

Utility Credit Ratings And Equity Analysis

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Utility Capital Markets

- Credit Ratings
 - Debt / Fixed Income Investments
 - Interest And Principal
- Equity Analysis
 - Equity / Stock Investments
 - Dividend And Stock Price Appreciation

Debt - Role Of The Credit Rating Agencies

- To Provide Capital Markets Participants With:
 - An independent, objective and forward-looking opinion of creditworthiness
 - Based on fundamental analysis
 - A global benchmark for investors to compare credit risk among peers
 - Measures the probability of default
 - Measures the severity of loss in event of default
- Investors, Issuers, Traders, And Counterparties

Debt - What A Credit Rating Represents

- A Credit Rating Represents An Opinion Regarding :
 - The likelihood that an issuer will default on its financial obligations
 - The capacity and willingness of an issuer or obligor to make timely payments in accordance with the terms of the obligations
- A Credit Rating Is The Result Of Qualitative And Quantitative Assessments, As Well As Historic And Prospective Data And Analysis
- It Is One Of *Many* Tools That May Be Used By Investors To Make Investment Decisions
- Ratings Are Designed To Answer The Question, “What Is The Ability And Willingness Of An Issuer To Meet Its Financial Obligations In Full And On Time?”

Debt - What A Credit Rating Does Not Represent

- A Credit Rating Does Not Provide Capital Markets Participants with:
 - A recommendation to buy, sell, or hold a security
 - An audit of obligors' financial statements
 - An indication of investment merit
 - A predictor of non-credit-market related market price movements
 - A guarantee of credit quality or an exact measure of default probability
 - A guarantee that the rating will not change over time

Credit Rating Agencies

- Standard & Poor's Ratings Services
 - S&P
- Moody's Investor Service
 - Moody's
- Fitch Ratings
 - Fitch
- This credit rating presentation relies heavily on S&P, Moody's, and Fitch presentations and publications

Credit Ratings Scale

S&P

- AAA
- AA+
- AA
- AA-
- A+
- A
- A-
- BBB+
- BBB
- BBB-
- BB+
- BB
- BB-
- B+
- B
- B-
- CCC+
- CCC
- CCC-
- CC
- D

STRONG

ABOVE INVESTMENT GRADE
BELOW INVESTMENT GRADE

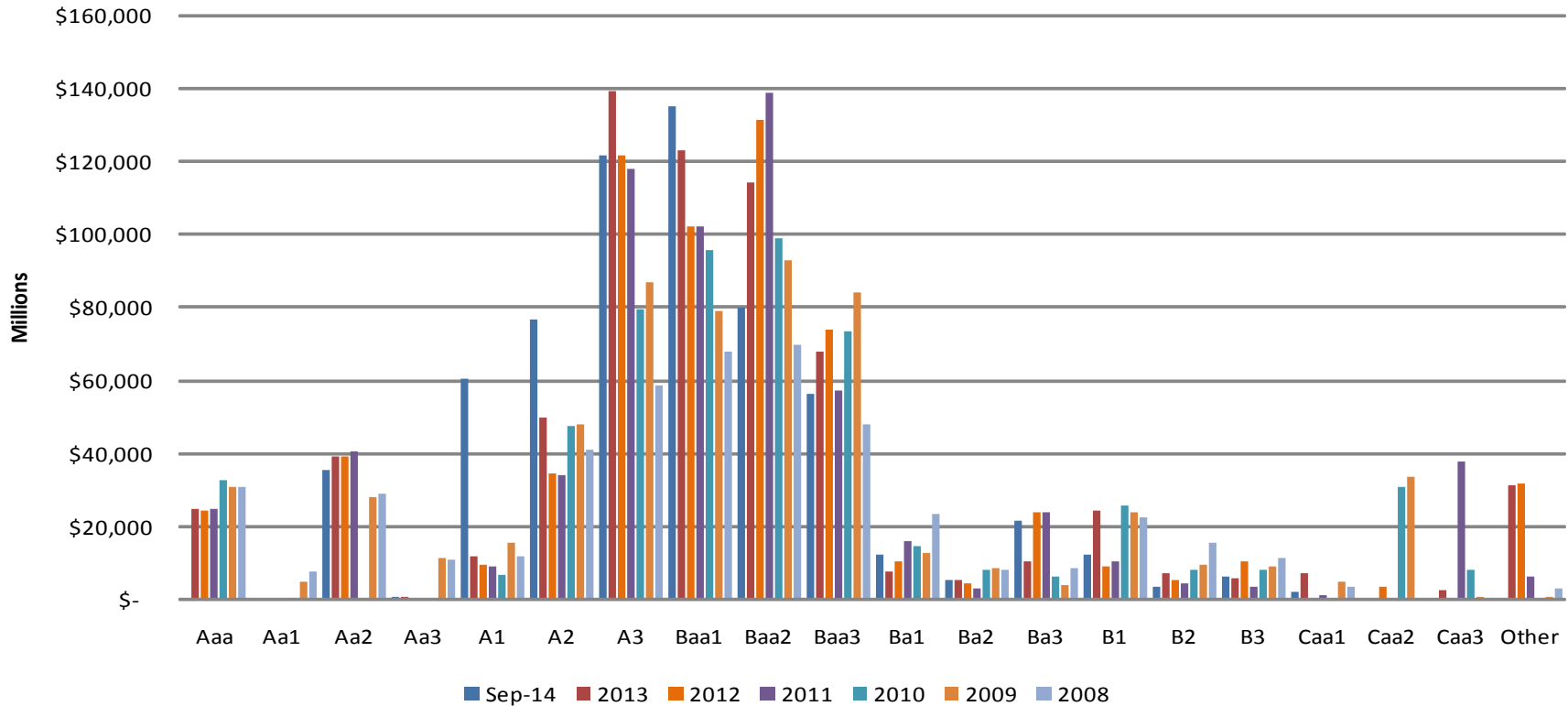
WEAK

Moody's

- Aaa
- Aa1
- Aa2
- Aa3
- A1
- A2
- A3
- Baa1
- Baa2
- Baa3
- Ba1
- Ba2
- Ba3
- B1
- B2
- B3
- Caa1
- Caa2
- Caa3
- Ca
- C

Moody's Infrastructure Rated Debt Breakdown by Rating

Debt per Rating Category



Source: Wired

The S&P Ratings Process



RATING PROCESS



** S&P's may allow for an appeal only if the issuer can provide new and significant information to support a potentially difficult rating conclusion*

The Ratings Process

- Issuer Decides To Issue New Debt Security
- Analytical Preparation For Management Meeting
 - Evaluate risk to investors
- Management Meeting Is Held To Discuss Sector Trends, Strategies, Operations, Governance, Finances, Forecasts, And Policies
- Analyst Recommends Rating To A Rating Committee
- Rating is Determined By The Rating Committee
- Management Is Informed Of Final Decision, Rationale, and Process
- Rating Is Publicly Released
- Surveillance – Monitoring The Security For Rating Change

Ongoing Surveillance

- Public Information
 - News Releases
 - SEC Filings
 - Quarterly Earnings Conference Calls
 - Investor Events
- Non-Public Information
 - Formal Management Meetings With Issuers – At Least Annually; More Frequently If Necessary
 - Key Business Trends, Competitive Issues, Management Strategy
 - Financial Policy: Acquisitions, Divestitures, Shareholder Initiatives
 - Financing Plans, Financial Projections
- Regular Ongoing Contact by Phone/Email

Utility Credit Rating Considerations

- Utility Credit Quality Has Traditionally Been Strong:
 - Presence of regulation that has been generally consistent in enabling utilities to recover costs and providing adequate returns on invested capital
 - Nominal competitive threats
 - Relatively low operating risk
 - Minimal event risk
 - Relative inelasticity of demand
- RESULT: Predictable Cash Flows And, Accordingly, Stable Ratings
- Utility Ratings Are Predominantly Investment Grade

S&P Utility Risk Continuum

- Utility Sectors: Highest Risk to Lowest Risk
 - Merchant generation
 - Diversified energy
 - Integrated energy
 - Electric and gas transmission and distribution
 - Water utilities

S&P Utility Business Profile Characteristics

- Basic Characteristics Define A Utility's Business Profile:
 - *Regulation*
 - Markets
 - Operations
 - *Management*

S&P Business Profile - Regulation

Four Pillars That Provide S&P's Assessment Of Regulatory Support

- Stability
 - Transparency of processes, predictability, and consistency
- Efficiency Of Tariff Setting Procedures
 - Recoverability of operating and capital costs
 - Balance of interests and concerns
 - Incentives that are achievable
- Financial Stability
 - Timeliness Of Recovery
 - Flexibility Related To The Unexpected
 - Capital Support During Construction
- Regulatory Independence
 - Policies that support financeability
 - Limited risk of political intervention
- Scale : Strong / Adequate / Weak

S&P Business Profile - Regulation

- Characteristics Of Credit-Supportive Regulation
 - Consistency and predictability of decisions
 - Timeliness of rate orders
 - Use of forward-looking measures
 - Pre-approval processes (for example, certificate of need)
 - Use of adjustment clauses trackers
 - Pass-through of purchased power, gas, and water costs
 - **Construction Work In Progress (CWIP)/infrastructure surcharges**
 - **Pre-approval of significant capital outlays**
 - **Environmental/conservation/demand response**
 - **Bad debt**
 - **Pensions**

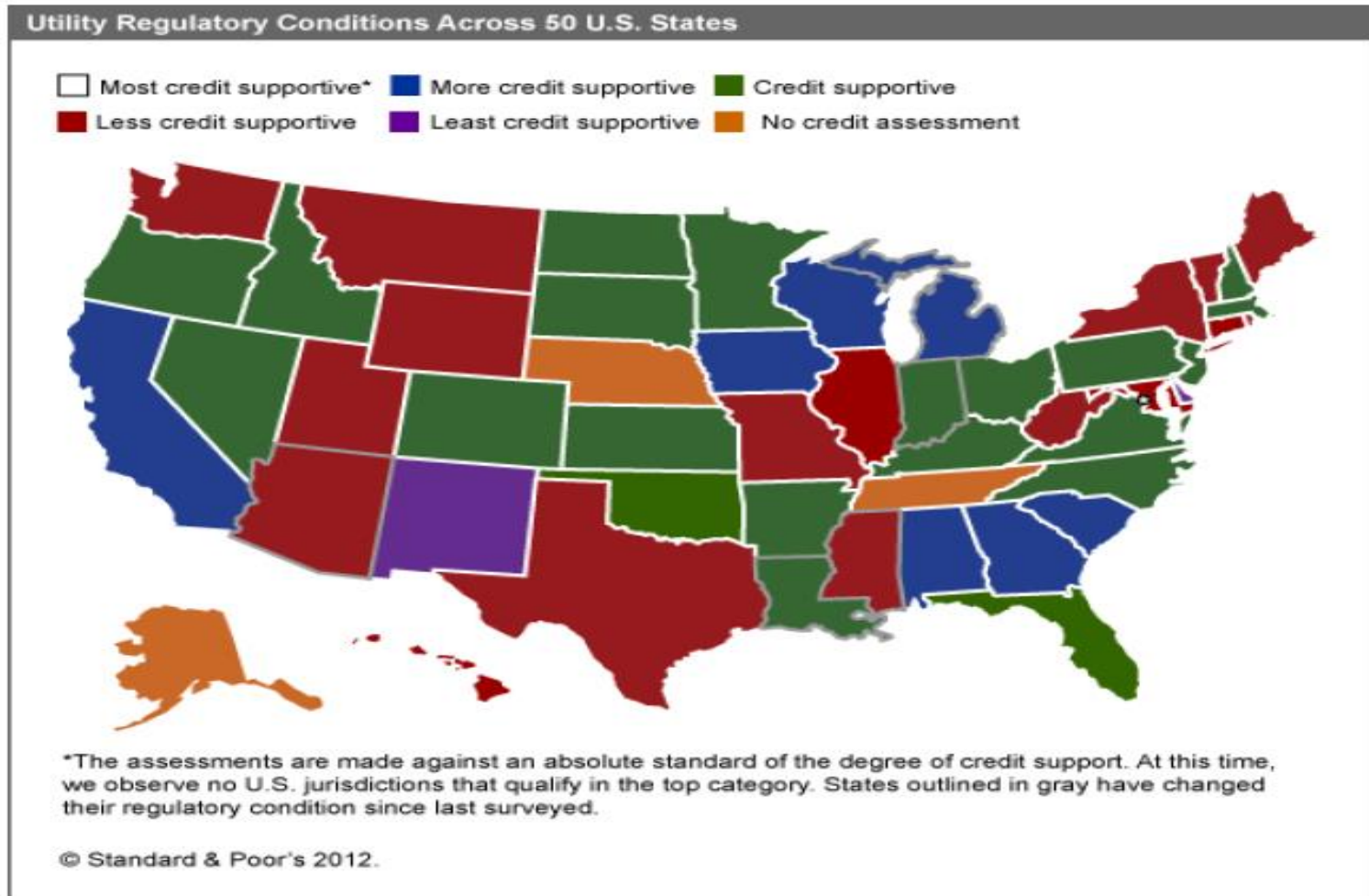
S&P Examples of Statutory Support for Regulation

- State Legislation That Supports Alternative Rate Recovery Mechanisms
- State Legislation That Limits Rate Case Lag (Drag) And Enables Interim Rates
- State Legislation That Expands Supportive Rate Mechanisms For Infrastructure Investment From Water To Electric And Gas

S&P Business Profile - Regulation

- Characteristics Of Challenging Regulation
 - Prolonged Rate Cases Without Resolution (Regulatory Lag)
 - Historic Test Years
 - Caps On Recovery
 - Absence Of Pre-Approved Capital Expenditure Programs
 - A Penchant For Prudence Disallowances
 - Legislative Or Executive Interference With Commission Actions/Responsibilities
 - Below Average Authorized Returns

S&P Assessment of Political / Regulatory Credit Posture - 2012



S&P Business Profile - Operations

- Stability Of Operations And Avoidance Of Regulatory/Political Intervention Are A Function Of:
 - Cost
 - Reliability
 - Safety
- Key PP&E Credit Considerations
 - Availability Of Plant And Diversity Of Fuel
 - Efficiency/Sufficiency Of Resources
 - Compliance
 - Capital Needs - Maintenance And Capital Expenditures
 - Transmission Access
 - Owned Generation Vs. Market Dependence

S&P Business Profile - Operations

- Analysis Of Management Is Arguably One Of The Most Qualitative Aspects Of S&P Analysis
- For Rate-Regulated Businesses Such As Electric, Gas, And Water Utilities, A Relationship Of Mutual Trust, Confidence, And Respect Between Issuer And Regulator Is Critical To S&P Evaluation
- Supportive Regulation Derives From Effective Management Of The Regulatory Relationship
- Assessments Will Reflect Publicly Observable Track Records As Well As Observations From Private Meetings

S&P Methodology Eight Management Components and Subfactors

- **Strategic Positioning**
 - **Strategic Planning Process**
 - **Consistency Of Strategy With Organizational Capabilities**
 - Regulated Versus Unregulated
 - **Ability To Track, Adjust, And Control Execution Of Strategy**
- **Risk Management**
 - **Comprehensiveness Of Risk Management Standards And Tolerances**
 - **Standards For Operational Performance**
- **Organizational Effectiveness**
 - **Management's Operational Effectiveness; Credibility**
 - **Expertise And Experience**
 - **Depth And Breadth Of Personnel**

S&P Methodology Governance Components and Subfactors

- Governance
 - Board Effectiveness/Independence From Management
 - Entrepreneurial Or Controlling Interest
 - Management Culture
 - Regulatory, Tax, Or Legal Infractions
 - Communication Of Messages
 - Internal Controls
 - Financial Reporting And Transparency

S&P Management and Governance Scoring

- Strong
- Satisfactory or Adequate
- Fair
- Weak

S&P Utility Management and Governance Scoring Distribution

- Strong 7
- Satisfactory or Adequate 69
- Fair 9
- Weak 0
- Categories With The Most Positives:
 - Strategic Planning Process*
 - Management's Expertise And Experience*
- Categories With The Fewest Positives:
 - Standards For Operational Performance*
 - Ability To Track, Adjust, And Control Execution Of Strategy*
 - Management's Operational Effectiveness*

Moody's Four Broad Utility Ratings Factors

- Factor 1 - Regulatory Framework (25%)
 - 1a: Legislative/judicial underpinning
 - 1b: Consistency and predictability of regulation
- Factor 2 – Ability To Recover Costs And Earn Returns (25%)
 - 2a: Timeliness and recovery of operating and capital costs
 - 2b: Sufficiency of rates and returns
- Factor 3 - Market Position and Diversification (10%)
- Factor 4 - Financial Strength (40%)

S&P Financial Statement Analysis

- Financial Risk Analysis Is Comprised Of The Following:
 - Accounting
 - Financial Governance And Policies/Risk Tolerance
 - Cash Flow Risk
 - Capital Structure
 - Liquidity/Short Term Factors

S&P Rationale for Adjusting Financial Statements

- Issuers' Audited Financial Statements Are Not Necessarily Viewed As Representative Of Analytical "Truth"
- Adjustments Create A More Accurate Depiction Of The Economic Reality Of An Issuer's Risks, Rights And Benefits
- Adjustments Enable More Meaningful Peer And Period-Over-Period Comparisons

S&P Principal Adjustments to Financial Statements

- **Common Adjustments**
 - **Additions To The Balance Sheet:**
 - **Operating And Capital Leases (PPA Exception)**
 - **Purchased Power Agreements**
 - **Pensions And Post-Retirement Benefit Obligations**
 - **Asset Retirement Obligations**
 - **Subtractions From The Balance Sheet:**
 - **Stranded Cost Securitization Financings**
 - **Hybrid Preferred Instruments**

Key Ratios Affected

- **Funds From Operations (FFO) To Total Debt**
- **Total Debt To Total Capitalization**

S&P Financial Risk Profile – Cash Flow Protection

- Key Credit Protection Measures
 - FFO*/Average Total Debt
 - Discretionary Cash Flow
- Considerations
 - Stability Of Cash Flow
 - Ability To Service Fixed Obligations
 - Capital Expenditure Schedule/Ability To Defer

* Net Income (After Tax) Plus Depreciation, Amortization, Deferred Income Taxes, And Other Non-Cash Items



S&P Comparison of Capital Structure

Total Debt/Total Capitalization U.S. Averages (2007 to 2009)

	AA	A	BBB
Industrial Companies	34.7	35.7	44.7
Utility Companies	47.8	53.1	56.8

S&P Comparison of Cash Flow Performance

Funds From Operations/Total Debt U.S. Averages (2007 to 2009)

	AA	A	BBB
Industrial Companies	73.4	53.0	34.0
Utility Companies	25.3	20.6	17.6

Moody's Regulated Electric Utility Sector Considerations

- Regulatory support generally remains strong
 - ROE pressure somewhat mitigated by improved recovery mechanisms
 - Trackers reduce regulatory lag and enhance ability to earn allowed ROE
 - Cash flow production remains strong
- Execution strategy over intermediate-term
 - Capital expenditures for compliance with MATS and RPS are winding down
 - Shifting towards system hardening focus
- Financial metrics to remain steady, or decline slightly
 - Bonus depreciation has boosted metrics by ~ 200 – 300 bps over past several years
 - Use of NOLs and declining capex profiles are likely to maintain metrics at current levels
- Lack of organic growth drives financial engineering
 - M&A transactions at historically high multiples
 - Resurgence of MLP structures / Yield Cos
- Advances in renewable and distributed generation pose rate design risks
 - Stakeholder cooperation will be necessary to maintain long-term financial health of the industry

Moody's 12/23/13 Comment on Distributed Generation Cost Shift

- “The distributed generation customer has no obligation to generate any particular amount of power, so the utility must stand ready to generate and deliver that customer’s full power needs at all times. Since most utility costs, including the fixed costs of financing and maintaining generation and delivery systems, are currently collected through volumetric rates, **a customer owning distributed generation effectively transfers a portion of the utility’s cost of serving that customer to other customers** with higher net usage, notably to customers that do not own distributed generation.”

Fitch 7/18/16 Comment on Distributed Generation Cost Shift

- “The conundrum for regulators and utilities from an energy policy point of view is facilitating development of distributed PV solar and its clean energy attributes without **unduly burdening non-NEM [net energy metering] customers with higher bills due to cross-subsidization of NEM customers.**”

Fitch 7/18/16 Comment on Distributed Generation Cost Shift

- “Fitch believes the impact of PV solar is manageable within the regulatory compact, based on existing technology, via adoption of tariff mechanisms with appropriately calibrated fixed versus variable cost recovery mechanisms and avoided cost-based payments for exports to the grid.”

Fitch 7/18/16 Comment on Distributed Generation Cost Shift

- “Fitch believes adoption of **fixed-variable rate structures calibrated to reflect the utility industry’s mix of fixed and variable costs would address the cost shift** caused by vanishing revenues used to support utility fixed costs when customers install solar PV systems. This would ensure self-generating customers would be required to pay their fair share of grid transmission, distribution, societal and other costs.”

NARUC Is Providing A Tool To Help PUCs Make Rate Design Decisions

- NARUC Staff Subcommittee On Rate Design Prepared A Draft Manual On Distributed Energy Resources (DER) Compensation
- NARUC Hosted A 3-Hour Town Hall Meeting In July 2016
- Interested Stakeholders Submitted Comments By September 2
- NARUC Staff Subcommittee Is Currently Revising The Draft Manual
- Final Manual Expected To Be Released In November 2016

Draft NARUC Manual On DER Compensation

- Describes The Rate Design Process
- Defines Distributed Energy Resources
- Describes The Cost Shift From DER Customers To Non-
DER Customers
- Mentions Related Considerations, Questions, And
Challenges
- Identifies Rate Design Compensation Methodologies
- Provides Menu For Regulators, Not Prescription
- Describes Technology, Services, And The Evolving
Marketplace

Draft NARUC Manual on DER Compensation Methodologies

- Net Energy Metering
- Valuation Methodology
 - Value of resource
 - Value of service
 - Transactive energy
- Demand Charges
- Fixed Charges And Minimum Bills
- Standby And Backup Charges
- Interconnection Fees/Metering Charges

Stocks - Equity Analyst Role

- Identify And Monitor Critical Factors
- Sort Through News Flow And Data To Focus On Critical Valuation Drivers
- Create And Update Financial Forecasts
- Use Risk-Adjusted Valuation Methods To Estimate Fair Stock Value, Primarily Discounted Cash Flow And Net Present Value Models
- Compare Estimated Fair Stock Value To Current Stock Market Price (Alpha)
- Make Stock Picks
- Communicate Picks To Portfolio Managers And Clients

Equity Analysis Critical Factors to Probe

- Strategy
- Financial
- Revenues
 - Volumes
 - Pricing
- Costs
- Management
- Valuation

Equity Analysis Approaches

- Difference Between Fundamental And Technical Analysis
- Key Fundamental Valuation Concept - Stock Market Prices Reflect Consensus Expectations
- Different Time Frames: Long-term And Short-term (Quarterly And Multi-Year Results)
- Different Risk Profiles: Long Only And Long/Short Portfolios

Sell Side and Buy Side Equity Analysts

- All Equity Analysts Focused On Researching Companies To Pick Winning And Losing Stocks
- Sell Side Analysts Publish Research Reports With Stock Recommendations, Market To Buy Side Analysts
 - Investment banks, commercial banks, stock brokers, boutique research firms
- Buy Side Analysts Invest Client Money, Make Stock Investment Decisions, Performance Evaluated By Return Achieved Versus Benchmark
 - Asset managers, institutional investors, hedge funds

Fundamental Analysis by Equity Analysts

- Fundamental analysis
 - Meetings with management
 - Meetings with customers
 - Meetings with suppliers
 - Meetings with competitors
 - Meetings with regulators
 - Meetings with employees
 - Communication with investor relations
 - Sell side reports and recommendations
 - Financial modeling
 - Financial projections

Equity Analyst Management Meetings

- Opportunities To Interact With Management
 - Analyst days
 - Sell side conferences
 - Industry conferences
 - Earnings calls
 - Visit to headquarters
 - One-on-one meetings

Recent Utility Equity Analysis Considerations From Sell Side Reports

- Economy – Interest Rates
- Mergers And Acquisitions
- New Generation Units
- Retirements Of Generation Units
- New Natural Gas Pipelines
- New Crude Oil Pipelines
- Rate Cases
- Grid Modernization Investments
- Distributed Energy Resources Rate Design
- Commodity Prices Including Power And Natural Gas