments within Zone of Reasonableness

19

- Any adjustments deviating from the measure of central tendency must remain within the zone of reasonableness (range).
 - Risk adjustment
 - Inclusion of RTO and/or incentive adders
 - Anomalous market conditions
- Not all point estimates within the range are assumed to be just and reasonable for ratemaking purposes

Questions

20