

Financing of Public Utilities

Virginia Municipal League 2025 Annual Conference



October 13, 2025



Kyle A. Laux, Senior Vice President

Kyle Laux began his career with Davenport in 2003 and since that time has served as Municipal Advisor to local governments throughout the nation. Mr. Laux's experience in public finance is diverse and he has led efforts in financial modeling, capital planning and credit rating strategy development for large cities and counties, small towns and regional entities. Mr. Laux also has considerable experience working on behalf of established issuers and entities obtaining their first credit rating. Mr. Laux graduated from Kenyon College with a degree in economics.

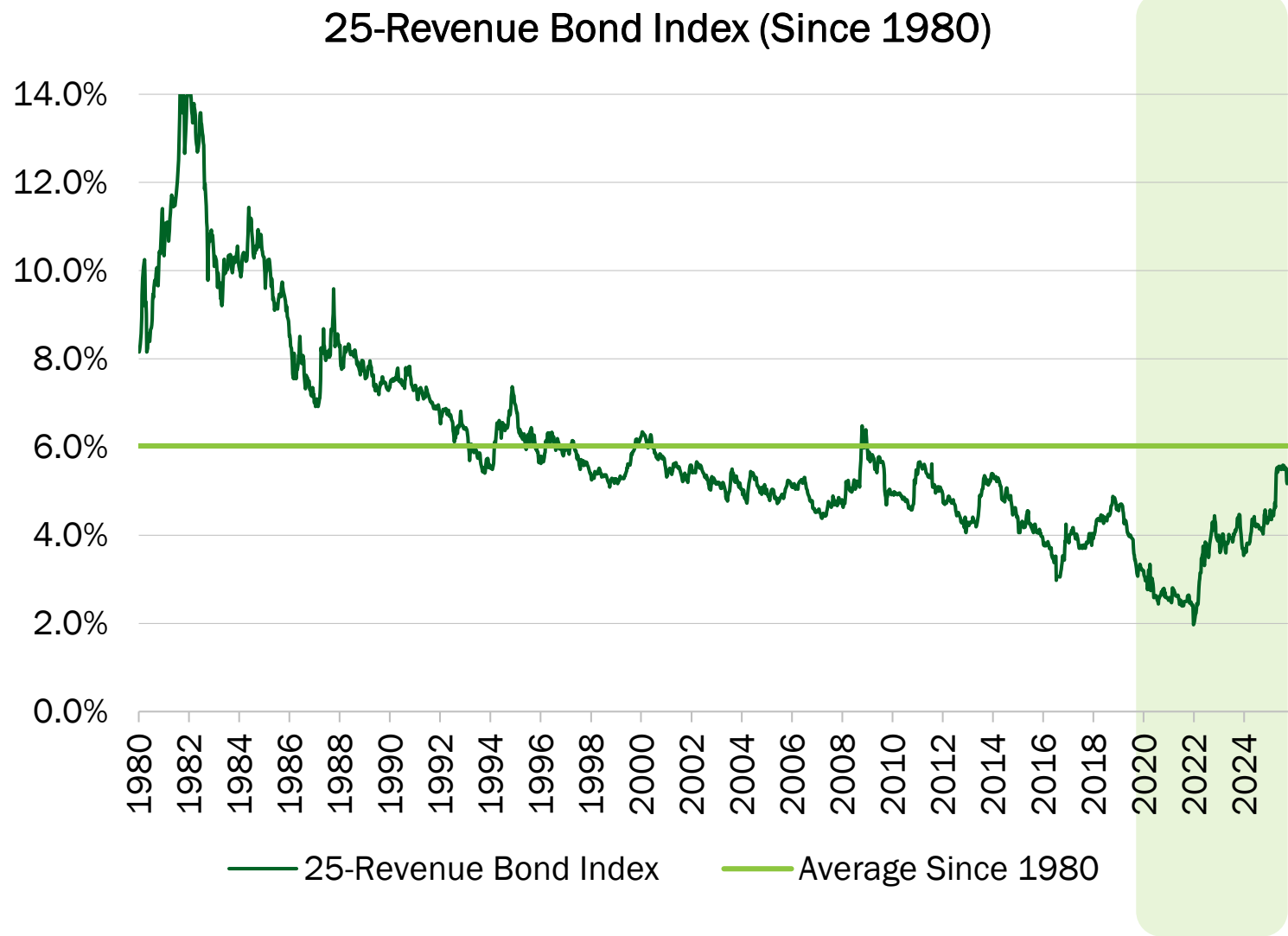


Roland M. Kooch, Jr., Senior Vice President

Roland Kooch has worked in public finance since 1993 and has served as Municipal Advisor to public sector and not-for-profit clients throughout the nation. Since joining Davenport in 1998, Mr. Kooch has led the analytical, financial modeling, and credit work on a wide variety of governmental and enterprise system engagements including large, complex municipal issuers, small local government borrowers and troubled entities. Mr. Kooch received his B.S. in business administration with a major in accounting from Georgetown University in Washington, D.C.

Long-Term Borrowing Interest Rate Trends

Tax-Exempt Interest Rate Trends (cont.)



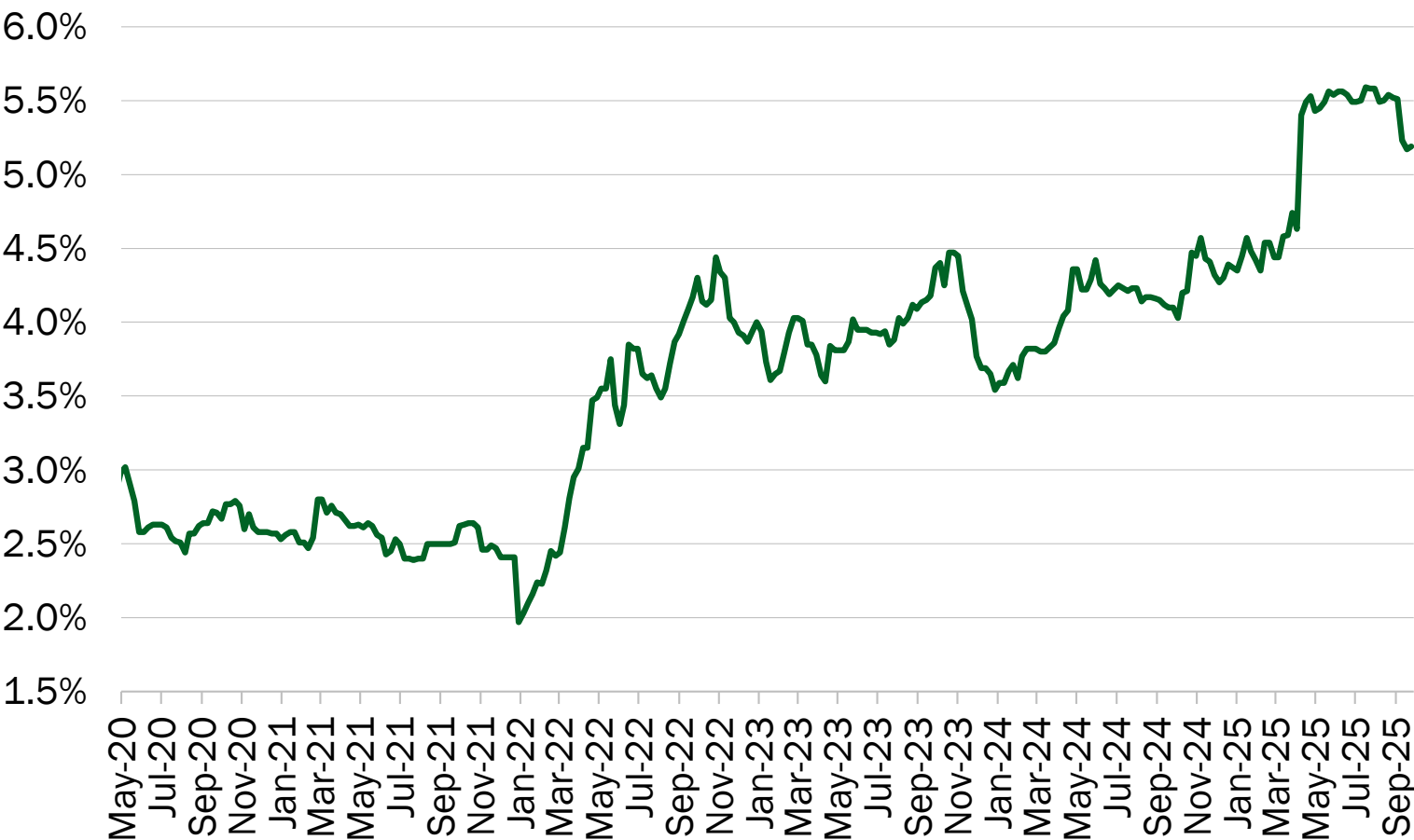
Shaded Region Expanded on Following Page

The 25-year revenue bond interest rates above show the Bond Buyer’s “25-Revenue-Bond Index” which consists of 25 long-term tax-exempt revenue bonds with an average rating of ‘Aa2’/‘AA’ (Moody’s / S&P) that mature in 25 years. The 25-Revenue-Bond Index serves as a general indicator of prevailing interest rates for tax-exempt borrowers. Shown as of September 25, 2025.

Tax-Exempt Interest Rate Trends (cont.)



25-Revenue Bond Index (Since May 2020)



The 25-year revenue bond interest rates above show the Bond Buyer’s “25-Revenue-Bond Index” which consists of 25 long-term tax-exempt revenue bonds with an average rating of ‘Aa2’/‘AA’ (Moody’s / S&P) that mature in 25 years. The 25-Revenue-Bond Index serves as a general indicator of prevailing interest rates for tax-exempt borrowers. Shown as of September 25, 2025.

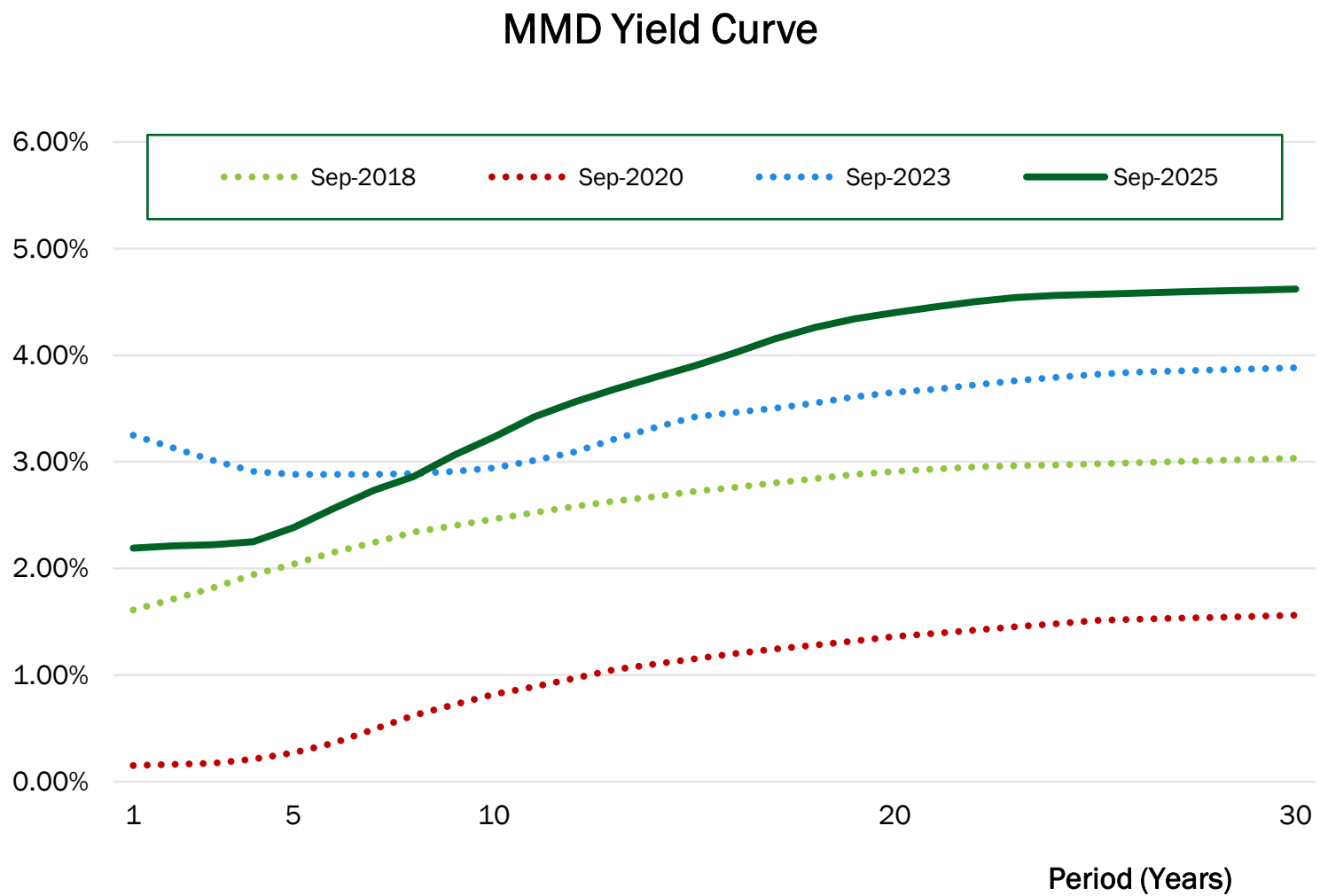
'AAA' MMD Curve



- The 'AAA' MMD Curve is a composite index released on a daily basis by Municipal Market Data, a Thomson Financial company.
- Represents the industry benchmark for tax-exempt municipal yields and is the basis for pricing new issues in the tax-exempt capital markets.
- Enables market participants to gauge pricing efficiency relative to market conditions on a given day.

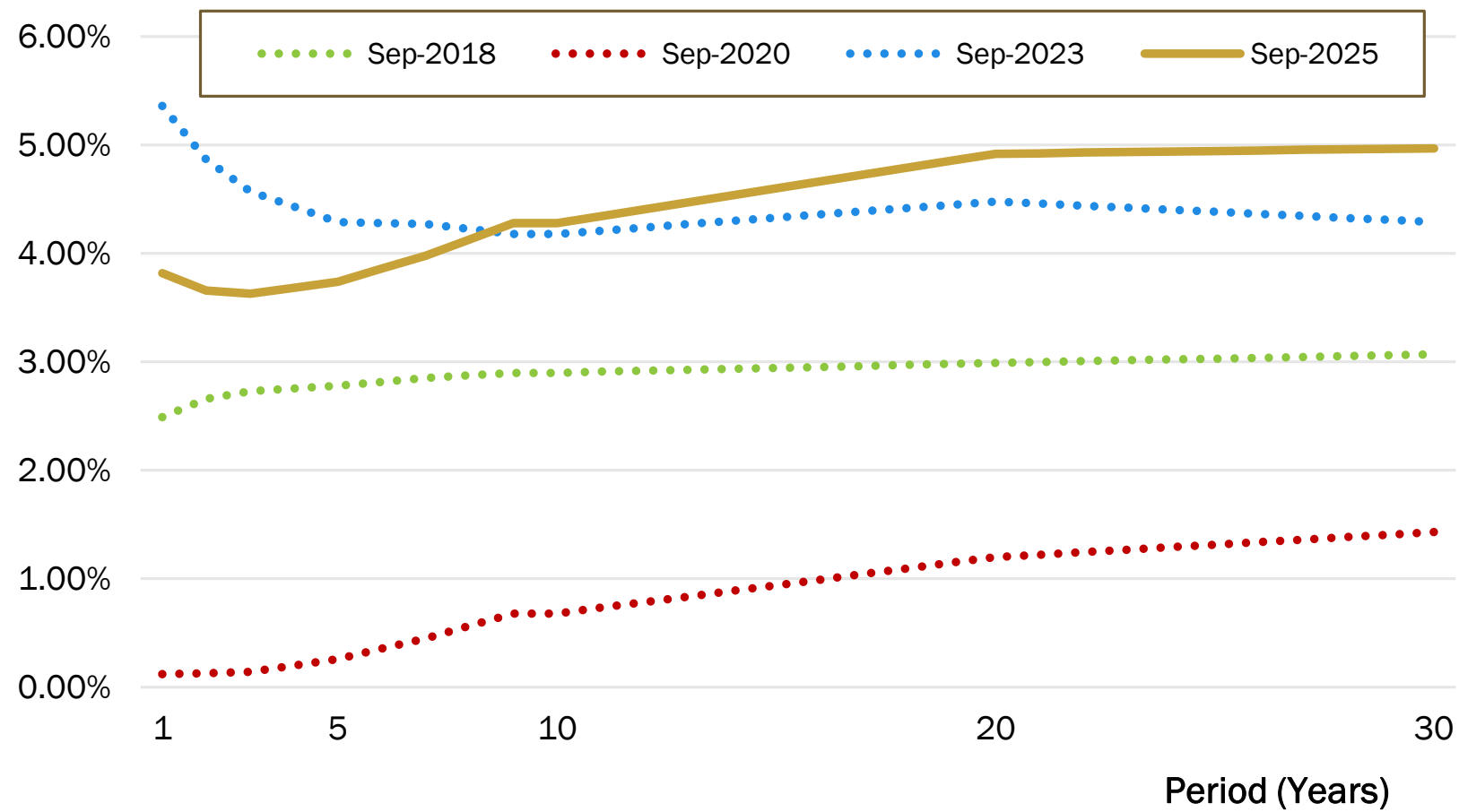
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Historic MMD Yield Curve | Past 7 Years



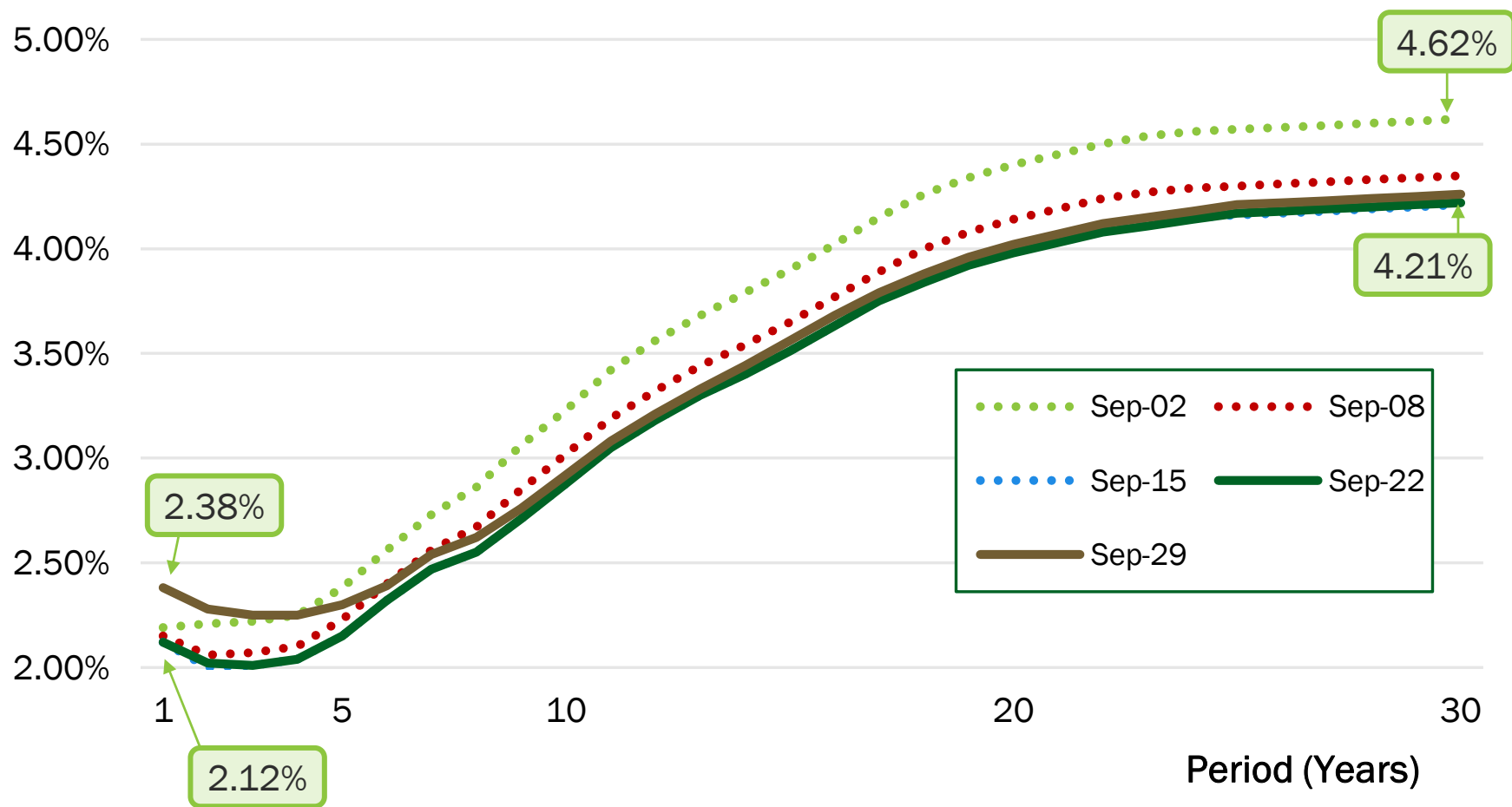


Treasury Yield Curve





MMD Yield Curve



It is Time to Borrow! What's Next?

It's Time to Borrow! What's Next?



- As part of this presentation, we will discuss:
 - Rating Agency Methodologies and what constitutes a highly rated, credit worthy utility system;
 - Preparation strategies in advance of a borrowing;
 - Developing the Plan of Finance; and,
 - Alternative Funding Sources.

Credit Rating Methodologies

Moody's Revenue Bond Methodology



- In March 2024, Moody's revised its rating methodology.

Factor	Factor Weighting	Sub-Factors	Subfactor Weighting
System Characteristics	30%	Asset Condition (Remaining Useful Life)	10.0%
		System Size (O&M)	7.5%
		Service Area Wealth (Median Family Income)	12.5%
Financial Strength	40%	Annual Debt Service Coverage	15.0%
		Days Cash on Hand	15.0%
		Debt to Operating Revenues	10.0%
Management	20%	Rate Management	10.0%
		Regulatory Compliance and Capital Planning	10.0%
Legal Provisions	10%	Rate Covenant	5.0%
		Debt Service Reserve Requirement	5.0%
Total	100%	Total	100.0%

S&P Revenue Bond Methodology



- In April 2022, Standard & Poor's revised its Water and Sewer Rating Methodology.

Enterprise Risk Profile

Economic Fundamentals 45%

Industry Risk 20%

Market Position 25%

Operational Management Assessment 10%

Financial Risk Profile

40% All-in Coverage

40% Liquidity and Reserves

10% Debt and Liabilities

10% Financial Management Assessment

Modifiers and Caps

Holistic Analysis

Criteria application to reflect external factors

Legal Structure/Pledge of Revenue Bond

Fitch Revenue Bond Methodology



- In March 2023, Fitch revised its approach to Municipal Water and Sewer Utilities.

Revenue Defensibility

Revenue Source
Characteristics

Service Area
Characteristics

Rate Flexibility

Affordability

Operating Risks

Operating Cost
Burden

Capital Planning and
Management

Financial Profile

Leverage Profile

Liquidity Profile

Net
Adjusted
Debt to
Adjusted
FADS

Other
Considerations

Coverage of
Full
Obligations
Ratio

Liquidity
Cushion
Ratio

Each of the Green Boxes are graded on a scale of 'aa', 'a', 'bbb' or 'bb'

Rating Methodology – Debt Service Coverage



Moody's Debt Service Coverage Rating Criteria	
Rating	Annual Debt Service Coverage (15%)
Aaa	> 2.00x
Aa	2.00x - 1.70x
A	1.70x - 1.25x
Baa	1.25x - 1.00x
Ba	1.00x - 0.70x
B and Below	<0.70x

Standard and Poor's Assessment of All-In Coverage	
Initial Assessment	All-In Coverage
1	> 1.60x
2	1.60x - 1.40x
3	1.40x - 1.20x
4	1.20x - 1.10x
5	1.10x - 1.00x
6	< 1.00x

Rating Methodology – Days Cash on Hand



Moody's Debt Service Coverage Rating Criteria	
Rating	Annual Debt Service Coverage (15%)
Aaa	>250
Aa	250 - 150
A	150 - 35
Baa	35 - 15
Ba	15 - 7
B and Below	< 7

Standard and Poor's Liquidity and Reserve Preliminary Evaluation		
Initial Assessment	Days Cash on Hand	Actual Cash
1	Greater than 150	More than \$75 million
2	90 to 150	\$20 million to \$75 million
3	60 to 90	\$5 million to \$20 million
4	30 to 60	\$1 million to \$5 million
5	15 to 30	\$500,000 to \$1 million
6	Less than 15	Less than \$500,000

Preparation Strategies

Understanding Historical Financial Results



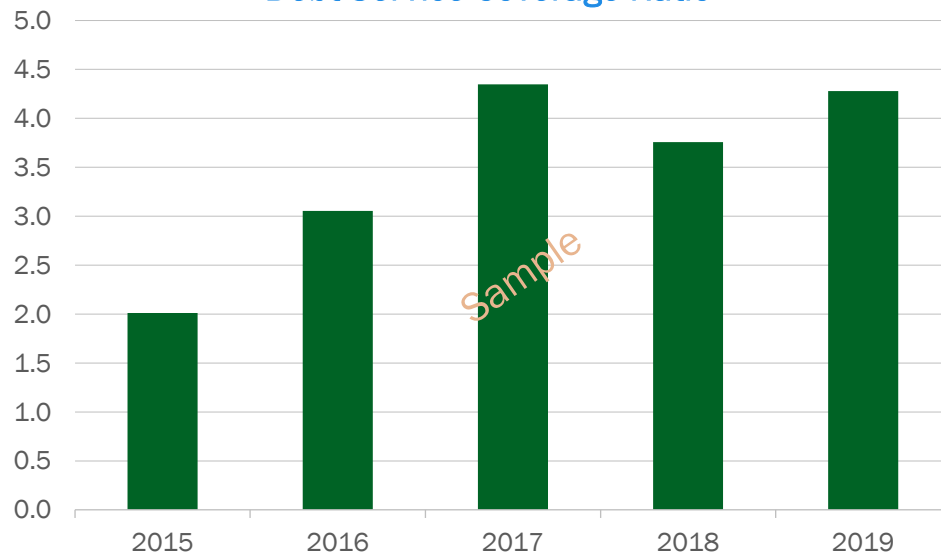
- In order to tell the story to the rating agencies or potential lenders, it is important to understand the historical financial results including, but not limited to:

- Revenues and Expenditures;
- Days Cash on Hand (Reserves); and,
- Debt Service Coverage.

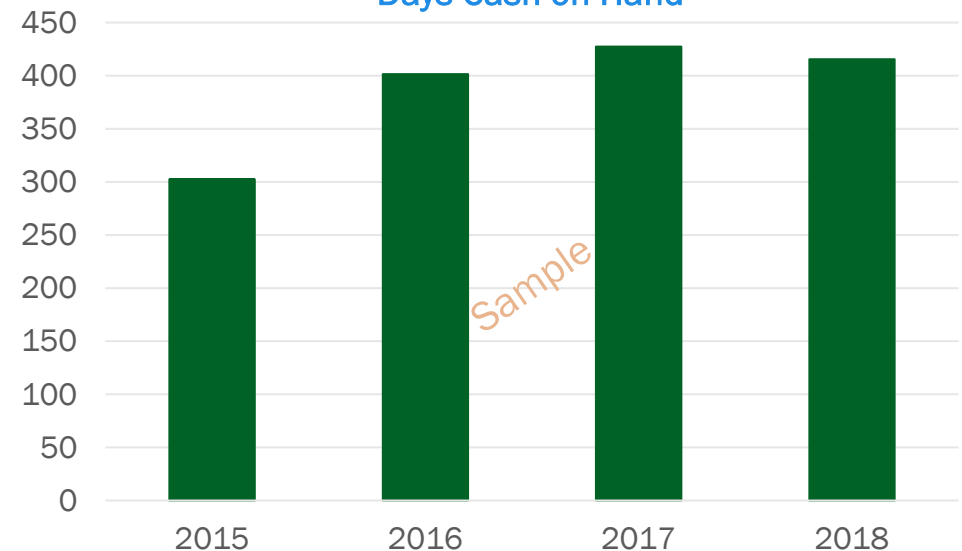
Historic Revenues & Expenditures



Debt Service Coverage Ratio



Days Cash on Hand

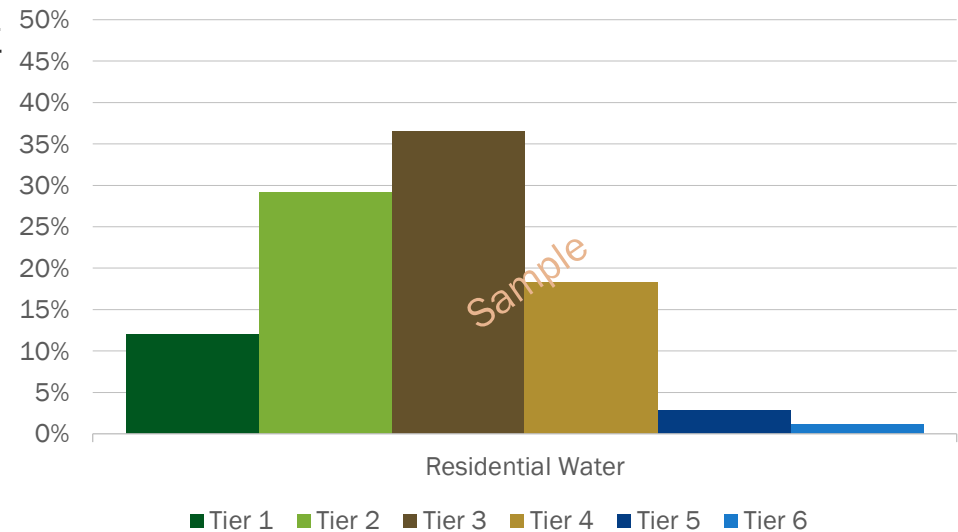


Understanding Historical Operations



- Similarly, understanding other historical operational metrics is critical. This includes, but is not limited to:
 - Existing Debt Profile;
 - Current Monthly Bills;
 - Historic Rate Increases; and,
 - Consumption (by tier or major user).

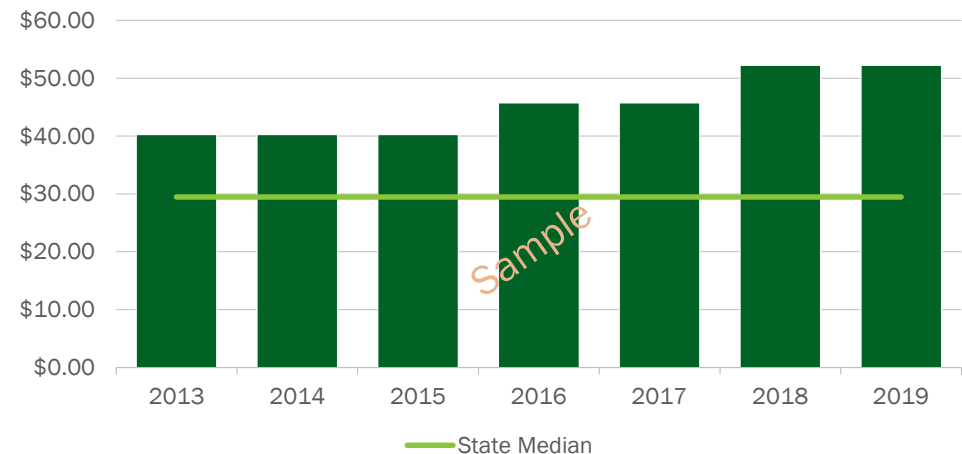
2019 Residential Water Accounts By Tier



Existing Debt Profile



Average Monthly Residential Bill 5,000 Gallon User



Financial Policies

- Financial Practices and Procedures should be formalized and adopted by the governing body.
- Certain policies include debt service coverage, days cash (reserves), investments and reporting, among others.
- When communicating with the governing body, it is imperative to understand:
 - What the policy is intended to govern;
 - The view of the Rating Agencies and impact on credit worthiness;
 - What is the existing policy; and,
 - What are the recommendations for improvement.

Develop Multi-Year Operating & Capital Planning

1. Develop a multi-year operating and capital plan (typically 5-years).
2. Review operating expenditure assumptions and identify capital projects.
3. Review assumptions for various sources of revenues and identify preliminary capital funding sources.
 - Having Debt is not always a negative; for large projects that will last many years, set it up so all that will use/service provided for (i.e., WWTP, Pump Stations and Water Lines) will pay a portion of the cost.
4. While the multi-year capital plan should balance, it is acceptable for the multi-year operating projection to identify shortfalls or surpluses.
5. Review any resulting debt funding from both a **Debt Capacity** and **Debt Affordability** perspective.

Sample Utility Multi-Year Operating and Capital Budget



	Budget 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022	Projected 2023
Operating Revenues						
Charges for services:						
Water	\$ 1,740,983	\$ 1,823,986	\$ 1,910,947	\$ 2,002,053	\$ 2,097,503	\$ 2,197,504
Sewer	1,042,941	1,092,664	1,144,758	1,199,336	1,256,515	1,316,421
Other revenue	198,500	207,964	217,879	228,266	239,149	250,551
Total Operating Revenues	\$ 2,982,424	\$ 3,124,614	\$ 3,273,583	\$ 3,429,655	\$ 3,593,167	\$ 3,764,475
Operating Expenditures						
Personnel Costs	\$ 799,145	\$ 815,128	\$ 831,430	\$ 848,059	\$ 865,020	\$ 882,321
Contractual services	374,168	381,651	389,284	397,070	405,011	413,112
Supplies & Materials	424,850	433,347	442,014	450,854	459,871	469,069
Total Operating Expenditures	\$ 1,598,163	\$ 1,630,126	\$ 1,662,729	\$ 1,695,983	\$ 1,729,903	\$ 1,764,501
Operating income (loss)	\$ 1,384,261	\$ 1,494,488	\$ 1,610,855	\$ 1,733,672	\$ 1,863,264	\$ 1,999,974
Nonoperating Revenues (Expenses)						
Interest revenue	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
Miscellaneous revenue	1,400	1,400	1,400	1,400	1,400	1,400
Use of Fund Balance	100,000	-	-	-	-	-
Use of Bond Proceeds	164,000	-	-	-	-	-
Capital Outlay	(996,357)	-	-	-	-	-
Contingency	(22,984)	(22,984)	(22,984)	(22,984)	(22,984)	(22,984)
Total Nonoperating Revenues (Expenses)	\$ (733,918)	\$ (1,584)	\$ (1,584)	\$ (1,584)	\$ (1,584)	\$ (1,584)
Income (loss) before transfers	\$ 650,343	\$ 1,492,904	\$ 1,609,271	\$ 1,732,088	\$ 1,861,680	\$ 1,998,390
Transfers Out	\$ (276,866)	\$ (312,461)	\$ (327,358)	\$ (342,966)	\$ (359,317)	\$ (376,448)
Income (loss) After transfers	\$ 373,477	\$ 1,180,443	\$ 1,281,912	\$ 1,389,122	\$ 1,502,364	\$ 1,621,943
Existing Debt Service	\$ (373,478)	\$ (373,478)	\$ (373,478)	\$ (373,478)	\$ (373,478)	\$ (373,478)
Projected Debt Service	\$ -	\$ (398,115)	\$ (398,115)	\$ (398,115)	\$ (796,230)	\$ (796,230)
Total Debt Service	\$ (373,478)	\$ (771,593)	\$ (771,593)	\$ (771,593)	\$ (1,169,708)	\$ (1,169,708)
Change in net position	\$ (1)	\$ 408,850	\$ 510,320	\$ 617,529	\$ 332,656	\$ 452,235
Operating Coverage	3.71	1.94	2.09	2.25	1.59	1.71
Coverage After Transfers/Capital	1.00	1.53	1.66	1.80	1.28	1.39

A local authority or utility that has a multi-year outlook enables them to budget more effectively and navigate future debt obligations.

It is important for a local authority or utility to monitor and anticipate how future capital projects or infrequent expenditures could affect their debt affordability and capacity.

Comprehensive Financial Review



- Provide insight on revenue history, spending practices and resulting fund balance levels
- Measure existing and projected financial standing with respect to:
 - Peer Virginia Utilities;
 - National Medians; and,
 - Other Comparative Groups, as necessary.
- Identify:
 - Revenue and Expenditure Trends;
 - Year-to-year change in Cash Reserve Balances;
 - Operating performance and Impact on future financial flexibility; and,
 - Growth trends that may create opportunities or potential areas of concern.

Developing the Plan of Finance

Municipal Financial Advisor's Role in the Financing Process



1. Develop the Plan of Finance

- Financial Modeling
- Presentation of Alternatives
- Credit Analysis

2. Communicate Risks and Benefits

- Board Meetings
- Market Updates
- Risk Analysis

3. Understanding of Credit Process

- Rating Methodology
- Develop Credit Presentation

4. Assist in Retaining the Most Qualified Financial Institutions to Execute the Plan

- Identify Candidate Firms
- Competitive Selection Process
- Utilize Legacy Firm

5. Facilitate Financing Team Coordination and Scheduling

- Management of Process
- Issuer's Counsel
- Bond Counsel
- Outside Consultants
- Underwriters & Bankers

6. Provide Expert Advice in Market Access and Negotiations

- Financing Documents
- Disclosure Documents
- Underwriter Negotiations
- Sale of Bonds
- Closing of Bonds

Questions to Answer when Capital Planning



1. **Debt Capacity:** How much can you finance and remain within policies/prudent financial levels?
2. **Debt Affordability:** How much can you afford to finance? How will you pay the principal and interest back?
3. **Construction Financing:** Should you utilize interim financing through a bank line or a sale of notes?
4. **Permanent Financing:** How much of the project should be financed with long term fixed rate debt?
5. **Equity:** Should you invest your reserves or contribute a portion to reduce borrowing?
6. **Amortization:** Over what period should the debt be amortized and how much flexibility do you need to accelerate retirement?
7. **Security:** What revenue streams and reserves should you pledge to secure the debt?
8. **Existing Debt:** What is the best option to accommodate existing debt?
9. **Investments:** How can project funds most effectively be invested prior to use?

Evaluate Issuance Method Options



Direct Bank Loan



Public Market Issuance



State / Federal Programs (e.g., VRA, SRF, USDA)

Competitive vs. Negotiated Sales Public Sales

- A competitive sale is normally the preferred method of sale with a highly rated issuer.
- This process typically ensures that competitive market forces will produce the lowest cost of funds.
- In certain circumstances, a negotiated financing or a direct bank loan may be the more effective financing approach, including financings with the following characteristics:
 - Unconventional or Complex Financial Structures;
 - New Revenue-Based Credits or First Time Issuers;
 - Controversial or Problem Credits; and,
 - Non-Rated or Baa/BBB Credits
- Additionally, a negotiated sale may be preferred in a time of greater market volatility, such as the COVID-19 pandemic.

Competitive vs. Negotiated Sales Public Sales (cont.)



	Negotiated		Competitive
Type of Issuer	-New or Infrequent Issuer -Special Government -Utility	↔	-Frequent Issuer -Standard General Government
Credit Structure	-All Rating Types -General Obligation -Revenue Supported -Tax Increment	↔	-'AA' and 'AAA' Rated -General Obligation -Straightforward Revenue Credits Without a "Story"
Transaction Complexity	-Highly Complex with Tax Issues/Concerns -Multi-Series Refundings with High Degree of Market Sensitivity	↔	-No Tax Issues / Basic Tax Structure -Single-Series Refunding with Basic Structures
Market Conditions	-Volatile -End of Year Market Uncertainty	↔	-Stable Market with Little or No Uncertainty
Timing Flexibility	-More Flexibility to Manage Specific Timing Constraints and Deadlines	↔	-Less Flexibility in Timing the Transaction

Other Considerations Ahead of Borrowing

■ Market Conditions

- Without attempting to ‘time the market’, how can we remain cognizant of overall economic trends/investor demand?

■ Documentation / Disclosure

- How will your financing documents / legal agreements for this borrowing affect your ability to borrow in the future?

■ Reimbursement Resolution

- If the potential is there to spend cash ahead of executing a borrowing, consider putting a Reimbursement Resolution in place to replenish reserves using bond proceeds.

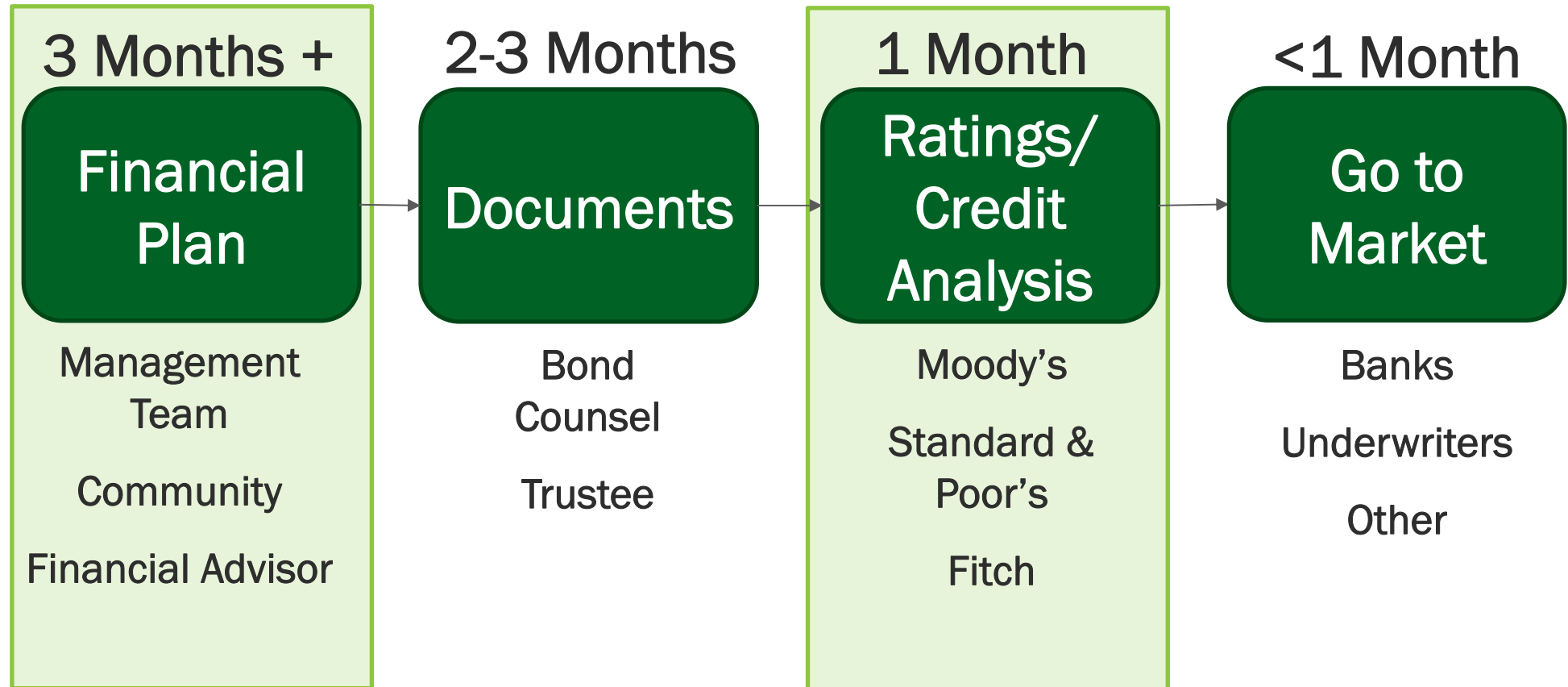
■ Ordinance and/or Authorizing Resolution

- Parameters should be set such that flexibility to execute in a timely manner is not disrupted; at the same time, the amounts should consider what is Politically Palatable.

Financing Timeline



- How long does it take to secure funding for capital projects?
- Other timing considerations...fiscal year end, budget adoption, major economic development announcements, etc.

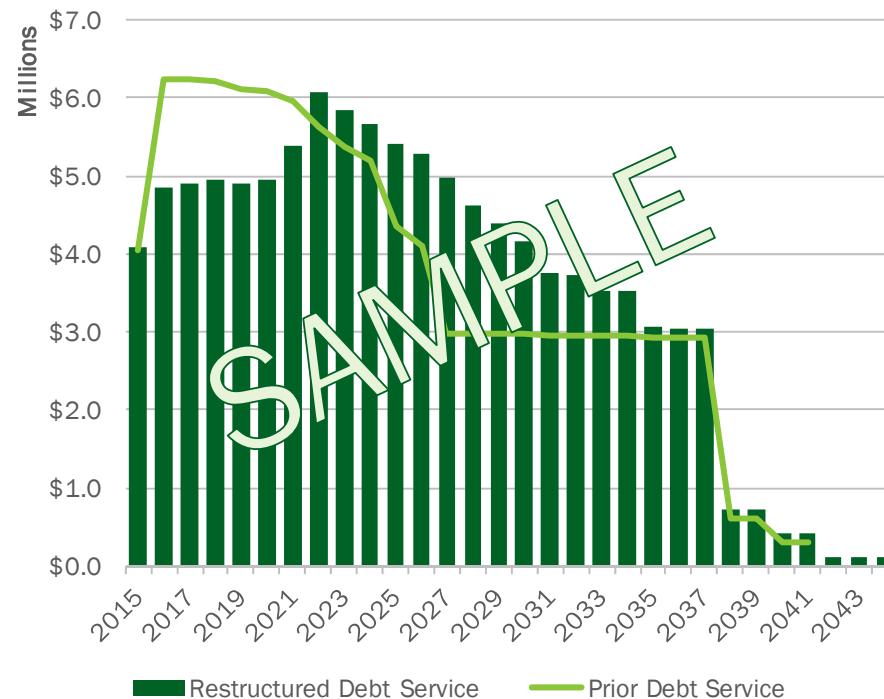


Alternative Funding Solutions

Alternative Solutions: Debt Restructuring



- A Utility has the ability to restructure their debt portfolio in order to gain some short term cash flow relief.
- The hypothetical example below shows how this utility got \$1 million in relief for their next five (5) years.



Alternative Solutions: Refunding



- The Tax Cuts and Jobs Act of 2017 eliminated the ability of Tax-Exempt issuers to Advance Refund existing debt (i.e. more than 90 days from the redemption date) with tax-exempt bonds.
 - Therefore, in order to refinance existing debt with tax-exempt bonds, an issuer would have to wait until 90 days prior to the redemption date to take advantage of lower rates and refinance existing debt.
 - Alternatively, issuers can refinance using taxable bonds more than 90 days in advance of the call date. Due to recent drops in interest rates, taxable bonds have been used more frequently to refinance tax-exempt debt.

- Typically, the opportunity to refinance an existing bond issue for debt service savings is worth pursuing if the net present value savings is in excess of the industry standard of 3.00%.
 - However, most taxable refinancings that have been brought to market in the last several months have had Net Present Value savings well in excess of the 3% industry standard.

Alternative Solutions: Cash Optimization



- This strategy is a two-step process involving a defeasance to maturity of the Bonds.
- This defeasance would be implemented by purchasing a SLGS / OMS Escrow with cash on hand.
- The second step in the process is to issue tax-exempt new money bonds.
- The new money bonds would be pay-go capital projects that would have been cash funded.

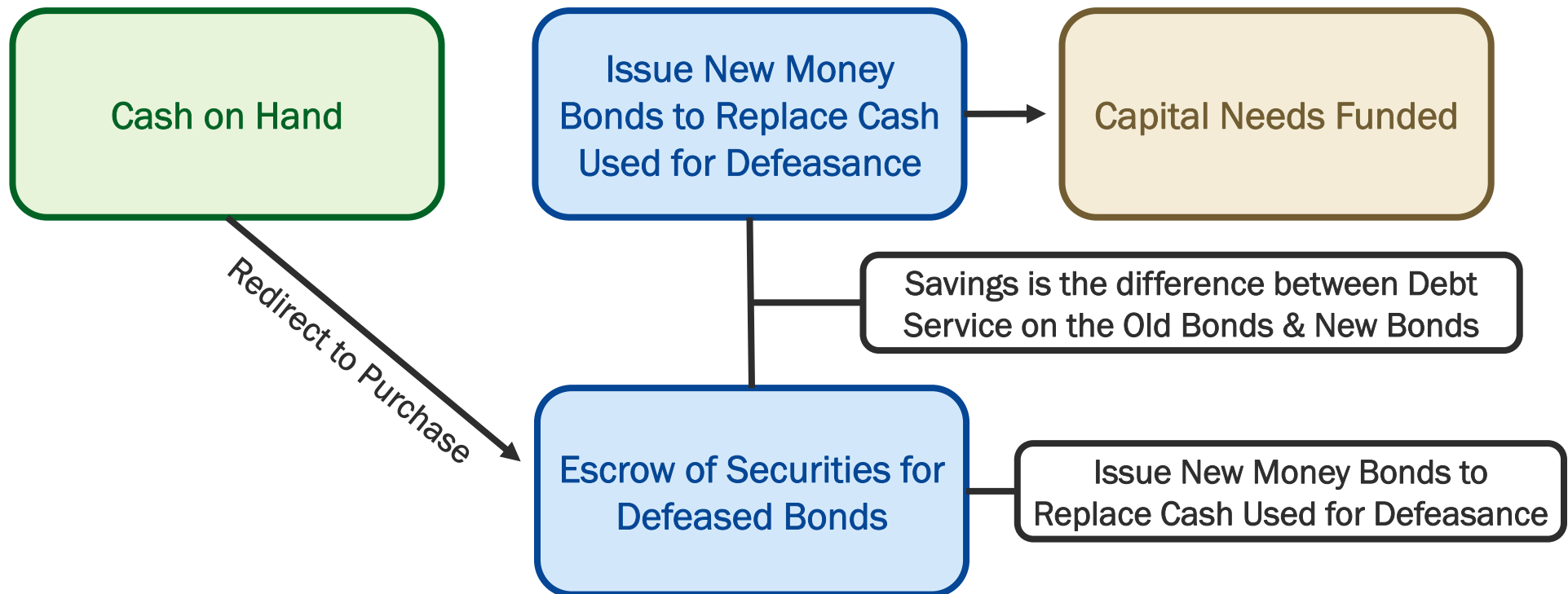
Alternative Solutions: Cash Optimization (cont.)



Current Use of Cash



Cash Optimization Strategy



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