MANAGING YOUR BORROWING COST THROUGH MARKET TURBULENCE

OCTOBER 18, 2023
SAN FRANCISCO, CA

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EXPLORATION OF POTENTIAL COST-SAVING TOOLS & STRATEGIES

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Market Conditions

Simon Wirecki
Head of the Western Region for
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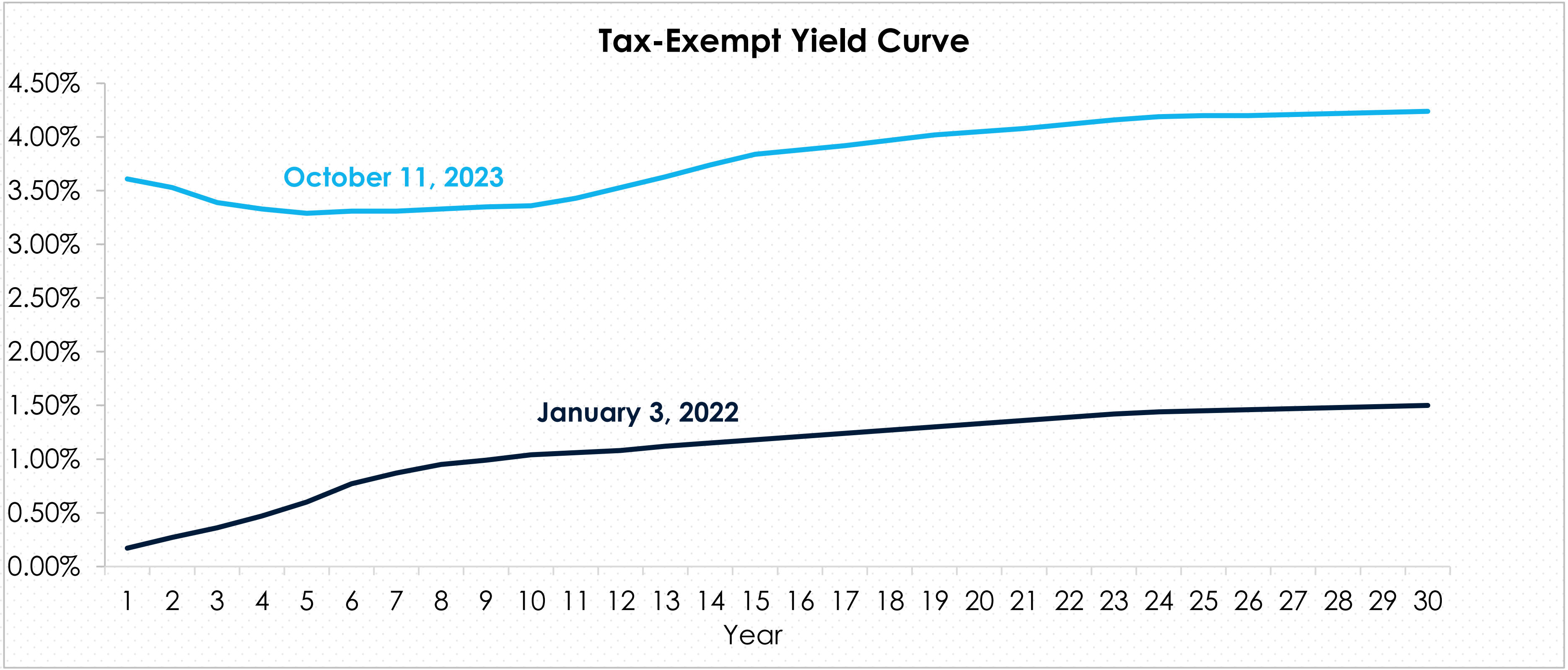
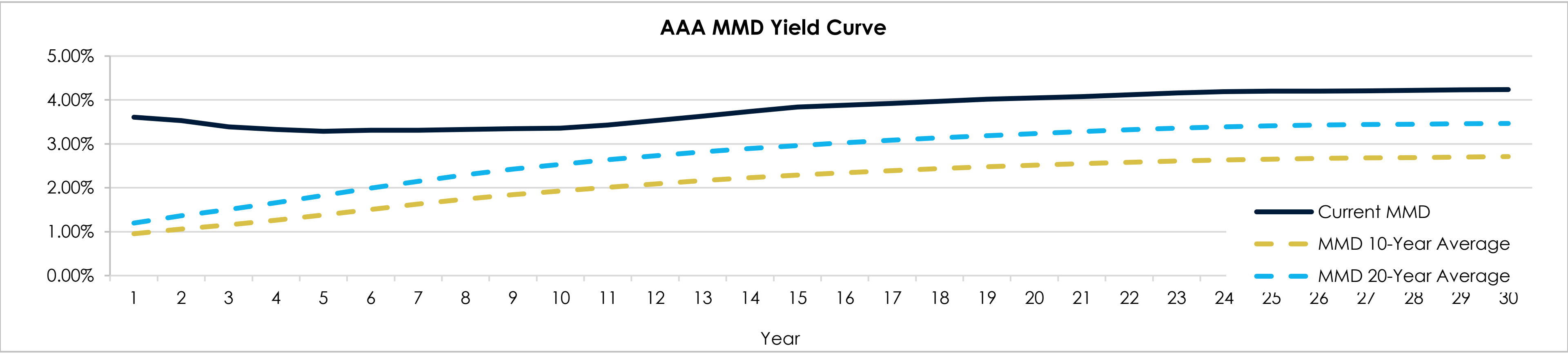
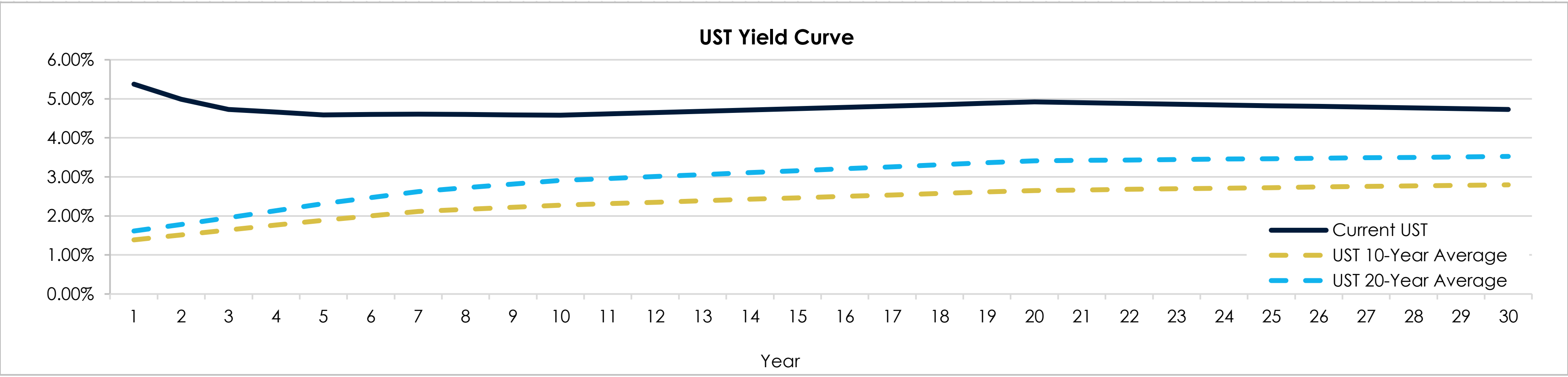
Tax-Exempt Interest Rates Have Risen Substantially and the Yield Curve is Inverted



Source: Refinitiv (TM3), as of 10/11/2023.

Where Are Rates Today Versus Past Levels?





Source: Refinitiv (TM3); U.S. Treasury website as of 10/11/2023.

Administrative Cost Management

Method of Sale

Procurement Of Finance Team

Professionals,

Services, Ratings

Bank Support, Liquidity Enhancement

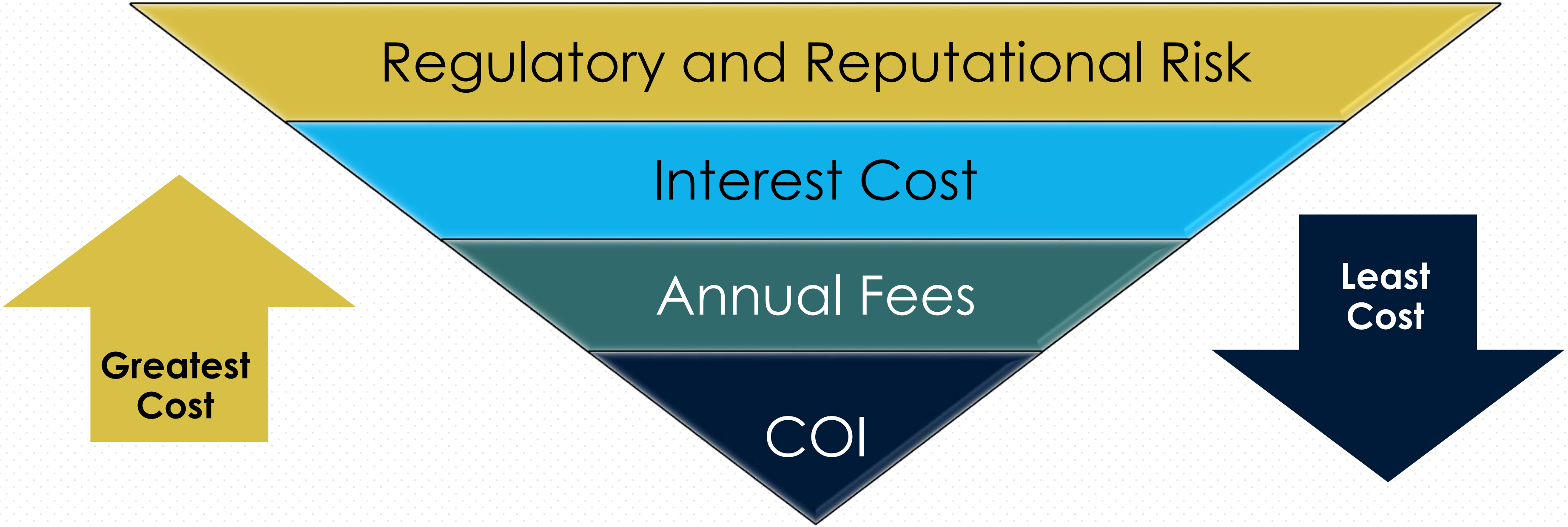
Nikolai J. Sklaroff
Capital Finance Director
San Francisco Public Utilities Commission

CDIAC Commissioner

Managing Debt Administration Fees

- Debt Service Payments
- Letter of Credit Fees
- Liquidity Fees
- Dealer Fees
- Trustee Fees
- Bond Counsel Fees
- Rating Fees
- Rebate Calculation Fees
- And more….

Thinking About Costs of Administering Debt



What is the Real Cost?

- $123,905,000 Bond Issue
- Underwriter's Discount $1.50 per bond, plus expenses, totaling $239,782
- $0.25 under $40k
- Present Value of every 1 bp change = $92,795

PRELIMINARY OFFICIAL STATEMENT DATED SEPTEMBER 20, 2023

NEW ISSUE – BOOK-ENTRY ONLY

Ratings:
S&P: "AA"
Fitch: "AA-"
(see "RATINGS")

In the opinion of Stradling Yocca Carlson & Rauth, a Professional Corporation, Bond Counsel, under existing statutes, regulations, rulings and judicial decisions, and assuming the accuracy of certain representations and compliance with certain covenants and requirements described in this Official Statement, interest (and original issue discount) on the 2023A Bonds is excluded from gross income for federal income tax purposes and is not an item of tax preference for purposes of calculating the federal alternative minimum tax imposed on individuals. In the further opinion of Bond Counsel, interest (and original issue discount) on the 2023A Bonds is exempt from State of California personal income tax. See "TAX MATTERS" with respect to certain tax consequences relating to the 2023A Bonds, including with respect to the alternative minimum tax imposed on certain large corporations for tax years beginning after December 31, 2022.

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

$121,660,000*
PUBLIC UTILITIES COMMISSION
OF THE CITY AND COUNTY OF SAN FRANCISCO
POWER REVENUE BONDS, 2023 SERIES A

Dated: Date of Delivery **Due:** As shown on inside front cover

***General.* This cover page contains information for general reference only. It is not intended to be a summary of this issue. Potential purchasers are advised to read the entire Official Statement to obtain information essential to making an informed investment decision.**

Authority for Issuance. The Public Utilities Commission of the City and County of San Francisco (the "**SFPUC**") is issuing a single series of its Power Revenue Bonds, 2023 Series A (the "**2023A Bonds**"), pursuant to authority granted by the Charter of the City and County of San Francisco (the "**City**") and a Trust Indenture, dated as of May 1, 2015, as amended and supplemented, including as supplemented by a Third Supplemental Trust Indenture, dated as of October 1, 2023 (collectively, the "**Indenture**"), each by and between the SFPUC and U.S. Bank Trust Company, National Association, as trustee (the "**Trustee**").

Plan of Finance. The 2023A Bonds are being issued to (i) refund approximately $117.7* million principal amount of and interest on Commercial Paper Notes issued to finance a portion of the costs of various capital projects benefiting the Power Enterprise, (ii) fund capitalized interest on the 2023A Bonds through November 1, 2025*, and (iii) pay costs of issuance of the 2023A Bonds.

Denominations and Interest. The 2023A Bonds will be available in denominations of $5,000 or any integral multiple thereof and will mature in the years and amounts and accrue interest from their date of delivery at the per annum rates set forth on the inside cover page of this Official Statement. Interest on the 2023A Bonds is payable semiannually on May 1 and November 1 of each year, commencing May 1, 2024.

Book-Entry Only. The 2023A Bonds will be issued as fully registered bonds, registered in the name of Cede & Co., as nominee of The Depository Trust Company ("**DTC**"), New York, New York, and will be available to ultimate purchasers (the "**Beneficial Owners**") under the book-entry only system maintained by DTC. Beneficial Owners will not receive physical certificates representing their interests in the 2023A Bonds. The principal of, premium, if any, and interest on the 2023A Bonds are payable to DTC by the Trustee, and, so long as DTC is acting as securities depository for the 2023A Bonds, disbursements of such payments to DTC Participants is the responsibility of DTC and disbursements of such payments to the Beneficial Owners is the responsibility of DTC Participants.

Redemption. The 2023A Bonds are subject to optional and mandatory redemption prior to maturity as described in this Official Statement.

Security. Under the Indenture, the SFPUC has irrevocably pledged the Revenues of its Power Enterprise, after payment of Operation and Maintenance Expenses and any Priority R&R Fund Deposits (each as defined herein), to the punctual payment of principal of, premium, if any, and interest on the Bonds, which consist of all outstanding parity revenue bonds issued under the Indenture, including the 2023A Bonds. The 2023A Bonds, all other Bonds and outstanding parity obligations permitted by the Indenture are secured by a parity lien on Revenues, after payment of Operation and Maintenance Expenses and any Priority R&R Fund Deposits. See "SECURITY FOR THE BONDS."

No Reserve Account. No Reserve Account will be established for the 2023A Bonds. See "SECURITY FOR THE BONDS – No Reserve Account for 2023A Bonds."

***Limited Obligation.* The 2023A Bonds are special limited obligations of the SFPUC. The SFPUC is not obligated to pay the principal of, premium, if any, or interest on the 2023A Bonds from any source of funds other than Revenues, after payment of Operation and Maintenance Expenses and any Priority R&R Fund Deposits. Neither the general funds of the SFPUC nor the funds of any SFPUC enterprise (other than the Revenues and the funds pledged therefor under the Indenture) shall be liable for the payment on the 2023A Bonds. The SFPUC has no taxing power. The General Fund of the City is not liable for the payment of the principal of, premium, if any, or interest on the 2023A Bonds, and neither the credit nor the taxing power of the City is pledged to the payment of the principal of, premium, if any, or interest on the 2023A Bonds. The 2023A Bonds are not secured by a legal or equitable pledge of, or charge, lien, or encumbrance upon, any of the property of the City or of the SFPUC or any of its income or receipts, except Revenues, after payment of Operation and Maintenance Expenses and any Priority R&R Fund Deposits. The 2023A Bonds are not secured by or payable from the revenues of the SFPUC's Water Enterprise, Wastewater Enterprise or CleanPowerSF, or the revenues allocated to Hetch Hetchy Water. See "SECURITY FOR THE BONDS."**

MATURITY SCHEDULE
(see inside front cover)

The 2023A Bonds are offered when, as and if issued by the SFPUC and received by the Underwriters, subject to the approval of validity by Stradling Yocca Carlson & Rauth, a Professional Corporation, Newport Beach, California, Bond Counsel, and to certain other conditions. Orrick, Herrington & Sutcliffe LLP, San Francisco, California, is acting as Disclosure Counsel. PFM Financial Advisors LLC, San Francisco, California, Municipal Advisor to the SFPUC, assisted in the structuring of this financing. Certain matters will be passed upon for the Underwriters by Husch Blackwell LLP, Oakland, California. It is expected that the 2023A Bonds in fully registered form will be available for delivery in book-entry form through the facilities of DTC, on or about October 12, 2023.

J.P. Morgan **Morgan Stanley**

Siebert Williams Shank & Co., LLC

The date of this Official Statement is __________, 2023.

* Preliminary, subject to change.

Method of Sale:
Competitive vs. Negotiated

- Market shift post pandemic
- Volatility in current market
- Importance of shaping repayment
- Couponing decisions
- Reverse inquiry

Procuring Services and Ratings

- The importance of competition
- Municipal Advisor attention
- Checking quotes/invoices
- Negotiating
- Understanding what motivates the other party

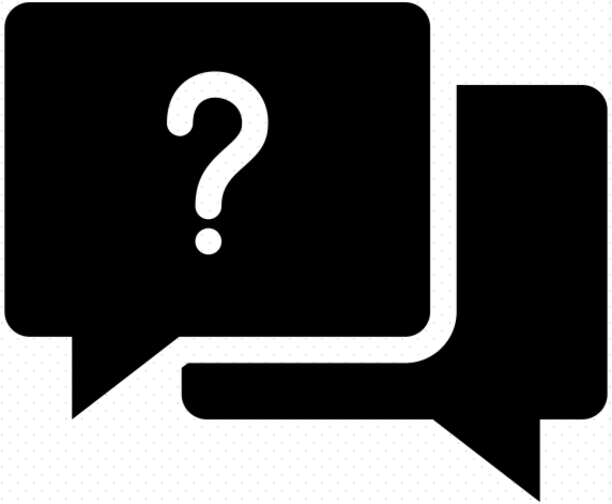
SFPUC: Bank Programs Across 4 Entities

Series	Bank	Next Renewal	Facility ($million)	Type
Water				
A-1 **A-1-T**	SMBC	5/16/2025	100	LOC
A-2	SMBC	6/15/2027	200	LOC
A-3	Barclays	7/19/2024	100	LOC
R-1	US Bank	7/19/2024	100	Rev
TOTAL			500	
Wastewater				
A-1	SMBC	3/7/2024	150	LOC
A-2	BofA	4/24/2026	150	LOC
A-4	TD Bank	7/6/2027	75	LF
A-6	State St	10/14/2023	200	LF
A-7	SMBC	5/31/2027	100	LOC
R-1	US Bank	7/19/2024	75	Rev
TOTAL			750	
Power				
A-1	BofA	3/6/2026	125	LOC
A-2	BofA	3/6/2026	125	LOC
TOTAL			250	
CleanPowerSF	JPM	3/29/2024	20	CA

- 14 different series
  - Multiple banks and dealers
- $1.52 billion
- Range of facility fees
- Assuming 30 bps that would be $4.56 million per year
- Plus dealer, rating and bank fees
- Competitive renewals

Bank Support and Facilities

- Understand what type of facility you need
- Credit vs. Liquidity facilities
- Understand how you will use it
- Drawn vs. undrawn
- Understand to motivation of providers
- Terms vs. Costs



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WIFIA & TIFIA

Bryant Jenkins
Managing Principal
Sperry Capital

TIFIA Program Overview

- The Build America Bureau manages the TIFIA credit assistance program
- Able to finance up to 33% of eligible project costs
  - Up to 49% for Transit Projects
  - Rural Project Initiative
- Typically subordinate to other debt
- Rolling application process
- The cost of risk to US DOT (credit subsidy) is covered by regular annual appropriations

- Program requirements
  - Dedicated repayment source
  - Investment grade ratings
  - Minimum anticipated project costs of $10M for Transit-Oriented Development, Local and Rural Projects; $15M for Intelligent Transportation Systems Projects; and $50M for all other eligible Surface Transportation Projects
  - Applicable federal requirements
  - Reserve account requirements
  - IIJA Value for money analysis

BUILD AMERICA BUREAU

TIFIA Program Overview

Program Benefits	Program Drawbacks

Program Benefits

- Low interest rate/cost on a relative basis
  - Comparable Treasury rate + 1 basis point,
  - Interest does not accrue until borrower draws proceeds
- Flexible amortization
  - Final maturity of up 35-years from substantial completion (up to 75 years for some projects with IIJA)
  - Interest can be capitalized for five years from substantial completion, principal payments can be deferred for ten years
  - Scheduled vs mandatory debt service payments allowed
- No pre-payment penalty
- Potential for waiver of TIFIA nonsubordination requirement

Program Drawbacks

- Process can be lengthy, so start early
- Integrating TIFIA into an existing indenture requires attention

BUILD AMERICA BUREAU

TIFIA Process

Letter of Interest (LOI) Submission	1	Project Sponsor submits LOI
Creditworthiness Review & Additional Info Requests	2	If requested by the Bureau, Project Sponsor provides additional information, Preliminary Rating Opinion Letter, and $250,000
Oral Presentation	3	Upon invitation, Project Sponsor makes oral presentation to the Bureau
Application	4	Upon invitation from the Bureau, Project Sponsor submits complete application
Notification of Completeness	5	The Bureau notifies Project Sponsor regarding completeness of application no more than 30 days after receiving application
Project Recommendation	6	The Bureau staff prepare evaluation and make recommendation to the Bureau Credit Council
Project Selection	7	The Bureau Credit Council provides recommendation to the Secretary, who makes final determination
Notification of Project Approval	8	the Bureau notifies Project Sponsor regarding project approval no more than 60 days after delivery of notice regarding application completeness
Term Sheet Issuance, Credit Agreement Execution, and Funding Obligation	9	The Bureau issues term sheet, executes Credit Agreement, and obligates funds
Fund Disbursement	10	The Bureau disburses funds upon satisfaction of conditions set forth in Credit Agreement

WIFIA Program Overview

- The Environmental Protection Agency manages the WIFIA credit assistance program
- Funding allowance
  - Up to 49% of eligible project costs
- Can be subordinate to other debt not associated with the project
- Rolling application process
- The cost of risk to the government is covered
  by regular annual appropriations

- Program requirements
  - Dedicated repayment source
  - Minimum anticipated project costs
  - Applicable federal requirements
  - Reserve account requirements

WIFIA Program Overview

Program Benefits	Program Drawbacks

Program Benefits

- Low interest rate/cost on a relative basis
  - Comparable Treasury rate
  - Interest does not accrue until borrower draws proceeds
- Flexible amortization
  - Final maturity of up 35-years from substantial completion
  - Interest can be capitalized for five years from substantial completion, principal payments can be deferred for ten years
  - Scheduled vs mandatory debt service payments allowed
- No pre-payment penalty

Program Drawbacks

- Process can be lengthy, so start early
- Water and wastewater projects often do not have a significant cost of capital advantage compared to lower-rated infrastructure projects
- Monthly disbursements

WIFIA Process

Application Submission

Credit Due Diligence & Negotiation

Finalize Documentation

Begin WIFIA Approval Process

Execution

Key Differences Between TIFIA, WIFIA, and Capital Markets

	TIFIA	WIFIA	Capital Markets
Term/Maturity	35 years following substantial completion; increased to up to the earlier of 75 years and the project's useful life with passage of IIJA	Earlier of 35 years following substantial completion or useful life of the project	30-year term from date of issuance; sometimes longer is acceptable (e.g., 35-40 years)
Draws	Draw on an as-needed basis until 1 year after substantial completion		Draws on an as-needed basis but typically paying interest as if all funds have been drawn

Key Differences Between TIFIA, WIFIA, and Capital Markets

	TIFIA	WIFIA	Capital Markets
Repayment	Interest can be capitalized until five years after substantial completion, accruing on drawn amounts of loan and added to the loan balance until interest payments begin. Principal payments generally not required to commence until ten years after substantial completion; debt service can be sculpted with flexibility between scheduled and mandatory debt service payments	Payments may be def erred up to 5 years after the project's subs tantial completion	Interest is due on full amount borrowed from financial close; if it cannot be paid for during construction/ramp-up, a capitalized interest account would be funded at financial close Principal payments generally begin following ramp-up (dependent on investor preference)

Key Differences Between TIFIA, WIFIA, and Capital Markets

	TIFIA	WIFIA	Capital Markets
Interest Rate	Comparable Treasury plus 1 basis point, regardless of transaction credit risk	Comparable Treasury regardless of transaction credit risk	Market dependent with a spread based on transaction credit risk, term, and other considerations
Time to Financial Close	12 - 18 months	12 months or less from application submission (after invitation to apply)	4 - 6 months (possibly longer for a first-time credit)

OCTA I-405 Improvement Project

- In 2011, the Orange County Transportation Authority began planning the I-405 Improvement Project which was designed to improve a 16-mile section of the I-405
- The I-405 is consistently ranked as one of the busiest highways in the nation and provides critical mobility for the approximately two million residents that live along it
- The Improvement Project will result in the demolition and reconstruction of 18 bridges, the addition of a new general-purpose lane, and the introduction of 2 x 2 Express Lanes in the median
- To fund and finance the Improvement Project, OCTA issued **Measure M2 sales tax bonds, Measure M2 sales tax paygo revenues and $135M in grants, and got a $629M TIFIA loan (2017)**
- **The 2017 TIFIA loan saved OCTA roughly $300M** compared to traditional toll revenue bonds and will be repaid entirely using revenue from the 405 Express Lanes

I-405 Project Savings (in $ millions)

OCTA I-405 Improvement Project Refinancing Plan

9/9/21

Refinancing of a $628.93 million TIFIA Loan

6/24/21 – 9/30/21

$315 million tax-exempt Bridge Loan from Bank of America N.A.

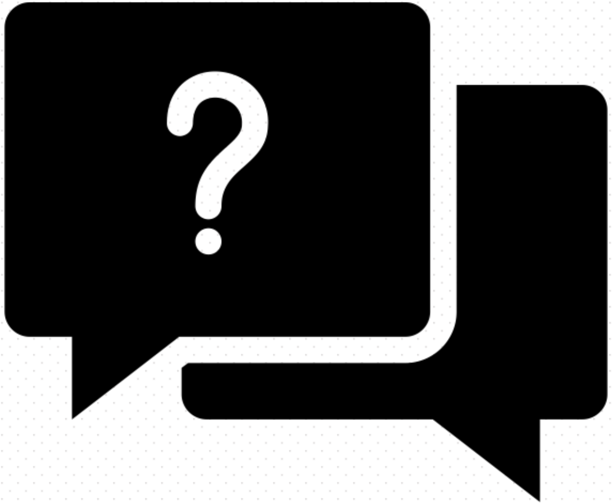
9/21/21 – 9/29/21

$662.80 million tax-exempt Bond Anticipation Notes (BANs) issuance

$182M in NPV Debt Service Savings

Marin Municipal Water District WIFIA Loan Process

- Marin Municipal Water District (MMWD) is a special district that provides water to residents of the southern and central portions of Marin County,
- MMWD's service area covers 147 square miles, extending northward from the Golden Gate Bridge to the City of Novato
- MMWD initially submitted a LOI for the Smith Saddle Tank Project on July 23, 2021
- On Oct. 26, 2021 the EPA notified MMWD that the project was eligible to submit an application for a loan up to $10.8M or up to 49% of total eligible project costs
- In March 2022, MMWD staff requested that the EPA shift the loan from the original project to the Pine Mountain Tunnel Tank Replacement Project, "citing the advanced deterioration of the existing tunnel facility, concerns about water quality, and water loss savings as justification for the shift"
- The Pine Mountain Tunnel Tank Replacement Project will add a pair of 2 million gallon water storage tanks in Ross Valley. The project is expected to take several years and will supply water for the town of Ross and local firefighters



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Variable Rate Demand Bonds

Floating Rate Notes

Put Bonds

Direct Purchases

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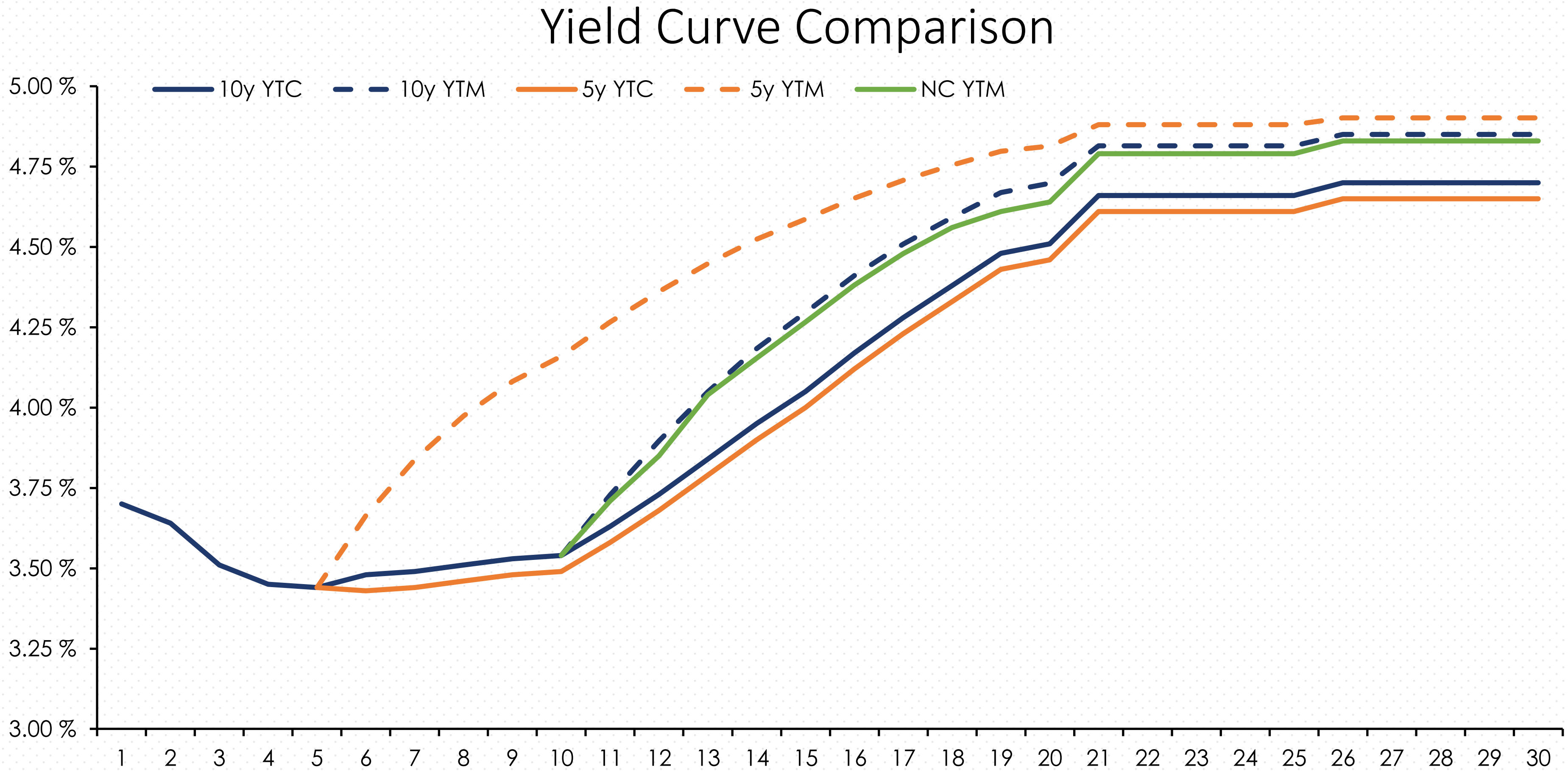
Summary of Municipal Products

	Fixed	Variable		Variable (Fixed for Limited Period)	Fixed or Variable
Product	**Public Fixed Rate Bonds**	**Variable Rate Demand Bonds (VRDBs)**	**Floating Rate Notes (FRNs)**	**Term Rate Put Bonds**	**Bank Direct Purchase**
Description	Bonds pay a fixed rate with interest paid semi-annually. Annual principal payments	Variable rate bonds with long-term nominal maturity often supported with a Direct Pay Letter of Credit (DPLOC) or Standby Bond Purchase Agreement (SBPA). Rates are reset weekly or daily	Variable rate bonds. Interest rate resets on a weekly or monthly basis based upon underlying floating rate index. Bonds have a long-term nominal maturity but have a Mandatory Put at the end of the term	Variable rate bonds. Interest rate is fixed for a few years. Bonds have a long-term nominal maturity but have a Mandatory Put at the end of the term	Bonds are privately placed with banks/direct purchaser and can be structured as fixed or variable
Interest Rate	MMD Index + Credit Spread	SIFMA + Trading Spread + DPLOC/SBPA Fees (if enhanced) + Remarketing Fees	SIFMA OR % of SOFR + Credit Spread	MMD Index + Credit Spread	Based on Bank Cost of Capital + credit spread
Commitment Term	Based on maturity schedule	If applicable, subject to DPLOC/SBPA term for up to 5 years	Typically up to 7 years	Typically up to 7 years	Typically up to 10 years

Summary of Municipal Products
(Continued)

	Fixed	Variable		Variable (Fixed for Limited Period)	Fixed or Variable
Product	**Public Fixed Rate Bonds**	**Variable Rate Demand Bonds (VRDBs)**	**Floating Rate Notes (FRNs)**	**Term Rate Put Bonds**	**Bank Direct Purchase**
Long-Term Ratings	Underlying ratings	Based on Bank Ratings or Underlying Ratings, if Self-Liquidity	Underlying ratings	Underlying ratings	Typically Not Required
Requires Bank Liquidity?	No	Usually, dependent on Underlying Ratings	No	No	No
Redemption Flexibility	Typically not callable until year 10 @ Par	Callable Anytime @. If swapped, swap may be subject to termination payment	Not callable until 6 months before Put Date @ Par	Not callable until Put Date @ Par	Subject to prepayment penalties under certain circumstances
Marketing Documentation	Official Statement	Official Statement or Remarketing Memorandum	Official Statement	Official Statement	None / Subject to negotiation
Timing Execution	2-3 Months	2-3 Months	2-3 Months	2-3 Months	1-3 Months
Security & Covenants	Same as existing Indenture	Same as existing DPLOC/SBPA Provider	Same as existing Indenture	Same as existing Indenture	Same as existing Lenders

Call Option Yield Comparison



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Call Structuring

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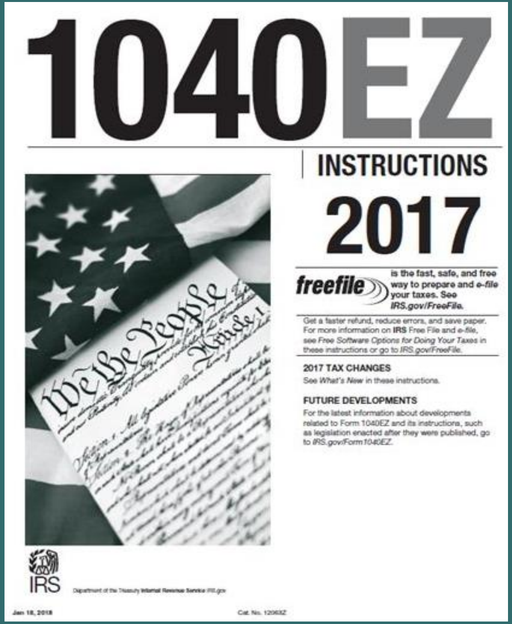
Evaluating the Merits of One Idea

- One component of the 2017 Trump Tax Act was the elimination of tax-exempt advance refundings
- Issuers were left with two refunding options
  - Wait until the optional call date for a “current” refunding
  - Issue taxable *advance* refundings bonds when rates were exceptionally low enough to still produce savings
- Tax-exempt market convention: first optional call features in ten years, at par
- Raises an obvious question:

Should we now sell bonds with a shorter optional call?



On First Impression…

- Would certainly increase an issuer's flexibility
- There is no increase in "yield" in the current market for a shorter call - in fact, yields might be a few basis points lower
- Sounds like FREE optionality!!!

But the Devil is in the Details

- Market prefers Premium Bonds
  - Bonds with a coupon rate higher than the effective yield protect against rising interest rates (more to come)
- Pricing math for Premium Bonds is more complicated than simply comparing yields
  - The cost of the early call is not intuitive

What is a Premium Bond

- Many investors prefer a bond whose nominal rate (the "coupon") is higher than the net investment yield
- To get a coupon above market yields, investor are willing to pay more (a higher dollar price) than the par value of the bond
- The additional proceeds from this "premium" can be used to reduce the size of the bond issue

Bond Pricing Report

Date	Principal Maturity	Coupon / Interest Rate	Yield	Yield to Maturity	Dollar Price	
6/1/2023	$640,000	5.00%	1.63%		102.619	
6/1/2024	640,000	5.00%	1.75%		105.687	
6/1/2025	675,000	5.00%	1.81%		108.626	
6/1/2026	705,000	5.00%	1.91%		111.231	
6/1/2027	740,000	5.00%	1.92%		114.017	
6/1/2028	780,000	5.00%	2.09%		115.778	
6/1/2029	820,000	5.00%	2.20%		117.558	
6/1/2030	860,000	5.00%	2.27%		119.379	
6/1/2031	900,000	5.00%	2.35%		120.922	
6/1/2032	945,000	5.00%	2.42%		122.357	
6/1/2033	995,000	5.00%	2.54%	2.72%	121.192	c
6/1/2034	1,045,000	5.00%	2.65%	2.96%	120.136	c
6/1/2035	1,095,000	5.00%	2.73%	3.15%	119.375	c
6/1/2036	1,150,000	5.00%	2.80%	3.30%	118.713	c
6/1/2037	1,210,000	5.00%	2.88%	3.44%	117.963	c
TOTAL	**$13,200,000**					

Sources:		
Bond Proceeds:	**Par Amount**	**$13,200,000**
	Net Premium	**3,619,644**
		$16,819,644

Why Would You Want A Premium Bond?

- Less volatility in price
- Tax protection
  - Once a bond is purchased at a discount, appreciation to the par is taxable income
- More tax protection
  - Appreciation of more than 0.25% a year becomes regular income (higher tax rate, up to 37%) rather than capital gains (up to 20%)
- Bonds that are sold at par and even small premium can become discount bonds when sold in a higher rate environment on the secondary market
- Discount bonds are less *liquid*; may need to offer higher yield

Example A: Premium Bond

Maturity	Par	Coupon	Yield	Dollar Price
6/1/2042	1,540,000	**5.00%**	3.21%	114.926
Yield Increase of 50 bps:			3.71%	110.500
Reduction in Dollar Price:				**-4.426**
Reduction in Dollar Price as %:				**-3.9%**

Example B: Discount Bond

Maturity	Par	Coupon	Yield	Dollar Price
6/1/2042	1,540,000	**3.00%**	3.21%	96.938
Yield Increase of 50 bps:			3.71%	90.106
Reduction in Dollar Price:				**-6.832**
Reduction in Dollar Price as %:				**-7.0%**

Back To Our Regular Programming

- Common use of premium couponing complicates the analysis of an early optional call
- Remember:
  - Yield and price are from the investor's perspective, assuming premium bonds will be called at the first optional call date
  - Therefore, the investor will pay premium based on above market yields only until the call date—the extra yield they are guaranteed to receive

Yield = yield to worst, which in the case of callable premium bonds means to the call date

Yield to Maturity = rate of return the investor receives if the bonds are NOT called: the kick

Bond Pricing Report

Date	Principal Maturity	Coupon / nterest Rat	Yield	Yield to Maturity	Dollar Price	
6/1/2031	900,000	5.00%	2.35%		120.922	
6/1/2032*	945,000	5.00%	2.42%		122.357	
6/1/2033	995,000	5.00%	2.54%	2.72%	121.192	c
6/1/2034	1,045,000	5.00%	2.65%	2.96%	120.136	c
6/1/2035	1,095,000	5.00%	2.73%	3.15%	119.375	c
6/1/2036	1,150,000	5.00%	2.80%	3.30%	118.713	c
6/1/2037	1,210,000	5.00%	2.88%	3.44%	117.963	c

*First Optional Call

Premium Couponing Drives The Analysis

Shorter call =

- Lower dollar prices received for premium bonds after the call
- Less original issue premium reduces proceeds received as original issue premium
- Higher par amount to make up the difference
    - More bonds to refund in the future
    - This higher par carries forward even after refunding
    - A tangible hard cost perpetuated for life of bonds

7.5-YR Call versus 10-YR Call

Call Scenario:	Scenario A: 7.5-year call	Scenario B: 10-year call	Difference
Actual Yrs to Call Date:	7.44	9.95	(2.50)
Par Amount:	262,425,000	258,295,000	4,130,000
Premium:	24,925,122	28,620,665	(3,695,543)
Total Sources:	287,350,122	286,915,665	434,457
Total Net Debt Service	1,220,400,000	1,201,125,000	19,275,000
PV of total net DS @ 3%	**580,751,554**	**571,579,163**	**9,172,391**
All-In TIC	3.036%	2.930%	0.106%

At Closer Look, The Early Option Is Far From Free

- Shorter call **does** typically produce similar, often even slightly lower, stated "yield" to call
- Entirely possible that the future plays out
  - Rates are lower in the future at the call date
  - the cost is fully recaptured (and, potentially, then some)
  - Then, shorter-call would prove more economic…
- But shorter call is a bet that, within a very specific time window, an opportunity will arise to refund the bonds at appreciably lower interest rates than will prevail at the 10-year mark

Benefit vs. Cost

- Can the issuer recapture this additional cost through savings generated by an earlier refunding?
  - Requires assumptions as to lower future interest rates
  - For 30-year debt, requires assumptions regarding multiple refundings, since the extra par caries through to maturity
- The value of the early optionality starts eroding quickly after the call date
  - If savings not captured in first 9 to 12 months, savings unlikely to exceed the cost of the additional optionality

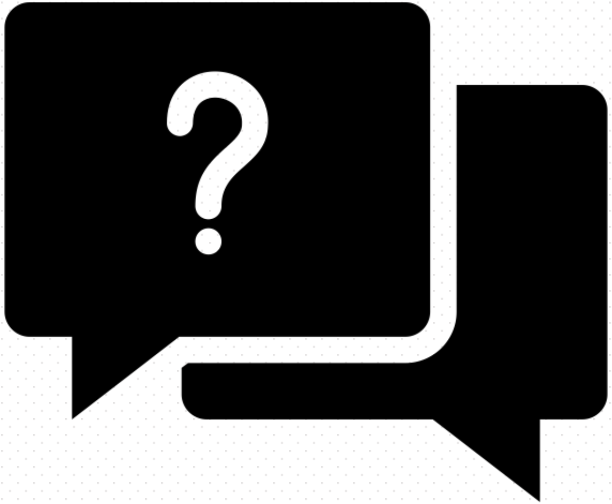
- Given the certainty of the cost of the early option and the uncertainty of its benefit, we generally still recommend a conventional 10-year call

What's the Upshot

- The early optional call is just an example of the challenges of evaluating innovation
- Innovation is great when it solves problems
  - Overcomes unproductive obstacles
  - Increases efficiency
  - Rebalances risk and reward
- Not all shiny objects are gold
  - It's okay to be skeptical
  - It's okay to require that you deeply understand something before proceeding

OCCAM'S RAZOR
(or the parsimony principle)

- "More things should not be used than are necessary."
- Finance corollary: the simplest solution is often the best



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Municipal Tenders & Exchanges

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Municipal Tenders Have Become Much More Common

- Tenders, exchanges and secondary market purchases are tools to manage debt and take advantage of market opportunities
  - Monetize upcoming call options
  - Convert taxable bonds back to tax-exempt
  - Purchase bonds below par call price
  - Redeem/replace non-callable bonds
- When interest rates were low in 2020 and 2021, issuers primarily employed tenders and exchanges to monetize call options in conjunction with taxable advance refundings
- In today's market, issuers are using these strategies to flip taxable advance refunding bonds back to tax-exempt, achieve immediate savings on tax-exempt bonds, and/or pursue other objectives

Tender:
An offer to buy existing bonds from investors for cash

Fund cash tender with new refunding bonds

Exchange:
An offer to replace an existing bond with a new bond

Refunding bonds issued in exchange for existing bonds

Economic Tenders Are Gaining Momentum This Year

Historically

1. Restructuring of Troubled Credits / Indenture Modifications

2019-2021

2. Tender <u>TE Bonds in conjunction with Taxable Advance Refundings</u> to Enhance Savings

Today

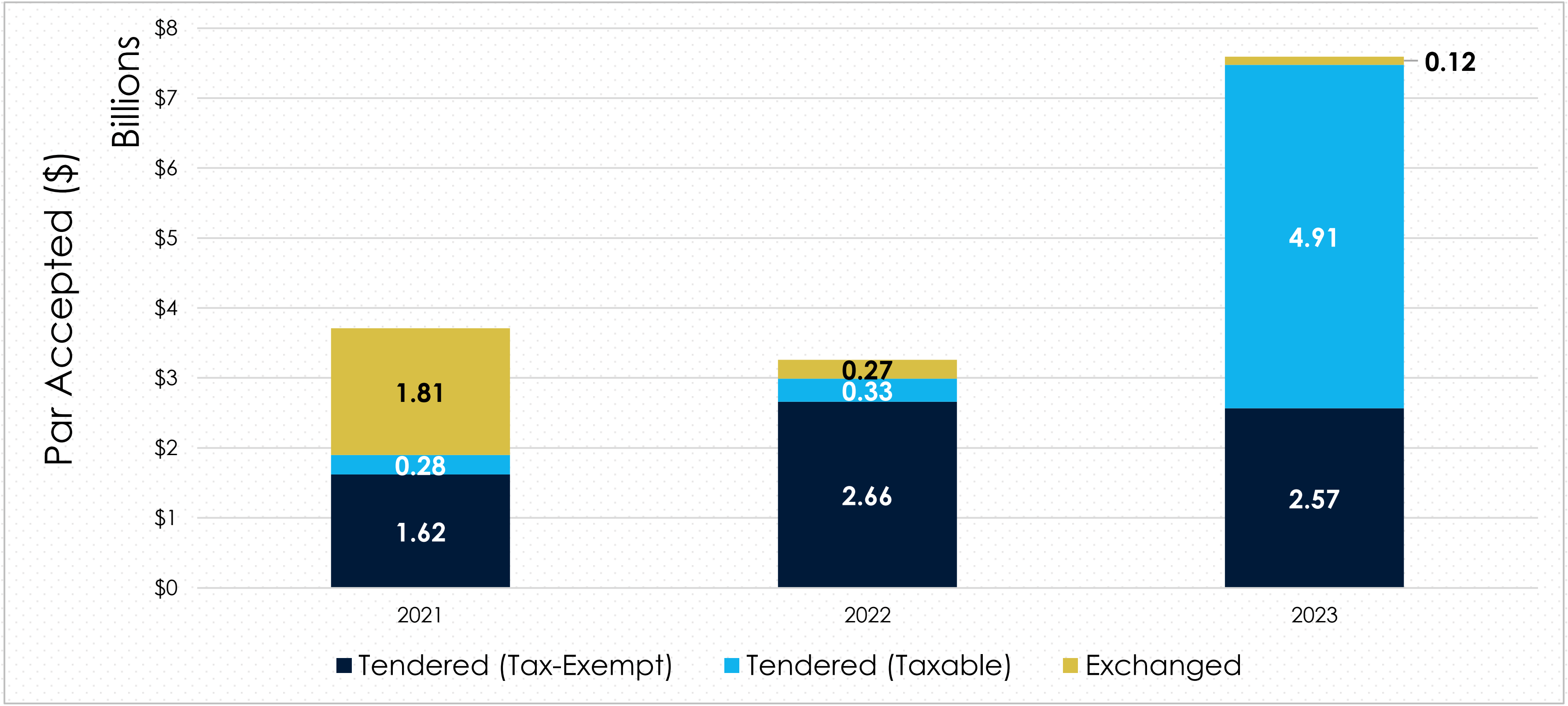
3. Tender <u>Taxable Bonds back to TE</u> for Savings
4. Tender <u>TE Bonds Near Call Dates</u> for Savings

What are "Economic" Tender Refundings?

- The issuer's goal is to achieve present value refinancing savings
- An issuer offers to purchase its bonds from existing bondholders on the secondary market at a specified price (or spread to a UST benchmark for taxable bonds)
- Bondholders decide whether to sell, or "tender", their bonds back to the issuer
- The issuer funds the tender purchases with a new refunding bond issue, sized based upon the total tenders received, and cancels its old bonds at closing

Bond Funded Tenders Are Gaining Momentum This Year

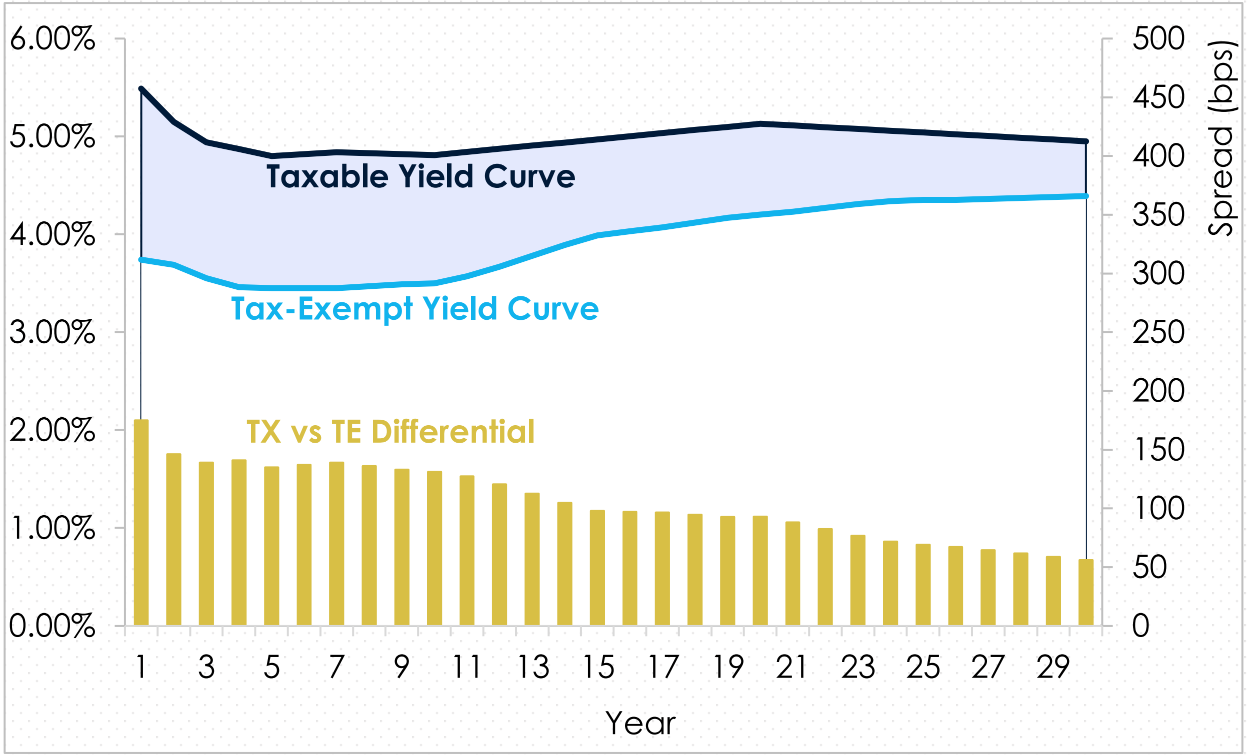
Municipal Tender/Exchange Transactions Since 2021*



* Source: As of October 2023; from publicly available tender results

Taxable Economic Tender Candidates

- Taxable bonds where underlying projects are otherwise eligible to be tax-exempt (i.e. taxable advance refunding)
- Savings generated by monetizing the yield differential between an Issuer's taxable and TE borrowing costs
- Ratio between tax-exempt and taxable markets drive savings <u>not</u> overall interest rate levels
- Bonds are often low coupon and purchased at significant discount to par

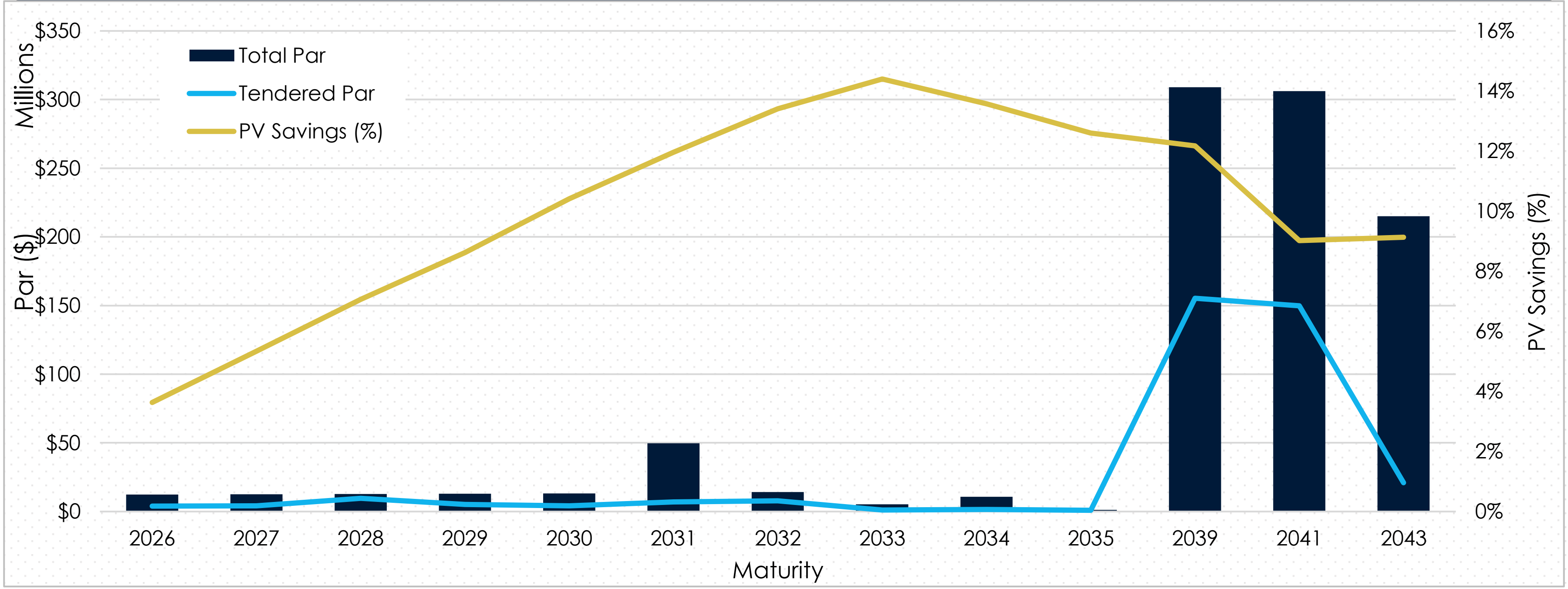


Source: Refinitiv (TM3), as of 10/11/2023.

SFPUC Water Revenue Bonds, 2023 C&D – Taxable Tender

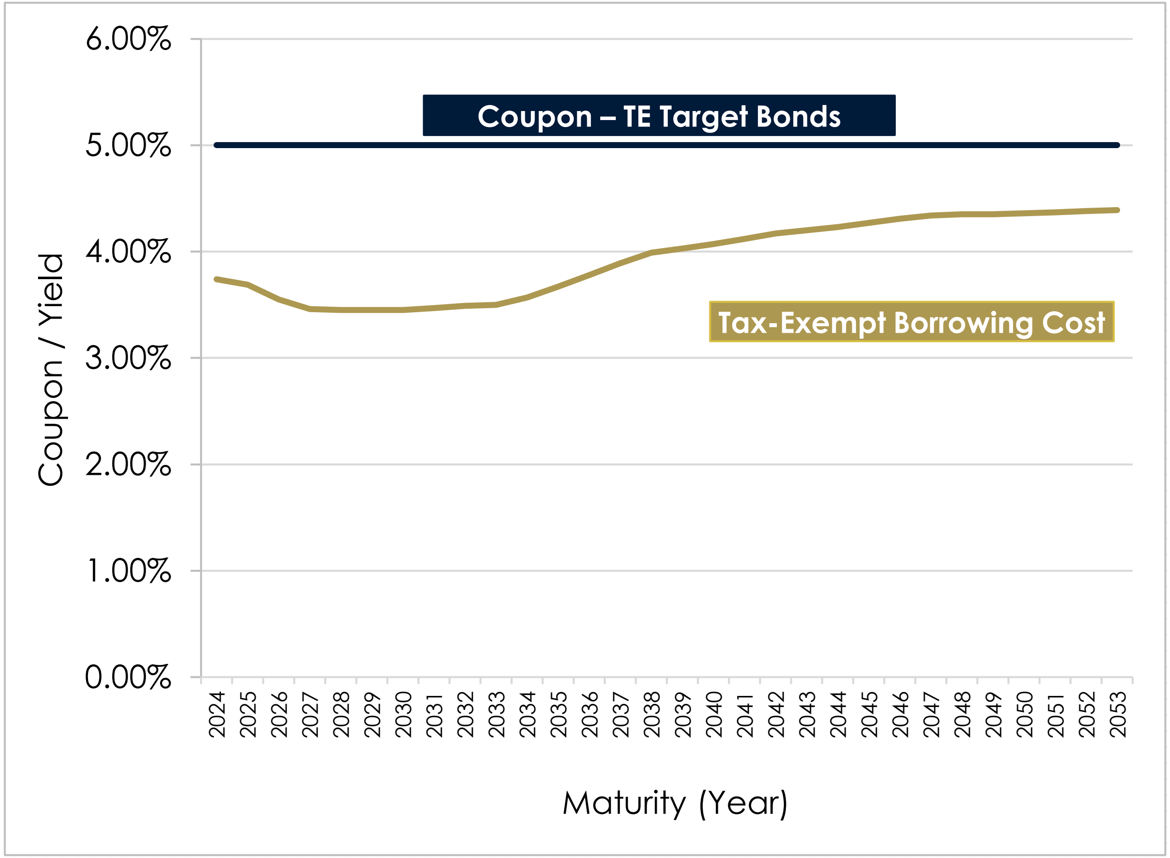
- 38.1% of the maximum permitted taxable par was tendered - $371.08 million
- ~$38.6 million PV savings or 10.4% of refunded par generated from low coupon taxable bonds with no embedded call option value

Total/Tendered Par and PV Savings by Maturity



Tax Exempt Economic Tender Candidates

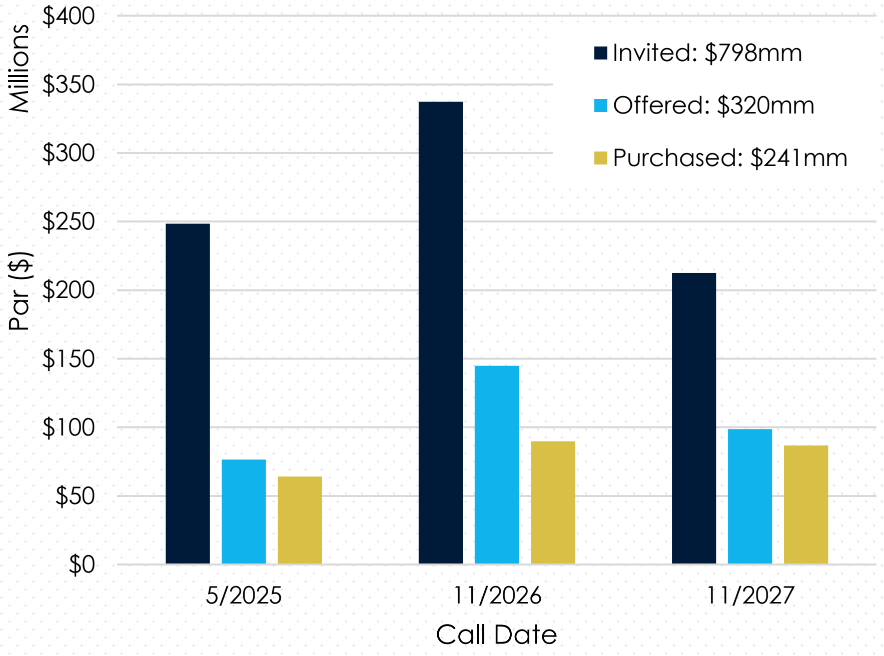
- Most tax-exempt financings are structured with 5% coupons for bonds maturing beyond five years and 10 year par call
- The result is "in the money" call options today
- Call cannot be monetized given prohibition of tax-exempt advance refundings
- Savings generated by monetizing the call option – highly dependent on overall TE interest rate levels
- Tender accomplishes what an advance refunding used to do



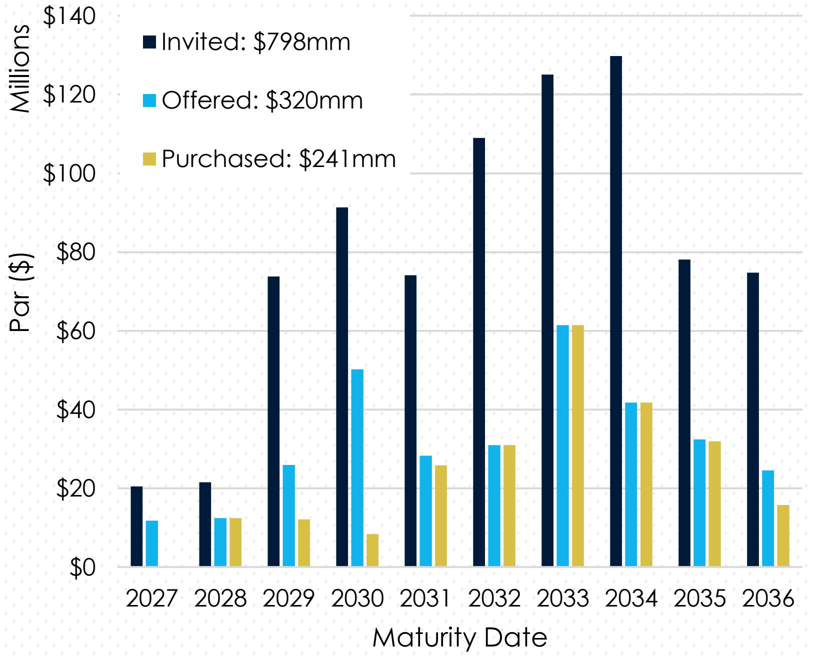
SFPUC Water Revenue Bonds, 2023 C&D – Tax-Exempt Tender

- 40% of the maximum permitted taxable par was tendered - $320.05 million
- SFPUC accepted $240.80 million (75.2% of total offered)
- Generated ~$21.68 million PV savings or 9.0% of refunded par

Tender Candidate Call Dates



Tender Candidate Maturity Dates



Sequestration: Historical and Potential Impact on BABs

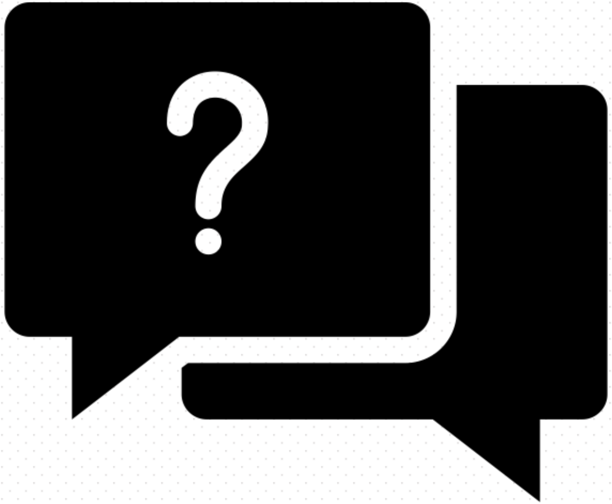
- Issuers of Build America Bonds (and other direct pay subsidy bonds) are currently exposed to federal sequestration
- Federal subsidies on these bonds have been reduced via sequestration in every year since 2013 under the BCA
- In addition, sequestration of the entire subsidy was put at risk in 2021 and again in 2022 - Congress avoided PAYGO sequestration on a temporary basis and with very limited legislative support
- The 2022 federal action avoids PAYGO sequestration only through 2024, not to maturity of outstanding BABs

Existing Yearly Sequestration Rate Reduction under BCA

FFYE 9/30	Rate Reduction
2021-2030	5.7%
2020	5.9%
2019	6.2%
2018	6.6%
2017	6.9%
2016	6.8%
2015	7.3%
2014	7.2%
2013	8.7%

Extraordinary Optional Redemption Provisions (ERP) to Refund BABs

- Issuers may be motived to eliminate exposure to future sequestration or subsidy loss if economics are break-even or better
- While most remaining BABs do not have par call many have make-whole call provisions (MWC) and extraordinary optional make-whole call provisions (ERP)
- ERP MWC provisions typically at much higher spread than MWC (i.e. UST + 100bps)
- Language differs significantly, however, for many issuers counsel can determine that sequestration has triggered the ERP provisions
- Refunding BABs back to Tax-exempt using the ERP may result in PV neutral or PV positive expected savings, particularly for California issuers
- PV benefit/cost highly dependent on maturity date(s) and coupon(s) of BABs



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15-Minute Break

APPLICATION & EXECUTION OF COST-SAVING STRATEGIES

Colin Bettis, County Debt Officer, County of Sacramento

Natalie Perkins, Director of Treasury, Metropolitan Transportation Commission

Nikolai Sklaroff, Capital Finance Director, San Francisco Public Utilities Commission

Daniel L. Wiles, Assistant Treasurer and Tax Collector, Public Finance, Investment and Deferred Income Branch, Los Angeles County Treasurer and Tax Collector

Colin Bettis

County Debt Officer

Sacramento County

Water Infrastructure Finance and Innovation Act

- Project – Arden Service Area Distribution System Pipe Realignment and Meter Installation Project
- Total Project Cost (Estimated) $165.7 Million
- WIFIA Loan Amount: $81.2 Million
- Project Benefits
  - Reduces water use by an estimated 17% annually by improved leak detection and water conservation methods
  - Delivers water reliably and efficiently to the community
  - Saves Sacramento County Water Agency approximately $22 million by financing with a WIFIA loan
  - Enables the County the county to meet the requirement of AB 2572 that requires all customers to be metered by January 1, 2025

2022 Water Revenue Bonds

- To further lower the overall cost of borrowing for the Project, SCWA issued Revenue Bonds to provide interim financing during the construction period
- The Revenue Bonds were issued with a final maturity in 2025 with repayment expected to come from a draw on the WIFIA loan
- Revenue Bonds provide several advantages to SCWA
  – Lower cost of financing providing during construction (1.89% WIFIA Loan vs. 1.04% Bonds)
  – Keeping WIFIA loan undrawn allows for potential loan refinancing in the future if rates decline (now unlikely)
  – Provided a cost-effective means of capitalizing all or a portion of interest payments during construction (capitalized $8.6 million of $12.2 million)
  – Total anticipated savings $403,581

2023 Pension Obligation Refunding Bonds

Problem:

- The documents for both the 2008 POBs and the related Swap never contemplated the demise of the LIBOR index which is expected to occur on June 30, 2023
- Federal Legislation was enacted in March 2022 that created different computations of the successor index, SOFR (the successor index to be used in financial instruments such as the 2008 POBs and the Swap that had not contemplated that LIBOR might end permanently): (1) Term SOFR for the 2008 Bonds, (2) Compounded SOFR for the Swap
- If no action is taken, there would be a mis-match between variable rate indices, creating risk of increased debt cost for the County in the future (Evercrest, the County's Swap Advisor, estimates 0.05%-0.10% swings could be expected)

Two Term Bonds Necessitate Two Different Solutions

2026 Term Bond

<u>Key Differentiator:</u> Non-Call, single Bond owner wishes to keep its Bond and Swap matched

<u>Solution</u>: Amend related indenture to incorporate the "standard" fallback process and economics that have been established for swap contracts, simultaneously match the Swap and the Bonds to the same index so that there is no mis-match in variable indices.

- Process to Effectuate the Change:
  - Orrick drafted an amendment to the supplemental indenture embedding the fallback language that mirrors the language from standardized swap documents
  - Because this creates a "non-standard" bond term, Evercrest Advisors now serves as Calculation Agent for the bonds going forward

2030 Term Bond

<u>Key Differentiator:</u> Callable at Par, 1.45% Credit Spread Allows Economic Refinance Opportunity

<u>Solution</u>: Refund the variable rate bonds with variable rate bonds based on the SOFR index and a much lower credit spread. Simultaneously restructure the swap so there is no mis-match in variable indices.

- Process to Effectuate the Change:
  - The County conducted a Request for Proposal for private placement financings whereas Bank of America was the winner
  - The 2030 Term Bond was called, and Bank of America was the sole purchaser of the variable rate refunding bonds
  - Options of both Fixed Rate and Variable Rate were requested through the private placement RFP and the Variable Rate provided the best economics at the time.

Details and Results of the Pro-Forma Structures

2026 Term Bond

SACRAMENTO COUNTY

5.901%

Bank of America

~~1m LIBOR~~
Compounded SOFR

~~1m LIBOR~~
Compounded SOFR
+1.30%
Credit Spread

2008 POBs

Benefits vs. Status Quo:
- No Basis Risk
- No Change in Interest

Economic Results

Debt Cost Savings:	0%
PV Impact to Debt Service:	$0

2030 Term Bond/2023 Bonds

*Assumes $12.4mm Unhedged Debt w/ Interest Rate of 4.00%

~~5.768%*~~
5.788%

SACRAMENTO COUNTY

Bank of America

~~1m LIBOR~~
Average SOFR

~~1m LIBOR~~
Average
SOFR
~~+1.45%~~
+0.45%
Credit
Spread

2023 Bonds

Benefits vs. Status Quo:
- No Basis Risk
- Debt Service Savings

Debt Cost:
Swap Rate = 5.788%
+ Credit Spread = 0.45%
Debt Cost = 6.238%

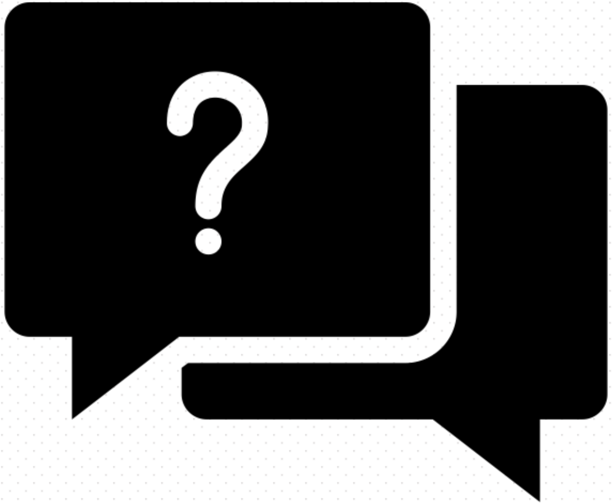
Economic Results

Debt Cost Savings:	0.98%
PV Impact to Debt Service:	$9.0mm Savings

Note: 2030 Term Bond economics do not include cost of issuance which equates to approximately 6 basis points. Present value impacts assume 4% rate.

Upcoming – TIFIA for Airports

- Department of Airports looks to take advantage of TIFIA
  - Rural Designation – ½ Treasury Rate
  - Interest does not accrue until proceeds are drawn
  - Requirements for Buy America and other Federal provisions are already being met due to consistency with obtaining other Federal Grants
- Challenges
  - No Airport projects have been funded through TIFIA as of the date these slides were prepared.



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Director of Treasury

Metropolitan Transportation Commission

BAY AREA TOLL AUTHORITY

Variable Rate Bonds - Background

- $285 million in SIFMA index bonds with purchase date of 5/1/23
- Originally reoffered in Mid 2013 at SIFMA + 0.90%
- Hedged by fixed-to-floating rate swaps
- Evaluated put bonds, SIFMA floaters and VRDBs
- Determined that VRDBs would provide the lowest cost

Variable Rate Bonds – Issuance Process

- Solicited proposals for Letters of Credit – three-to-five-year terms
- Provided a form of reimbursement agreement
- Received proposals from 11 banks
  - Broad range of rates – as much as 0.60% spread between highest and lowest fees
  - Existing agreement has favorable terms
    - Five-year term out
    - Two years of interest only
  - Negotiated rate
  - Kept existing terms
- Split into four- and five-year pieces in a daily rate mode

Variable Rate Bonds – Results

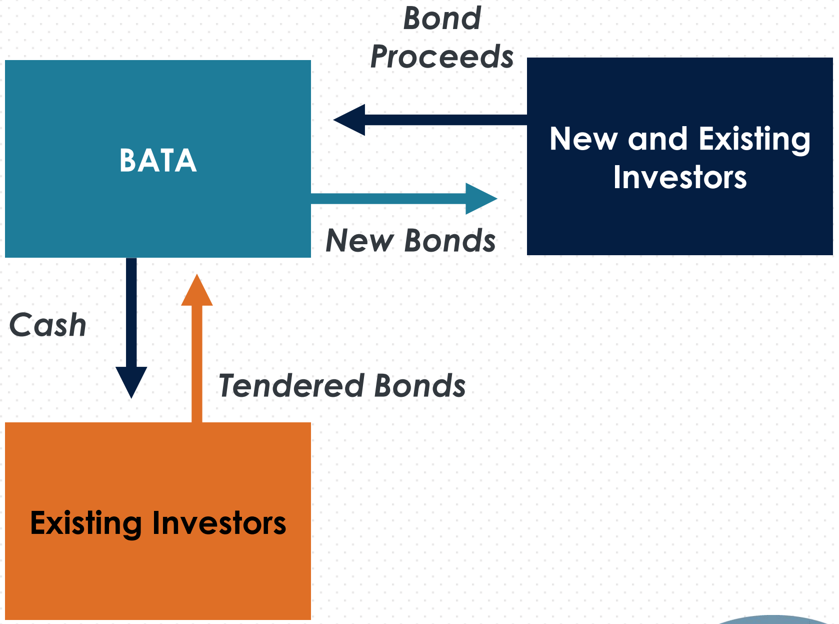
- Weekly VRDBs traded at an average of approximately SIFMA – 0.20% in 2022
- Refunded index rate notes were at SIFMA + 0.90%
- Since the refunding, VRDBs trading at approximately SIFMA – 1.05%
  - All-in cost is approximately SIFMA – 0.65%
  - Comparable maturity index rate notes were SIFMA + 0.50% to 0.65% at the time of pricing
- Elected to have a longer escrow in order to earn positive arbitrage on the escrow

Tender Refunding - Background

- Tender – invitation to investors to sell bonds back
- BATA had taxable bonds outstanding that were eligible for tax-exempt refunding
  - Non-callable or distant call dates
- Low coupon with rising rates meant they were trading below par
- Capture savings between taxable rates and tax-exempt rates

TENDER OFFER

Investors tender bonds for cash; purchase can be funded with bond proceeds or cash on hand



Tender Refunding – Process

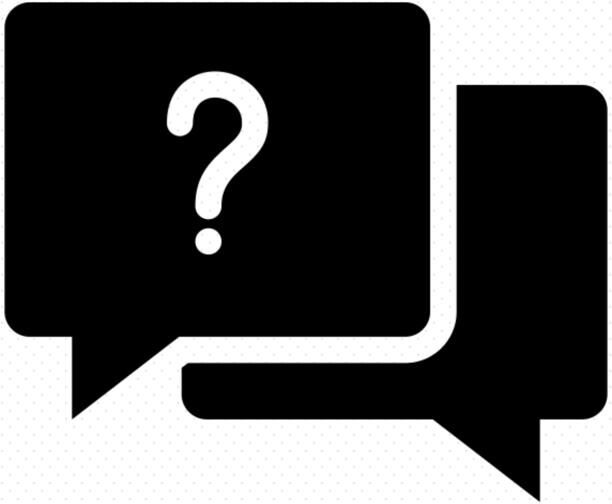
- Examined whole portfolio of fixed rate debt
- Tax analysis related to eligibility to refund on tax-exempt basis
- Tax-exempt to tax-exempt – monetizing pushing back the call date, minimal savings in this case (elected not to refund)
- Refunding of BABs – low savings, but able to eliminate the subsidy risk on a small amount of bonds (approximately $62 million refunded)
- Showed rating agencies a very large universe of candidates
- Predetermined tender spread to benchmark; purchase price determined contemporaneously with the pricing of the refunding bonds

Tender Refunding – Results

- Tender offer for $1.3 billion
  - Maximum that could be accepted $768 million
  - $485.2 million tendered
  - $473.3 million accepted
    - Tenders are not accepted until after pricing of refunding bonds
    - Tender was contingent on the issuance of refunding bonds
    - NPV savings of $24.8 million or 5.25% of refunded par
  - Process enabled opportunistic second refunding transaction eight weeks later

Takeaways

- Combined tender with variable transaction that was required
- Combination minimized staff time and resulted in lower costs of issuance
  - Combined development of disclosure document
  - Combined rating fees
  - Professional fees lower than if separate transactions
- Regular check-ins to make sure tender in-the-money and worth incurrence of further costs
  - Tender was relatively labor intensive
- Rating fees – negotiate what the cancellation fee would be



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AB 218 Settlement Financing Challenges

Daniel Wiles
Assistant Treasurer and Tax Collector
Finance and Investments
Los Angeles County

AB 218 – Impact on Liability

AB 218 extended statute of limitations for childhood sexual assault cases

- 22 years after plaintiff reaches majority age (18) or
- Within 5 years of date plaintiff discovered (or should have) the psychological injury occurring after age of majority was caused by assault
- Also revived 3-year window to file certain claims

Estimated liability and settlement costs of $3B or more over current and next FY

- Timing and amounts not predictable

More than can be absorbed in 2 FYs

Requires interim and long-term financing

- Interim to pay settlements as reached and accumulate settlement amounts into financially efficient packages – est. at least $200 million

Authority to Finance

Judgments are considered "obligations imposed by law"

Financing is covered by CA Government Code provisions authorizing refundings

Like pension obligation bond financings

Like POBs, precedent not sufficiently well settled to proceed without validation

Need Judicial action before implementing financing

Potential Financing Structure

Interim Financing – 2 Alternate Forms

Revolving loan facility from major bank

- Drawn as needed
- Interest paid on amounts drawn, with fee for unutilized amount

Tax and Revenue Anticipation Notes

- Compliance with cash flow requirements – maybe difficult depending on County cash position
- TRANs present strict time limitations

Interim Financing attributes

Likely needed for 3-5 year term

Possible amount outstanding at any time: $500,000 ??

Long Term Bonds

Straight forward 20 year term

Level debt service

Likely need multiple issues during next 3-5 years

Expected ratings will be at/near LAC issuer rating

Tax Status of Financings

Base case is taxable – long term working capital financing

Qualifying for tax-exemption through extraordinary working capital rule requires ongoing monitoring for "available amounts" and future investment constraints

Made more complex due to positive County cash flow position.

Validation Process

Documentation submitted for court review

- Includes all possible transaction structures
- Substantially final documents
- All parties must be selected and terms negotiated BEFORE FILING

Process subject to adversarial process

- POB issues have been challenged and withdrawn

Estimated 4 months to process from filing date

- Assumes no parties contest the validation

General Timing

Hope to complete initial interim financing before July 1, 2024

Long-term bonds will be issued as needed

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Capital Finance Director

San Francisco Public Utilities Commission

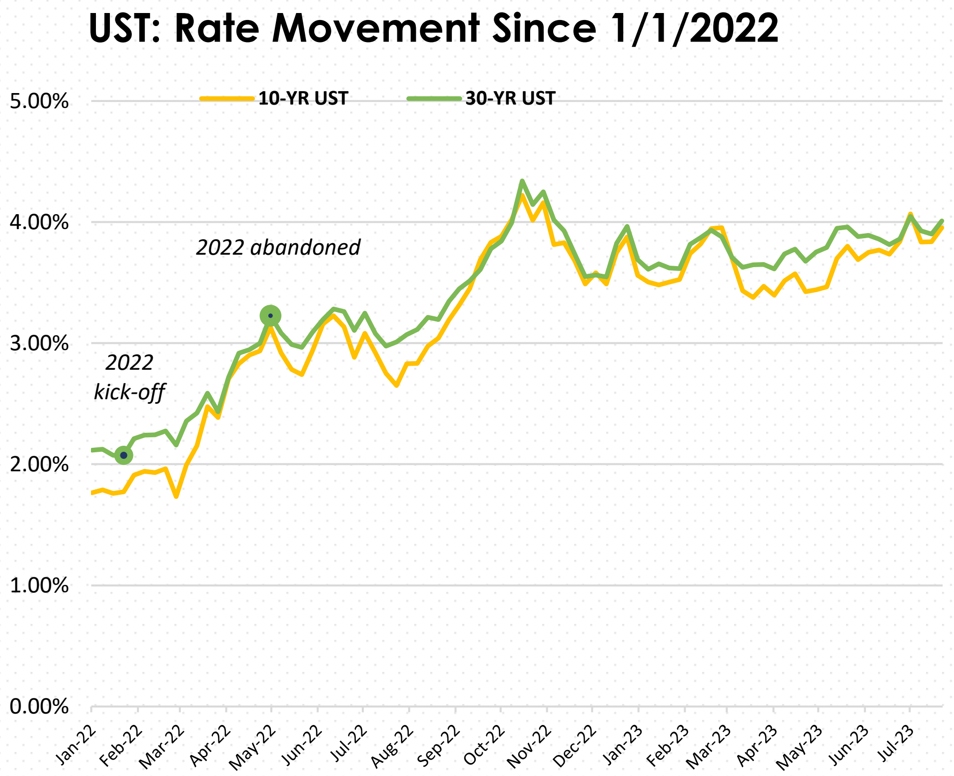
CDIAC Commissioner

Issuer Panel: Executing Cost Strategies

Four Topics:

1. Tender Refunding
2. WIFIA
3. BABs
4. Bond Proceeds Investment

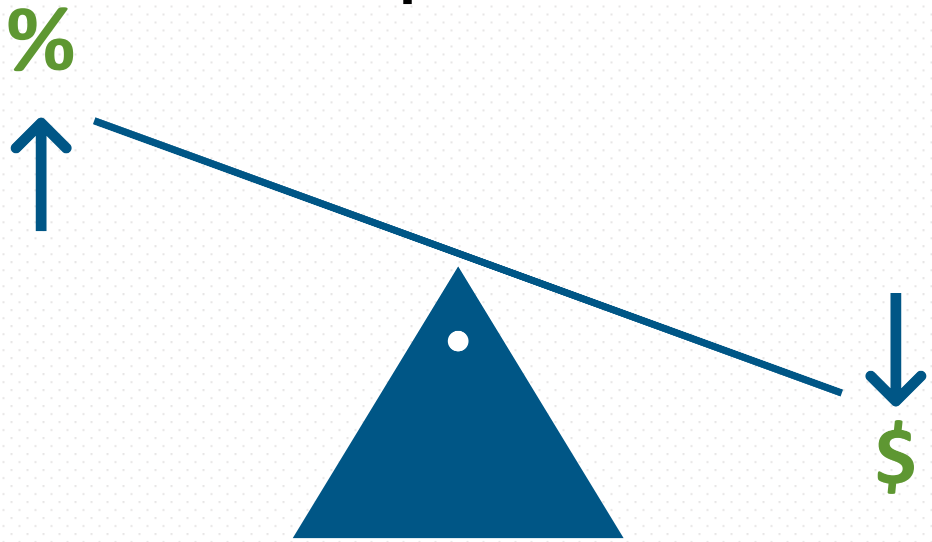
Refunding Alternatives



- 2017: End of Tax-Exempt Advance Refundings and advent of taxable refundings
- 2020: Pandemic brings dramatically lower rates and refinancing opportunities
- 2022: Commission authorizes $950 million taxable refunding and $475 million tax-exempt refunding
- 2022: Fed starts raising rates in March and rapidly adds 11 increases by July 2023
- Tender refunding opportunities reemerge as an option

Why Tender Refundings?

When interest rates *rise*, bond prices *fall*



- Investors who need or want to sell, selling in secondary market at a steep discount
- Opportunity for win-win solution
- Refund bonds that are not efficient or can not be current refunded
- Important to understand both sides of the transaction

SFPUC Pursues Tender Refunding


NEW ISSUE – Book-Entry Only

Ratings:
Moody's: "Aa2"
S&P: "AA-"
(See "RATINGS.")

$414,035,000
PUBLIC UTILITIES COMMISSION OF
THE CITY AND COUNTY OF SAN FRANCISCO
San Francisco Water Revenue Bonds, 2023 Series AB

$349,495,000 2023 Sub-Series A (Regional Water and Local Water)	$64,540,000 2023 Sub-Series B (Hetch Hetchy Water)

Dated: Date of Delivery

Due: November 1, as shown on inside cover page


NEW ISSUE – Book-Entry Only

Ratings:
Moody's: "Aa2"
S&P: "AA-"
(See "RATINGS.")

$514,855,000
PUBLIC UTILITIES COMMISSION OF
THE CITY AND COUNTY OF SAN FRANCISCO
San Francisco Water Revenue Bonds, 2023 Series CD

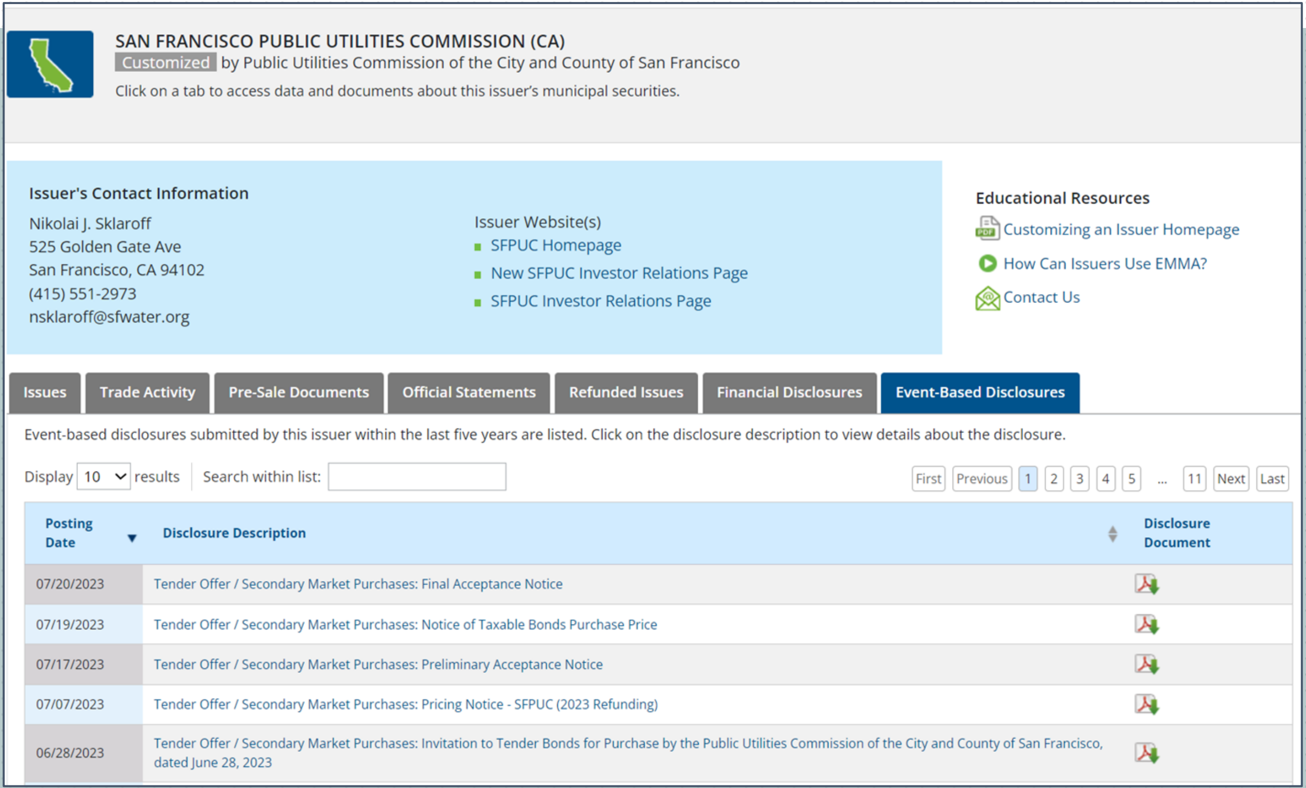
$486,875,000 2023 Sub-Series C (Refunding) (WSIP) (Green Bonds)	$27,980,000 2023 Sub-Series D (Refunding) (Local Water)

Dated: Date of Delivery

Due: November 1, as shown on inside cover page

Authorized Par and Purpose	2023 Series AB - Up to $450 million to fund regional, local, and Hetchy water projects (new money/refund commercial paper)	2023 Series CD - Up to $1,662 million to refinance certain outstanding WSIP and Local Water bonds through a tender process to achieve savings
Pricing	July 11, 2023	July 19, 2023

Deliberate Market Communications

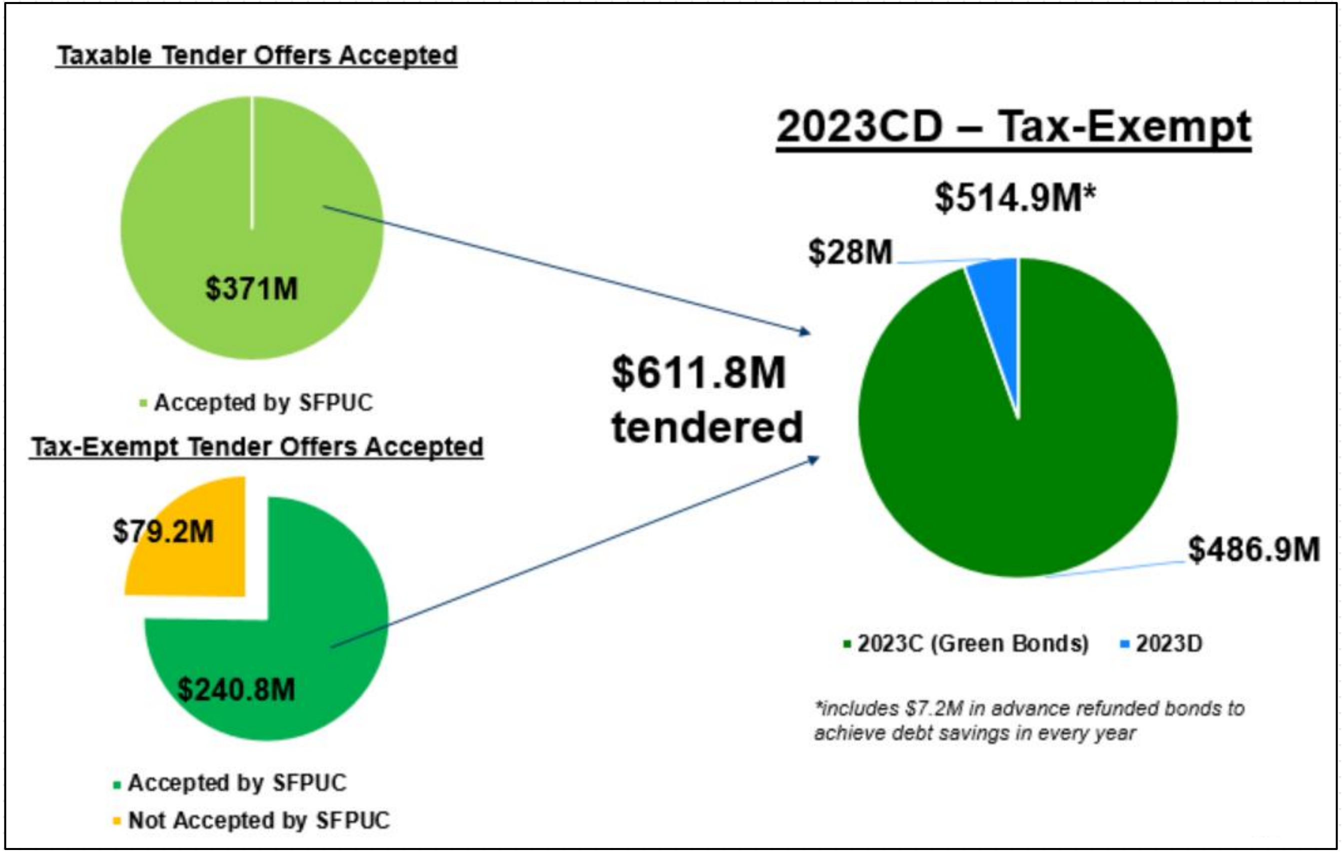


- EMMA
- Tender Agent
- Dealer
- Syndicate on Bonds

Updates on Valuations / Tender Process

Taxable Tender: Tender Participation and Estimated Maturity-by-Maturity Savings (Final)															
Existing Bond Information (Term Bonds Aggregated)									Tender Participation		Tender Price and Estimated Savings				
CUSIP	Series	Program	Par Amount	Coupon (%)	Maturity Date	Weighted Average Maturity Date (for Term Bonds)	UST Benchmark	UST Benchmark Yield	Tendered Par	Tendered % of Max Permitted	Tender Spread to UST	Tender Price	PV Savings (%)	PV Savings ($)
79765R4R7	2019A	WSIP	3,805,000	2.371	11/1/2026	11/1/2026	3-Yr	4.322%	970,000	18.53%	-5 bps	94.326	**3.58%**	34,773
79765R4S5	2019A	WSIP	3,900,000	2.483	11/1/2027	11/1/2027	5-Yr	3.986%	2,035,000	52.18%	+20 bps	93.464	**5.30%**	107,918
79765R4T3	2019A	WSIP	4,000,000	2.533	11/1/2028	11/1/2028	5-Yr	3.986%	2,690,000	44.13%	+20 bps	92.310	**7.02%**	188,832
79765R4U0	2019A	WSIP	4,105,000	2.593	11/1/2029	11/1/2029	7-Yr	3.887%	970,000	18.39%	+31 bps	91.289	**8.57%**	83,122
79765R4V8	2019A	WSIP	4,215,000	2.703	11/1/2030	11/1/2030	7-Yr	3.887%	575,000	4.74%	+33 bps	90.651	**10.35%**	59,501
79765R4W6	2019A	WSIP	31,095,000	2.803	11/1/2031	11/1/2031	10-Yr	3.774%	525,000	0.00%	+47 bps	90.079	**11.89%**	62,425
79765R4X4	2019A	WSIP	4,055,000	2.953	11/1/2032	11/1/2032	10-Yr	3.774%	40,000	0.99%	+49 bps	90.083	**13.34%**	5,335
79765R4Y2	2019A	WSIP	4,180,000	3.053	11/1/2033	11/1/2033	10-Yr	3.774%	-	0.00%	+55 bps	89.581	**14.32%**	-
79765R4Z9	2019A	WSIP	4,310,000	3.153	11/1/2034	11/1/2034	10-Yr	3.774%	1,425,000	16.01%	+59 bps	89.338	**13.57%**	193,355
79765R5A3	2019A	WSIP	308,895,000	3.303	11/1/2039	7/16/2037	10-Yr	3.774%	155,340,000	47.94%	+79 bps	87.101	**12.18%**	18,912,669
79765R5B1	2019A	WSIP	204,340,000	3.473	11/1/2043	7/11/2042	30-Yr	3.897%	20,865,000	9.76%	+83 bps	84.429	**9.13%**	1,904,062
79765R5E5	2019C	Local Water	5,320,000	3.153	11/1/2034	12/24/2032	10-Yr	3.774%	-	0.00%	+57 bps	90.907	**12.84%**	-
79765R5F2	2019C	Local Water	12,455,000	3.523	11/1/2041	12/20/2038	10-Yr	3.774%	-	0.00%	+80 bps	88.489	**10.63%**	-
79771FAA5	2020E	WSIP	293,605,000	2.825	11/1/2041	12/12/2038	10-Yr	3.774%	149,890,000	63.96%	+80 bps	80.867	**9.02%**	13,517,456
79771FAZ0	2020G	Local Water	8,475,000	1.140	11/1/2026	11/1/2026	3-Yr	4.322%	2,990,000	35.28%	-5 bps	90.655	**3.64%**	108,782
79771FBA4	2020G	Local Water	8,575,000	1.340	11/1/2027	11/1/2027	5-Yr	3.986%	2,025,000	23.62%	+20 bps	89.081	**5.36%**	108,636
79771FBB2	2020G	Local Water	8,700,000	1.618	11/1/2028	11/1/2028	5-Yr	3.986%	6,885,000	77.82%	+20 bps	88.057	**7.08%**	487,317
79771FBC0	2020G	Local Water	8,840,000	1.718	11/1/2029	11/1/2029	7-Yr	3.887%	4,230,000	45.81%	+31 bps	86.540	**8.63%**	365,195
79771FBD8	2020G	Local Water	9,005,000	1.788	11/1/2030	11/1/2030	7-Yr	3.887%	3,520,000	21.54%	+33 bps	85.004	**10.42%**	366,889
79771FBE6	2020G	Local Water	18,520,000	1.988	11/1/2031	11/1/2031	10-Yr	3.774%	6,350,000	31.45%	+47 bps	84.471	**11.96%**	759,687
79771FBF3	2020G	Local Water	10,180,000	2.188	11/1/2032	11/1/2032	10-Yr	3.774%	7,800,000	72.74%	+49 bps	84.299	**13.41%**	1,046,092
79771FBG1	2020G	Local Water	1,110,000	2.288	11/1/2033	11/1/2033	10-Yr	3.774%	1,110,000	100.00%	+55 bps	83.314	**14.40%**	159,806
79771FBH9	2020G	Local Water	1,140,000	2.388	11/1/2034	11/1/2034	10-Yr	3.774%	-	0.00%	+59 bps	82.607	**13.65%**	-
79771FBJ5	2020G	Local Water	1,165,000	2.488	11/1/2035	11/1/2035	10-Yr	3.774%	840,000	60.94%	+62 bps	82.116	**12.59%**	105,798
79771FBK2	2020G	Local Water	10,705,000	3.095	11/1/2043	6/29/2040	30-Yr	3.897%	-	0.00%	+83 bps	81.157	**11.18%**	-
			974,695,000						**371,075,000**	**38.07%**			**10.40%**	**38,577,650**

Net Tender Refunding Results



- $1.6 billion candidates
- $611. 8 million tendered
- $514.9 million refunding bonds
- Gross Savings of $85.4 million
- $58.5 million/ 9.5% NPV savings

Tips for Tender Refunding

- Develop a good plan for education of internal parties and elected officials
  - Two sides of transaction, and unfamiliar bond pricing dynamics
- Importance of Good Advice
  - SFPUC – Municipal Advisors and Pricing Consultants
  - Dealer and MA Models
- Investor Relations
  - Communications
  - Transaction Decisions

Low Cost Federal and State Loans

Water Infrastructure Finance and Innovation Act (WIFIA)

“WIFIA Program Handbook”
EPA, September 2023
https://www.epa.gov/system/files/documents/2023-09/WIFIA-Program-Handbook.pdf

- Opportunity to lock in rates based on Treasury rates
- One Time opportunity to reexecute and lower rate

- 2023: $791 million master agreement for wastewater resilience program for up to 15 projects city-wide
- $369 million first loan for 6 projects
- Two prior WIFIA loans for Biosolids Digester Facility Project ($699.2 million) and Southeast Treatment Plant ($513.8 million)

TIPS FOR "IFIA" FINANCING

- One of program's largest partners
  - Dedicated resources and time
- Negotiation and new ideas
- Value of Lien
- Real Value for Highly-Rated Issuers
  - Locking in rates and ability to capture one time adjustment
  - Opening strategic options
  - Mix of tools
  - Remember reimbursement for 49% and the other 51%

Build America Bonds (BABs) Refundings

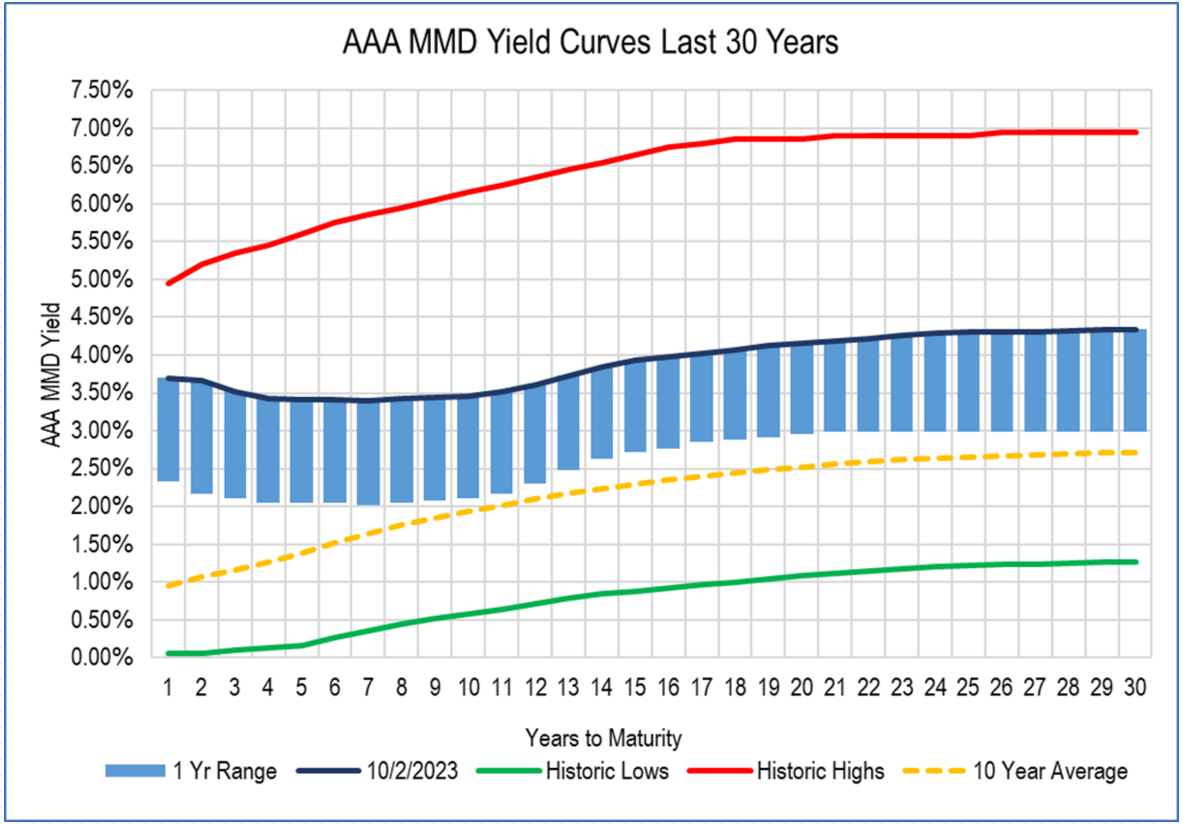
"GFOA Leads Coalition Letter on Sequestration and Direct Subsidy Bonds"
GFOA, June 2022
https://www.gfoa.org/materials/gfoa-leads-coalition-letter-on-sequestration-and-direct-subsidy-bonds

"Burned by BABs, Issuers Look for a Way Out"
Orrick, May 24, 2023
https://www.orrick.com/en/Insights/2023/05/Burned-by-BABs-Issuers-Look-for-a-Way-Out

"Issuers urge Supreme Court to review BABs subsidies case"
Bond Buyer, August 17, 2023
https://www.bondbuyer.com

- Issued a total of $1.1 billion of Build America Bonds in 2009 and 2010
- Currently about ~$25 million per year
- Sequestration has cost about ~$24 million

Bond Proceeds Investments



- Making sure proceeds investment is not an after-thought
- Market changes
- Opportunities to recover costs
- Legal arbitrage
- Tax exempt vs. taxable rates

Tips for Bond Investments

- Changing Rate Dynamics and Inverted Yield Curve
  - Opportunity to reevaluate both what you do on new transactions and what you have done on existing invested proceeds
- Whole Generation of Public Finance Officials who have only worked in low interest rate environment
  - Arbitrage rebate liabilities and compliance
  - Expert advice – Municipal Advisors and Treasurer’s Office
  - Regular monitoring
  - Educational opportunities

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Please help CDIAC improve our programming by completing the program evaluation.

UPCOMING CDIAC EVENT

Fundamentals of Public Funds Investing
February 28-29, 2024
Livermore, CA