MUNICIPAL DEBT ESSENTIALS

SEPTEMBER 15-17, 2026 | SAN JOSE, CALIFORNIA

INTRODUCTION

Securities and Exchange Commission (SEC) Update

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U.S. SEC

CDIAC

SESSION ONE

Overview of Issuer Responsibilities Post-Issuance

COLIN BETTIS
County Debt Officer
County of Sacramento

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CDIAC

You've Priced the Bonds… Now What?

- Pre-Closing Activities
  - Document Finalization
    - Teams review and confirm accuracy of edits
    - Significant Changes to OS – require stickering
    - Signatures (Electronic or Manual)
    - Set up funds for the acceptance of proceeds to be held by the agency
- Closing – Day of
  - Call to confirm receipt of funds and release of bonds to DTC
  - Prepare for the next steps

You’ve Closed and Have Access to Funds… What Now?

- The Bonds issued carry significant responsibilities going forward.
  - Debt Service Payments
  - Investment of Proceeds
  - Recording Transactions accurately for ACFR
  - Monitoring
    - Cash Flow
    - Use of Funds
    - Use of Facilities/Equipment
    - Arbitrage
  - Reporting
    - CDIAC
    - EMMA
    - Governing Board
    - Rating Agency, Investor Relations – Continued Communications (within limits)
  - Records Retention

Money, Money, Money

- Proceeds
  - Costs of Issuance
  - Project Fund
  - Debt Service Reserve
  - Capitalized Interest
- Invest Funds in accordance with:
  - State and Federal Law
  - Ordinance/Indenture Requirements
  - Internal Investment Policy
- Use Project Fund Proceeds timely

Ongoing Responsibilities

- IRS
- MSRB/EMMA – Information direct to Investors/Rating Agencies
  - Continuing Disclosures
- CDIAC
  - Report of Proposed Issuance
  - Report of Final Sale
  - Annual Debt Transparency Report
  - And if applicable – Mello-Roos/Marks Roos Reports
- Trustee, Credit Providers, Swap Counterparties, etc.
- Training (Continuing Disclosure, Use of Proceeds, Records Retention)

What Do I Need To Track?

- Use of the Bond Proceeds
  - Authorized list of projects
  - Construction Proceeds spent in a timely manner
  - Cash Flow for expected draws
- Investments
  - Permitted investments in accordance with the bond documents (Tax/Trust)
  - Permitted investments with state law and your investment policy
- Debt Service / Cash Flow Availability
  - Include Debt Service payments in the budget
  - Monitor cash flows and timing of investments to maintain sufficient liquidity – coordinate with the treasurers.

Record Keeping – Term of Bonds + 3 Years

- Keep Accurate Accounting Records
- Maintain proper tracking of:
  - Transcript Files
  - Documents of evidence of the expenditures of bond proceeds
  - Documents of evidence of the use of the facilities
  - Documents of evidence of the source of payment and security of the bonds
  - Documents pertaining to the investments of the bond proceeds
- IRS Electronic Storage Guidelines
- Refunding may extend the timeline, follows new final maturity of refunding bonds.

Policies/Procedures/Systems

- Review your Debt Policy – Update accordingly
- Review your Disclosure Policies and procedures – update accordingly
- Establish systems for reminders of dates and responsibilities or covenants (add calendar reminders) – tools are available
- Debt Service Payments (timely)
- Continuing Disclosure Filings
- Other Reporting Requirements
- Arbitrage (track liabilities for ACFR)
- Use Consultants when appropriate (Arbitrage, Trustee, Tax Counsel, Disclosure tracking)

Event Filings – Know What Needs to be Disclosed

- Principal and interest delinquencies
- Non-payment related defaults, if material
- Unscheduled draws on reserves
- Unscheduled draws on credit enhancements
- Substitution of credit or liquidity providers
- Adverse tax opinions
- Modifications to rights of security holders, if material
- Bond calls, tender offers
- Defeasances

Event Filings –
Know What Needs to be Disclosed (continued)

- Release or Substitution or sale of property securing repayment
- Rating Changes
- Bankruptcy
- Consummation of a merger, consolidation, or acquisition
- Appointment of a successor or additional trustee or name change of trustee

NEW AS OF FEBRUARY 27, 2019

- Incurrence of a financial obligation, if material
- Default, event of acceleration, termination event, modification of terms or other similar events…which reflect financial difficulties

Post-Issuance Tax Compliance (in greater detail)

- Record Retention
- Arbitrage and Yield Restrictions
- Correct Expenditure of Proceeds
- Monitor use and disposition of facilities
    - Private Use limitations
- Reach out to Tax Counsel when you have questions or things go haywire (there are often remedies, but they require timely compliance as well)

Arbitrage – a little detail

- What is Arbitrage?
  - Earning a profit by capitalizing on differences between investments and debt service on tax-exempt bond proceeds in taxable securities
  - Positive arbitrage represents earnings above the arbitrage yield
  - Arbitrage is not bad, but needs to be rebated back to the IRS, subject to certain exceptions under which the issuer may retain those earnings
- Calculation requirements
  - Every 5 years and at Final Maturity
  - Refunding triggers a new Final Maturity
- Calculation recommendations
  - Every year during the construction period or if the last year’s interim calculation had positive arbitrage liability

Arbitrage (continued)

- Liabilities are reportable in the ACFR and in other state reports
- Set aside funds each time a liability is identified (don’t be surprised by a payment when due)
- Set up reminders not just for the calculation, but for the payment deadline as well.

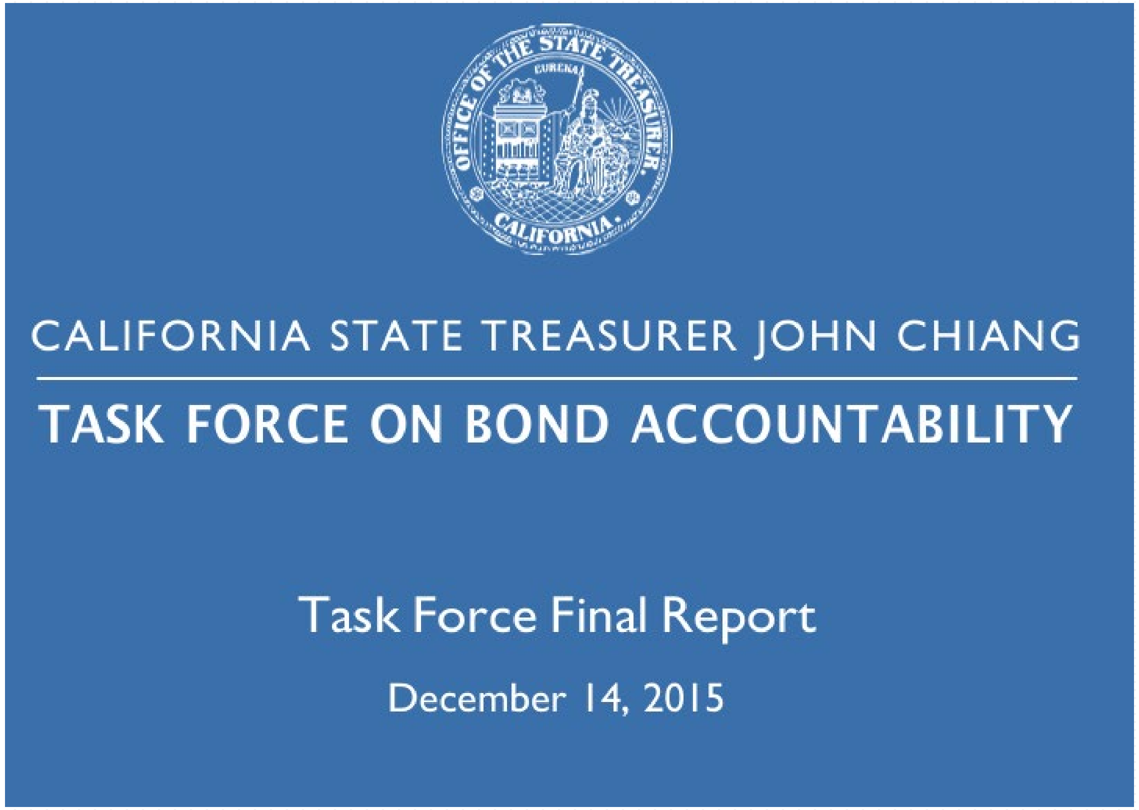
Private Use/Private Payment Tests

- Private Business Use Test – No more than 10% of proceeds can be used for private business use
- Private Payment Test – No more than 10% of the payment of principal or interest on the bonds is made or secured by payments for private business use
  - Both test must be met in order to have private activity bonds
  - Engage Tax Counsel to seek guidance
    - Federal Government is considered/treated as a Private Entity
    - If a property that was improved utilizing bond proceeds is going to be sold to a private entity remediation is required

Other Compliance Issues

- Bond Indenture Requirements/Covenants
  - Coverage Ratios
  - Progress Reports / Financial Reports
    - Private Placements, or Alternative Financings may come with additional reporting requirements
  - Additional Bonds Tests
- Debt Policy Requirements
- Monitor changes to laws and regulations
- Keep yourself educated – regularly attend trainings when possible

Bond Accountability: Best Practice Guidelines


CALIFORNIA STATE TREASURER JOHN CHIANG

TASK FORCE ON BOND ACCOUNTABILITY

Task Force Final Report

December 14, 2015

Task Force Findings

- Internal controls ensure agency funds are used properly.
- Bond fund management is more complex due to strict legal limitations.
- Public agencies lack a full set of commonly accepted best practices for bond oversight.
- Task Force developed 17 guidelines in 5 control categories to strengthen and supplement existing controls.
- Greater transparency is needed for taxpayers and stakeholders.

Control Environment

- Governing body holds ultimate responsibility for internal controls.
- Ethical leadership and “tone at the top” drive control effectiveness.
- Segregation of duties reduces risk of misuse.
- Written procedures must align with internal control objectives.
- Competent personnel and regular training are essential.

Risk Assessment

- Define objectives for the bond program.
- Identify risks that could prevent achieving objectives.
- Assess fraud and misuse risk explicitly.
- Consider internal and external risk factors.
- Adjust policies (debt, investment, administrative) based on risk profile.

Control Activities

- Apply consistent controls to bond funds and other governmental funds.
- Use “three-way match” for disbursements (invoice, requisition, receipt).
- Require supporting documentation before payment.
- Approving officer must certify compliance with controls prior to disbursement.
- Conduct annual compliance tests for disclosure and tax requirements.

Information and Communications

- Maintain detailed fund and account structures for bond proceeds.
- Publish annual expenditure reports to governing bodies and the public.
- Use websites and FAQs to communicate bond program status.
- Keep reporting timely, accurate, and accessible.
- Train staff regularly on reporting obligations and control changes.

Monitoring

- Evaluate internal controls regularly.
- Use oversight committees for independent review.
- Conduct annual control system reviews.
- Include compliance testing in audit programs.
- Provide fraud hotline or webpage.

Accountability in Practice

Accountability in Summary

- Strong internal controls safeguard bond proceeds and taxpayer trust.
- Guidelines supplement existing systems and strengthen risk mitigation.
- Transparency improves accountability and public confidence.
- Agencies should embed guidelines into policies, training, and oversight practices.
- Bond Accountability Checklists
  - Debt Issuance and Management Review Checklist
  - Internal Control System Checklist

QUESTIONS?

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SESSION TWO

Continuing Disclosure

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Why Is Disclosure Necessary?

- Issuers of municipal securities have obligations under federal securities laws

- All "material" information must be disclosed:
  - SEC Rule 405
    - The term material, when used to qualify a requirement for the furnishing of information as to any subject, limits the information required to those matters to which there is a ***substantial likelihood*** that a ***reasonable investor*** would attach importance in determining whether to purchase the security registered
    - The rule is from an investor perspective, not the issuer's or the borrower's

What Is A Reasonable Investor?

- Objective
  - A reasonable investor is one that is objectively focused on the investment decision
  - Does not consider emotional or subjective elements that are not related to the investment decision
  - Most importantly, legal standard of materiality assumes reasonable investors are not influenced by political or policy factors that are unrelated to the investment decision (for good or for bad)
- ***Unclear what level of sophistication***
  - Cannot assume an institutional investor (such as professional investors who maintain bond funds who are engaged in the business of investing)

Why Did The SEC Create Continuing Disclosure Requirements?

- ***It is helpful to know why Congress adopted the federal securities laws and created the United States Securities and Exchange Commission***
  - Securities presented quite the conundrum to Congress in the early 1930's
    - They were not like goods or services because they were just investments and thus the quality of the security couldn't be objectively evaluated from a legal perspective; BUT
    - The one thing an investor needs is accurate, complete and timely information about the security to make a good investment decision
  - Congress adopted the federal securities laws to recognize that the purchase and sale of a security is a different economic transaction than others and thus required laws to ensure that investors receive the information they need to make good investment decisions.
  - In many regards, the SEC's entire mission is to ensure that these laws are enforced but also that investors of securities receive the kind of information they need to make informed investment decisions

Federal Securities Laws

- **SECURITIES ACT OF 1933** — registration requirement for most securities, but does not include municipal bonds
- **SECURITIES EXCHANGE ACT OF 1934** — creates ongoing disclosure requirements for public companies and regulates brokers and dealers
- Both the 1933 Act and the 1934 Act contain antifraud provisions, which do apply to municipal securities

When Do Disclosure Rules Apply?

- Rule 10b-5 applies whenever an issuer is "speaking to the market"
  - New offerings
  - **Reporting under Continuing Disclosure Undertakings ("CDUs")**
  - **Voluntary filings on EMMA website**
  - Other circumstances
    - Public statements by officials—"speaking to the market" will depend on who is making the statement and the audience ("Political speech" has in the past been viewed as OK, but certain SEC actions suggest using greater caution)
    - Investor websites

Four Legal Foundational Principles For Investor Communications Outside Of Offerings

- Know when you are "speaking" to the market

- Know when you are altering the "total mix of information"

- Know the "circumstances" of your statements

- Have a reasonable process for ensuring that your statements are complete and accurate, under the circumstances

Legal Basics Of Secondary Market Disclosure

THE BASICS:

- 1994 Interpretative Release:

  "…when [a municipal issuer] releases information to the public that is ***reasonably expected*** to reach investors and the trading markets, those disclosures are subject to the antifraud provisions. The fact that they are not published for purposes of informing the securities market does not alter the mandate that they not violate antifraud proscriptions." (emphasis added)

  - Before the SEC amended Rule 15c2-12 in 1994, issuers and borrowers of municipal securities had no obligation to provide updates to investors concerning their financial and operating condition

Legal Basics Of Secondary Market Disclosure (Continued)

What should we take away from this?

- Secondary market statements are as much subject to the Federal antifraud laws as primary offering statements
- The circumstances of the statements govern what those statements need to contain:
  - Primary offering documents purport to describe all factors material to an investment decision and the Federal antifraud laws test those statements in that light.
  - Secondary market disclosures, though, can vary
  - Annual reports can purport to provide a comprehensive updating of the financial and operating condition
  - Other filings will be evaluated based on their circumstances

Rule 15C2-12 Listed Events

- Listed events that require notice not in excess of 10 business days after the occurrence of the event
  (1) Principal and interest payment delinquencies;
  (2) Non-payment related defaults, ***if material***;
  (3) Unscheduled draws on debt service reserves reflecting financial difficulties;
  (4) Unscheduled draws on credit enhancements reflecting financial difficulties;
  (5) Substitution of credit or liquidity providers, or their failure to perform;
  (6) Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other ***material*** notices or determinations with respect to the tax status of the security, or other ***material*** events affecting the tax status of the security;

Rule 15C2-12 Listed Events (Continued 2/4)

(7) Modifications to rights of security holders, ***if material***;

(8) Bond calls, ***if material***, and tender offers;

(9) Defeasances;

(10) Release, substitution, or sale of property securing repayment of the securities, ***if material***;

(11) Rating changes;

(12) Bankruptcy, insolvency, receivership or similar event of the obligated person;

Rule 15C2-12 Listed Events (Continued 3/4)

(13) The consummation of a merger, consolidation, or acquisition involving an obligated person or the sale of all or substantially all of the assets of the obligated person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, ***if material***;

(14) Appointment of a successor or additional trustee or the change of name of a trustee, ***if material***;

(15) Incurrence of a financial obligation of the obligated person, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation of the obligated person, any of which affect security holders, ***if material***; and

(16) Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a financial obligation of the obligated person, any of which reflect financial difficulties.

Rule 15C2-12 Listed Events (Continued 4/4)

- The listed events in (15) and (16) define “financial obligation” as “(i) a debt obligation; (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii).”
- Adopted in response to an increasing concern by investors relating to timing and quality of disclosure in the municipal securities markets about bank loans and other debt obligations incurred by an obligated person in transactions not subject to Rule 15c2-12

What Do Good Continuing Disclosure Practices Look Like?

- ***What should obligated persons do to comply with the amendments?***
  - Adopt policies and procedures that:
    - Identify categories of financial obligations that obligated persons are likely to incur and the departments that are likely to incur financial obligations;
    - Monitor material amendments to financial obligations;
    - Monitor covenants and defaults of financial obligations; and
    - Create an internal tickler process to ensure that personnel responsible for filing event notices are aware of the occurrence of events that need to be reported.

What Do Our Continuing Disclosure Undertakings Require Us To Do?

- What do our continuing disclosure undertakings require us to do?
  - File annually:
    - Audited financial statements; and
    - Audited financial statements; and
    - File within 10 business days' notice of the occurrence of listed events
    - This requires
      - Systems to meet calendar deadlines for annual filings;
      - Procedures to ensure everything is included in annual financial reports; and
      - Procedures to track potential listed events

What Do Our Continuing Disclosure Undertakings Require Us To Do? (Continued 2/3)

- ***This requires:***
  - Good process to make sure everything that the issuer or borrower states in a filing is accurate; and
  - Good process to ensure that the filing does not omit important information which entails:
    - Knowing the "circumstances" of the filing.
    - Good "internal due diligence" to make sure that all individuals who have key information are appropriately involved in the filing to ensure that the filing does not omit a material fact that would render the filing misleading.

What Do Our Continuing Disclosure Undertakings Require Us To Do? (Continued 3/3)

- ***What many issuers and borrowers do not know:***
  - ***All continuing disclosure filings also are "statements" tested under the federal antifraud laws!***
  - Issuers and borrowers should also take reasonable steps to ensure that the information contained in any continuing disclosure filing satisfies the federal antifraud laws….
  - Which means:
    - The issuer or borrower needs to take reasonable steps to ensure that the information in the filing…
      - Does not make a material misstatement…and
      - Does not omit a material fact necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading.

Underwriter Considerations

- Underwriters are required to independently investigate an issuer's compliance with its continuing disclosure undertaking

- Underwriters may want to see or have an understanding of the policies and procedures in place to confirm appropriate internal controls

Consequences of Failure to Comply

- Generally, non-compliance is not an event of default under bond documents, but bondholders have a right to sue for compliance
- In an offering, failures over the past five years must be disclosed
- No clear guidance on what is a “material” failure to comply

Enforcement Actions Relating To Continuing Disclosures Pre-municipalities Continuing Disclosure Cooperation Initiative ("MCDC")

CITY OF HARRISBURG (2013)

- May of 2013, the SEC charged the City of Harrisburg, Pa. ("City") with securities fraud for its misleading public statements when its financial condition was deteriorating and financial information available to municipal bond investors was either incomplete or outdated
- SEC investigation found that the City made misleading statements in the City's budget report, annual and mid-year financial statements and a State of the City address and also failed to comply with continuing disclosure requirements to provide certain ongoing financial information and audited financial statements for the benefit of investors from 2009 to 2011
- The City was nearly bankrupt, under state receivership, and as of March 2013, had missed approximately $13.9 million in general obligation debt service payments, and was the obligated person for approximately $455 million of outstanding debt for several of its component units
  - When Harrisburg realized it was becoming insolvent, it cut off all information flow to everyone – which included no longer sending out their promised continuing disclosure updates to investors. The SEC then used information provided on the city's website to charge the city – included the mayor's state of city address – even though none of that information was intended to investors. The SEC's point was that the investors had no other information to inform their investment decisions
- Significant because this was the first time the SEC charged a municipality for misleading statements made outside of its securities disclosure documents
- The City settled with the SEC and was ordered to cease and desist from committing or causing violations of Section 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5.

Enforcement Actions Relating To Continuing Disclosures

WEST CLARK COMMUNITY SCHOOLS, INDIANA AND CITY SECURITIES CORPORATION (2013)

- In the summer of 2013, the SEC settled an antifraud case against a small school district in Indiana which stated in its Official Statement (2007) that it had not failed to comply in all material respects with any prior continuing disclosure undertakings but had, in fact, failed to file any annual reports—SEC alleged this misstatement in the Official Statement was a violation of Section 17(a)(2) of 1933 Act

- The underwriter paid a $580,000 settlement ($280k disgorgement and $300k penalty) for failing to investigate the issuer's statements, and the individual at the underwriter paid approximately $38,475 ($20k disgorgement and $18k penalty) with a one-year collateral bar and a permanent supervisory bar

- Significant because this was the first time the SEC charged (i) a municipal issuer with falsely claiming in an Official Statement that it was fully compliant with annual disclosure obligations and (ii) an underwriter and its principal for not doing the necessary research to attest to the truthfulness of the issuer's claims

Enforcement Actions Relating To Continuing Disclosures (Continued)

LAWSON FINANCIAL CORP (2017)

- Lawson Financial Corporation ("Lawson Financial") was the underwriter for multiple issues for entities controlled by Richard Brogdon ("Brogdon"), the proceeds of which were to be used for projects for nursing homes, assisted living facilities, and retirement housing.
- The offering documents represented that the borrowers had not failed to comply with any prior CDUs, when, in fact, they had consistently failed to provide the required information.
- The SEC found that Lawson Financial conducted inadequate due diligence, did not review EMMA, and solely relied on Brodgen's representations. Lawson Financial and Robert Lawson paid disgorgement of approximately $198,000, Lawson Financial paid a penalty of approximately $198,000, and Robert Lawson paid a penalty of $80,000 and was barred from the securities industry for three years. Penalties were approximately double what the firm would have paid under the MCDC Initiative.
- Lawson Financial's counsel was also charged and paid nearly $45,000 and agreed to the entry of an order permanently suspending him from appearing and practicing before the SEC as an attorney.
- The SEC separately charged Brogdon with fraud and is seeking an order for Brogdon to repay $85 million to investors

What Do Good Continuing Disclosure Practices Look Like? — Part Two

- ***Written policies and procedures that address:***
  - Good calendaring/tickler/create a template or chart for annual reports and event filing;
  - Clear identification of a coordinator;
  - Clear identification and assignment of responsibilities to the right people;
  - Clear procedures to ensure the right people meet together at the right times and ask the right questions;
  - Good compliance check to ensure the filing includes all required information; and
  - Good listed event procedures
  - Training

Case For Establishing Policies And Procedures

- Shows the organization cares about compliance and is actively managing its compliance
- Might be a mitigating factor when SEC calls
- May lessen the risk of personal liability for staff
- Greater attention to disclosure made for continuing disclosure compliance and for new offerings

QUESTIONS?

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SESSION THREE

Investing Bond Proceeds, Arbitrage, and IRS Tax Compliance

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The Bonds Have Been Issued … Now What?

Congratulations!

- Months of careful planning are over
- At last, the Bonds have been issued
- You've locked in a low cost of funds
- Now it's time to get back to your regular duties

Do Not Forget About the Bond Proceeds

- Probably on your "To Do List"
- Typically, are forgotten
- Are unique assets considering the arbitrage rebate and yield restriction requirements

Do Not Forget About the Arbitrage Rebate Requirements

- Positive arbitrage is BACK!!!

Overview of Arbitrage & Rebate

- General rule is that you cannot invest proceeds of tax-exempt bonds in investments with a yield materially higher than the yield on the bonds
  - Several important exceptions apply
- Intent of these rules is to restrict situations where an issuer might:
  - Issue more bonds than needed
  - Issue bonds earlier than needed
  - Keep bonds outstanding longer than needed
- Hedge bonds limitations are an independent non-arbitrage restriction, which generally requires an issuer to expect to spend 85% within 3 years.

What Do the Arbitrage Rules Apply to?

- Proceeds of Bonds
  - Sale proceeds
  - Investment proceeds (earnings on investments of sale proceeds)
  - Transferred proceeds (unspent proceeds of refunded bonds)
- Replacement or "Gross Proceeds"
  - Debt service funds (P&I accounts, sinking fund accounts, etc.)
  - Cash-funded reserve funds, pledged funds, and defeasance escrows
- Arbitrage restrictions apply until proceeds are spent

Arbitrage – Yield Restriction vs. Rebate

YIELD RESTRICTION

Can you invest proceeds at a higher yield? Only during a "temporary period.“

- 3-year temporary period for new money project funds
- 90 days for current refunding escrows
- Reserve funds / bona fide debt service funds
- 30-day period for other funds

REBATE

Can you keep earnings above the bond yield? Only if you meet an exception from rebate:

- Spending exceptions (spend the money quickly enough)
- Small issuer exception (issuers that don't issue more than $5mm)
- Debt service fund exception

Most Common Yield Restriction Exceptions

1 **NEW MONEY BONDS**

Three-Year Temporary Period

- Must expect to spend 85% of proceeds within 3 years
- Must incur a binding obligation to spend at least 5% of the proceeds within 6 months after issuance
- Must proceed with due diligence in spending proceeds
- After 3 years, must make "yield reduction payments"

2 **CURRENT REFUNDING BONDS**

90-day Temporary Period

3 **RESERVE FUNDS**

Lesser of Three Tests (10% / 125% AADS/MADS)

4 **BONA FIDE DEBT SERVICE FUNDS**

Up to 13 Months of Depleted Annually

Spending Exceptions from Rebate

6 Month Exception
No rebate owed if all proceeds spent within 6 months

18 Month Exception
No rebate owed if...

- 15% of proceeds are spent within 6 months
- 60% are spent within 12 months
- 100% are spent within 18 months

24 Month Exception
No rebate owed if at least 75% of the proceeds are spent on construction costs (not acquisition costs) of property owned by a governmental or 501(c)(3) entity, and...

- 10% of proceeds are spent within 6 months
- 45% are spent within 12 months
- 75% are spent within 18 months
- 100% are spent within 24 months

Timing Issues for Rebate and Yield Reduction

- Investment earnings are blended over time for rebate and yield reduction
  - Periods with positive arbitrage can be offset against periods with negative earnings relative to bond yield, and vice versa
- Yield restriction analysis is only blended outside a temporary period
  - After 3-year temporary period for new money, proceeds "not allowed" to be invested above the bond yield, but if they are, can make yield reduction payments
  - Negative arbitrage during that initial 3-year temporary period cannot be used to offset positive arbitrage in later years (different from rebate)

Calculating and Paying Rebate and Yield Reduction Payments

- If rebate or yield reduction payments are owed, first payment must be no later than 5 years after issuance (60 days after fifth year), and every five years thereafter
  - Must pay at least 90% of liability every 5 years, and then 100% of liability after retirement of bonds
  - Possible to have a payment due for one 5-year period, and then a refund in a later 5-year period
- Best practice is to monitor on an annual basis to avoid surprises
- Working with rebate consultants

Why Bother Worrying About Investments?

COSTS

- Interest costs accrue on bonds immediately so…
  - Negative carry (i.e., negative arbitrage) on investments increases financing cost
- Improved investment performance will…
  - Reduce negative carry and even lower overall borrowing costs

TYPICAL FUNDS

- Project Funds
  - Net funding + more earnings = smaller bond issue
  - Gross funding + more earnings = more project funds
- Reserve Funds
  - Earnings will offset debt service costs
  - Higher earnings here can offset costs of negative carry in Project Funds
- Debt Service Funds
  - More earnings = less net debt service (this is a good thing!)

Bond Proceeds Investment Strategy

An Optimal Bond Proceeds Reinvestment Strategy Should…

- Ensure safety of principal while providing adequate liquidity
- Consider current and future interest rate expectations
- Take into account any applicable arbitrage rebate regulations
- Provide a reasonable risk-adjusted return

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Key Questions to Consider When Investing Bond Proceeds

- What is my credit risk, and how can I manage it?
- How does this instrument or investment strategy provide liquidity for both expected and unforeseen draws?
- What are the rebate implications of my reinvestment strategy?
- What is the yield of the instrument or investment strategy, and how can my return change through time?
- Does this reflect my view of market conditions? How does this instrument or investment strategy manage market and reinvestment risk?

Typical Permitted Investments for Bond Proceeds

Money market/short-term investments

- Money market funds
- Local government investment pools (LGIPs)

Open-market and Custom securities

- U.S. Treasuries and direct obligations (examples: Treasury Bills, Treasury Notes)
- Federal Agency securities (examples: Fannie Mae, Freddie Mac)
- Corporate securities (examples: Coca-Cola, Adobe)
- Commercial paper (examples: JPMorgan, Toyota)
- Negotiable certificates of deposit (examples: Rabobank, TD Bank)

Structured investments

- Guaranteed investment contracts (GICs)
- Flexible repurchase agreements (Flex Repos)
- Forward delivery agreements (FDAs)

pfm asset management

Active Management vs. Passive Strategies

Active Management

- Ideal for funds with expansive permitted investments and/or uncertain liquidity needs
- Advisor goal: generate incremental earnings via swapping amongst individual CUSIPs, sectors, and duration buckets to attempt to offset advisory fees
- Enhanced ability to take advantage of benefit from near-constant duration exposure

Real-time monitoring of holdings through time

More frequent trades to manage duration and/or liquidity

Greater ability to take advantage of short-term securities mispricings

Enhanced ability to add incremental net value

Advisor has fiduciary responsibility

pfm asset management

Passive Strategies

- Ideal for funds with conservative, straightforward permitted investments and predictable liquidity needs
- One-time engagements with subsequent opportunities to restructure in the future
- May require significant change to market conditions and/or cash flow requirements for restructurings to add value

Periodic/ad-hoc monitoring

Wholesale restructurings to rebalance to target

No ability to take advantage of short-term opportunities

May require substantial changes in market conditions to add value

No fiduciary responsibility once portfolio is structured

pfm asset management

Types of Risks to Manage in Bond Proceeds Investments

Credit Risk

- Is there a government guarantee?
- Who is the ultimate obligor?
- What type of credit?

Liquidity Risk

- How quickly and easily can I access the proceeds?
- Are there redemption fees or gates?
- Is there a secondary market that I can access in the event of emergency?

Reinvestment Risk

- What might happen to my return if interest rates go up or down?
- Does the strategy give me any ability to take advantage of changes in interest rates

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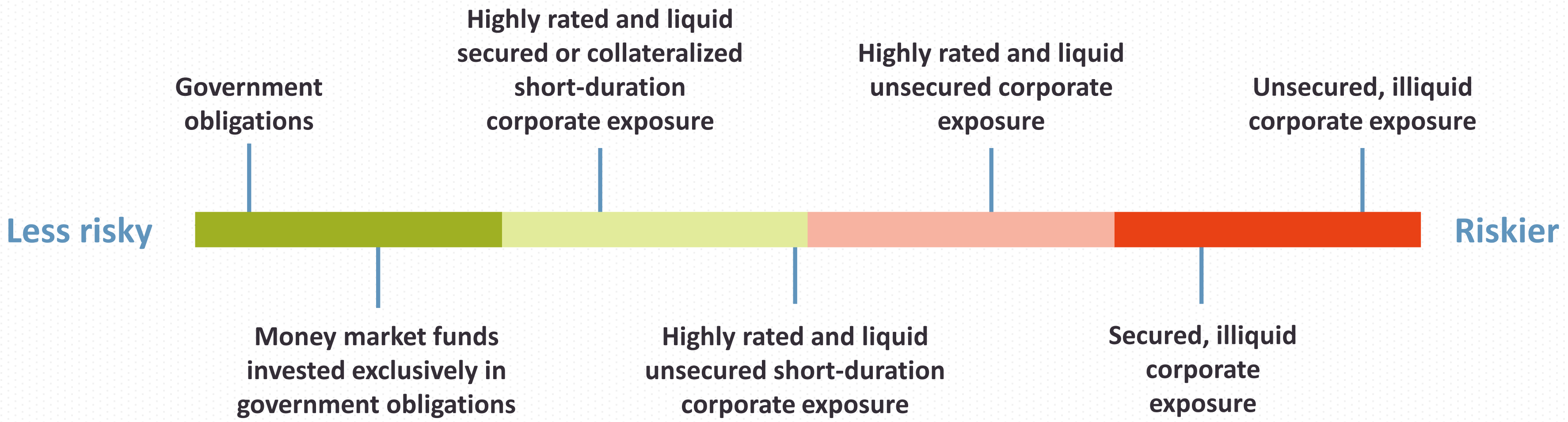
Credit Risk: Risk Aversion and Yield

- For any given yield or return a rational investor will choose the least risky investment
  - Given the choice between a 30-day Treasury Bill at 5.23% or 30-day commercial paper at 5.23%, a rational investor would choose the Treasury Bill because it is less risky
- By extension, investors require more yield or return for riskier investments



Liquidity Considerations of Various Investment Alternatives

Strategy	Liquidity Considerations	Additional Points of Consideration
Money market fund	Typically offer same-day liquidity which is a function of cut-off times	Are there redemption fees or gates?
Passively structured portfolio	Underlying investments offer same-day liquidity, but logistical considerations may cause delays	Requires trustee to sell investments or advisor to be engaged which may take time to put into place
Managed portfolio	Underlying investments offer same-day liquidity; function of advisors to access capital markets	How are liquidity needs communicated to advisor?
Structured Investment	Typically have a notice period; official notice may need to come from trustee	**No secondary market**

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Reinvestment Risk

- Impact of interest rate movements on return/yield of instrument
  - Does the strategy give me any ability to take advantage of changes in interest rates or am I "locked in"?

Strategy	Interest Rate Scenario		
	Rising Rates	Falling Rates	Stable Rates
Money market fund	Yield of fund tends to follow short-term rates (with lag)	Yield of fund tends to follow short-term rates (with lag)	Yield of fund will tend to remain stable
Passively structured portfolio	Yields locked in; reinvestments will occur at higher rates	Yields locked in; reinvestments will occur at lower rates	Yields locked in
Managed portfolio	Yields locked in; manager has ability to alter portfolio to take advantage of opportunities	Yields locked in; reinvestment at lower rates	Yields locked in
Structured Investment	Yields locked in	Yields locked in	Yields locked in

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Strategy Development

Project Fund Investment Process

Define Universe of Investments

- Bond indentures, state law, investment policy
- Sector specialist recommendations
- Identify value

Identify Constraints & Objectives

- Draw schedule expectations
- Liquidity buffer

Initial Portfolio Optimization

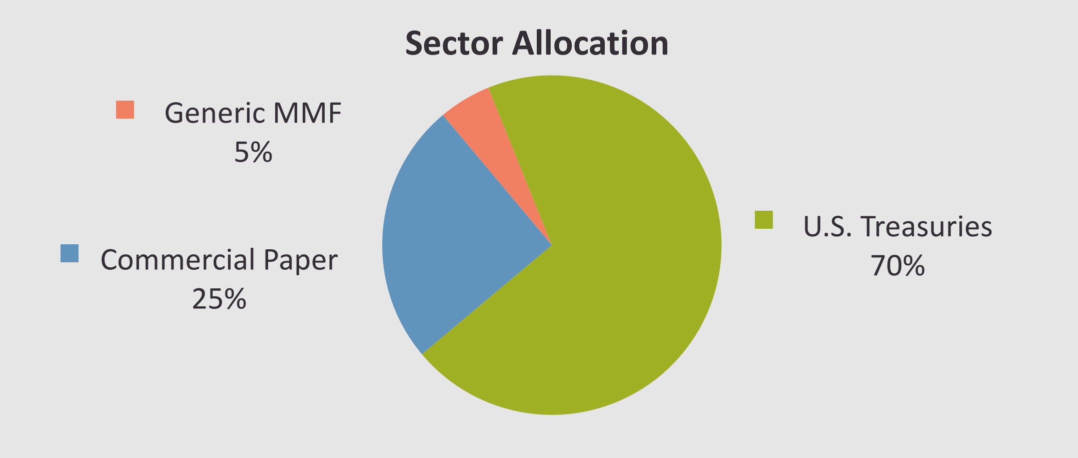
- Meet initial expected cash flow needs
- Horizon and relative value analyses

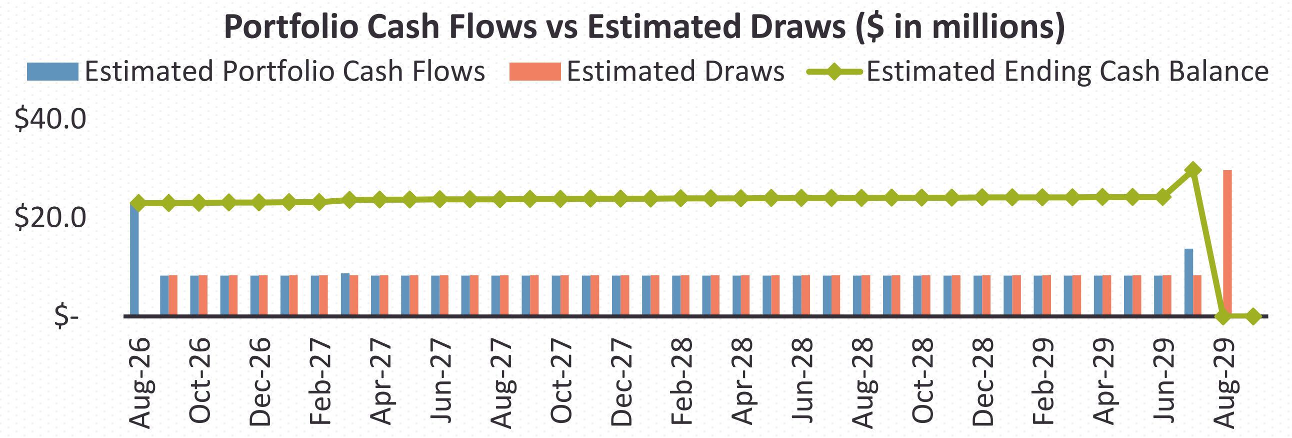
Sample Treasury and Credit Portfolio

Portfolio Statistics Summary	
Approximate Cash Balance (Total)	$15,000,000
Approximate Par Amount (Investments)	$285,000,000
Weighted Average Maturity	544 days
Average Life of Draw Schedule	564 days
Average Gross Yield (IRR)	4.21%
Estimated Gross Earnings	$18,934,000

Strategy Overview

- Approximately 70% allocation to Treasuries, 25% to commercial paper, with the balance in a money market fund
- Commercial paper structured to meet draws inside of nine months
- Treasury maturities laddered to closely match the remaining draws
- Treasuries can be swapped into higher-yielding commercial paper as securities near maturity





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Investing Reserve Funds

Unique considerations for reserve funds impact reinvestment strategy

Investment Decision Factor	Considerations
Market Outlook	Does the strategy account for the interest rate outlook?
Risk Management	Is interest rate risk based on the investment valuation methodology and frequency?
Replenishment Requirements	If investment values decline, must the reserve funds be replenished?
Opportunity Costs	Are there yield enhancement opportunities within your risk management parameters?

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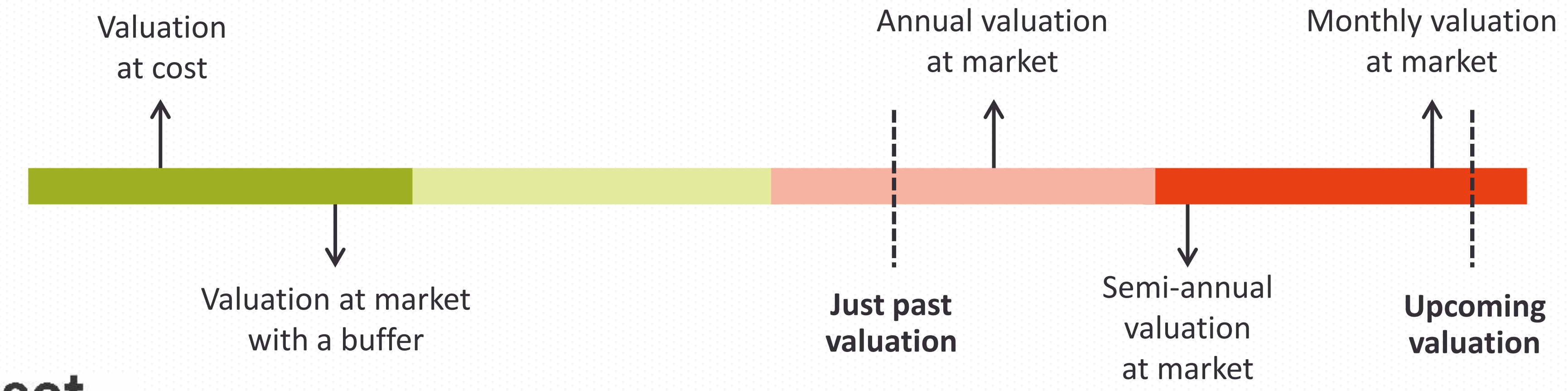
Managing Downside (Replenishment) Risk in Reserves

- Reserve funds are typically funded for the benefit of the underlying bondholders
  - Most indentures require reserve funds to be valued periodically with any shortfalls due to investment losses made up
- In addition to credit, liquidity, and tax risk, the management of reserves also requires focusing on mitigating risk that losses in market value of investments will require additional deposits into reserves
- Sensitivity and breakeven analyses to determine potential outcomes under different interest rate assumptions

Portfolio's Ability to Take Interest Risk



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Investing Debt Service Funds

- 1/6th of semi-annual interest payment and 1/12th of principal payment is deposited into debt service fund monthly
- Bona fide debt service funds are typically not subject to rebate
- Investment alternatives include:
  - Ultra-short duration bias: money market fund
  - Short duration bias: managed portfolio of securities
  - Long duration bias: structured investments such as FDAs

Strategy	Gross Yield*	Key Benefits	Key Limitations
Money market fund	3.63%	Can take advantage of increases in interest rates; administrative simplicity	Ultra-short duration
Managed portfolio	3.89% to 3.98%	Extends duration while retaining flexibility to reinvest at higher rates	Duration cannot be extended beyond upcoming principal and interest payment dates
Structured Investment	4.38%	Synthetically extends duration beyond upcoming liquidity needs	Locks in yield; cannot take advantage of increases in interest rates

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**Yields sourced from Bloomberg Finance L.P. as of August 3, 2026, and subject to change based on underlying market conditions. Please see further disclosures at the end of this presentation.*

Don’t Forget About the Bond Proceeds!

- Consider your investment strategy soon before or after your bonds are issues
- It’s GOOD to owe rebate!
- Maximize earnings on your bond proceeds
- Actively manage upcoming arbitrage rebate payments
- Avoid surprises (i.e., spent all the investment earnings)
- It's BETTER to keep all the investment earnings
- Aim at meeting one of the spending exception to the arbitrage rebate requirements

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QUESTIONS?

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Disclosures

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SESSION FOUR
Refunding an Issue

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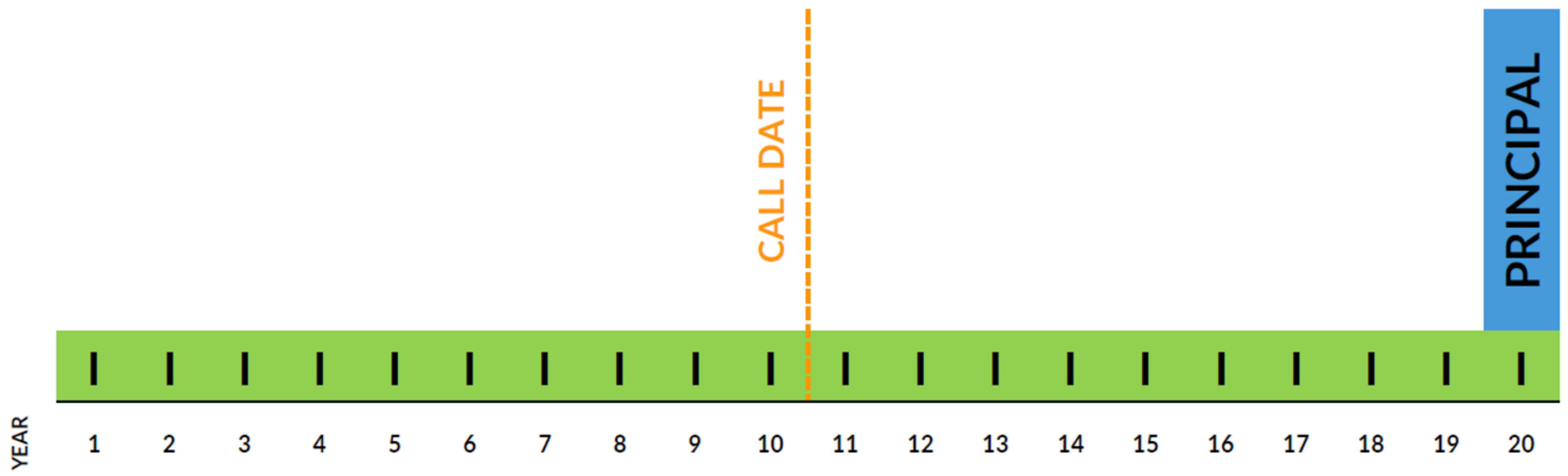
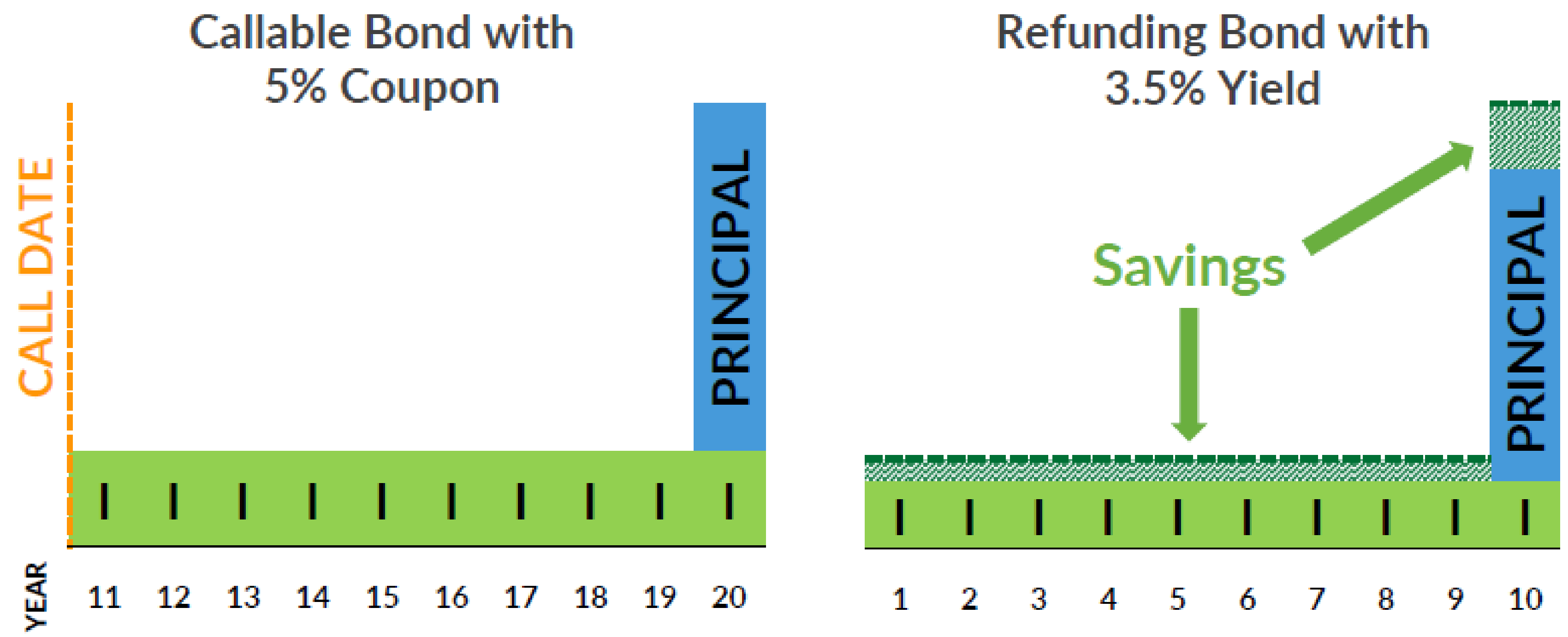
Picture A Typical Tax-Exempt Bond…

- Pays interest semiannually with principal repaid on the maturity date
- Typically sold at a premium (i.e. 5% coupon with a yield of 4% ⇨ Price: 108.176
- Can be redeemed at par anytime after 10 years (no prepayment penalty)
- Why might an issuer want to refinance a bond?



Generating Debt Service Savings

- A refunding is when proceeds of a new bond issue are used to pay debt service on a prior issue of the same issuer
- Savings are generated in a refunding when the yield of the refunding bond is less than the coupon of the refunded bond
    - Refunded debt service - refunding debt service = SAVINGS



Refunding Notions

Paying Off an Existing Loan With a New Loan (Refinance):

MORTGAGE EXAMPLE:

- Mortgages can be prepaid at any time
- Considerations:
  - New interest rate
  - Transaction cost
  - Term of new loan (e.g., a new 30-year loan would extend overall repayment)

BOND EXAMPLE:

- Borrower has call option…but
- Bond investor typically has call protection (commonly for 10 years from issuance)
- Similar considerations

Optional Redemption:

SAMPLE PROVISION:

The Series 2027 Bonds maturing on and after **August 1, 2038**, are **subject to redemption** prior to their respective stated maturity dates, **at the option of the County**, … on or after **August 1, 2037** at the principal amount of the Bonds called for redemption, together with interest accrued thereon, **without premium**……

First 10 years call protected

First optional call date

Call price – at par in this case

Types Of Refundings & Timing

CURRENT REFUNDING:

- New bond proceeds are used to redeem refunded bonds within <u>90 days</u> of issuance of refunding bonds
- Tax-exempt bonds can be issued to currently refund outstanding tax-exempt bonds

<u>Tax-exempt</u> advance refundings were eliminated in 2017 federal tax bill

<u>Taxable</u> bonds may be issued for advance refunds

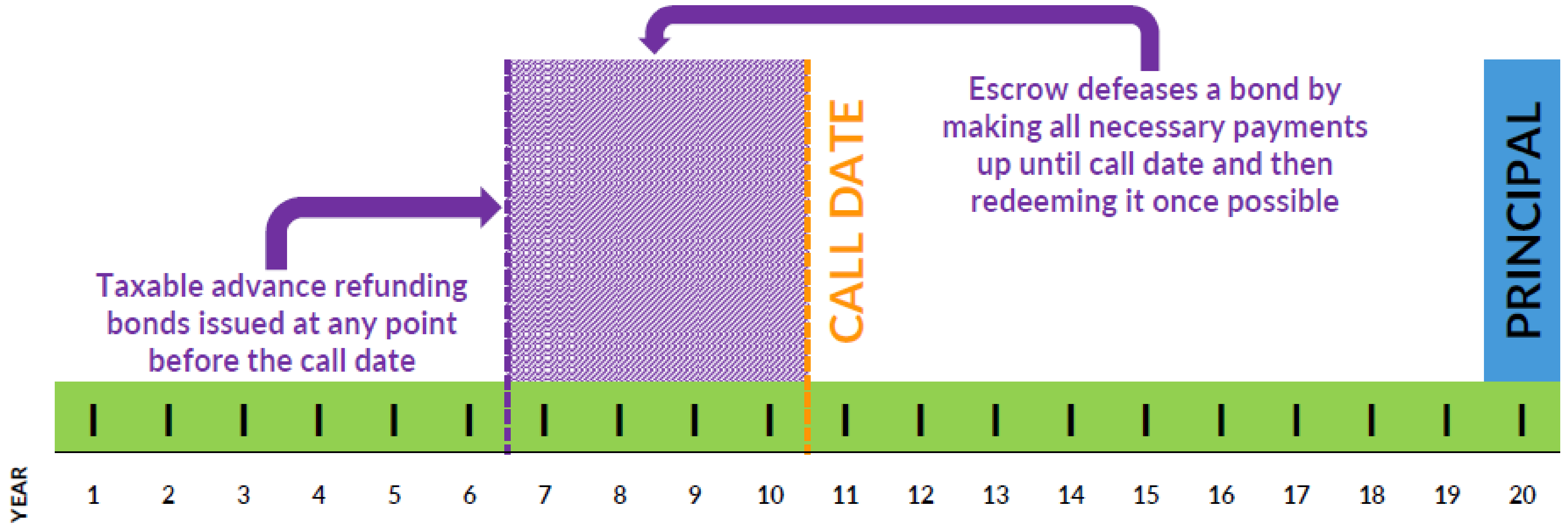
ADVANCE REFUNDING:

- New bond proceeds are used to redeem refunded bonds <u>more than 90 days</u> from issuance of refunding bonds
- Proceeds sized to be sufficient to fund an escrow account that, along with interest earnings, will pay all debt service on refunded bonds until the call date, and then redeem the bonds
- Advance refundings are typically less efficient, especially when the interest rate earned on escrow is less than the borrowing rate (negative arbitrage)

Refunding Before The Call Date

Advance Refunding

- Today, advance refundings must be done with taxable bonds
- In a taxable advance refunding, an escrow is funded with taxable bond proceeds that pays debt service on the refunded bond through its call date
  - Savings are typically generated in the same mechanism as in a current refunding (taking a higher coupon and replacing it with a lower yield)

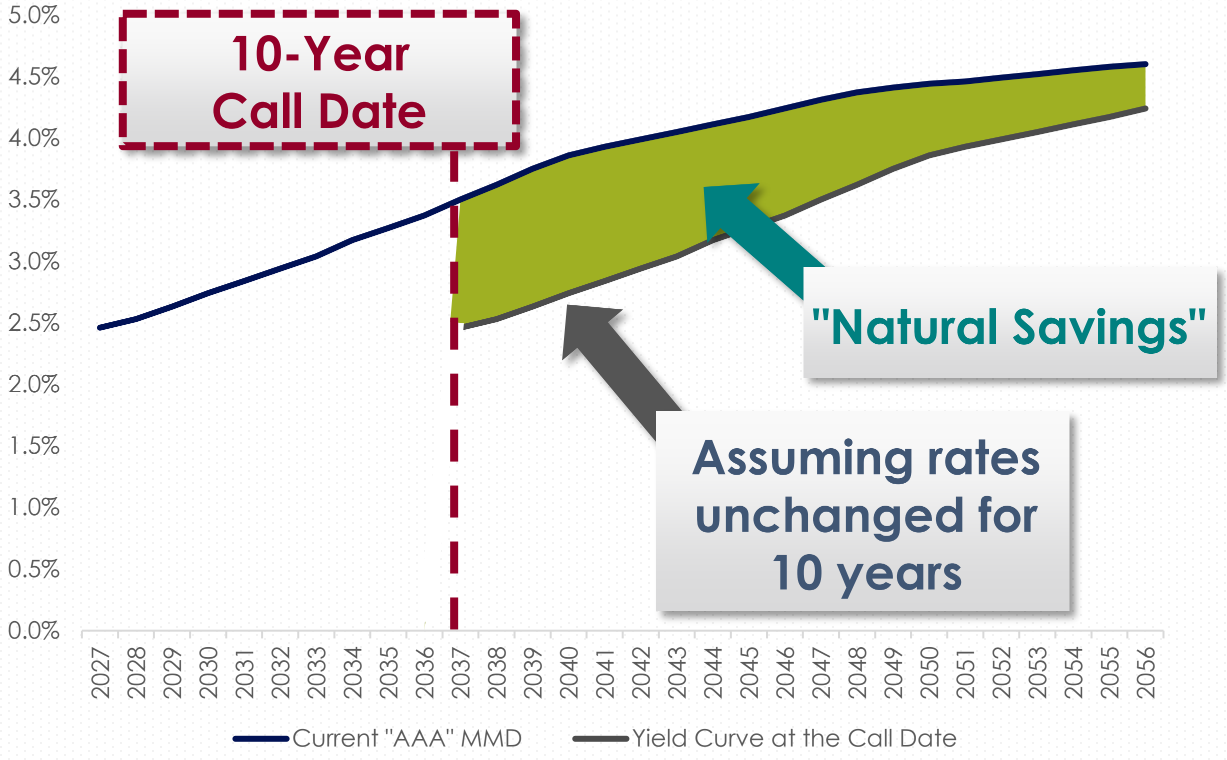


What Creates Savings?

- The market standard use of "premium couponing" (e.g., 5% coupons to yield 3% to the investor) creates a higher likelihood of future refunding
- Because of the typical shape of the yield curve, the passage of time generally helps create savings
- At the optional call date, there is a "roll down" for corresponding refunding bonds maturities (e.g., a 20-year bond at issuance is now a 10 year bond)

ROLLING DOWN THE YIELD CURVE

YEAR	PAR	COUPON	YIELD
2032	$1,975,000	5.000	2.500
2033	$2,075,000	5.000	2.610
2034	$2,180,000	5.000	2.720
2035	$2,290,000	5.000	2.820

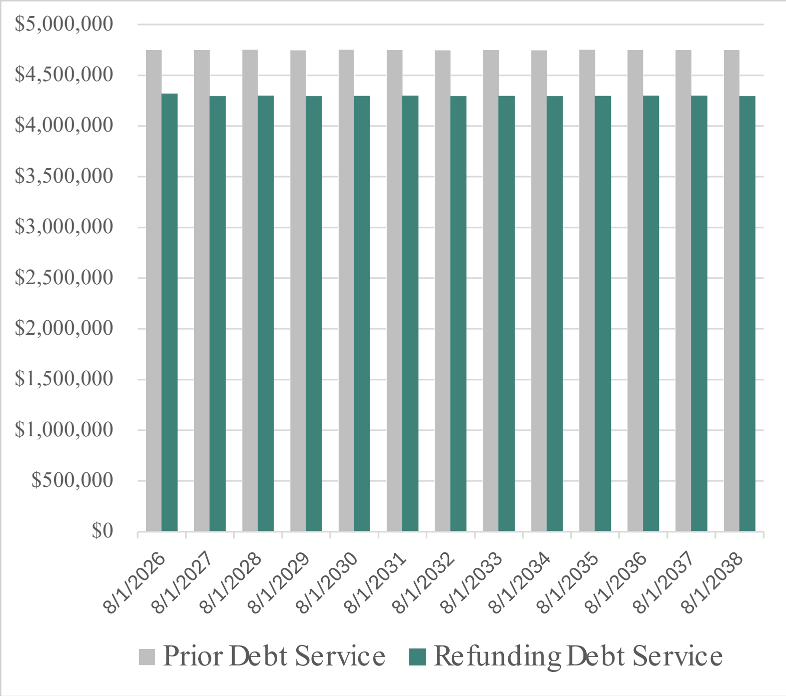


Measuring Savings

- **Savings typically presented as “present value (PV) savings"**
- Future cashflows discounted back at the yield of the refunding bonds (the current cost of funds)
- Most common measurement is present value savings divided by par amount of refunded bonds, shown as a percent
- Net PV savings takes into account other factors, such as investment earnings on debt service reserve fund or funds on hand

Savings Summary:

- **$452,926 Avg. Annual Cash Flow Savings**
- **$4,802,213 NPV Savings**
- **10.77% Savings of Refunded Bonds (Refunded Par Amount of $44.6 M)**



Date	Prior Debt Service	Refunding Debt Service	Savings	Present Value Savings
8/1/2026	$4,751,500	$4,318,708	$432,792	$423,138
8/1/2027	$4,750,500	$4,294,000	$456,500	$431,489
8/1/2028	$4,753,250	$4,299,500	$453,750	$415,924
8/1/2029	$4,749,250	$4,293,750	$455,500	$404,890
8/1/2030	$4,753,500	$4,297,000	$456,500	$393,493
8/1/2031	$4,750,250	$4,298,500	$451,750	$377,617
8/1/2032	$4,749,500	$4,293,000	$456,500	$370,020
8/1/2033	$4,750,750	$4,295,500	$455,250	$357,825
8/1/2034	$4,748,500	$4,295,250	$453,250	$345,454
8/1/2035	$4,752,500	$4,297,000	$455,500	$336,636
8/1/2036	$4,752,000	$4,300,250	$451,750	$323,736
8/1/2037	$4,751,750	$4,299,500	$452,250	$314,253
8/1/2038	$4,751,250	$4,294,500	$456,750	$307,737
	$61,764,500	$55,876,458	$5,888,042	$4,802,213

Refunding Savings

WHEN TO PULL THE TRIGGER?

A MOVING TARGET:

- Rule of thumb was often 3% PV savings
- "Conservative" polices called for 5% savings, often for advance refundings
- During periods of very low interest rates, double-digit savings were common

CITY& COUNTY OF SAN FRANCISCO DEBT POLICY

Absent any significant non-economic factors, it is the policy of the City that a refunding should produce minimum debt service savings of at least 3% of the par value of the refunded bonds on a net present value basis, using the refunding issue's True Interest Cost ("TIC")[1] as the discount rate.

BEST PRACTICES

Refunding Municipal Bonds

Issuers should include guidelines and criteria in their debt management policies that address when a refunding is permitted based on potential debt service savings or other criteria, preservation of future refunding flexibility when issuing any new money debt, and monitoring of refunding opportunities on outstanding debt.

FORMAL POLICY VS. WISE PRACTICE:

- Policies typically set a "minimum" goal
  - Risk of losing an opportunity
  - Risk of leaving significant savings on the table
- Refunding options have value; in practice, only can be exercised every ten years
- Prior to the call date, the challenge of a forward or advance
  - Bird in the hand vs. potential future savings
- After the call date, the call option is a 'wasting asset'

Savings vs. Costs — Why 3% Savings Isn't Always Enough

Costs of issuance are largely fixed — so they consume a much bigger share of savings for a small issuer than a large one

Smaller Public Agency **$7 million bond issue**	
Refunded Par Amount	$7,000,000
NPV savings threshold	3.0%
Net Present Value savings	$210,000
Projected costs of issuance	$200,000
COI as Percentage of NPV	95.2%

Meets 3% — but barely worth doing

Larger Public Agency **$50 million bond issue**	
Refunded Par Amount	$50,000,000
NPV savings threshold	3.0%
Net Present Value savings	$1,500,000
Projected costs of issuance	$360,000
COI as share of savings	24.0%

Meets 3% — more worthwhile to do

Bottom line:

Legal, financial advisor, rating agency, and disclosure fees are mostly fixed regardless of deal size — so a small issuer can clear the 3% savings threshold and still find the refinancing may not be worth the effort once issuance costs are netted out.

Maturity By Maturity Analysis Fine Tunes Potential Savings On A Refunding

- When a partial refunding is possible, no need to refund maturities that don't meet goals

MATURITY-BY-MATURITY REFUNDING MONITOR

REFUNDED MATURITY	REFUNDED COUPON	REFUNDED PAR	CALL DATE	CALL PRICE	ESCROW RATE	REFUNDING YIELD	REFUNDING PAR	NPV SAVINGS	SAVINGS AS % OF REFUNDED PAR	NEGATIVE ARBITRAGE	ESCROW EFFICIENCY
8/1/2027	4.00%	$2,090,000	8/1/2026	100	1.32%	1.54%	$2,222,072	$28,223	1.35%	$7,952	78%
8/1/2028	4.00%	2,440,000	8/1/2026	100	1.32%	1.77%	2,594,189	68,798	2.82%	18,930	78%
8/1/2029	3.00%	2,815,000	8/1/2026	100	1.32%	1.92%	2,936,953	38,995	1.39%	28,753	58%
8/1/2030	4.00%	3,185,000	8/1/2026	100	1.32%	2.07%	3,386,268	165,324	5.19%	41,038	80%
8/1/2031	4.00%	3,615,000	8/1/2026	100	1.32%	2.22%	3,843,440	212,836	5.89%	55,801	79%
8/1/2032	4.00%	4,070,000	8/1/2026	100	1.32%	2.18%	4,327,193	313,378	7.70%	60,056	84%
8/1/2033	4.00%	4,555,000	8/1/2026	100	1.32%	2.28%	4,842,841	381,061	8.37%	74,945	84%
8/1/2034	4.00%	5,080,000	8/1/2026	100	1.32%	2.38%	5,401,017	448,020	8.82%	92,188	83%
8/1/2039	4.00%	5,635,000	8/1/2026	100	1.32%	2.53%	5,991,089	482,587	8.56%	116,540	81%
8/1/2040	4.00%	6,225,000	8/1/2026	100	1.32%	2.68%	6,618,372	500,516	8.04%	144,467	78%
8/1/2041	4.00%	41,455,000	8/1/2026	100	1.32%	3.05%	44,074,639	2,500,909	6.03%	1,217,266	67%

Other Reasons For Refunding Bonds

CASH FLOW RESTRUCTURE:

- Restructuring debt payments with a modified amortization schedule and/or repayment term can help issuers better align debt with annual cash flows

RISK REDUCTION:

- Refunding bonds can help to take advantage of enhanced credit profile and/or valuation if there has been improvement since the original issuance.
- Replacing variable-rate debt with fixed-rate debt

RATE MANAGEMENT:

- Structuring savings in targeted years

AMEND OR REMOVE RESTRICTIVE COVENANT:

- Onerous bond/indenture covenants may be revisited and potentially removed

Forward Delivery Refunding

- **Tax-exempt refundings should always generate greater savings than taxable refundings, all else equal… but waiting until near the call date entails risk of interest rates rising**
- **Tax-exempt forward delivery refunding is a middle-ground approach: locks in majority of savings, at the expense of leaving a slice of potential savings on the table**
  - Tax-exempt refunding bonds are <u>priced</u>, locking-in savings, well ahead of the call date (e.g., a year)
  - Bonds <u>settle</u> far in the future…within 90 days of call date, allowing for tax-exempt status
  - Pricing premium for delayed (forward) settlement -- currently ~4-5 bps per month between pricing and delivery
  - A relatively short “forward” usually more favorable than issuing advance refunding bonds at taxable rates

- **Additional considerations:**
  - Some potential incremental effort (Updated OS required at deliver)
  - Risk forward does not settle
  - Savings begin only after the call date
  - Practical limit to how far ahead of the call date a forward is feasible

- **Other strategies can accomplish similar objectives (e.g., "Cinderella" refunding)**

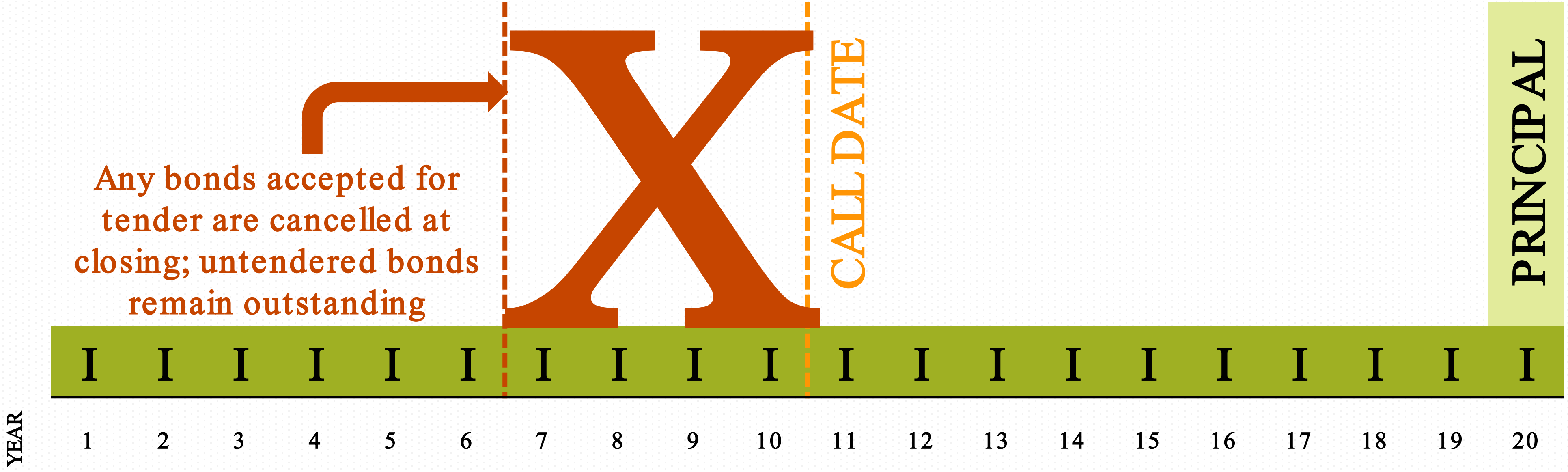
EXAMPLE: OPTIONS IN FALL 2026 FOR BONDS CALLABLE IN SUMMER 2027

	TAXABLE ADVANCE	T-E CURRENT*	T-E FORWARD
PRICE:	Oct 2026	May 2027	Oct 2026
SETTLE:	Nov 2026	May 2027	May 2027
CALL DATE:	Aug 2027	Aug 2027	Aug 2027
NPV SAVINGS:	$4m / 5%	$12m / 15%	$10m / 12.5%

* illustrative option in Fall 2026

Other Refunding Opportunities — Tenders

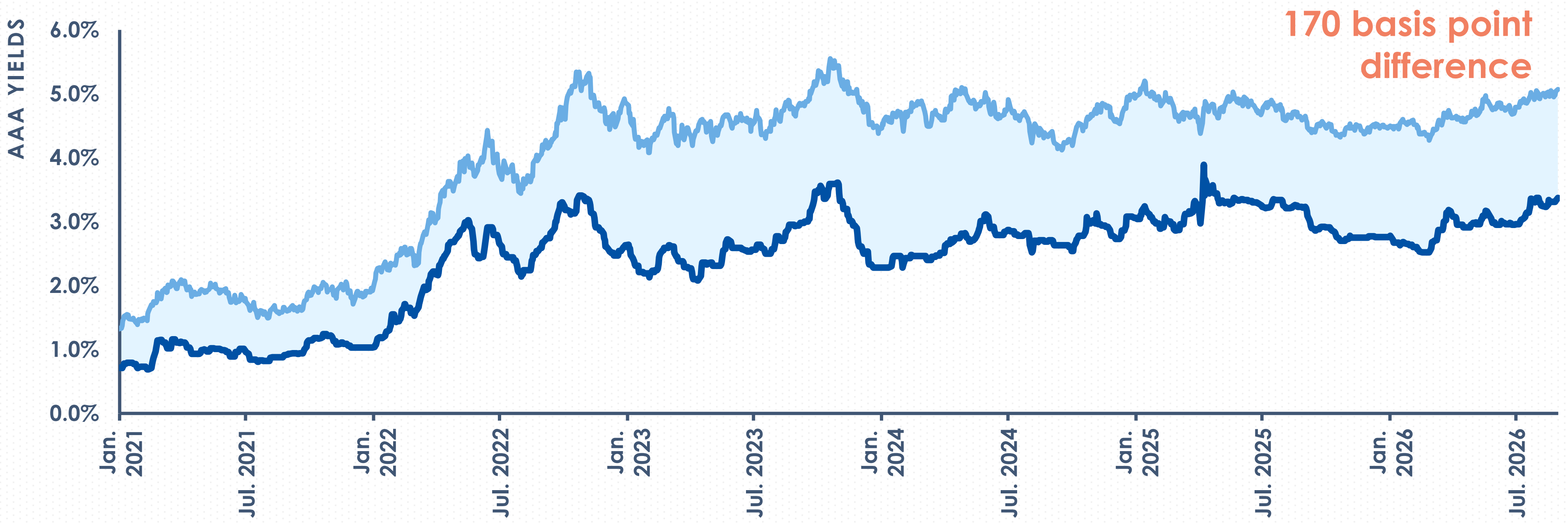
- Tender is an alternate refunding process used to achieve issuer savings either because (i) the refunded have not reached their first optional call date or (ii) the coupons are too high to achieve savings via a traditional refunding
- In a tender refunding, the issuer makes an offer to buy its bonds back from investors, funding the purchase price with new tax-exempt refunding bonds
- A tender refunding can be performed at any time and once tendered, bonds can be cancelled immediately rather than waiting until the call date
- Investors are incentivized by a premium to the market value, but participation cannot be guaranteed
- Because bonds are bought back at market value (with a premium), the price paid, not just the coupon of the refunded bonds, drives savings



Other Refunding Opportunities — Tender Market Dynamics

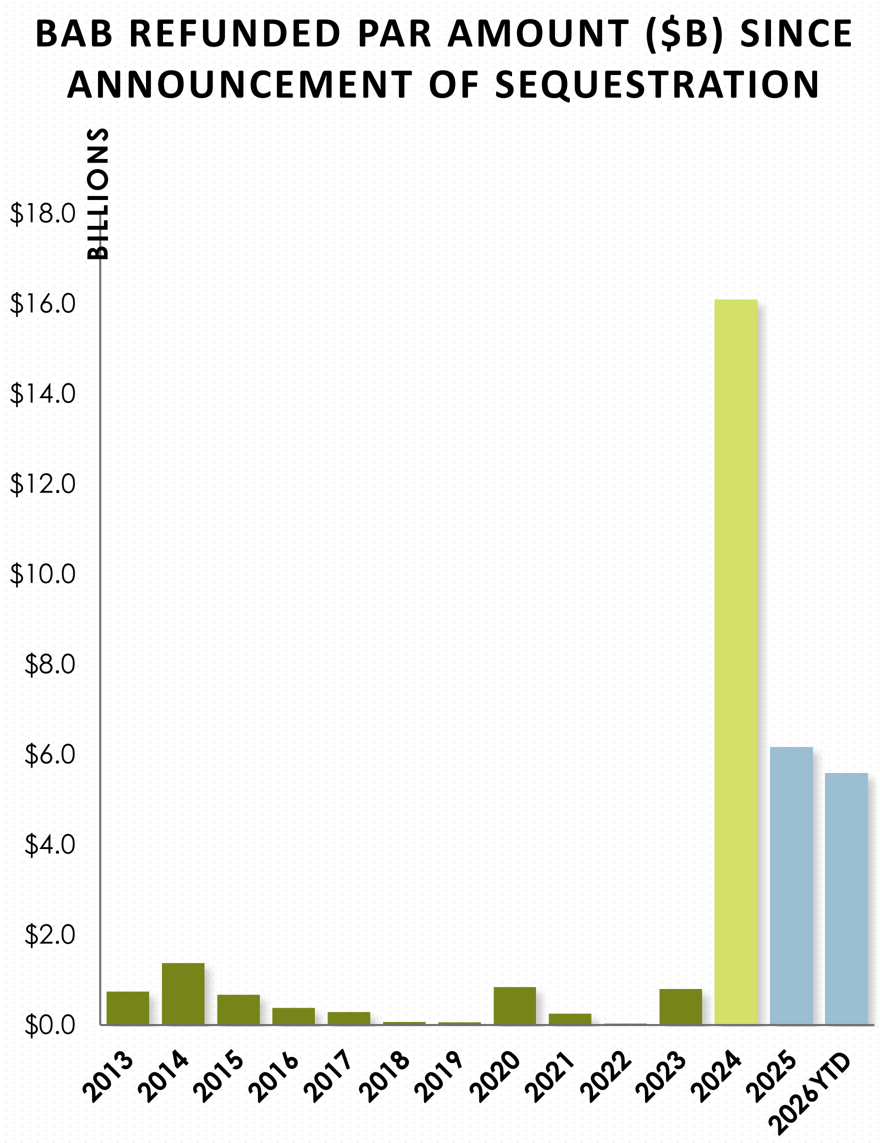
- For tax-exempt bonds, tenders are an alternative to taxable advance refundings
  - Premium bonds are priced to first call date, not maturity date, so TE tender prices are often close to par
  - Analysis is similar to trade-off of a forward refunding, however, only portion of the bonds will be tendered
- For taxable advance refunding bonds great opportunity exists to tender and fund the purchase with new tax-exempt refunding bonds (as long as call date of original refunded bonds has passed)

10 YEAR AAA MUNI TAXABLE VS. TAX-EXEMPT HISTORICAL SPREADS (2021 TO PRESENT)



Other Refunding Opportunities — Refunding Babs

- Build America Bonds ("BABs") are taxable bonds subsidized by the Federal Government
  - Introduced in 2009 as part of the American Recovery and Reinvestment Act
  - Bond program expired in 2010
  - Most BABs were sold with a "make-whole redemption" language
  - Often included an "extraordinary MWC" with a lower redemption premium
  - The primary motivation of refinancing BABs using the extraordinary redemption provision make-whole call is to eliminate future sequestration risk, not to achieve debt service savings
  - Under current market conditions, high taxable rates have reduced the make whole call prices for taxable debt, and BABs can often be refunded with tax-exempt bonds at break-even or even slightly positive savings
  - Many issuers have already refunded their BABs

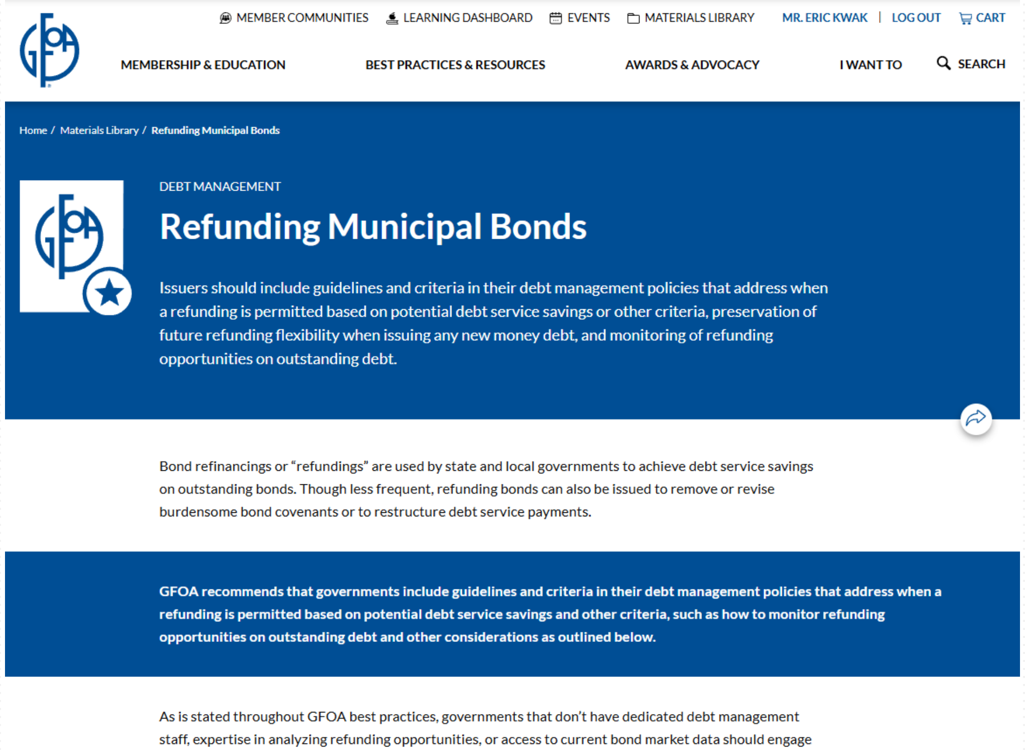


Legal Considerations

- Refunding is an issuance of new bonds (the refunding bonds) to pay debt service on a prior issue (the refunded bonds)
- Legal Authority:
  - General Obligation refunding bonds are typically issued under Articles 9 and 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the Government Code
  - Revenue refunding bonds are typically issued under Article 10 of Chapter 3 of Part 1 of Division 2 of Title 5 of the Government Code
- Purpose of a refunding is either to reduce the debt service on the financing or to remove or replace a restrictive covenant imposed by the terms of the refunded bonds (for example, an excessive coverage ratio)
- For accounting purposes, refunded bonds are not considered part of the issuer's outstanding debt because the refunded bonds are to be paid from the proceeds of the refunding bonds and not from the revenues originally pledged
- Refunded bonds may continue to hold a lien on the revenues originally pledged, however, unless the indenture or bond resolution provides for defeasance of the refunded bonds prior to maturity or redemption
- General rule is there must be savings

General Refunding Best Practices

- Issuers should include refunding guidelines and criteria in their debt management policies
- Municipal bonds are typically issued with an optional redemption date or “call date” approximately 10 years from the date of issuance. This provision allows issuers to refinance the outstanding bonds with refunding bonds
- Governments should establish a process to identify and monitor potential refunding opportunities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DEBT MANAGEMENT

Refunding Municipal Bonds

Issuers should include guidelines and criteria in their debt management policies that address when a refunding is permitted based on potential debt service savings or other criteria, preservation of future refunding flexibility when issuing any new money debt, and monitoring of refunding opportunities on outstanding debt.

Bond refinancings or “refundings” are used by state and local governments to achieve debt service savings on outstanding bonds. Though less frequent, refunding bonds can also be issued to remove or revise burdensome bond covenants or to restructure debt service payments.

GFOA recommends that governments include guidelines and criteria in their debt management policies that address when a refunding is permitted based on potential debt service savings and other criteria, such as how to monitor refunding opportunities on outstanding debt and other considerations as outlined below.

As is stated throughout GFOA best practices, governments that don’t have dedicated debt management staff, expertise in analyzing refunding opportunities, or access to current bond market data should engage

https://www.gfoa.org/materials/refunding-municipal-bonds

Other Key Refunding Best Practices

- Refunding Savings Thresholds
  - Minimum NPV savings as % of refunded bonds
  - Graduated NPV savings based on number of years between call and final maturity
  - Minimum dollar size savings
  - Other forms of graduated analysis
- Structuring Savings
  - Level savings recommended

- Advance Refundings
  - Breakeven Analysis
  - Escrow Efficiency
  - Refunding Efficiency
- Monitoring Refunding Opportunities
  - Refunding Horizon
  - Refunding Monitor
- Preserving Future Refunding Opportunities

Conclusion

- Remember that the option to call bonds has a value
- It can only be exercised once
- Use it wisely!!

- Question debt policy refunding targets
- Rules-of-thumb: they may not be well informed

- With the common use of 5% or higher coupons (premium bonds), municipal bond loans can be thought of as bullet loans (effectively "coming due" in ten years), but with an interest rate cap of 5% if you don't refund

- Approach refunding opportunities with caution
- Virtually everybody advising you regarding a refunding only makes money if you refund your bonds

QUESTIONS?

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