

**ARBITRAGE RISKS AND OPPORTUNITIES
IN THE CURRENT MARKET**

MARCH 21, 2024

10:00AM – 11:30AM

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SPEAKER INTRODUCTIONS



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**HISTORICAL &
CURRENT
MARKET
CONDITIONS**

CURRENT MARKET CONTEXT

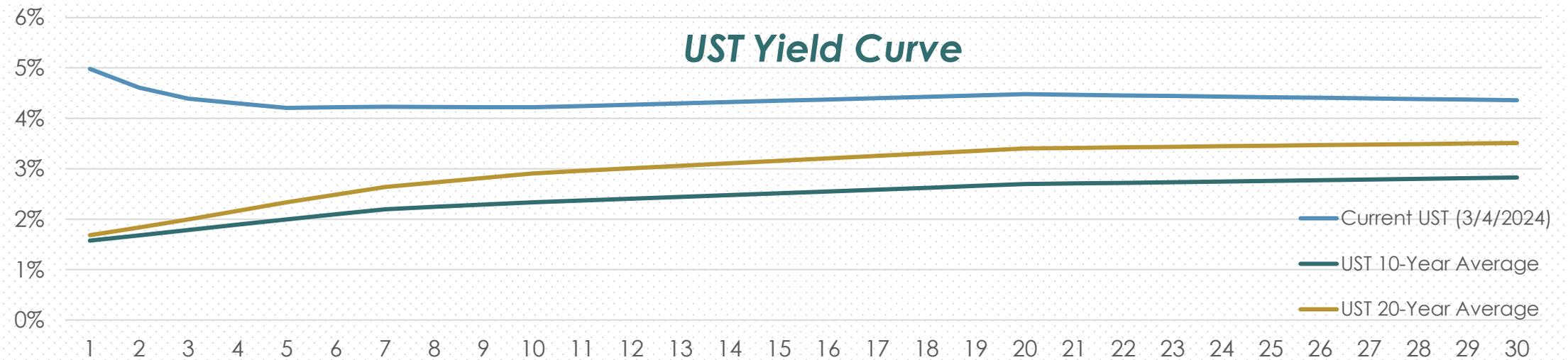
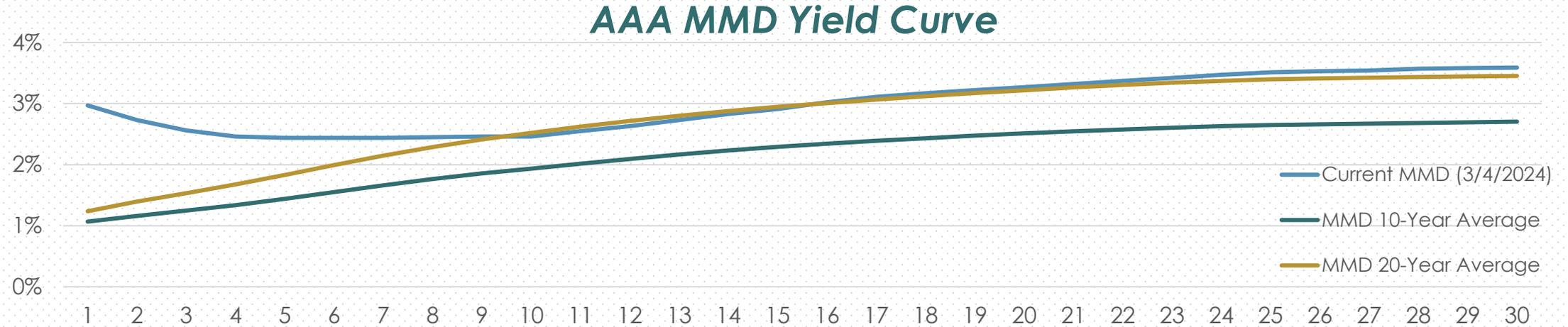
Tax-exempt Borrowing Costs Have Risen Materially Since the Lows of COVID

20YR MMD since 2019



CURRENT VS. HISTORICAL MARKET RATES

(1980 – 2024) Comparing Yield Curves over time to highlight unique place we are in today



CURRENT MARKET RATES

Inverted Taxable Curve and Strong Ratios Present Interesting Arbitrage Opportunities for Issuers

1YR UST minus 20YR MMD



CRASH

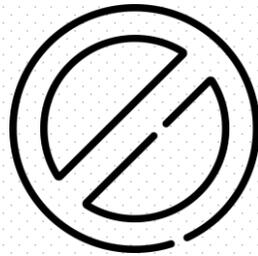
COURSE IN

ARBITRAGE

REBATE

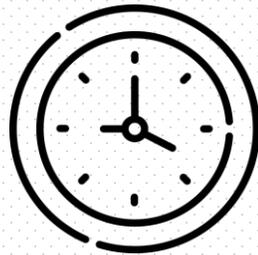
OVERVIEW

OF ARBITRAGE & REBATE



General rule: 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

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- Hedge bonds limitations are an independent non-arbitrage restriction, which generally requires an issuer to expect to spend 85% within 3 years (or 85% in 5 years if certain requirements are met).

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 or pledged funds
- Cash-funded defeasance escrows
- Other replacement proceeds

Arbitrage restrictions apply until proceeds are spent

ARBITRAGE: YIELD RESTRICTION VS. REBATE

YIELD RESTRICTION

When are you allowed to invest proceeds at a yield higher than the yield on the bonds?

- 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

If you were allowed to invest proceeds at a higher yield, can you keep the excess earnings?

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 in a year)
- Debt service fund exception

MOST COMMON YIELD RESTRICTION EXCEPTIONS

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"

Current Refunding Bonds - 90 Day Temporary Period

Reserve Funds - Lesser of three test (10% / 125% AADS / MADS)

Bona Fide Debt Service Funds - Up to 13 months if depleted annually

SPENDING EXCEPTIONS FROM REBATE

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Month Exception

No rebate owed if all proceeds spent within 6 months

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Month Exception

No rebate owed if...

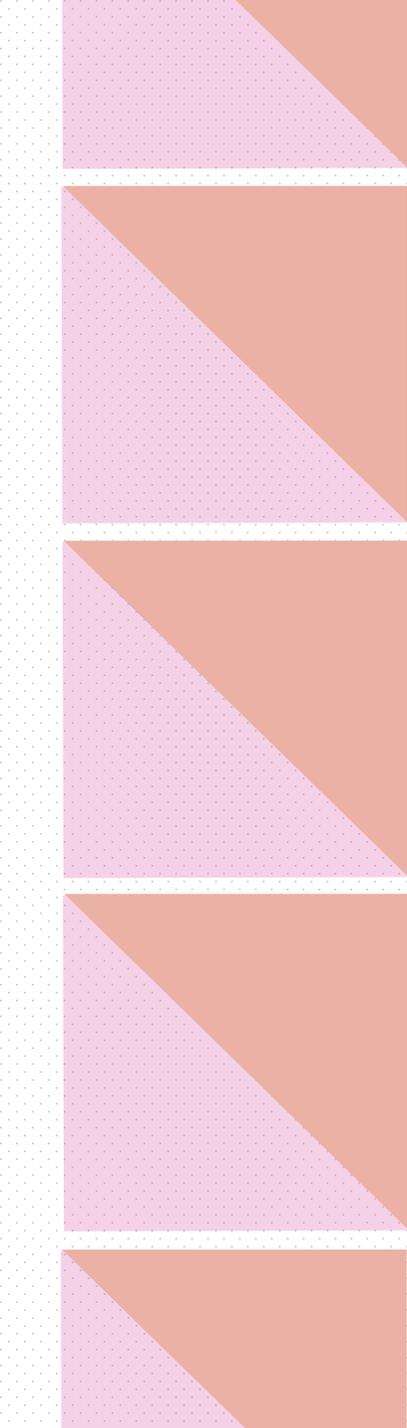
- 15% of proceeds are spent within 6 months
- 60% are spent within 12 months
- 100% are spent within 18 months

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 CONSIDERATIONS

REBATE LIABILITY

Rebate analysis is blended over time

- Periods with positive rebate liability can be offset against periods with negative liability, and vice versa

If rebate is 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 rebate on an annual basis

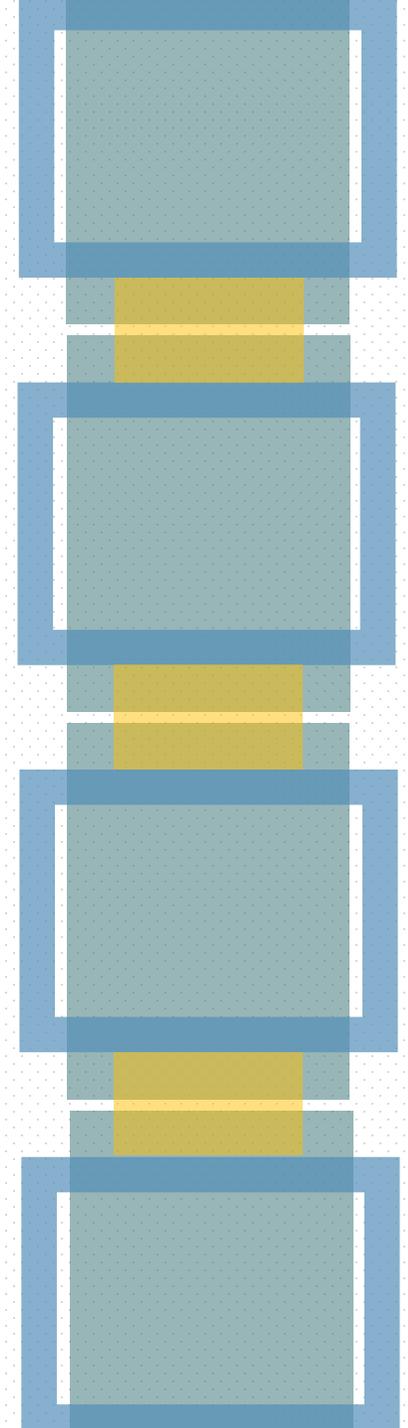
- Avoids surprise liability at 5th year

TIMING CONSIDERATIONS

YIELD RESTRICTION

**Yield restriction analysis is also blended over time
But only during period where temporary period does not apply**

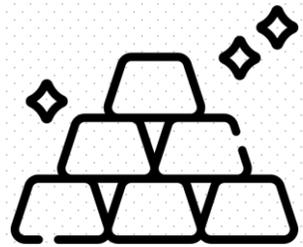
- New money bonds generally get 3-year temporary period
- After that 3-year period, proceeds are "not allowed" to be invested above bond yield, but if they are, issuers may make a yield reduction payment to bring down yield on investments
- For yield restriction purposes, negative arbitrage during that initial 3-year temporary period cannot be used to offset positive arbitrage in later years (different from rebate)
- Yield reduction payments to comply with yield restriction must be made on same 5-year schedule as rebate payments



OTHER ARBITRAGE RULES & DEFINITIONS

Bond Yield

- Fixed rate bonds vs. Variable rate bonds



Fair Market Value

- All investments must be at fair market value
- Treasury Regulations provide methods of establishing FMV
 - In some circumstances, IRS can dispute the FMV of investments
 - Yield burning / uninvested funds

Tax-Exempt Investments

- Proceeds invested in other non-AMT tax-exempt bonds are not subject to yield restriction or rebate
- For this purpose, Demand Deposit State and Local Government Securities (SLGS) are treated as tax-exempt bonds

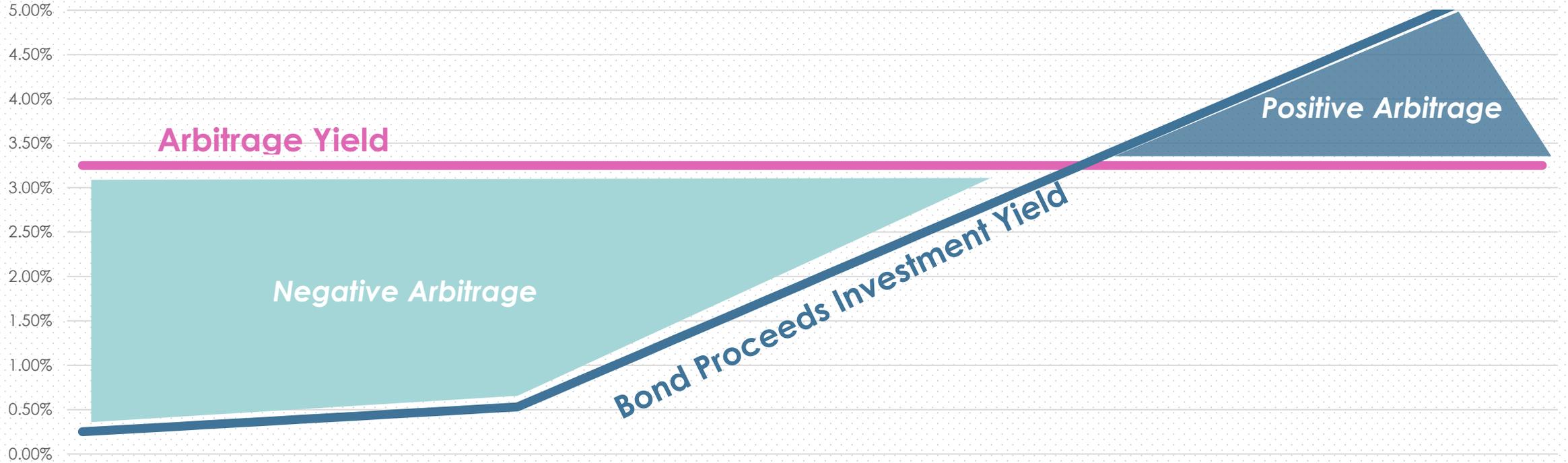


GENERALLY PERMITTED INVESTMENT OPTIONS FOR BOND PROCEEDS

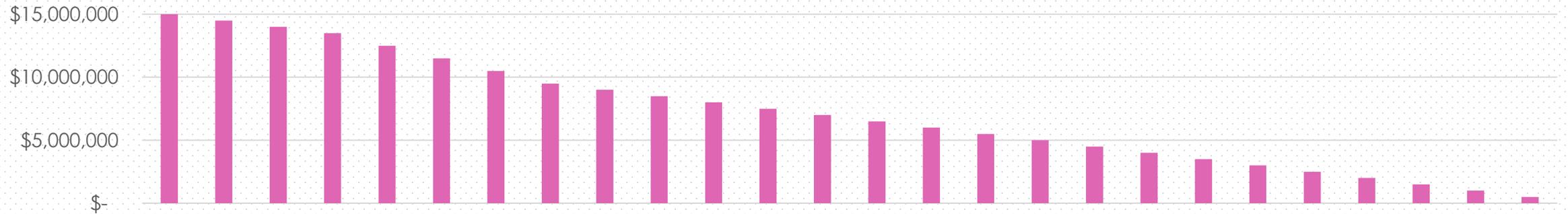
Defined by the Permitted Investment section of Bond documents

- Federal Securities
- Federal agencies rated “AA” or better by S&P
- U.S. dollar denominated deposit accounts, including demand deposits
- A-1+ rated commercial paper not maturing more than 270 calendar days after the date of purchase
- Money market mutual funds
- A-rated investment agreements with financial institutions
- Local Agency Investment Fund (“LAIF”)
- Common law trust - California Asset Management Program (CAMP)
- SLGS—including time deposit and demand deposit
- Tax-exempt municipal securities (subject to maturity limitations)

BOND YIELD VS. INVESTMENT YIELD



Amount of unspent proceeds will impact the dollar amounts of arbitrage



CASE STUDIES

Recently issued bonds with
unspent proceeds

New money bonds and
sizing / investment considerations

Short-term accounts (Debt Service
Accounts, Capitalized Interest)

Current Refunding Transactions

CASE STUDY ONE

RECENTLY ISSUED BONDS

Bonds issued on July 1, 2021

- Arbitrage yield of 2.5%
- \$20,000,000 for new money construction projects
- No reserve fund
- Project Fund qualifies for the 3-year temporary period allowing investments above the bond yield
 - \$10,000,000 remaining in Project Fund
- Reinvestment Average: July 2021 to June 2022 – 0.30%
July 2022 to June 2023 – 2.25%
July 2023 to March 2024 – 4.00%

RECENTLY ISSUED BONDS cont.

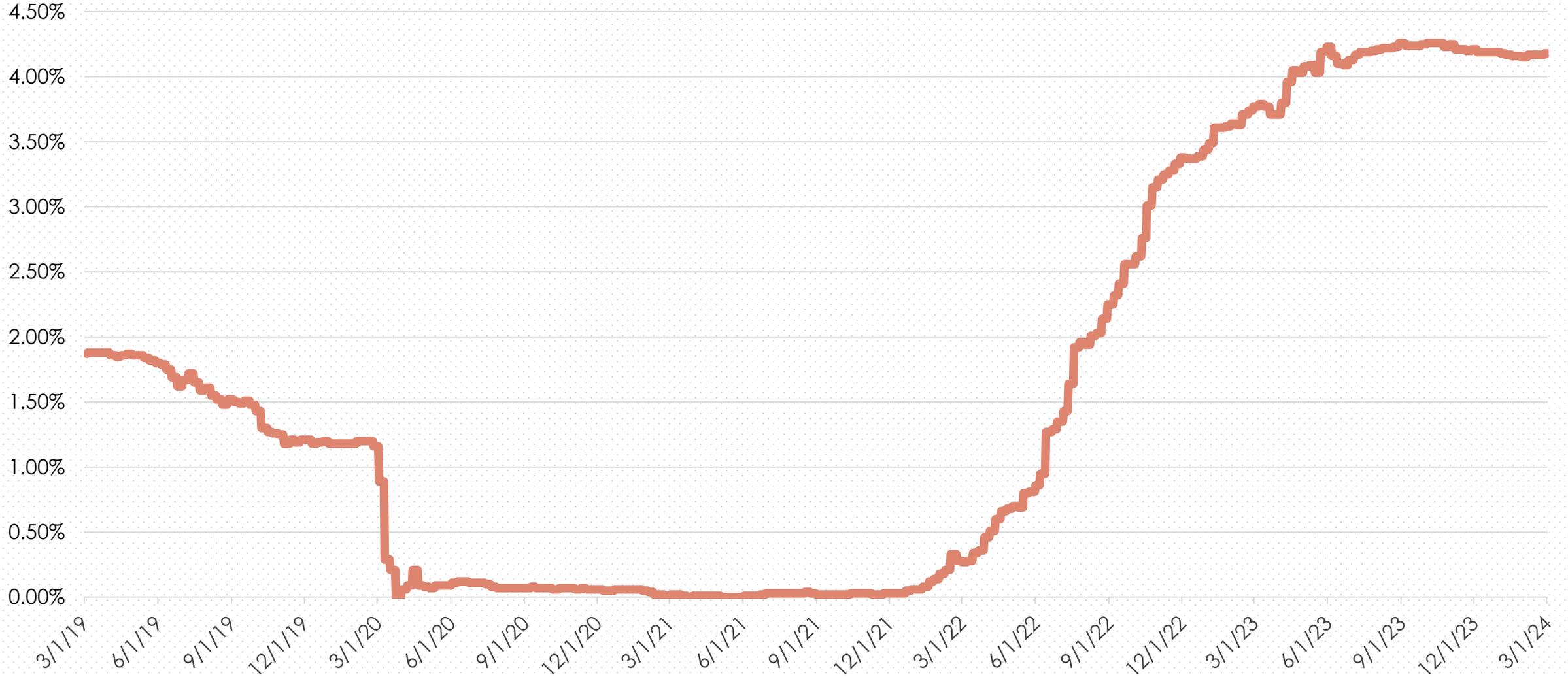
Initial Observations and Issues

- Need to maintain liquidity in Project Fund to allow completion of projects
- Only 50% spent to date—does not meet any rebate exceptions
- Positive arbitrage since mid-2023 can be earned now and will be offset by the negative arbitrage from the first two years of investments
- On a blended basis, any earnings above the bond yield will be owed as rebate

After July 1, 2024—Yield Restriction Applies

- Rebate analysis will still be based on all earnings on Project Fund since issuance
- But yield restriction analysis will "start fresh" after end of 3-year temporary period
- Eliminates benefit from of past negative arbitrage
- Demand Deposit SLGS?

Demand Deposit SLG Interest Rates 5-Year History



CASE STUDY

TWO:

NEW ISSUANCE

- City plans to issue bonds in July 2024 to fund a \$20 million project
- Expected funding needs over 30 months:
 - \$8 million in January 2025
 - \$6 million over 2025 (\$500k per month)
 - \$6 million over 2026 (\$500k per month)
- Expected bond yield of 3.5%
- Expected reinvestment rate of 4% or more

NEW ISSUANCE cont.

Sizing and Timing Considerations

Net Funding of Project Fund

- Investment earnings on Project Fund could reduce size of bond issuance
- Uncertainty about stability of short-term investment rates

Rebate Exceptions

- Current spend-down timing would not meet rebate exceptions
- Delay issuance?
- Accelerate expenditures?
- Size based on net funding only up to bond yield, and assume excess will be owed as rebate?

CASE STUDY THREE:

SHORT TERM ACCOUNTS

- Debt Service Funds may qualify for exception from yield restriction and rebate
- Capitalized Interest Accounts will generally qualify on same basis as Project Funds
- Capitalized Interest Fund Draw Schedule:

	Jan 1	July 1	Jan 1	July 1	Jan 1	July 1	Total
Debt Service Draw	\$1M	\$1M	\$1M	\$1M	\$1M	\$1M	\$6M
Interest Earnings @ 1%	\$30K	\$25K	\$20K	\$15K	\$10K	\$5K	\$105K
Interest Earnings @ 4%	\$122K	\$102K	\$81K	\$61K	\$40K	\$20K	\$425K

- Investment Options:
 - Money Market Fund (variable rate and liquid)
 - Laddered Securities (mature on interest payment date of bond debt service)
 - Investment Contract (fixed rate with draw schedule)
 - Other?

CASE STUDY FOUR:

CURRENT REFUNDING

- Issuer plans to issue refunding bonds in April 2024 to refund outstanding bonds callable any date after May 1, 2024
- Current refunding—Cannot issue tax-exempt bonds more than 90 days before the call date of the refunded tax-exempt bonds, or else it becomes an impermissible advance refunding
- Current refunding escrows:
 - Qualify for a 90-day temporary period from yield restriction
 - May qualify for a rebate exception if all proceeds (including COI) are spent within 6 months
- If refunded bonds have flexible call features (any business date vs. 1st of month), there is an arbitrage opportunity by delaying the redemption date (up to 90 days after issuance) and investing the escrow at a higher yield

Refunded Bond		If Yield Restricted
Outstanding Par	\$48,715,000	
Average Coupon	3.809%	
Daily Accrued Interest	\$7,181	
Escrow Earnings Rate	5.530%	3.040%
Daily Accrued Interest	\$7,217	\$4,113
90-Day Cash Benefit	\$6,592	(\$276,067)
Positive Arbitrage Amount	\$282,659	

QUESTIONS?



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Upcoming CDIAC Events

Current Topics and Practices in Land-Secured Development Finance

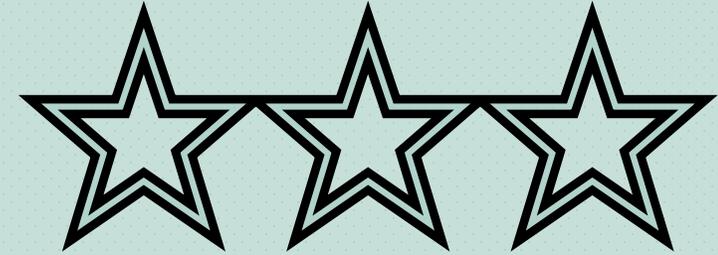
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