

Exploring Debt Refinancings

October 2023



What is a debt refinancing?

- A new debt obligation issued for the purposes of paying down existing debt, typically with the goal of achieving annual debt service savings.
 - Same concept as refinancing a mortgage.
- Reasons to conduct a refinancing
- Types of refinancings
- Other related concepts

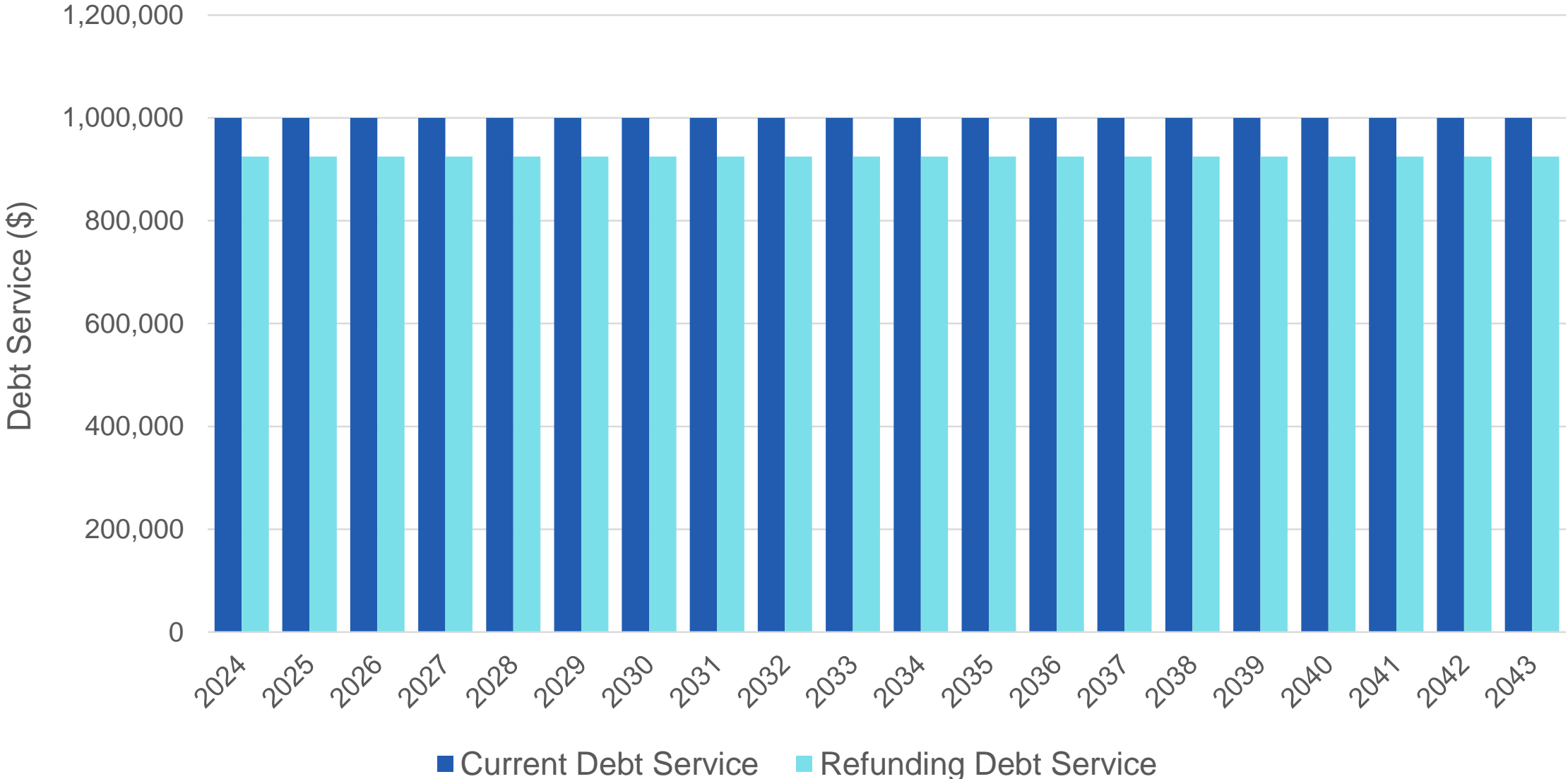
Refunding Basics

- Two types of refundings under federal tax law:
 - Current refundings
 - Prior debt is paid off within 90 days of the issuance of the new bonds
 - Advance refundings
 - Prior debt is paid off more than 90 days after of the issuance of the new bonds.
 - 2017 Tax Cuts and Jobs Act eliminated tax-exempt advance refundings
 - Advance refundings can still be done on a taxable basis.

Refunding Basics

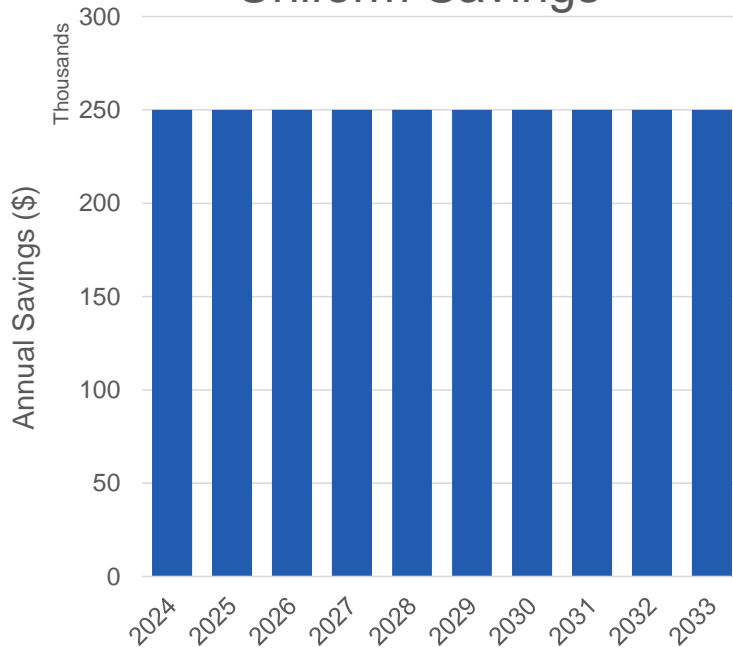
- Common reasons for conducting a refunding:
 1. Debt Service Savings
 2. Planning for Future Debt
 - Common with comprehensive plans of finance requiring multiple issuances.
 - Example: School Districts building multiple schools over a 5- to 10-year period
 3. Eliminating Restrictive Covenants
 - Example: Overly restrictive additional bonds test
 4. Liquidating a Reserve Fund
 - Instantly provides access to unused cash

Refunding Basics



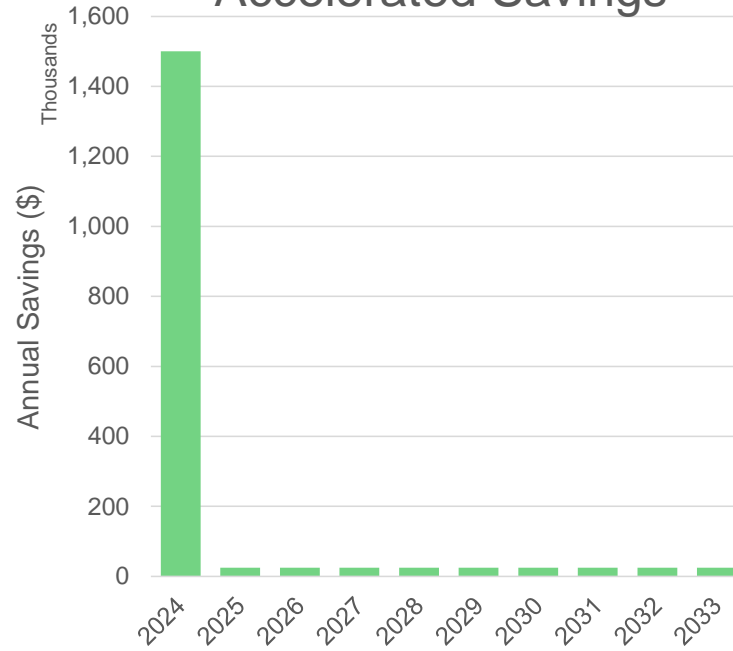
Common Refunding Structures

Uniform Savings



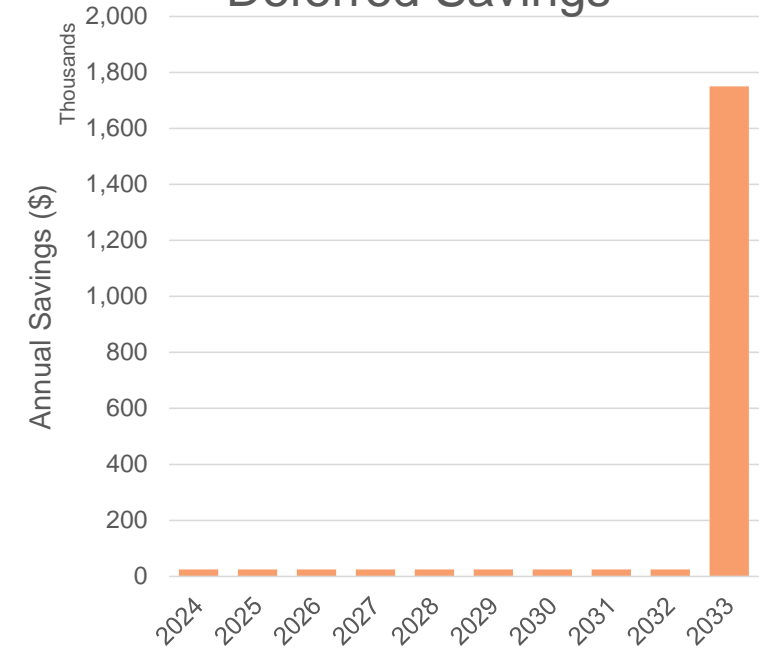
- Commonly used structure
- Evenly distributes gross annual savings
- Maintains shape of existing debt service
- “Middle-of-the-road” option

Accelerated Savings



- Provides upfront savings
- Useful if savings is needed in near-term
- Typically generates lowest total savings

Deferred Savings



- Provides savings at or near the final maturity
- Useful if savings is not needed in near-term
- Typically generates highest total savings

Common Optional Redemption (Call) Features

Par Call

- Issuers have the ability to call debt at face value (or par).
- Expressed as a price of 100.00%.
- Example Language: The Bonds maturing on or after December 1, 2034 are subject to prior redemption, by and at the sole option of the City, either in whole or in part (as selected by the City) on any date on or after December 1, 2033, in integral multiples of \$5,000, at par plus, in each case, accrued interest to the redemption date.

Make-Whole Call

- Typically a two pronged test determined to be the greater of (i) 100% of the principal amount of the Make-Whole Bonds to be redeemed and (ii) the sum of the present value of the remaining scheduled payments of principal and interest on the Make-Whole Bonds to be redeemed.
- In this case, the call price cannot be less than par.
- Call price changes daily as interest rates change (if calculated price is greater than par).

Refunding with taxable bonds

- Both current and advance refundings are usually done to achieve interest rate and cash flow savings
 - With taxable bonds this is usually accomplished when taxable and tax-exempt rates are on parity with each other
- Issuers also utilize taxable bonds to defer principal payments or re-amortize debt
 - This is sometimes called a “scoop and toss” or “principal deferment”
- Taxable bonds can also be utilized to with “convertible” bonds or in conjunction with a “forward delivery” bond structure

Efficiency Measures

- NPV Savings as a Percentage of Refunded Par
 - Measures total savings relative to principal amount of the bonds being refunded
- Negative Arbitrage
 - Measures the earning power of your escrow
- Opportunity Cost Index
 - Measures savings results from “Now vs. Later” perspective

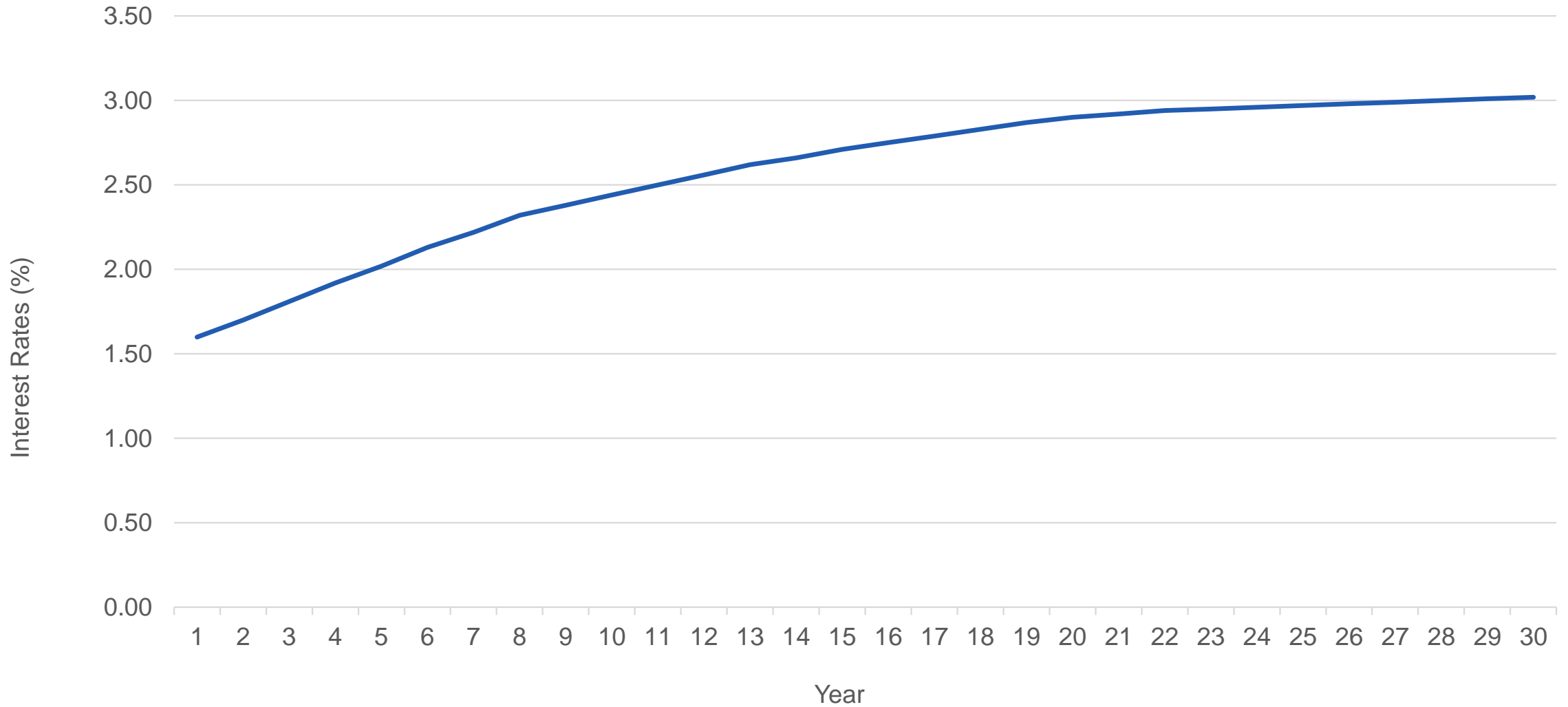
Efficiency Measures

Refunding Candidates							Refunding Rates			Arbitrage Statistics		Savings Statistics	
Series Name	Dated Date	Maturity	Par Amount	Coupon	Call Date	Call Price	Refunding Bond Yield	Refunding Bond Coupon	Escrow Rate	Negative Arbitrage	Neg Arb % Savings	NPV Savings	NPV % Savings
Series 2014	6/1/2014	12/1/2034	5,950,000	4.000	6/1/2024	100	2.17%	2.170%	0.050%	71,632	9.57%	748,558	12.58%
Series 2014	6/1/2014	12/1/2035	8,500,000	4.000	6/1/2024	100	2.27%	2.270%	0.050%	107,044	9.98%	1,072,154	12.61%
Series 2015	12/1/2015	12/1/2026	4,045,000	5.000	12/1/2025	100	1.10%	1.100%	0.270%	65,358	569.96%	11,467	0.28%
Series 2015	12/1/2015	12/1/2027	5,960,000	5.000	12/1/2025	100	1.42%	1.420%	0.270%	132,680	94.23%	140,808	2.36%
Series 2015	12/1/2015	12/1/2028	6,255,000	5.000	12/1/2025	100	1.62%	1.620%	0.270%	162,893	59.52%	273,698	4.38%
Series 2015	12/1/2015	12/1/2029	6,565,000	5.000	12/1/2025	100	1.77%	1.770%	0.270%	189,464	46.26%	409,595	6.24%
Series 2015	12/1/2015	12/1/2030	400,000	3.000	12/1/2025	100	1.87%	1.870%	0.270%	12,739	n/a	(1,058)	(0.26%)
Series 2015	12/1/2015	12/1/2031	6,500,000	5.000	12/1/2025	100	1.97%	1.970%	0.270%	211,859	33.47%	632,908	9.74%
Series 2015	12/1/2015	12/1/2032	5,090,000	4.000	12/1/2025	100	2.07%	2.070%	0.270%	178,556	65.43%	272,910	5.36%
Series 2015	12/1/2015	12/1/2033	3,620,000	3.375	12/1/2025	100	2.12%	2.120%	0.270%	131,869	164.02%	80,399	2.22%

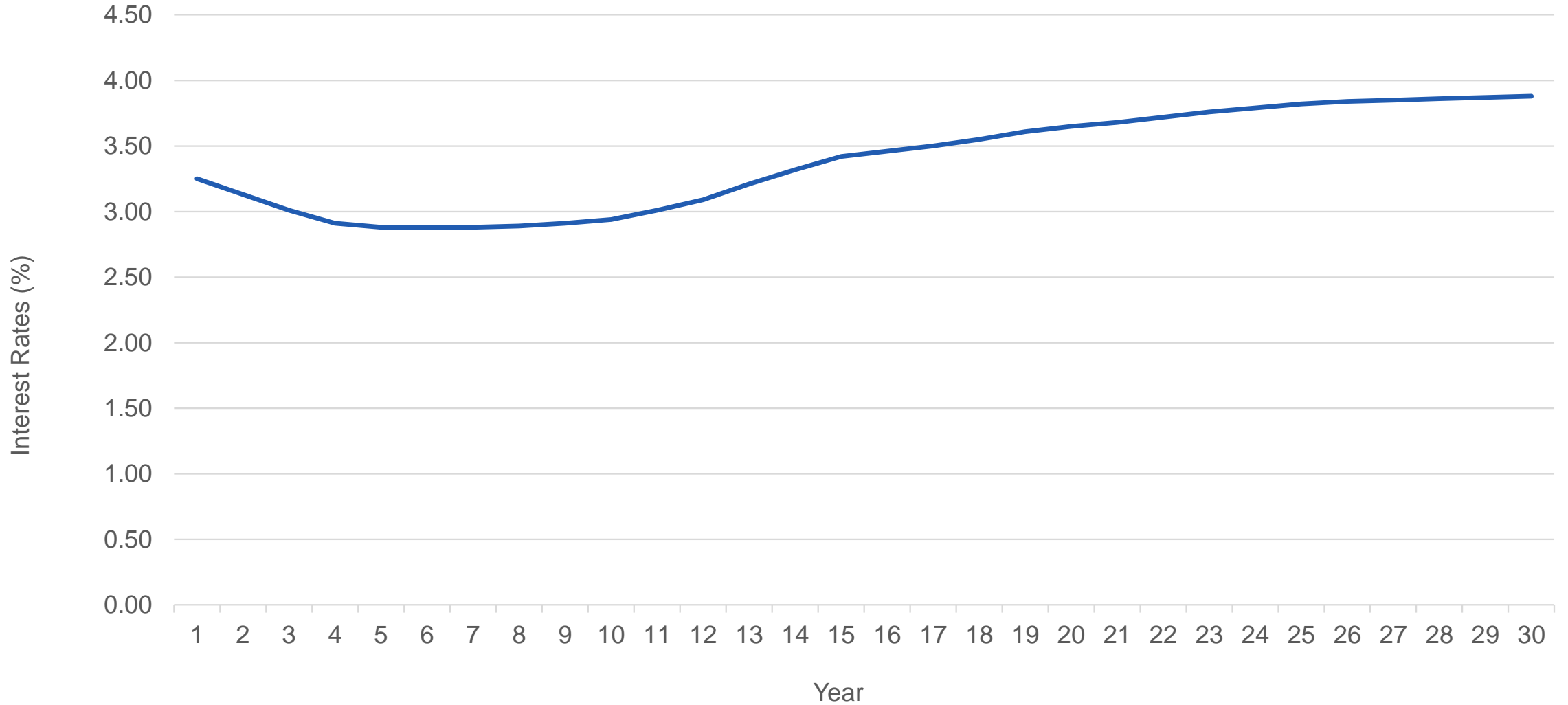
A general threshold of less than 50% or 100% is commonly used

A general threshold of at least 3% to 5% is commonly used

Yield Curve Five Years Ago

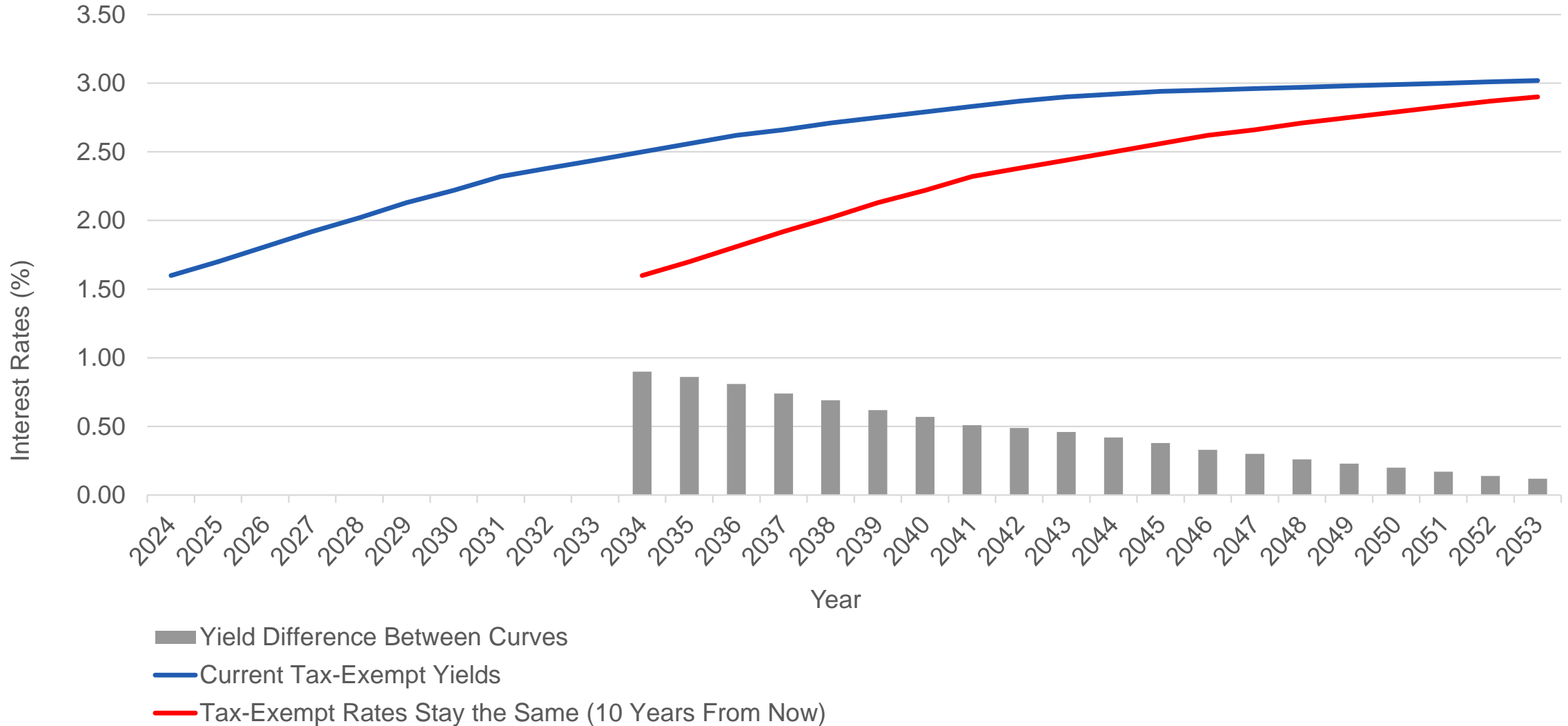


Today's Yield Curve



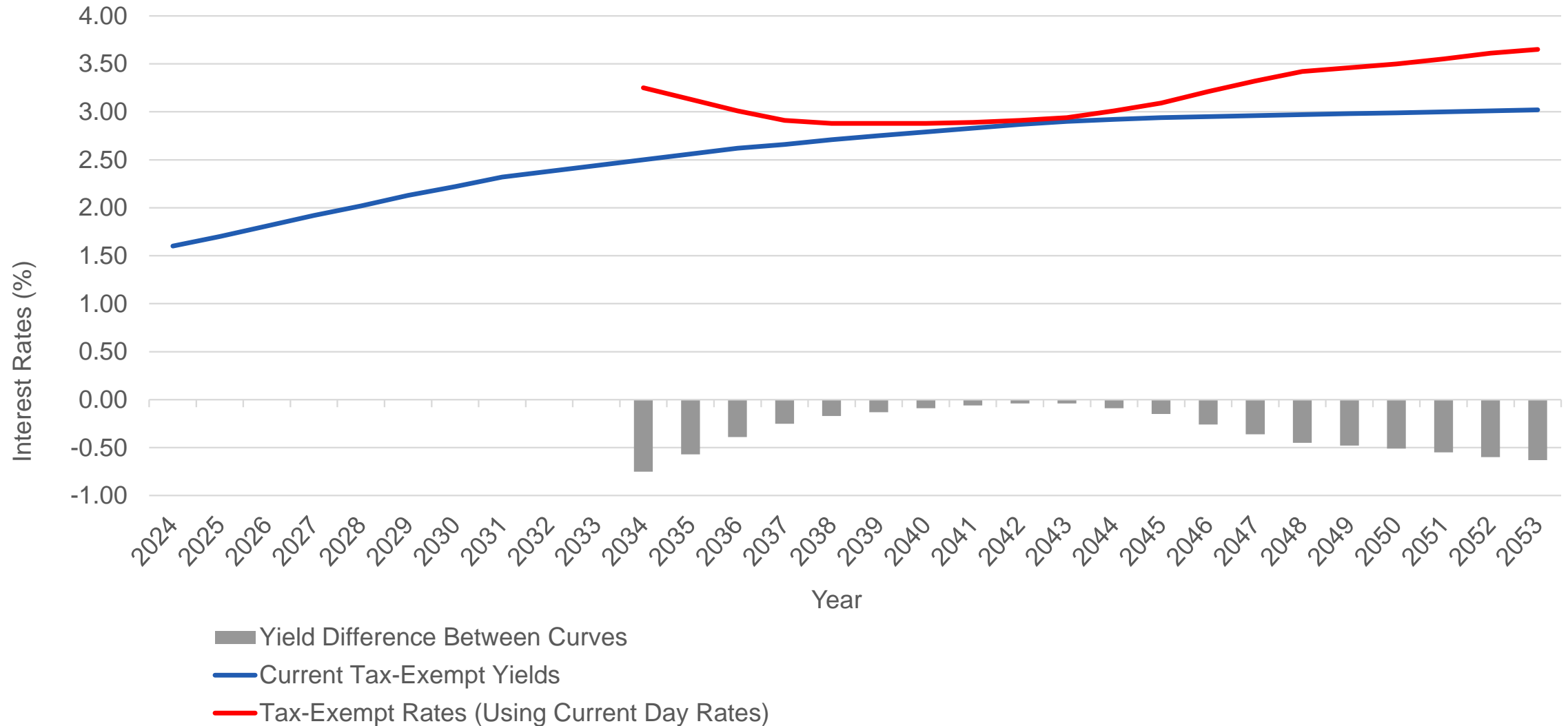
If Rates Stay the Same...

Riding Down the Yield Curve



Current Day Example

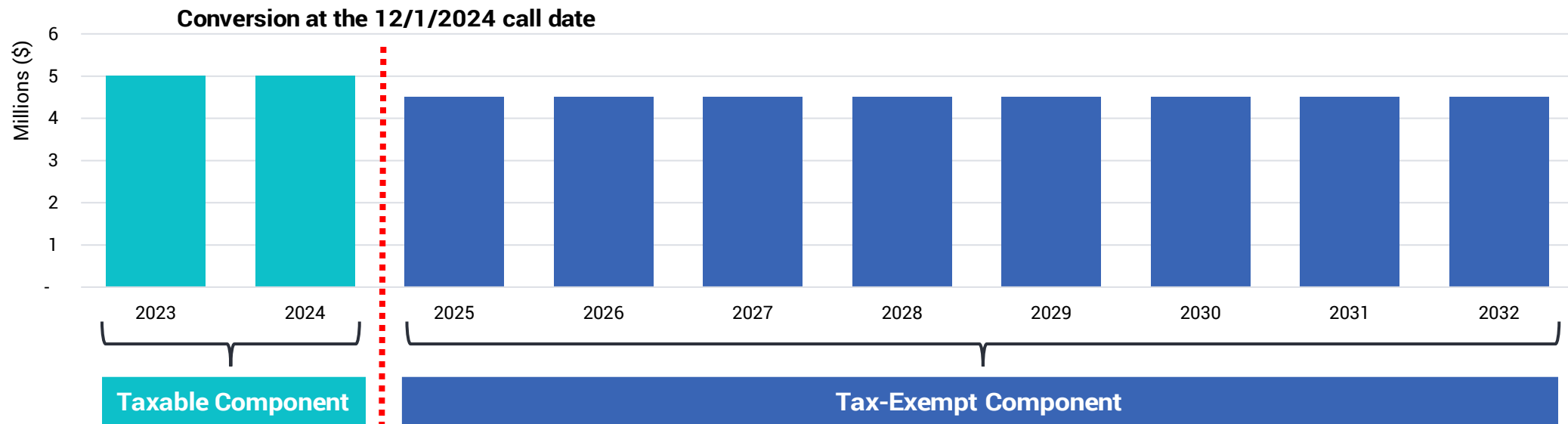
Riding Down the Yield Curve



Convertible “Cinderella” Refunding

- Initially issued as taxable advance refunding bonds
 - Taxable rate remains in place until the call date of the refunded bonds.
 - The bonds change tax-status at the conversion date (call date of the refunded bonds).
 - The interest rate is reduced to a tax-exempt rate and the structure of the taxable bonds remains in place.
 - Conversion cannot be automatic.

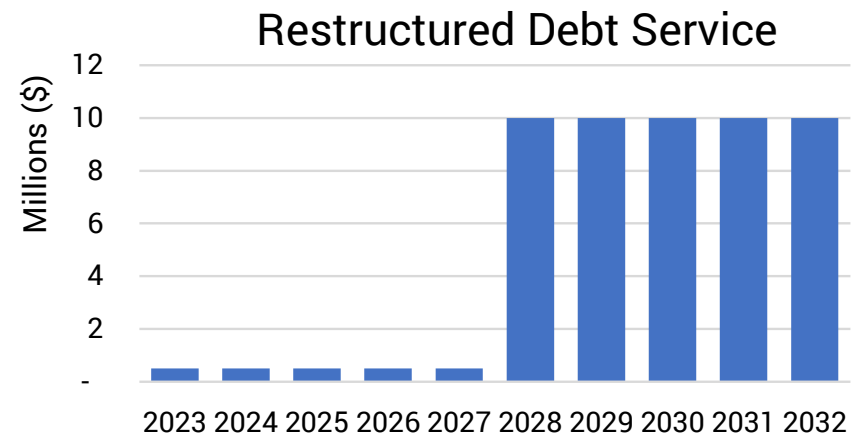
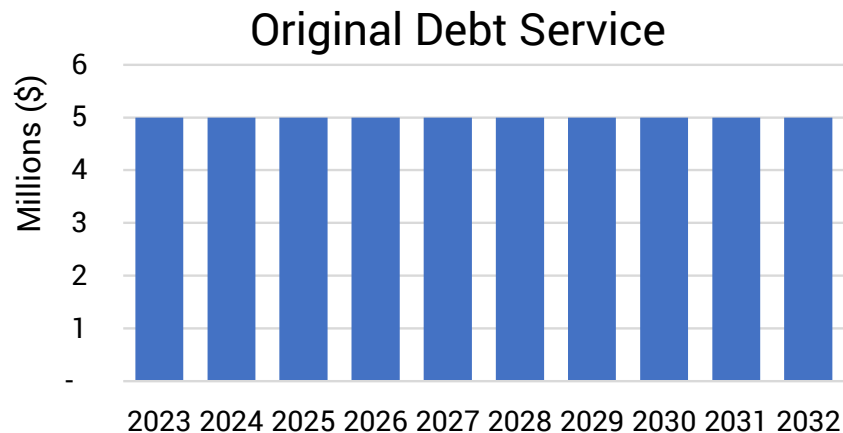
Conversion Example



Restructuring Debt

- What is the goal of restructuring?
 - Accelerate or decelerate principal payments
 - Eliminate restrictive legal covenants
- Debt that is restructured will need to be refunded or defeased.
 - Advance refundings are required to be issued as taxable bonds.
 - Certain new money purposes as part of the issuance may also need to be issued taxably.

Restructuring Example



What is a Bond Tender Offer?

- A bond tender offer is when an issuer retires all or a portion of its outstanding bonds. This is accomplished when an issuer makes an offer to its debt holders to repurchase a predetermined number of bonds at a specified price. This occurs during a set period of time known as a “tender period”.
- In certain circumstances, bond tenders of existing taxable bonds can be executed in conjunction with a new tax-exempt issuance of bonds .
- By replacing existing taxable debt with new tax-exempt debt, it is possible to achieve debt service savings, similar to a conventional current refunding.
- Unlike conventional refundings, issuers are not able to determine the exact amount of bonds that will be tendered in advance, as the process relies on bondholder participation. It is solely the bondholder’s option to tender bonds.

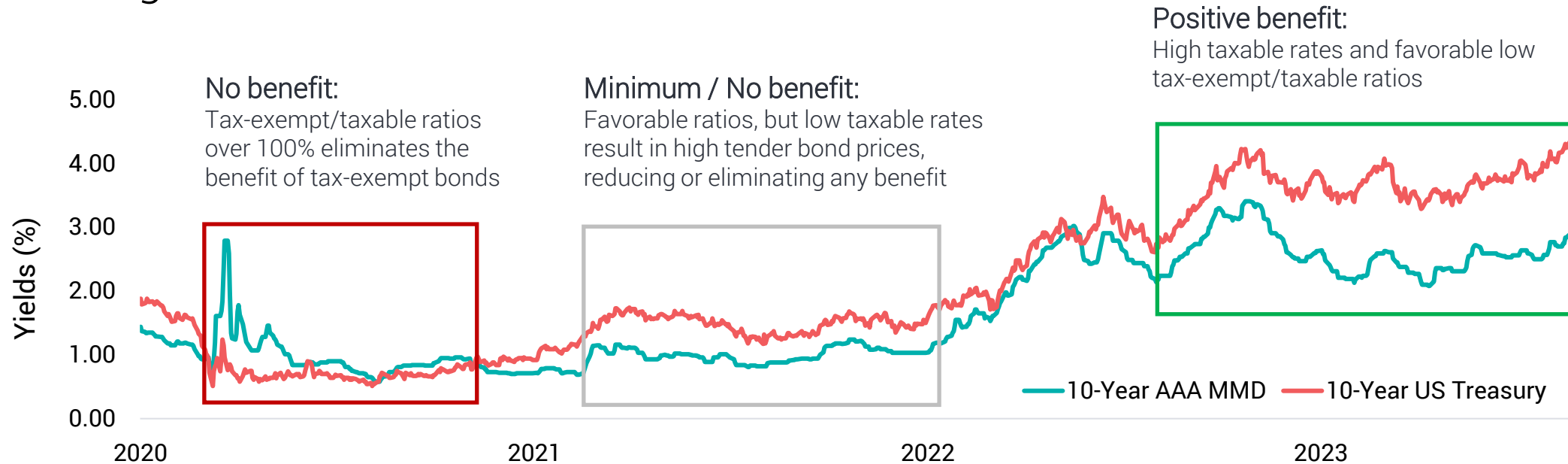
How I Felt After Reviewing Tenders for the First Time



Basic Principles and Mechanics

When are market conditions favorable for a taxable-to-tax-exempt tender?

- Market conditions favor tenders when taxable treasury yields are high, resulting in lower dollar prices on existing taxable bonds.
- Further, when the spread between the AAA MMD and US Treasuries widens, tenders gain more benefit.



Tax Considerations

- According to the memo released by the IRS on October 26, 2018, tax-exempt bonds are not precluded from advance refunding non-tax-advantaged (taxable) bonds.
- The purpose and use of proceeds for taxable debt under consideration to be tendered will also determine whether the bond tender can be executed.
- Ultimately, tenders converting existing taxable debt to tax-exempt are subject to bond counsel's review and approval.

Example Tender Analysis

Estimated Tender Results

Refunding Candidates			Savings Statistics			
Series Name	Maturity	Par Amount	100% Participation		30% Participation	
			NPV \$ Savings	NPV % Savings	NPV \$ Savings	NPV % Savings
2020B	12/1/2025	2,040,000	(16,493)	(0.81%)	(4,948)	(0.81%)
2020B	12/1/2026	2,655,000	21,981	0.83%	6,594	0.83%
2020B	12/1/2027	2,815,000	67,069	2.38%	20,121	2.38%
2020B	12/1/2028	2,895,000	104,967	3.63%	31,490	3.63%
2020B	12/1/2029	17,090,000	883,021	5.17%	264,906	5.17%
2020B	12/1/2030	18,635,000	1,152,085	6.18%	345,625	6.18%
2020B	12/1/2031	19,520,000	1,513,466	7.75%	454,040	7.75%
2020B	12/1/2033	21,415,000	2,319,535	10.83%	695,861	10.83%
2020B	12/1/2034	22,100,000	2,549,457	11.54%	764,837	11.54%
2020B	12/1/2035	22,675,000	2,563,388	11.30%	769,016	11.30%
2020B	12/1/2036	13,390,000	2,320,090	17.33%	696,027	17.33%
2020B	12/1/2037	13,795,000	2,151,171	15.59%	645,351	15.59%
2020B	12/1/2038	5,570,000	766,899	13.77%	230,070	13.77%
2020B	12/1/2039	5,735,000	701,881	12.24%	210,564	12.24%
2020B	12/1/2040	5,915,000	635,493	10.74%	190,648	10.74%
2020B	12/1/2041	2,235,000	406,627	18.19%	121,988	18.19%
2020B	12/1/2042	2,305,000	381,951	16.57%	114,585	16.57%
2020B	12/1/2043	2,380,000	365,817	15.37%	109,745	15.37%
2020B	12/1/2044	2,455,000	344,612	14.04%	103,384	14.04%
2020B	12/1/2045	2,530,000	327,246	12.93%	98,174	12.93%
2020B	12/1/2046	2,610,000	301,605	11.56%	90,481	11.56%
2020B	12/1/2047	2,695,000	287,170	10.66%	86,151	10.66%

Refunding Summary by Savings Level @ 100% Participation

NPV Savings Criteria	Refunded Par	NPV Savings	NPV Savings %
All Maturities	\$193,455,000	\$20,149,038	10.415%
Positive Savings	\$191,415,000	\$20,165,531	10.535%
5% or Greater	\$183,050,000	\$19,971,514	10.910%

Refunding Summary by Savings Level @ 30% Participation

NPV Savings Criteria	Refunded Par	NPV Savings	NPV Savings %
All Maturities	\$58,036,500	\$6,044,711	10.415%
Positive Savings	\$57,424,500	\$6,049,659	10.535%
5% or Greater	\$54,915,000	\$5,991,454	10.910%

- The results show the potential estimated savings assuming 100% and 30% participation from bondholders. Complete participation from bondholders is unlikely and is shown to provide context and total potential savings for each maturity. BTMA has provided 30% participation for illustrative purposes to show the results of a smaller transaction. This participation rate is not an estimate or an expected outcome.

Case Study: State of Wisconsin

- Baker Tilly served as municipal advisor to the state of Wisconsin for its recent tender transaction, which was completed on October 19, 2022.
- Three series of bonds were tendered for economic savings:
 - 2019 Series 1
 - 2020 Series 2
 - 2020 Series 3
- The State's tender received a 38.92% participation rate from bondholders which resulted in \$112,525,000 of bonds being tendered.
 - The sale generated \$9.084 million of net present value savings (or 8.07% of refunded par).

Tender Statistics

Total Par Amount of Bonds Considered for Tender	337,835,000
Maximum Allowable Tender Amount for Tax-Purposes	289,105,000
Par Amount of Tendered Bonds	112,525,000
Tender Participation Rate (%)	38.92%

Tax-Exempt Refunding Statistics

Refunding Par	85,945,000
Refunded (Tendered) Par	112,525,000
Gross Savings	13,575,636
NPV Savings (\$)	9,084,702
NPV Savings (%)	8.07%

Questions?

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