



Northern California Power Agency

February 2018

Finance Committee Materials

PFM Financial Advisors
LLC

601 S. Figueroa Street
Suite 4500
Los Angeles, CA 90017

213.489.4075

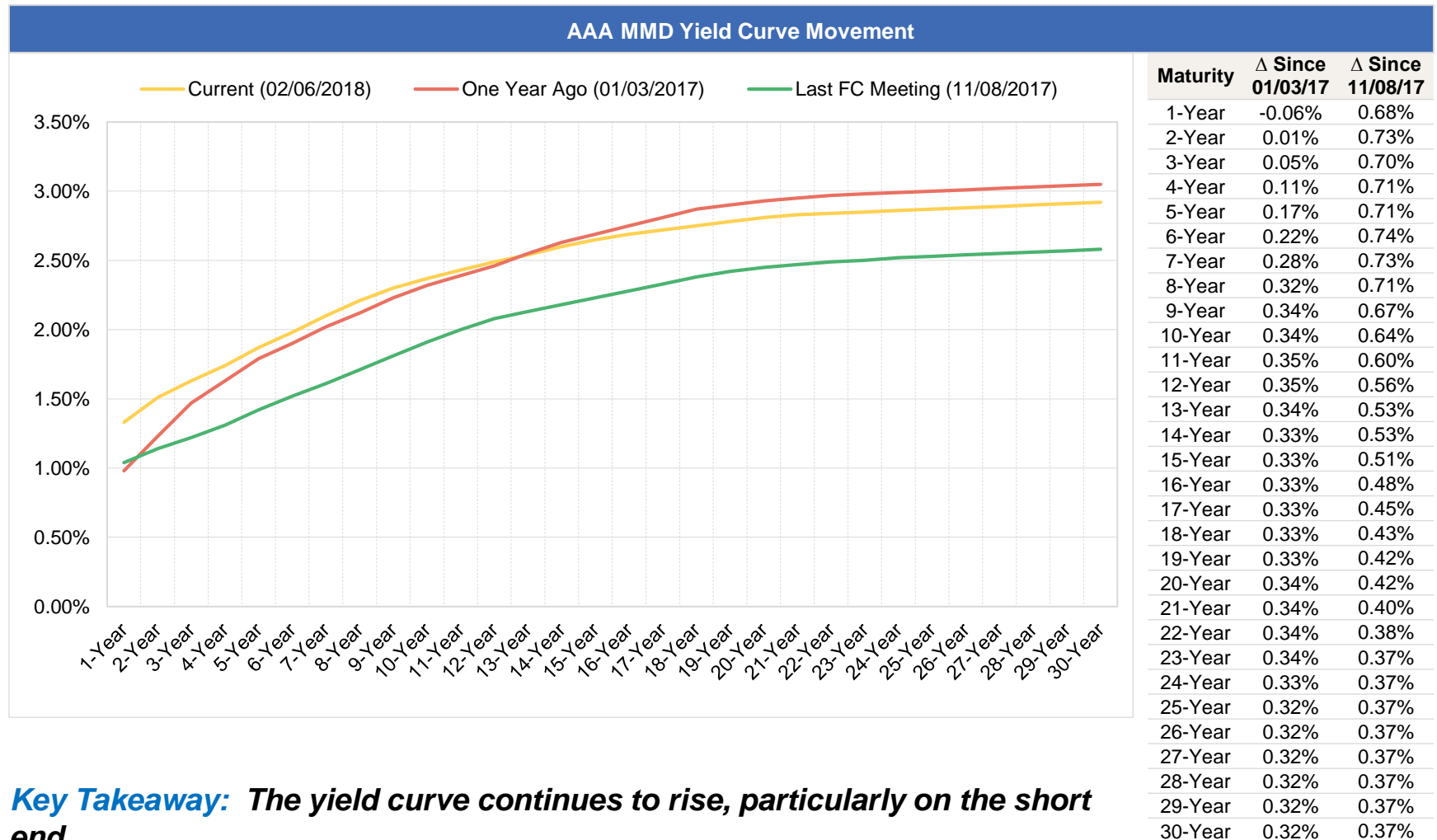


Report on Current Financial Market Conditions or Issues

Data, rates, and related statistics and charts are as of February 6, 2018, unless otherwise indicated



Recent AAA MMD Yield Curve Movement



Source: Thomson Reuters



Interest Rate Forecasts

- Market participants continue to call for an increase in interest rates as shown in the data compiled by Bloomberg below

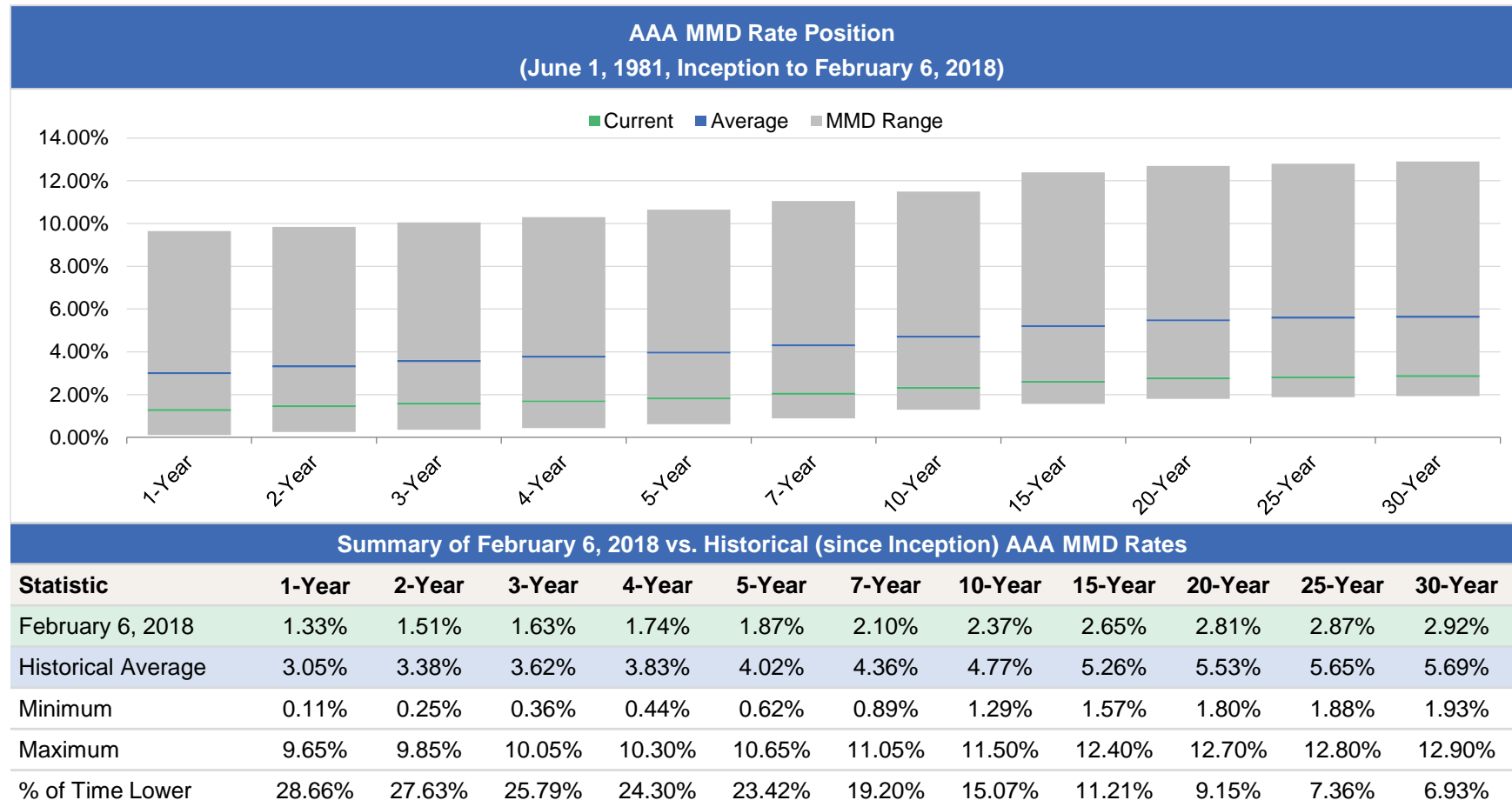
The Street's Interest Rate Forecast (As of February 7, 2018)							
Average Forecasts	Current	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
30-Year UST	3.11%	3.05%	3.17%	3.29%	3.40%	3.48%	3.58%
10-Year UST	2.81%	2.71%	2.81%	2.92%	3.02%	3.11%	3.26%
2-Year UST	2.11%	2.13%	2.27%	2.40%	2.55%	2.67%	2.83%
3M LIBOR	1.80%	1.85%	2.04%	2.21%	2.39%	2.49%	2.64%
Fed Funds Target Rate (Upper)	1.50%	1.70%	1.95%	2.15%	2.30%	2.45%	2.65%
Fed Funds Target Rate (Lower)	1.25%	1.47%	1.70%	1.88%	2.06%	2.22%	2.39%

Key Takeaway: *The market expects 3 interest rate hikes through the end of the year*

Source: Bloomberg



AAA MMD Position (Since Inception)



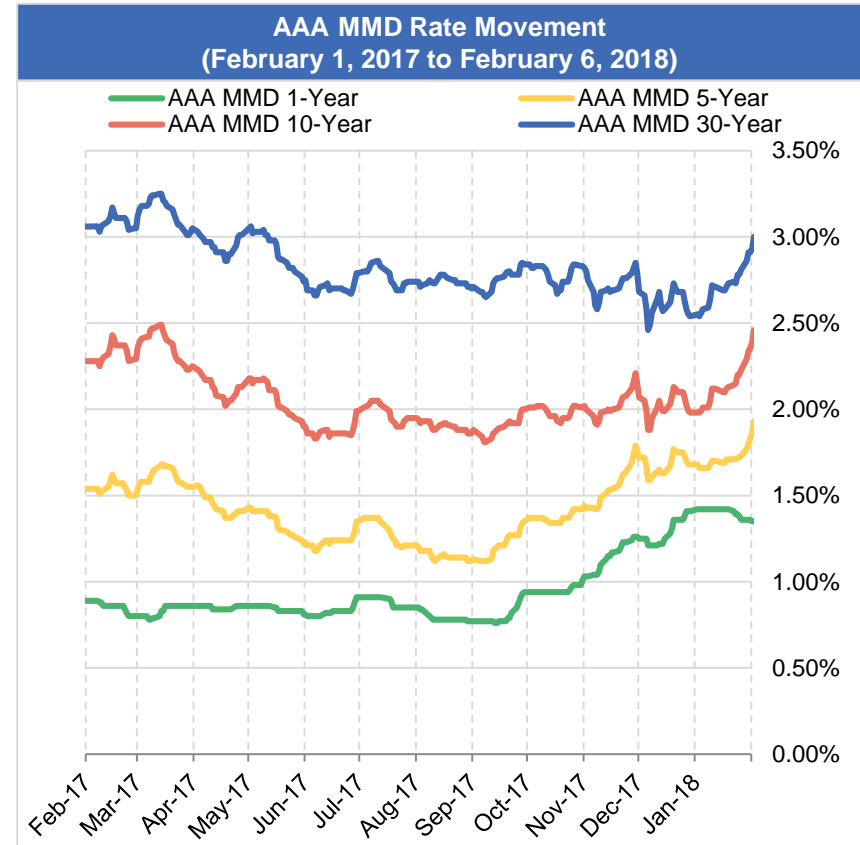
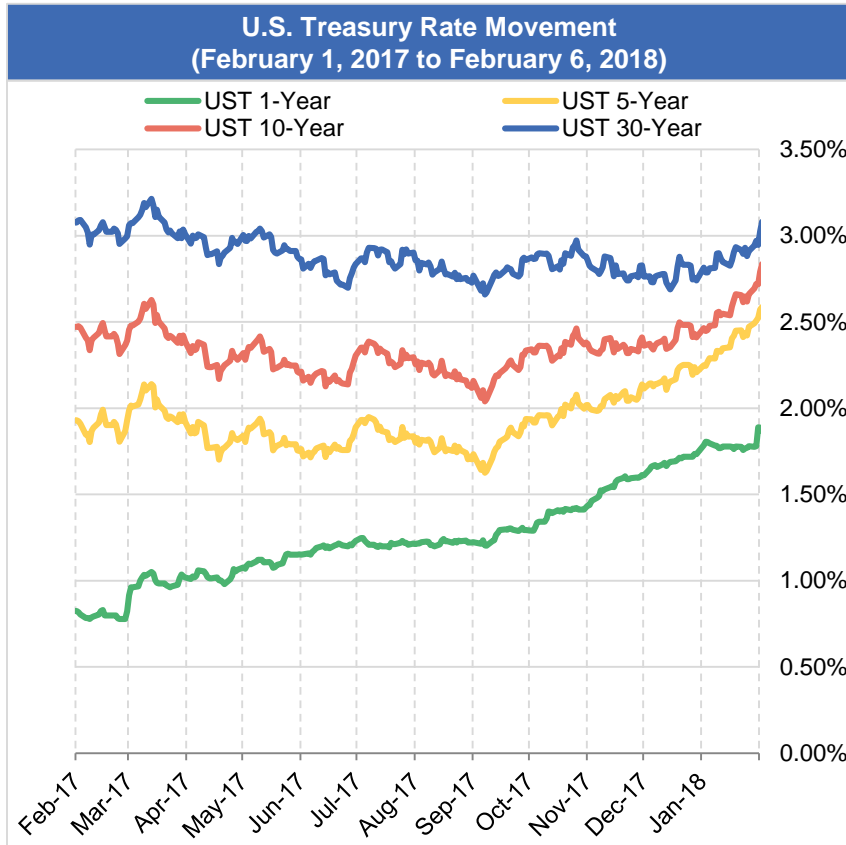
Key Takeaway: *MMD continues to be significantly lower than its historical averages*

Source: Thomson Reuters



U.S. Treasury and AAA MMD Rate Movement

- The AAA MMD curve and US Treasuries have continued to increase



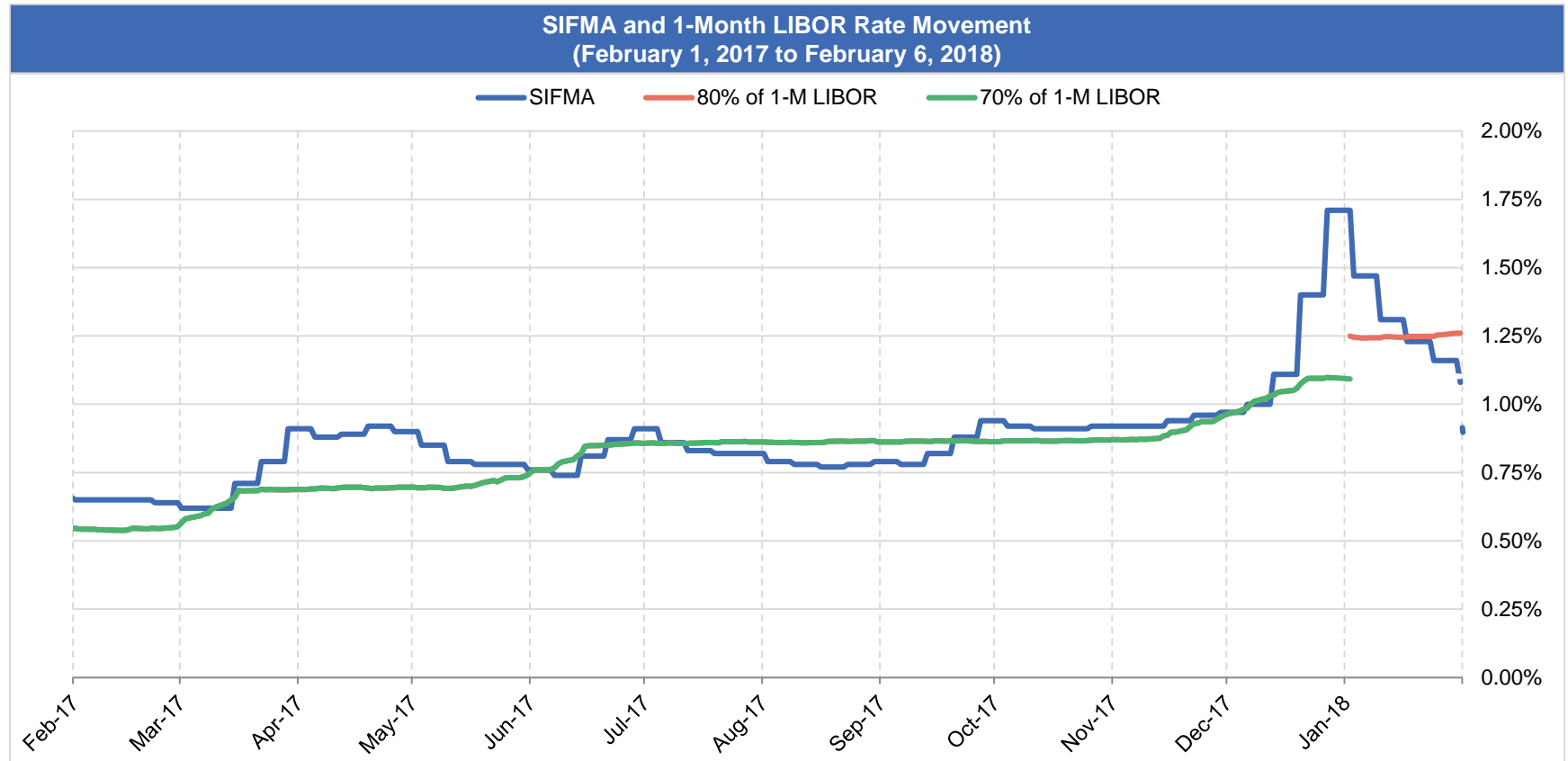
Key Takeaway: Tax reform and the Fed's decision to raise rates have driven rates higher

Source: Thomson Reuters



SIFMA and 1-Month LIBOR Rate Movement

- SIFMA has decreased substantially while LIBOR has remained relatively stable in January



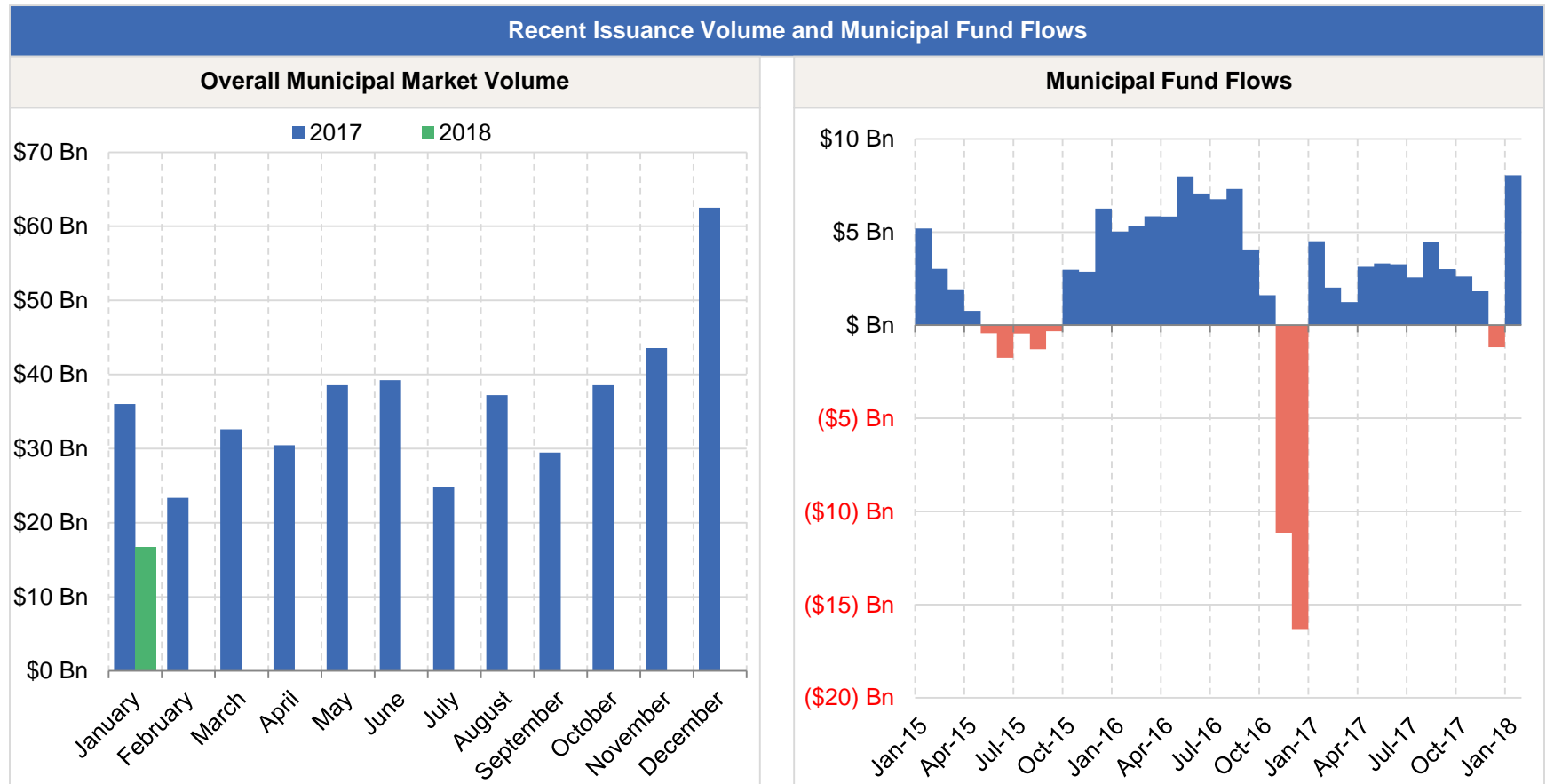
Key Takeaway: Short term rates are beginning to normalize after the tax reform bill was passed

Source: Bloomberg



Municipal Market Supply and Demand

- After record issuance in December in response to the tax reform, supply in January was ~53% lower than the previous year. Municipal bond funds reported net cash inflows in January.

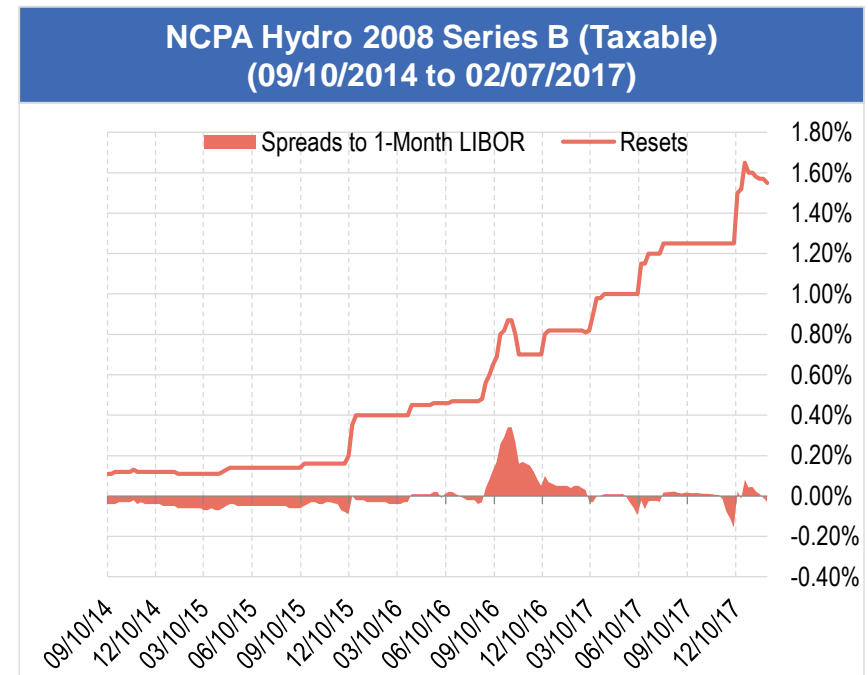
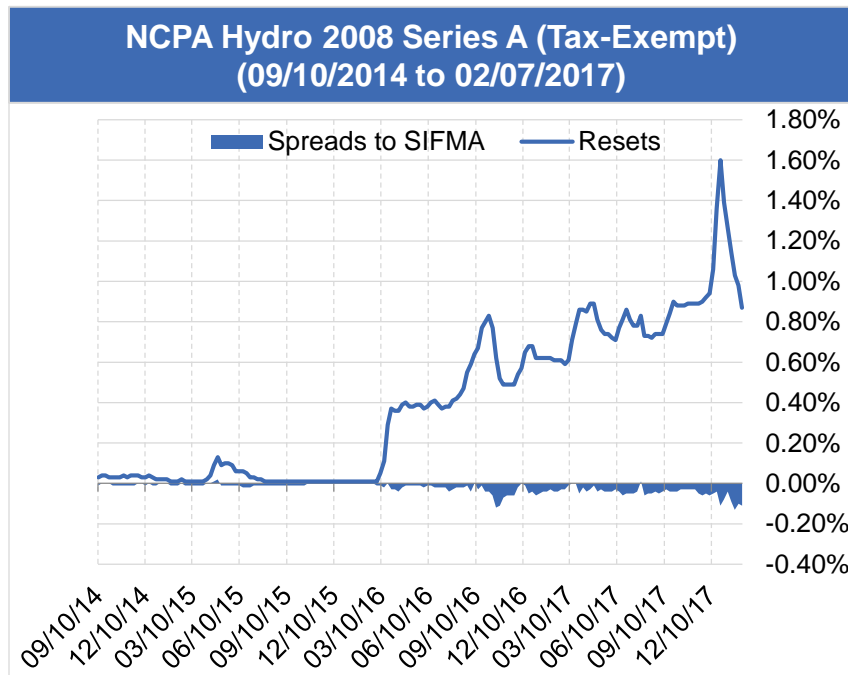


Source: Bond Buyer; Investment Company Institute



Resets on NCPA's Hydroelectric Project 2008 Series A & B Bonds

- As a result of the increase in short-term rates, NCPA's Hydroelectric 2008 Series A and B Bonds have also been resetting higher; however, they continue to trade well versus benchmarks and have been hedged with interest rate swaps



Key Takeaway: *NCPA variable rate bonds have been resetting at or better than benchmark rates*

Source: Thomson Reuters, EMMA



Report on NCPA's Debt Portfolio and Hydroelectric Refunding

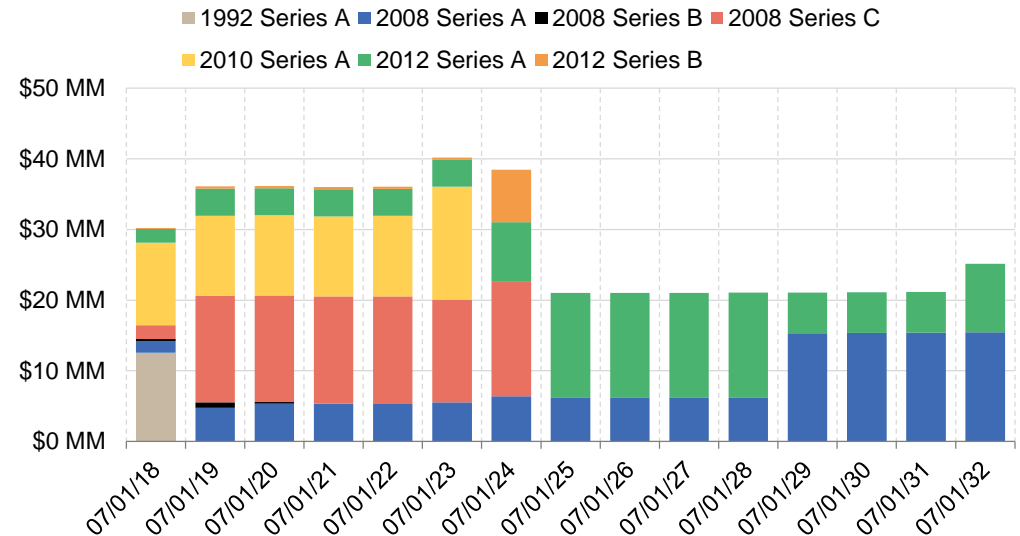


Hydroelectric Project Debt Overview

Hydroelectric Project Participation Percentages

Member	Entitlement Share (%)
Alameda	10.000
Biggs	0.100
Gridley	1.060
Healdsburg	1.660
Lodi	10.370
Lompoc	2.300
Palo Alto	22.920
Roseville	12.000
Santa Clara	35.860
Ukiah	2.040
Plumas-Sierra	1.690

Hydroelectric Project Debt Service



Summary of Outstanding Hydroelectric Project Debt

Ratings (M/S/F): Aa3/A+/A+, Stable Outlooks

Series	Tax Status	Coupon Type	Issue Size	Outstanding Par	Coupon Range	Call Date	Final Maturity
1992 Series A	Tax-Exempt	Fixed-Rate	\$195,610,000	\$12,155,000	6.300%	Non-Callable	7/1/2018
2008 Series A	Tax-Exempt	Variable-Rate	\$85,160,000	\$85,160,000	Var. (3.819%) ^(S)	Current	7/1/2032
2008 Series B	Taxable	Variable-Rate	\$3,165,000	\$1,235,000	Variable ^(V)	Current	7/1/2020
2008 Series C	Tax-Exempt	Fixed-Rate	\$128,005,000	\$77,130,000 ⁽¹⁾	5.000%	7/1/2018	7/1/2024
2010 Series A	Tax-Exempt	Fixed-Rate	\$101,260,000	\$62,975,000	5.000%	7/1/2019	7/1/2023
2012 Series A	Tax-Exempt	Fixed-Rate	\$76,665,000	\$76,665,000	5.000%	7/1/2022	7/1/2032
2012 Series B	Taxable	Fixed-Rate	\$7,120,000	\$7,120,000	4.320%	Make-Whole	7/1/2024

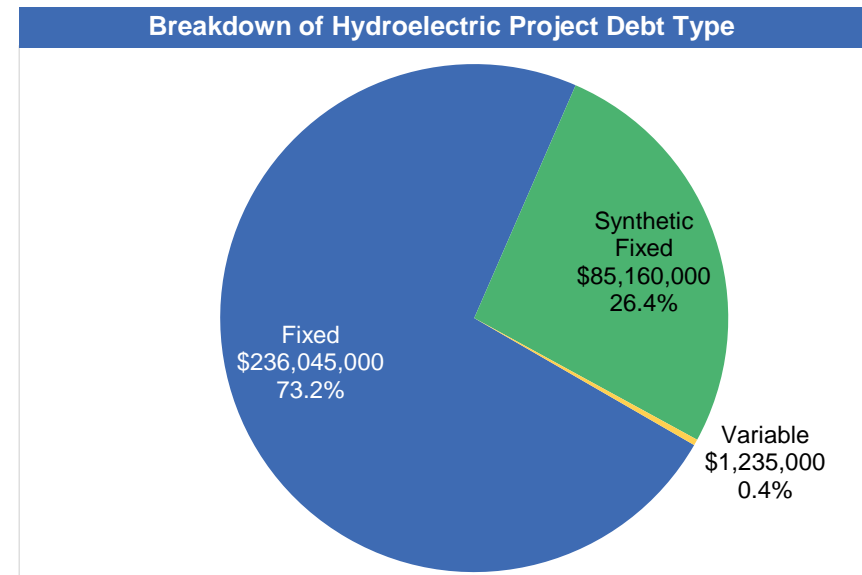
⁽¹⁾ Bonds to be refunded ^(S) Swapped; Please see next page for details, ^(V) 4% variable rate assumed for debt service chart



Hydroelectric Project Debt Overview (Cont'd)

Hydroelectric Project Swap Summary									
Series	NCPA Pays	NCPA Receives	Trade Date	Effective Date	Maturity Date	MTM Value (As of 1/31/18)	Initial Notional	Current Notional	Bank Counterparty
2008 Series A	3.8190%	54% of USD-LIBOR + 0.54%	11/24/04	11/24/04	7/1/32	(\$14,472,874)	\$85,160,000	\$85,160,000	Citibank, N.A., New York (A1/A+/A+)
2008 Series B	USD-LIBOR	5.2910%	11/24/04	11/24/04	7/1/32	\$170,412	\$1,574,000	\$1,073,895	Citibank, N.A., New York (A1/A+/A+)

Hydroelectric Project Liquidity Summary			
Series	LOC Provider	LOC Expiry	Last Reset
2008 Series A	Bank of Montreal (A1/A+/AA-)	September 09, 2019	0.87%
2008 Series B	Bank of Montreal (A1/A+/AA-)	September 09, 2019	1.55%





Hydroelectric Project | *Economics and Schedule*

- The refunding of the Hydroelectric Project, 2008 Series C Bonds are expected to generate approximately \$7.7 million in present value savings, representing over 10% of refunded par, after accounting for:
 - Par-to-proceeds restriction
 - Transferred proceeds penalty
 - Arbitrage yield adjustment for unamortized swap termination payments

Summary (Preliminary; Based Upon 2/8/18 Market Conditions)

	Public Sale
Par Amount of Bonds Refunded	\$77,130,000
Refunded Maturities	2019 – 2024
Par Amount of Refunding Bonds	\$71,175,000 (\$2.2MM taxable)
Rate	Taxable and Tax-Exempt
Issuance Costs	\$425,000 (estimate)
All-In True Interest Cost	2.05%
Average Life of Refunding Bonds	3.88 years
Present Value Savings	\$7,714,000
PV Savings as Pct. of Refunded Par	10.00%
Negative Arbitrage	\$0
Escrow Efficiency	100.00%

Financing Schedule

Event	Date
Finalize rating agency presentations	Week of Feb. 5
Rating agency calls	Week of Feb. 12
Finance Committee to recommend Commission approval	02/13/2018
Final documents submitted for Commission meeting	02/14/2018
Commission meeting to approve financing	02/22/2018
Receive Ratings	02/27/2018
Post POS	02/28/2018
Pricing of Series 2018 Refunding Bonds	03/07/2018
Closing	04/03/2018
Redeem 2008C Hydroelectric Bonds	07/01/2018

Key Takeaway: *The current market continues to provide NCPA with NPV savings over the established threshold*



Appendix: Proposed S&P Ratings Methodology Change



S&P Proposed Summary and Timeline

- The proposed criteria would apply to U.S. ratings and related credit products regarding U.S. retail electric, retail gas, steam, chilled water, and combined utility systems where electric and/or gas is the predominant service.
- Electric distribution cooperatives will be included under this proposed criteria which are currently assessed under *“U.S. Public Finance Criteria: Applying Key Rating Factors to U.S. Cooperative Utilities”*, published Nov. 21, 2007.
- These utilities are units of U.S. local and regional governments (LRGs) or comparable political subdivisions, whose revenues are derived chiefly from user charges for ongoing operations.
 - Examples of debt issued under this criteria include utility revenue bond issued by:
 - Cities, utility boards, utility districts, regional authorities, or distribution cooperatives that provide primarily retail utility service.
- If the proposed changes are adopted, the new criteria will supersede:
 - *“Electric And Gas Utility Ratings”*, published December 16, 2014.



What is Affected?

WHAT IT COVERS

Approximately 275 credit ratings

Utilities that are units of U.S. local and regional governments or comparable subdivisions, whose revenues are derived chiefly from user charges

Includes U.S. Not-for-Profit

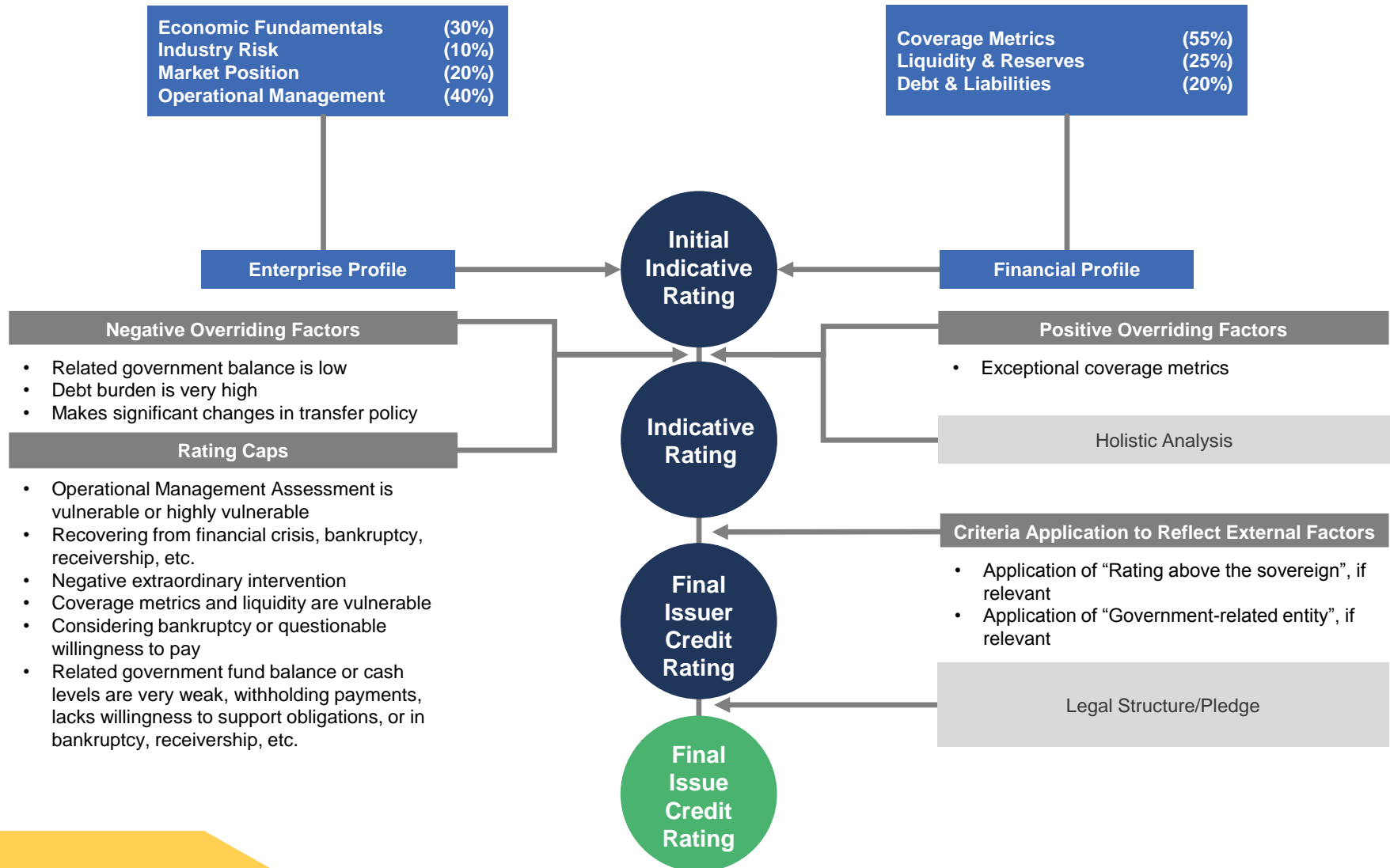
- ✓ Retail Electric
- ✓ Retail Gas
- ✓ Steam
- ✓ Municipal Chilled Water Utilities
- ✓ Electric Distribution Cooperatives

WHAT IT DOES NOT COVER

- ⊖ Joint action agencies and other types of wholesale municipal electric and gas utilities
- ⊖ Generation and Transmission Electric Cooperatives
- ⊖ Investor Owned and Merchant Utilities
- ⊖ Municipal Utilities where electric or gas are not the predominant service



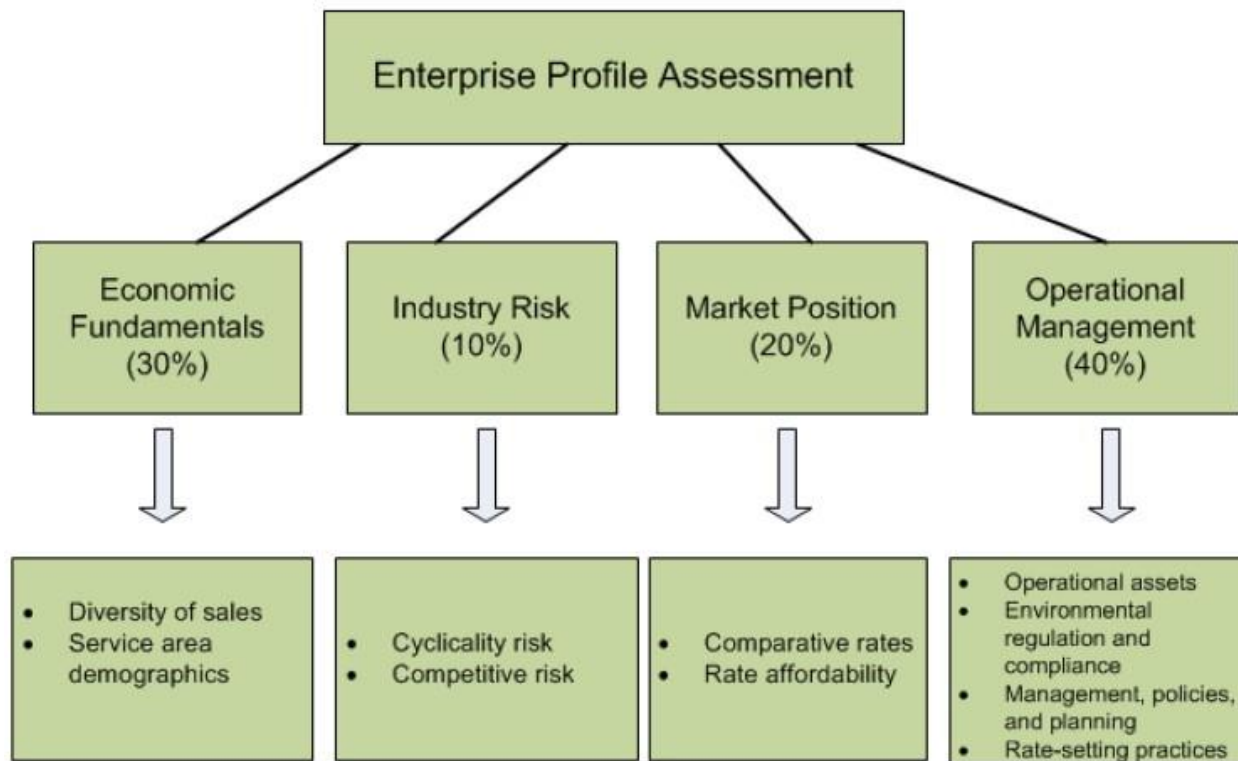
Analytical Framework for Retail Utilities





Proposed Methodology

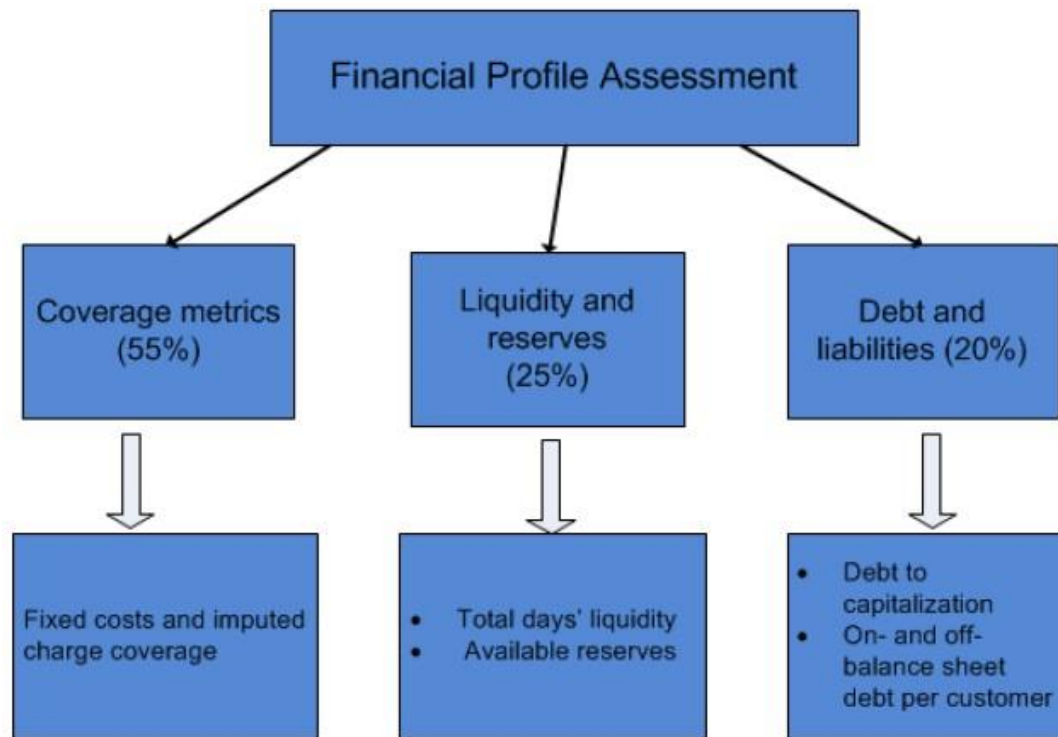
- The chart below shows the assessments used in determining the four enterprise profile factors.





Proposed Methodology (cont'd)

- The chart below shows the assessments used in determining the three financial profile factors.





Proposed Methodology (cont'd)

- Once the final enterprise and financial profile assessments have been determined, they are combined using **Table 1** (*below*) to arrive at the “initial indicative rating.”

Table 1

Combining The Enterprise And Financial Risk Profiles To Determine The Initial Indicative Rating						
Enterprise Risk Profile	Financial Risk Profile					
	1	2	3	4	5	6
	Extremely strong	Very strong	Strong	Adequate	Vulnerable	Highly vulnerable
1 Extremely strong	aaa	aa+	aa-	a	bbb+/bbb	bb+/bb
2 Very strong	aa+	aa/aa-	a+	a-	bbb/bbb-	bb/bb-
3 Strong	aa-	a+	a	bbb+/bbb	bbb-/bb+	bb-
4 Adequate	a	a/a-	a-/bbb+	bbb/bbb-	bb	b+
5 Vulnerable	bbb+	bbb/bbb-	bbb-/bb+	bb	bb-	b
6 Highly Vulnerable	bbb-	bb	bb-	b+	b	b-

- After applying overriding factors and rating caps, a holistic analysis is preformed and an “indicative rating” is established.
 - This is also known as a “stand alone credit profile” (SACP).
- Finally, external factors, such as sovereign risk and extraordinary support or intervention from a related government, are incorporated to determine the final issuer credit rating (ICR).



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