



ACWA FINANCE PANEL

The Water Infrastructure Financing Landscape

May 9, 2024

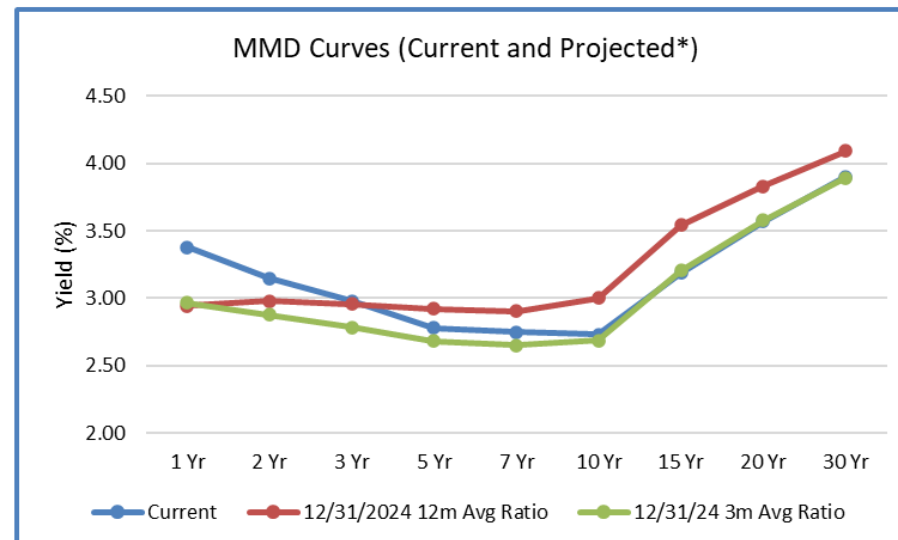
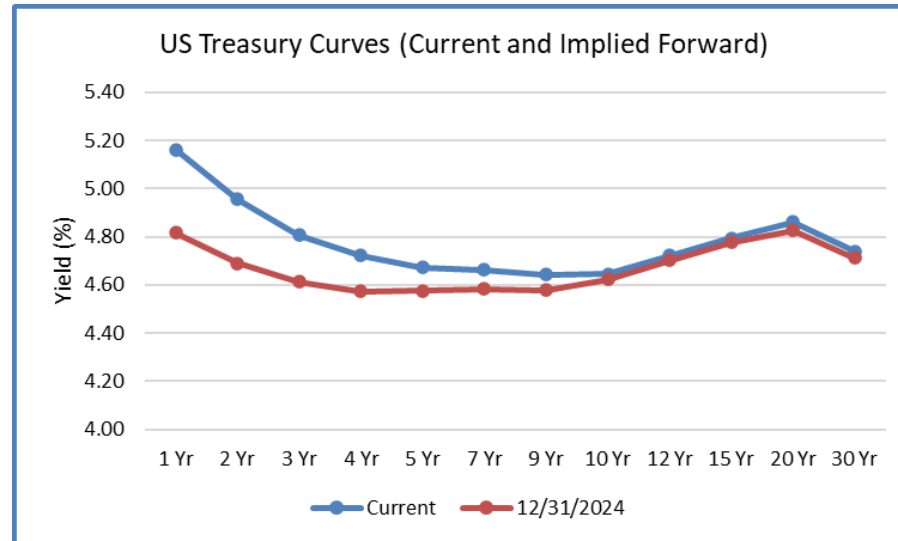
MUNICIPAL MARKET TRENDS

- Market participants now expect the Fed to lower rates about 50 bps by early 2025, with the first rate cut not coming until late the fall

Bond Market Trends	6 months	12 months
Rate Volatility	X	X
Lower, Flatter Yield Curve		X
Changing ESG Environment	X	X
Tender Refundings	X	?
Increased Supply	X	X
Growth of ETFs and SMAs	X	X
Significant CA VRDB Benefit	X	?
Increased Cost of Credit	X	X
BAB Refundings	X	?

- Expect continued bond market volatility due to monetary policy, economic and geopolitical uncertainty and 2024 general election
- Market participants expect the yield curve to flatten from its current inverted shape in 2024, impacting bond structuring and proceeds investment decisions
- ESG environment is evolving and may become more challenging as regulation becomes more stringent
- Tender refundings are expected to continue to be utilized by larger issuers, but universe of candidates is declining
- Many market participants are revising their supply forecasts upward
- Growth of municipal exchange-traded funds (ETFs) is now impacting the structuring and pricing of municipal bonds and SMAs are driving pricing out to the 15- to 20-year maturity sector
- Demand for lower coupon bonds may increase if rates decline as expected
- Supply/demand in balance and expected to continue to favor CA VRDB issuers, but increased supply could dampen the trading advantage
- Bank credit costs are expected to continue to be higher than in recent years
- BAB refundings expected to continue in limited amounts

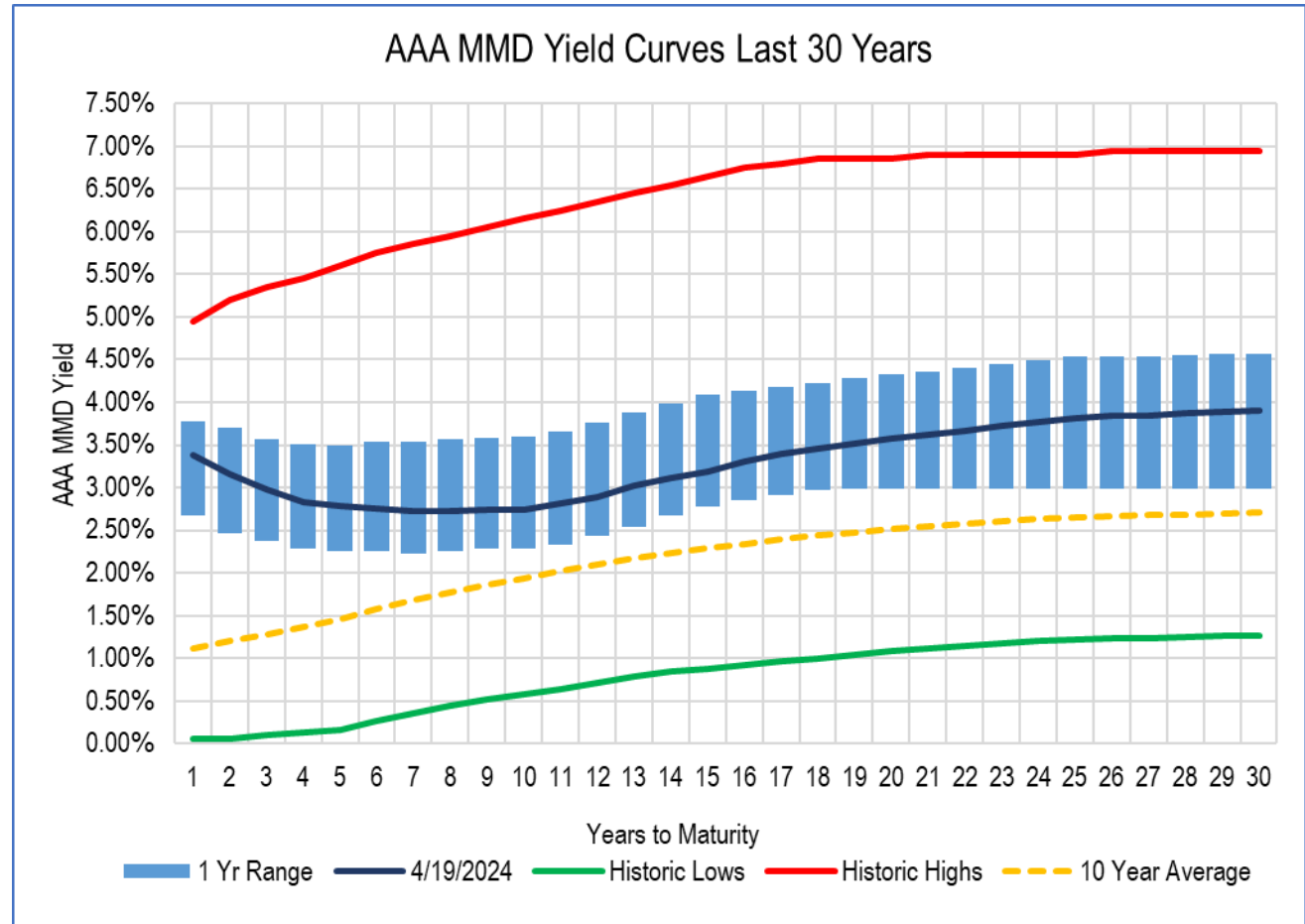
PROJECTED RATES AT YEAR END



* Projected MMD yields for each maturity are equal to (a) the implied forward UST yield for each maturity on 12-31-24 times (b) the 12-month historical average (red line) or 3-month historical average (green line) MMD/UST yield ratio for each maturity

Muni Rates Are Near the Middle of Their 30 Year Ranges

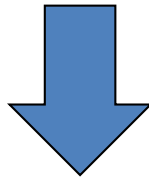
- As of April 19, 2024, AAA tax-exempt yields were about in the middle of their 30-year ranges, except in the first three maturities
- On average, AAA yields are about 115 bps above their 10-year averages across the yield curve
- On average across the yield curve, AAA yields are about 75 bps below their 12-month highs



New Rate Environment Introduces New Opportunities for Cash and Debt Management

Old Standard (2008 – 2021)

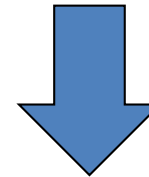
- Historically low interest rates since 2008
 - 20-year MMD from 2010 through 2021 averaged about 2.70%
 - 20-year MMD from 2019 through 2021 averaged about 1.69%
 - Low returns on cash investments (the 2-year UST yield averaged 0.85% from 2010 through 2021)



- ↑ Supportive environment for long-term new money fixed rate debt issuance
- ↑ Extremely favorable conditions for debt refinancing
- ↓ Low returns on invested cash

What's Old is New Again (2022 forward)

- Higher inflation and tighter monetary policy
 - Federal Funds rate has been raised from 0% in March 2022 to its current 5.35%
- Flat yield curve creates less difference between long-term tax-exempt rates and short-term taxable rates
- More “normalized” overall rate environment



- ↑ Decreased market value for outstanding bonds (can support cash tender or defeasance)
- ↑ Higher returns on invested cash
- ↓ More expensive environment for long-term new money fixed rate debt issuance, relative to last 15 years

General Overview

- A tender offer is a public bid to purchase some or all of an issuer's outstanding securities at a specified price (typically at a premium to the market price) within a specified time frame
- Tenders are an alternative way to realize debt service savings since tax-exempt advance refundings are no longer possible
- According to Bond Buyer, tender transaction volume totaled more than \$14 billion in 2023¹

Benefits	Considerations
• Can provide significant debt service savings • Can add optionality to debt portfolio (taxable to tax-exempt tender)	• Transactions are sensitive to market conditions and characteristics of investor base • Limited ability to sculpt savings • More complex to execute than standard current refunding • Higher issuance costs and administrative burden

Build America Bonds – History and Current Environment

- Market conditions, frustrations with administrative requirements related to receiving the BAB subsidy, and the rulings in the *Indiana Municipal Power Agency v. United States* case have led more issuers to pursue Build America Bond de-riskings
- Many bond counsels, investment bankers and issuers believe that the ongoing sequestration of the Build America Bond subsidy qualifies as an “Extraordinary Event”

- In 2009 and 2010, the Build America Bond (“BAB”) program allowed municipal issuers to issue taxable bonds for new money purposes with the expectation that they would be reimbursed for 35% of annual interest costs
 - Between April 2009 and December 2010, municipal issuers issued \$181 billion in Build America Bonds
- However, since sequestration took effect in 2013, BABs subsidy payments have been reduced year over year and have a current sequestration rate of 5.7% through 2031
- Issuers have been interested in refunding BABs since sequestration was first introduced to reduce future uncertainty and eliminate frustrations with BABs administrative requirements
- Most BABs were issued with a make-whole call provision and an extraordinary optional redemption (“EOR”) provision that potentially allows the issuer to redeem BABs at a lower price than the standard MWC if the subsidy was impaired
- An issuer’s ability to exercise the EOR relies on whether there has been an “extraordinary event” as defined in their EOR provisions, and since 2013, issuers have wondered if sequestration constituted an “extraordinary event” that triggers their right to utilize the less costly EOR provisions to redeem BABs
- Clarity from *Indiana Municipal Power Agency v. United States* ruling and publications by various bond counsels provides “favorable guidance” for issuers to refund/de-risk their BABs via the EOR provisions in most cases
- This has led to an upsurge in issuers pursuing BABs de-riskings
 - According to data from JPMorgan as of April 30, 2024, \$4.4 billion of BABs had been called pursuant to EOR provisions and about \$5.3 billion more are currently expected to be called based on posted EMMA notices and conditional call notices
- Investors have questioned or challenged a very limited number of BAB refundings, disputing the validity of the use of the extraordinary optional redemption provisions

Benefits and Considerations for Evaluating a BABs De-Risking

- *EOR provisions vary between issuers – exact language defining “extraordinary event” and criteria for an EOR differs by BAB issue*
- *Some EOR language is viewed as more supportive of EORs than others*
- *Provisions for calculating EOR price also vary from issue to issue*
- *Even if an issuer’s EOR provisions are viewed favorable, there are other factors that should be considered*

Benefits	Considerations
• Eliminates or reduces sequestration risk • Reduces administrative burden associated with debt management • Adds optionality to an issuer’s debt portfolio • May generate modest debt service savings	• Transactions are market sensitive; changes in muni/UST ratios could positively or negatively impact the economics • Certain larger BAB transactions have been challenged or questioned by some investors, but to date there appear to be little or no adverse impacts for issuers • Selectively refunding sinking fund redemptions could be viewed less favorably by investors

Green Bonds Overview

- *Green Bonds provide an opportunity to target a new set of investors when funding projects with positive environmental and social attributes*
- *Absence of a clear pricing advantage for Green Bonds remains a disincentive*

- Green and Social bonds were created to fund projects that have positive environmental and/or climate benefits
- Green and Social Bonds are traditional municipal bonds, except that the bonds' proceeds are:
 - Issued specifically to fund environmentally beneficial projects
 - Identified or defined as “green”
 - Monitored and reported on to ensure proper green use of proceeds
- Other than the use of proceeds, Green and Social Bonds share the same basic attributes as non-Green and Social municipal bonds
- Designating bonds as “Green” or “Social” allows issuers to explicitly market bonds to socially and environmentally conscious investors
 - May broaden appeal of issuer's bonds and potentially attract a new class of environmentally conscious investors, particularly individuals
- For investors, purchasing Green Bonds allow them to earn income in conjunction with an environmentally focused investment
 - Further, the additional reporting typically associated with Green Bonds also affords investors greater insight and transparency into the issuer and how investments are utilized
- Despite market developing, big questions persist regarding what exactly makes an issuance “Green” and who decides if it is green enough, and if there will ever be a consistent cost advantage to Green Bonds for issuers
- The SEC is considering new regulations to reduce or prevent “greenwashing” by investors, which in turn may increase burdens on issuers to help investors meet more rigorous criteria