



UNDERSTANDING REGULATED UTILITIES IN TODAY'S CAPITAL MARKETS

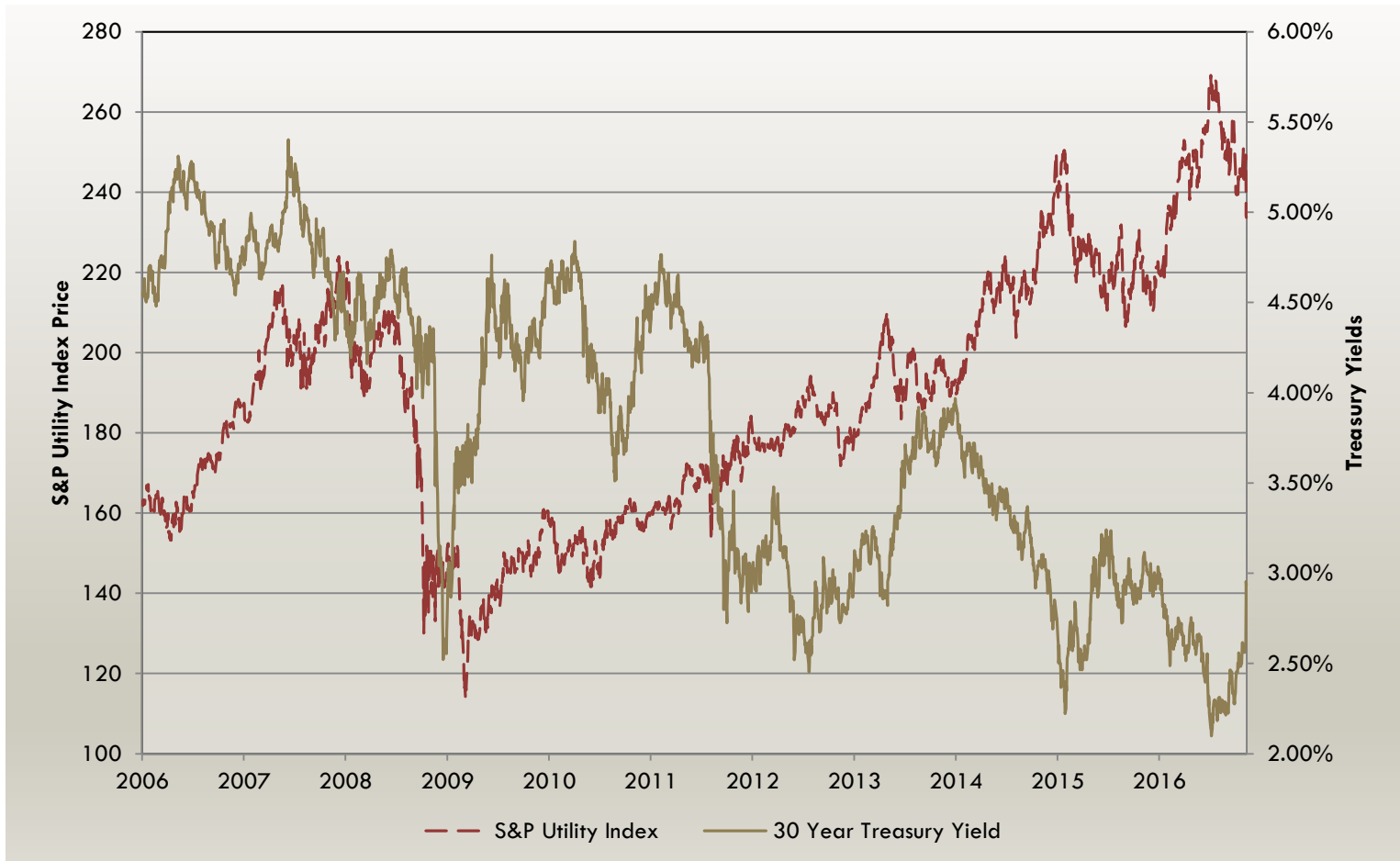
Presented by:
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Concentric Energy Advisors
NARUC Annual Meeting
Monday, November 14, 2016

PRESENTATION TOPICS

- **Capital Market Trends**
- **Industry Trends**
- **Practical Issues**
- **Solutions**
- **Cross Border Investment**

Capital Market Trends:

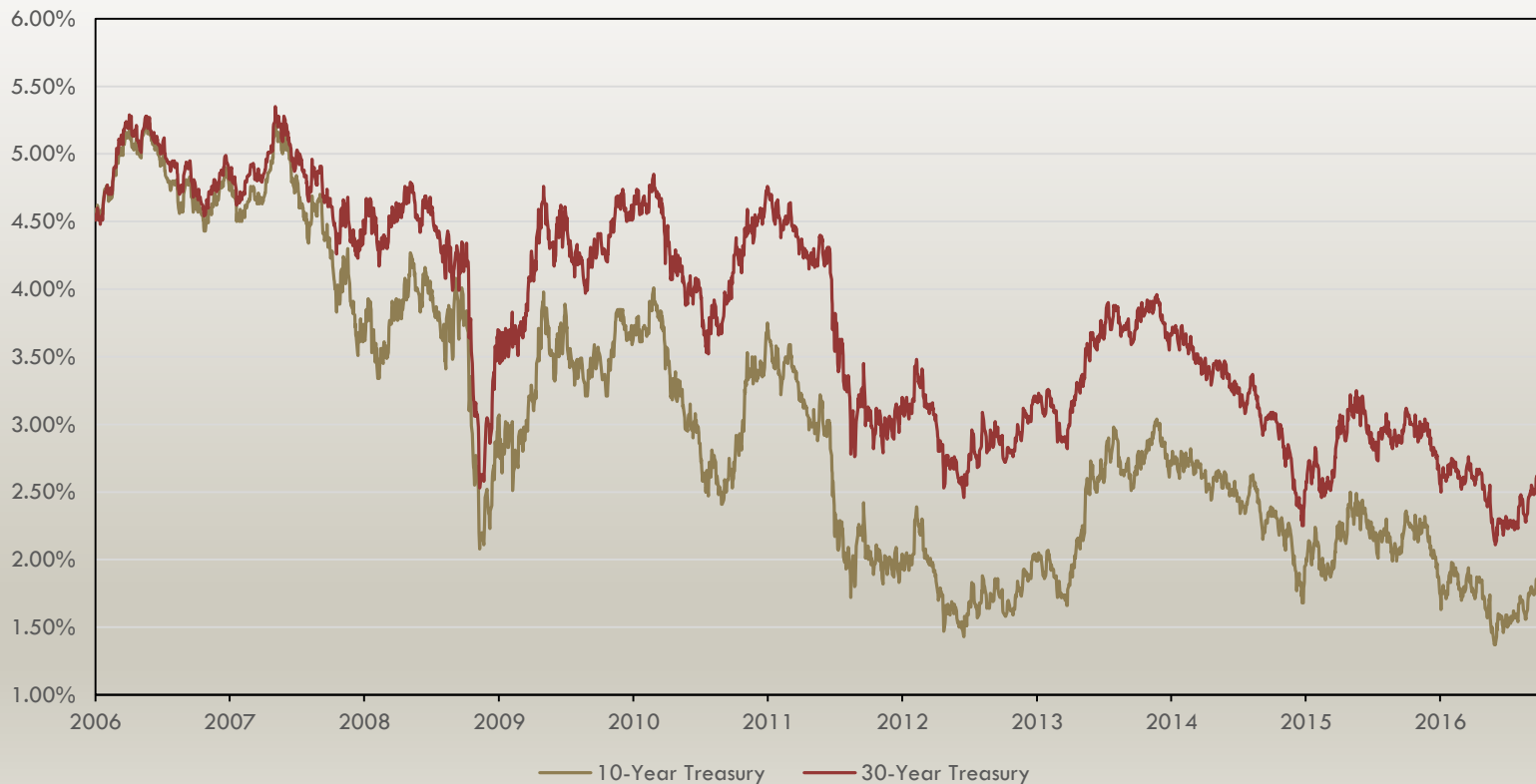
UTILITY STOCK PRICE PERFORMANCE VS. TREASURY BOND YIELDS



Capital Market Trends:

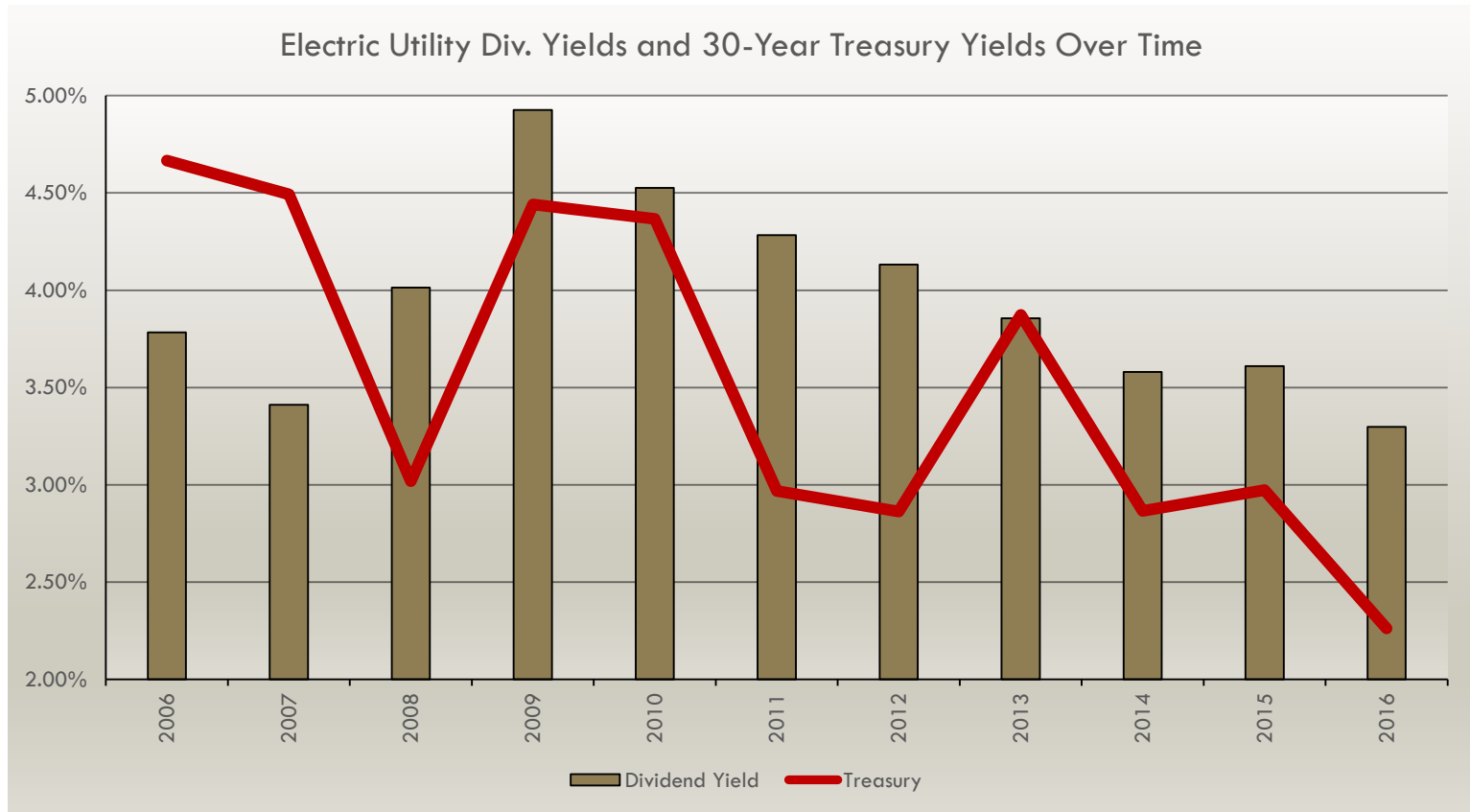
LONG-TERM GOVERNMENT BOND YIELDS

10 and 30 Year Treasury Yields Over Time



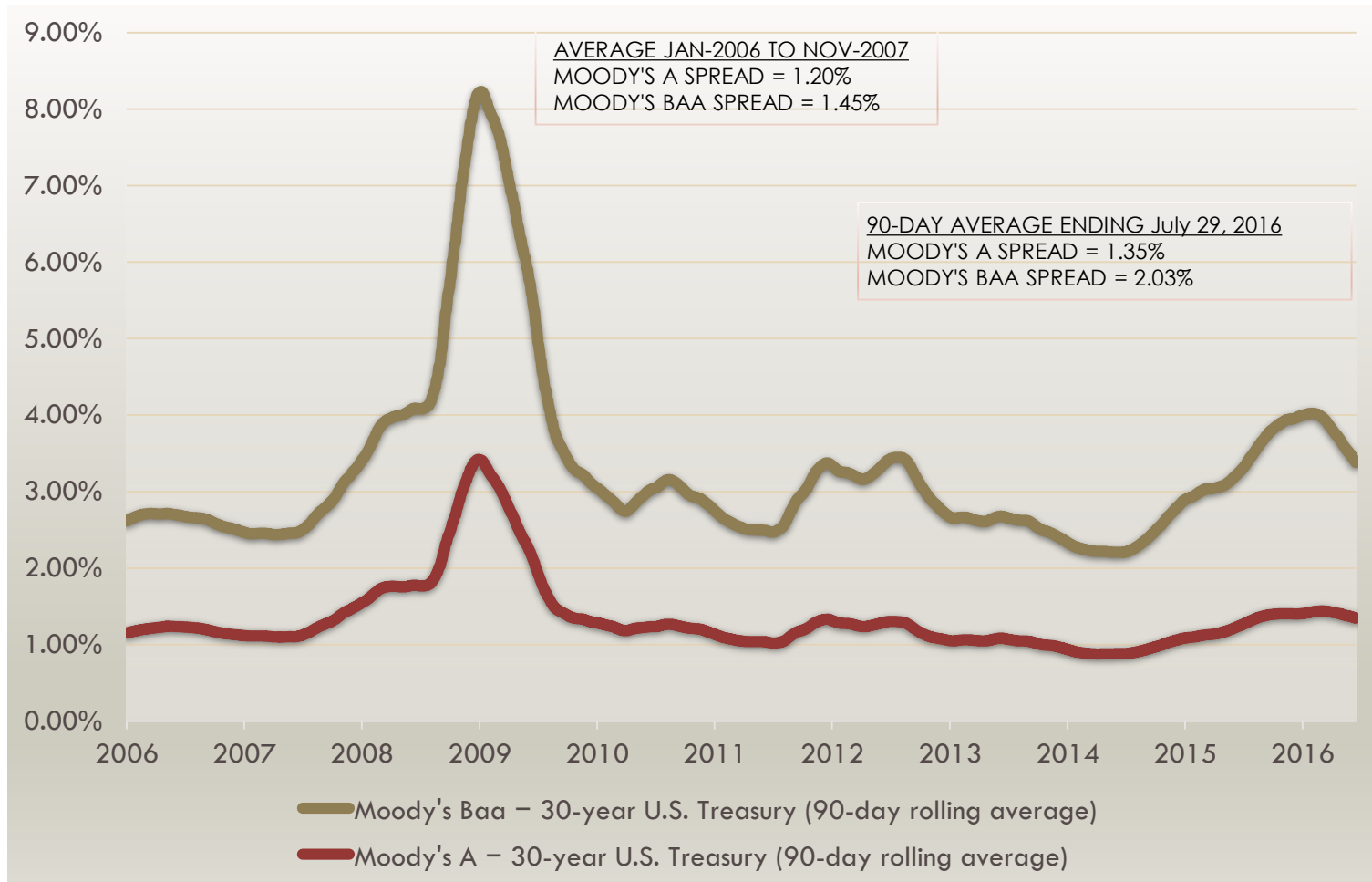
Capital Market Trends:

UTILITY DIVIDEND YIELDS



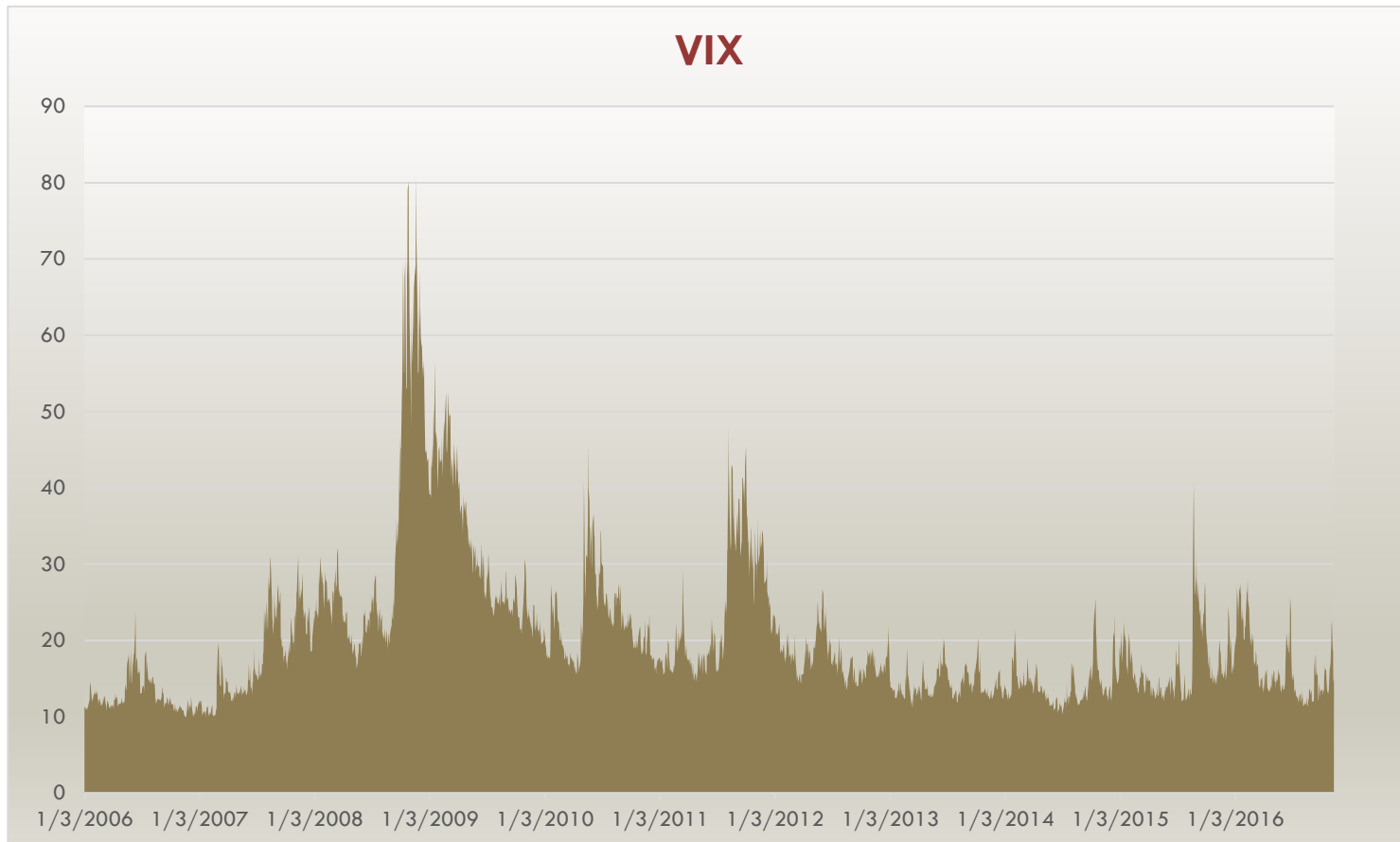
Capital Market Trends:

CREDIT SPREADS



Capital Market Trends:

MARKET VOLATILITY

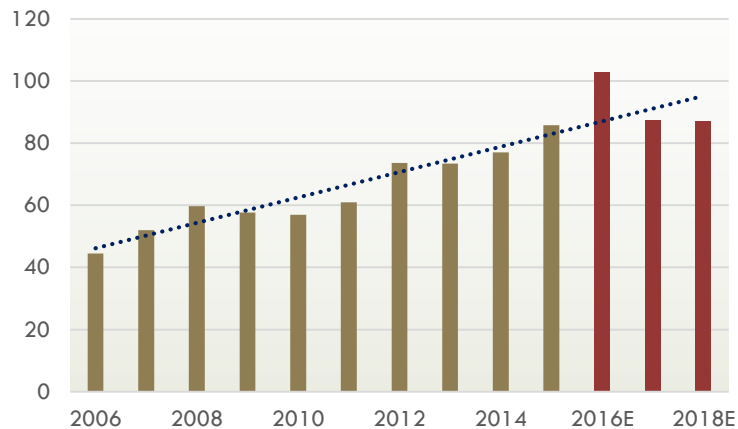


Industry Trends:

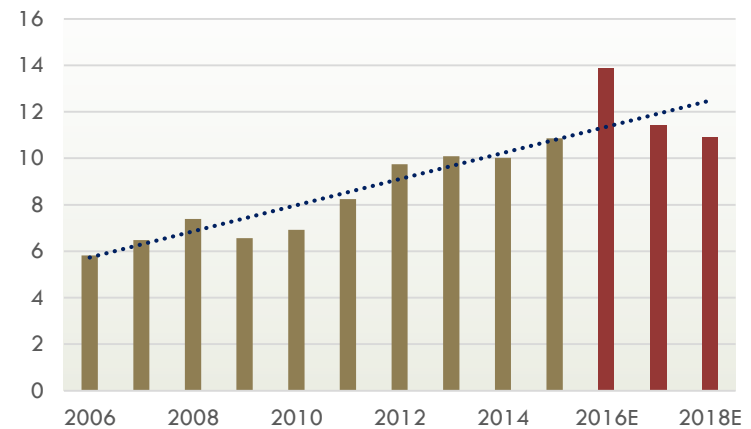
CAPITAL INVESTMENT TRENDS

Aggregate IOU electric and gas utility investments, 2000-2015, and projected 2016-2018

RRA-Universe Electric Utility Actual and Estimated CapEx (\$B)

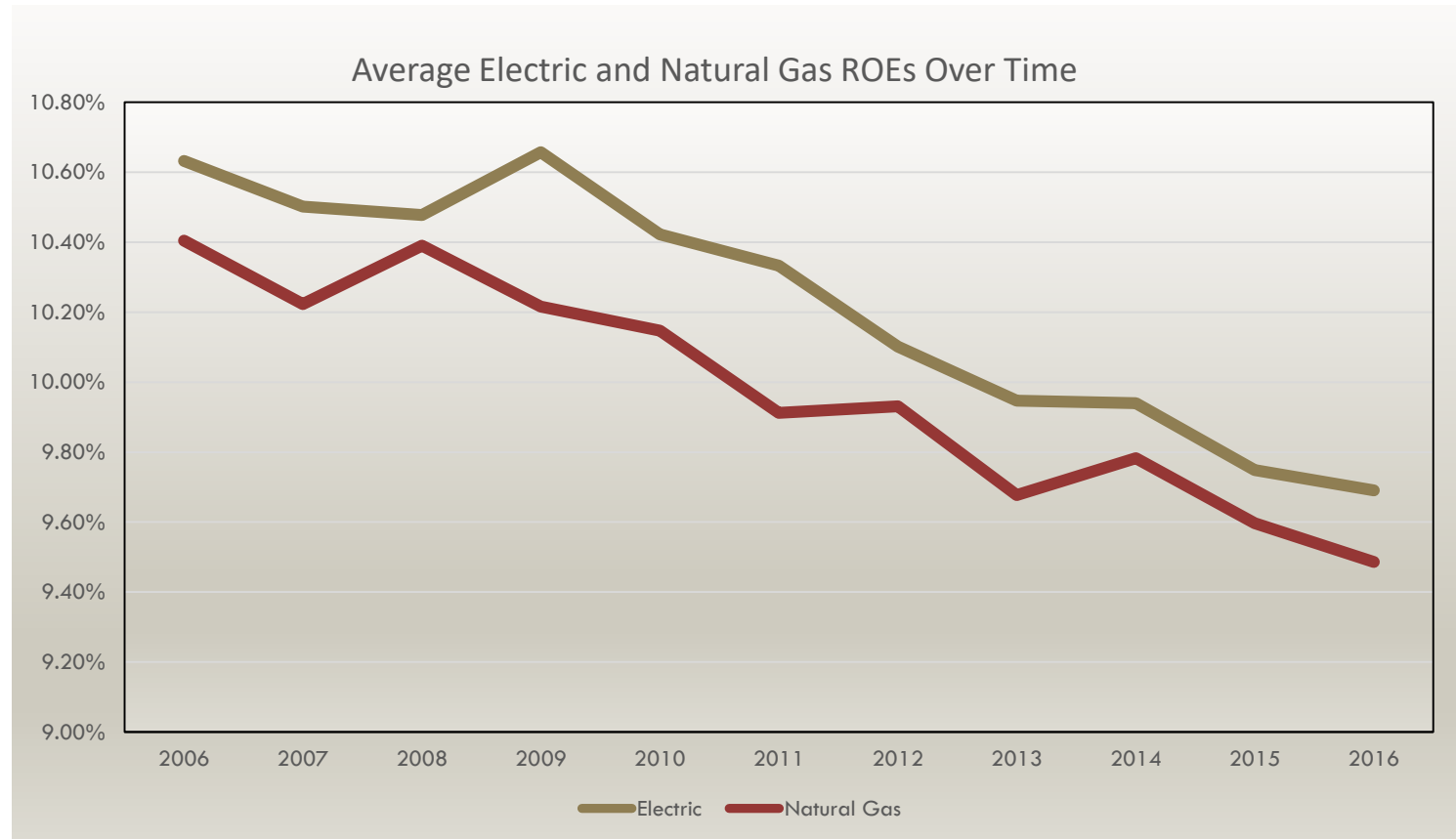


RRA-Universe Gas Utility Actual and Estimated CapEx (\$B)



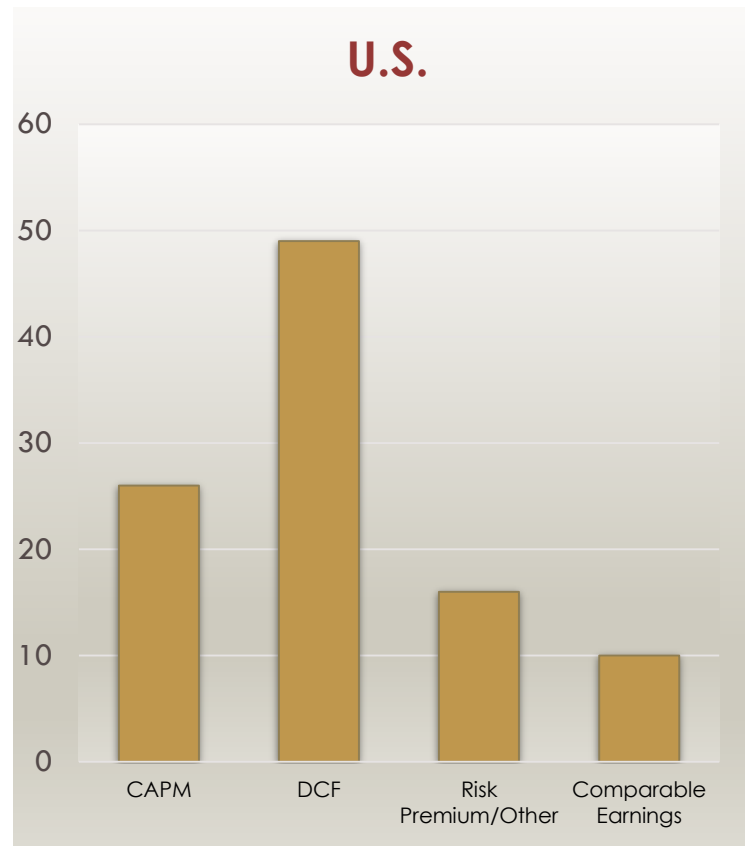
Industry Trends:

ELECTRIC AND NATURAL GAS UTILITY ALLOWED ROEs



Practical Issues:

PRIMARY METHODOLOGY FOR DETERMINATION OF ROE



Practical Issues:

INPUTS TO THE MODELS

DCF

- Stock Price
- Dividend
- Dividend Growth Rate

CAPM

- Risk Free Rate
- Market Equity Risk Premium
- Beta

BOND YIELD PLUS RISK PREMIUM

- Allowed ROE
- Bond yields
- Risk Free Rate

Model

Challenges

- Market volatility
- Distortion in dividend yields
- Sources of long-term growth rates

- Wide range of equity risk premium estimates
- Differing beta estimation procedures
- Determining a 'normalized' risk free rate

- Determining a 'normalized' risk free rate

Practical Issues:

ANOMALOUS MARKET CONDITIONS

FERC: In MISO (*Initial Decision, June 30, 2016*)

In Opinion No. 531, the Commission broke new ground in deciding to examine alternative metrics when existing, anomalous conditions created doubt that the financial inputs into the DCF model were representative.

[W]e ... understand that any DCF analysis may be affected by potentially unrepresentative financial inputs to the DCF formula, including those produced by historically anomalous capital market conditions.

[T]he very existence of anomalous capital-market conditions made “it more difficult to determine the return necessary to attract capital.”

Given these anomalous conditions, the Commission was concerned that awarding the NETOs Base ROEs equivalent to the Midpoint might fail to meet the criteria for Base ROEs laid down in two seminal Supreme Court decisions ...*Bluefield* and *Hope*.

The yields of 10-year Treasury Bonds during the Study Period continue to reflect economic conditions that could render inputs to the DCF analysis unrepresentative.

[T]he level of the dividend yield affects the reliability of the DCF process when that level is lower than the level acceptable to investors that value utility stocks based on their estimated long-term dividend growth.

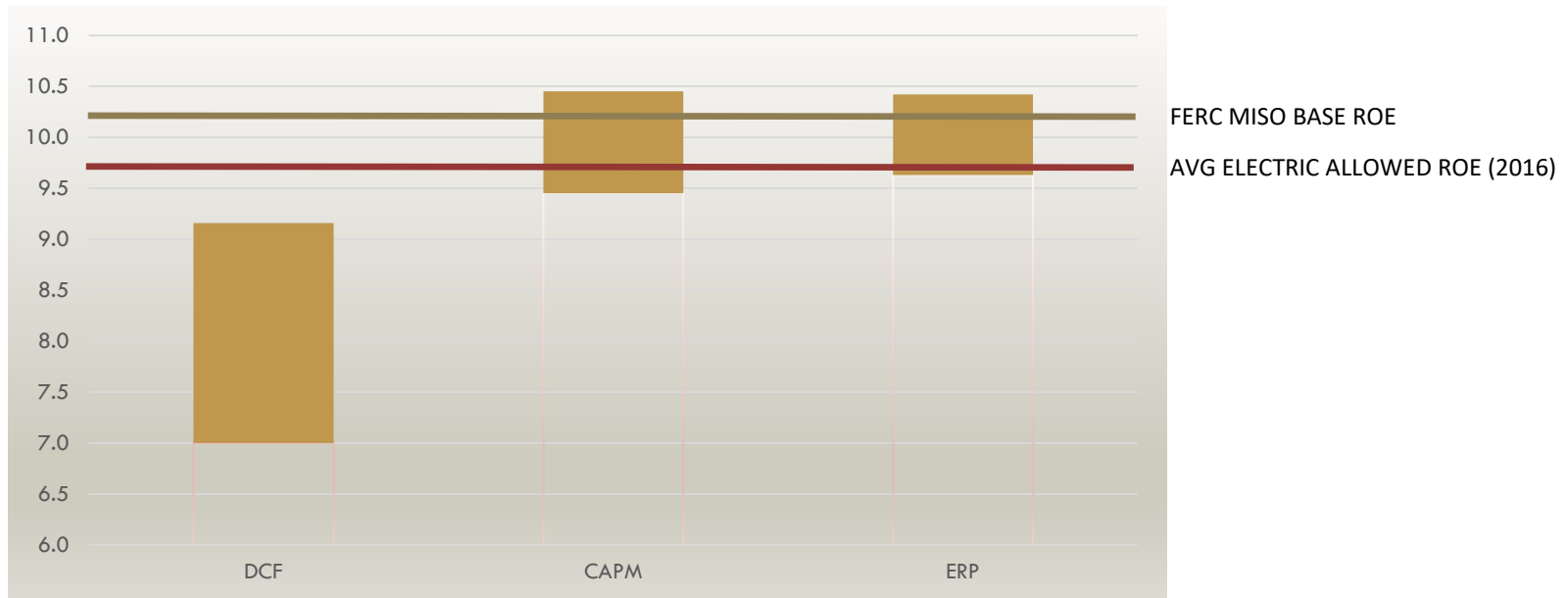
Solutions:

POTENTIAL SOLUTIONS

- Consideration of additional evidence
 - Alternative “benchmark methodologies”
 - State public utility allowed ROEs
- Setting the ROE halfway between the midpoint and the top of the zone of reasonableness (FERC solution)
- Forward looking interest rates and market equity risk premium in the CAPM
- Risk premium approach, accounting for the inverse relationship between interest rates and allowed utility ROEs
- Regulatory “gradualism” recognizing the inherently long-term nature of utility investments does not coincide with short-term capital market fluctuations.

Solutions:

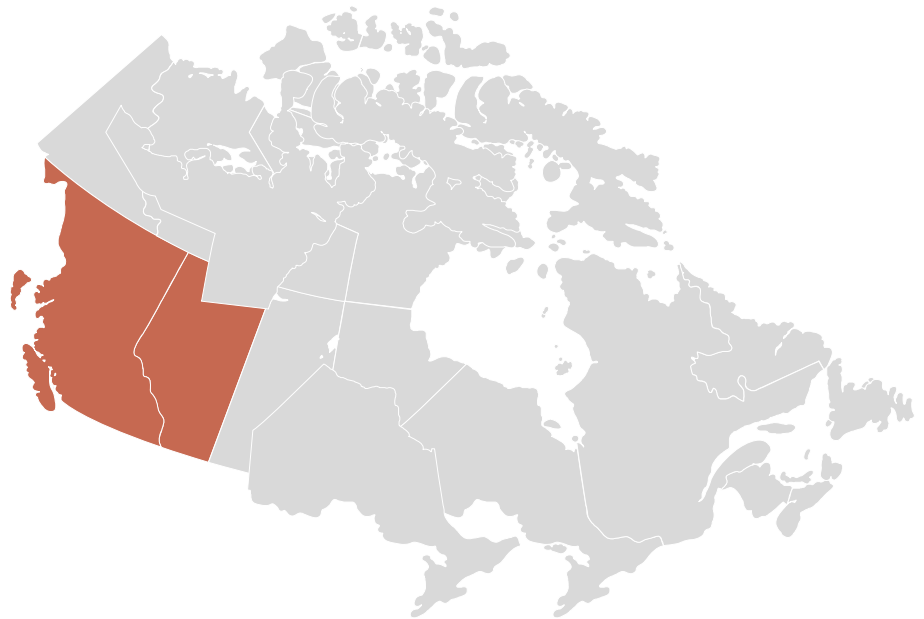
RANGE OF REASONABLE RESULTS



Cross Border Investment:

U.S. BASED COMPANIES HAVE INVESTED IN CANADIAN UTILITIES...

- Kinder Morgan acquires Terasen Inc. (2005)
- Berkshire Hathaway acquires AltaLink (2014)



Cross Border Investment:

BUT THE CAPITAL FLOWS TO THE U.S. HAVE BEEN FAR GREATER

- TransCanada acquires Iroquois Gas Trans. (2005)
- Gaz Métro acquires Green Mountain Power (2007)
- Emera acquires Maine & Maritimes Corp. (2010)
- Algonquin acquires Granite State Electric & Energy North (2012)
- Algonquin acquires California Pacific Electric Co. (2013)
- Algonquin acquires Midwest gas distribution operations from Atmos Energy Corp. (2012)
- Gaz Métro acquires Central Vermont Public Service (2012)
- AltaGas acquires SEMCO Holding Corp (2012)
- Fortis acquires CH Energy Group (2013)
- Algonquin acquires distribution operations from Atmos Energy (2013)
- Algonquin acquires New England Gas Co. (2014)
- Fortis acquires UNS Energy (2014)
- Emera acquires TECO Energy (2016)
- Fortis acquires ITC (2016)
- Algonquin acquires Empire District Electric Co. (pending)

