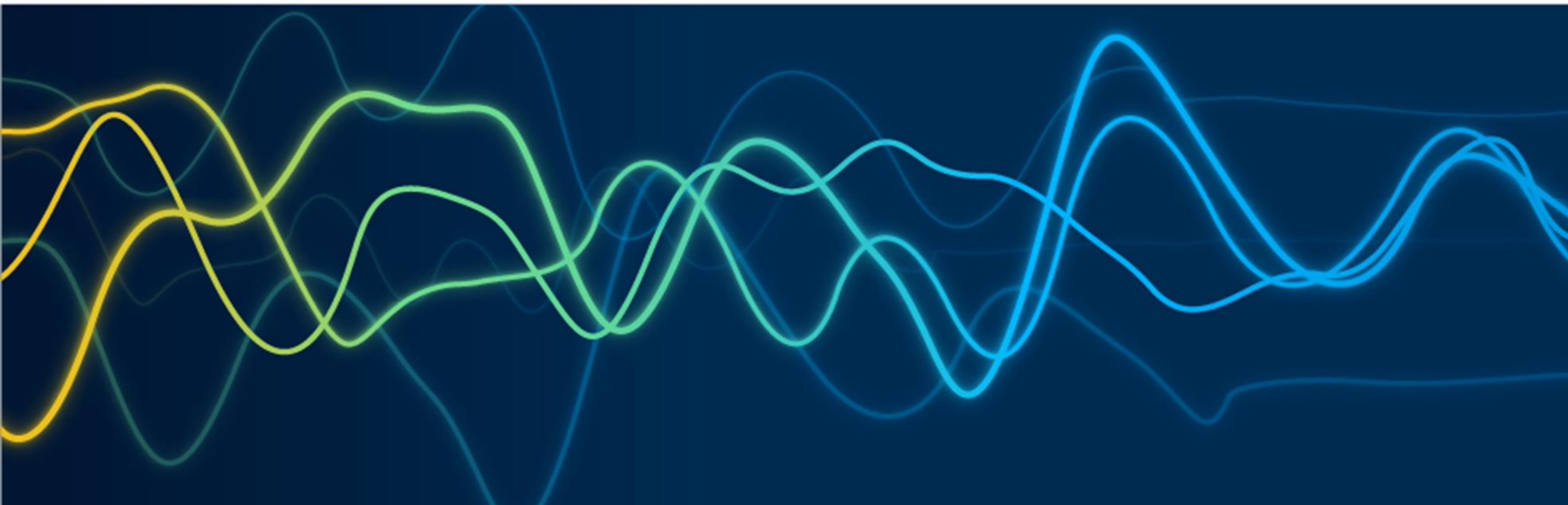


# Municipal Bond Market Monitor

Municipal Bond Group

Q4 2024



## Q4 2024 Municipal Market Review

### FISCAL POLICY UNCERTAINTY AND SHIFTING INFLATION EXPECTATIONS RESULT IN FIXED INCOME WEAKNESS

- Muni bond Index: -1.22% | HY Muni Index: -1.08% | Taxable Muni Index: -3.57%
- US Treasury: -3.14% | Corporate: -3.04%

### YIELDS RISE IN Q4 & END THE YEAR HIGHER ACROSS THE CURVE

#### Q4 '24 AAA Muni

- 2-Year: 2.30% → 2.82% +52 bps
- 5-Year 2.31% → 2.87% +56 bps
- 10-Year 2.60% → 3.06% +46 bps
- 30-Year 3.52% → 3.90% +38 bps

#### YTD '24 AAA Muni

- 2-Year: 2.52% → 2.82% +30 bps
- 5-Year 2.28% → 2.87% +59 bps
- 10-Year 2.28% → 3.06% +78 bps
- 30-Year 3.42% → 3.90% +48 bps

### MUNICIPAL FUND FLOWS REMAIN POSITIVE FOR THE QUARTER & THE YEAR

- Municipal fund net inflows of \$42 billion in 2024
- Long Duration (+\$38.6bn) and High Yield (+\$15.8bn) flows were particularly strong, while Short Term flows (-\$4.6Bn) were consistently negative

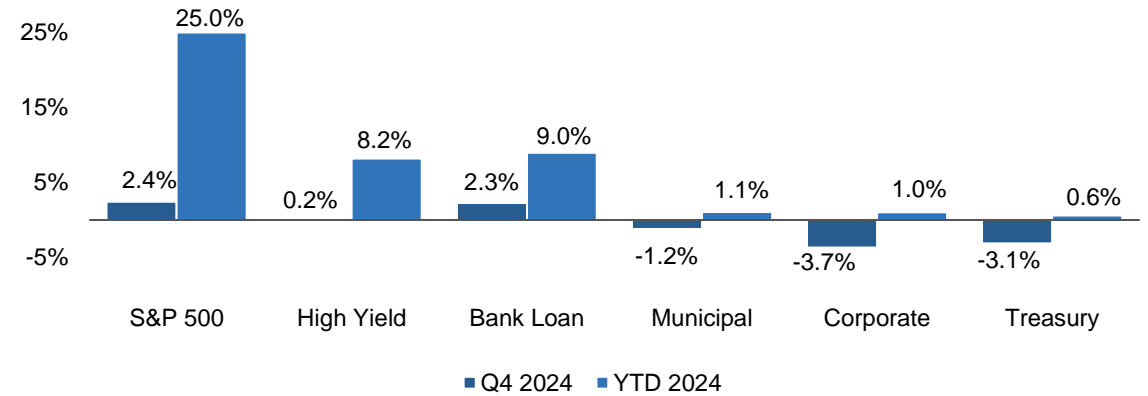
**Past performance is no guarantee of future results.** It is not possible to invest directly in an index. See end of report for important additional information. This commentary may contain statements that are not historical facts, referred to as "forward looking statements". Actual future results may differ significantly from those stated in any forward-looking statement, depending on factors such as changes in securities or financial markets or general economic conditions.  
Source: Index Performance: Bloomberg, AAA YTD changes as of 12/31/2024. Fund Flows: J.P Morgan, Ratios: Bloomberg

## Overview

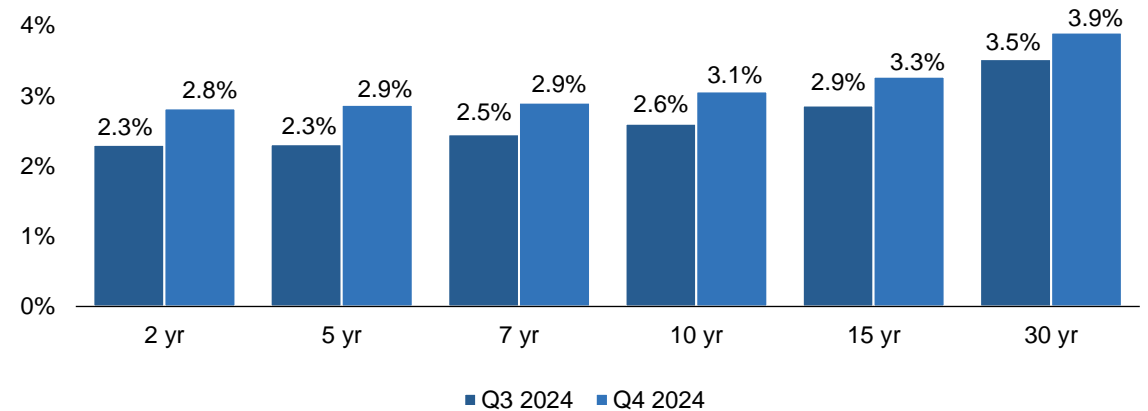
- After cutting Fed Funds 50bps in September, the Fed lowered the policy rate 25bps in both November and December to end the year at 4.25% - 4.50%.
- December's result was characterized as a "hawkish cut" with comments from Chair Powell outlining a more cautious approach to future easing.
- The Fed's December dot plot calls for 50bps of cuts in 2024 compared to a projected 100bps of cuts following the September meeting.

- Despite the rate cuts, Treasury yields rose during the quarter with 2-year, 10-year and 30-year yields 59 bps, 78 bps and 65 bps higher, respectively.
- Municipals yields also rose with 2-year, 10-year and 30-year yields 52 bps, 46 bps and 38 bps higher, respectively.
- With the Q4 weakness, 10-year AAA municipal yields finished the year 78 bps higher, while the 10-year Treasury yield increased 68 bps.

### Major Asset Class Returns



### AAA Municipal Yields (%)



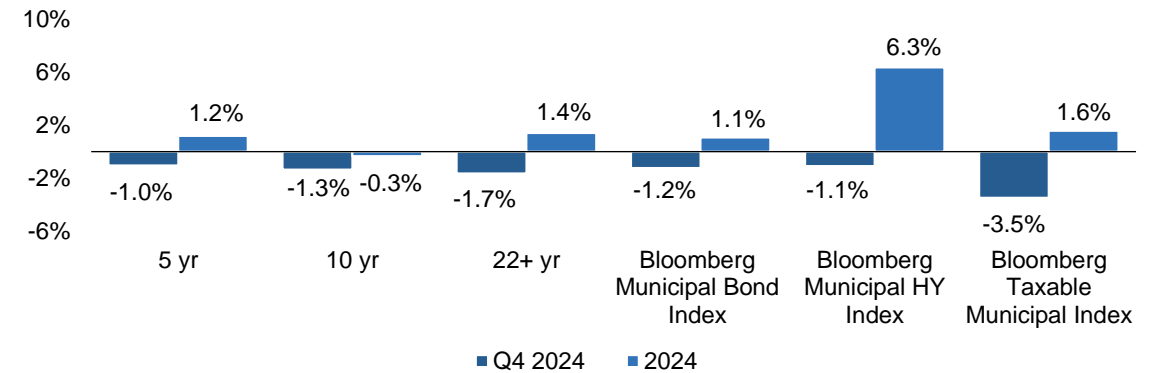
Source: Bloomberg and Morningstar Direct as of 12/31/24. **Past performance is no guarantee of future results.** It is not possible to invest directly in an index. See end of report for important additional information. \*Basis points (BPS) is a unit that is equal to 1/100th of 1% and is used to denote the change in a financial instrument.

## Index Returns

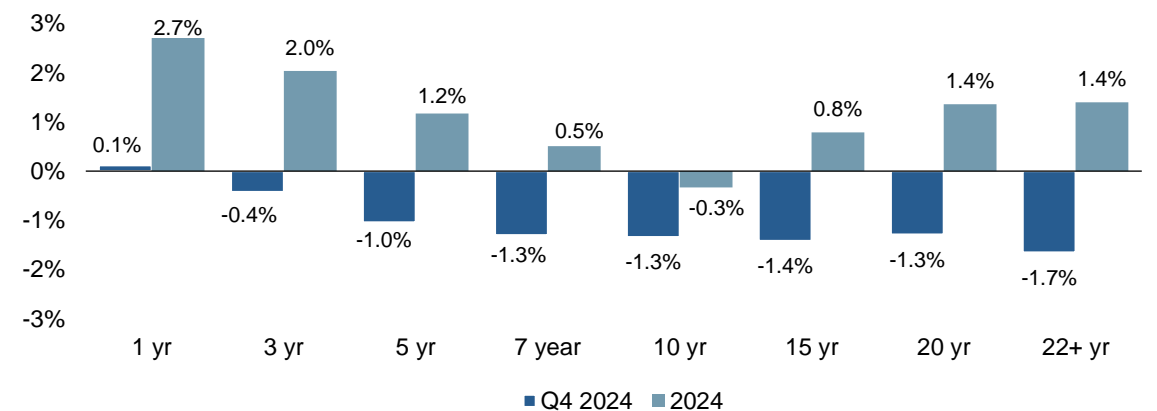
- Except for very short maturities, municipal performance was negative across the municipal curve and credit spectrum in the fourth quarter.
- Down 1.1%, high yield municipals slightly outperformed investment grade for the quarter. Year-to-date, high yield municipals outperformed by over 500bps.

- Year-to-date, performance has been strongest at the very short end and the very long end of the municipal curve.
- We believe barbell curve positioning should continue to be beneficial heading into 2025.

### Tax-Exempt and Taxable Index Returns



### Investment Grade Tax-Exempt Index Returns



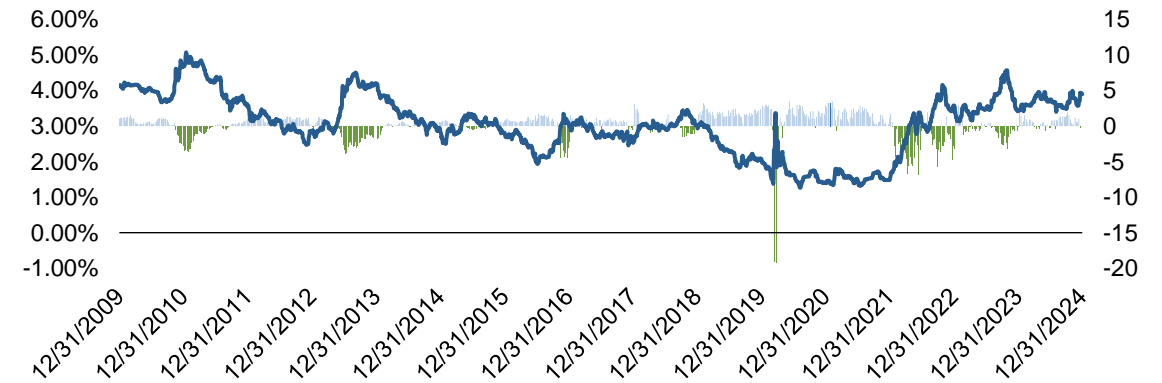
Source: Bloomberg, MMA and Morningstar Direct as of 12/31/24. **Past performance is no guarantee of future results.** Performance less than one year is cumulative. It is not possible to invest directly in an index. See end of report for important additional information.

## Municipal Fund Flows

- Though yield volatility resulted in outflows in the final weeks of December, municipal fund flows were consistently positive throughout the year.
- For the year, municipal fund inflows were approximately ~\$42bn. Of the total, ~\$26bn entered open-end funds while ETFs received ~\$16bn.

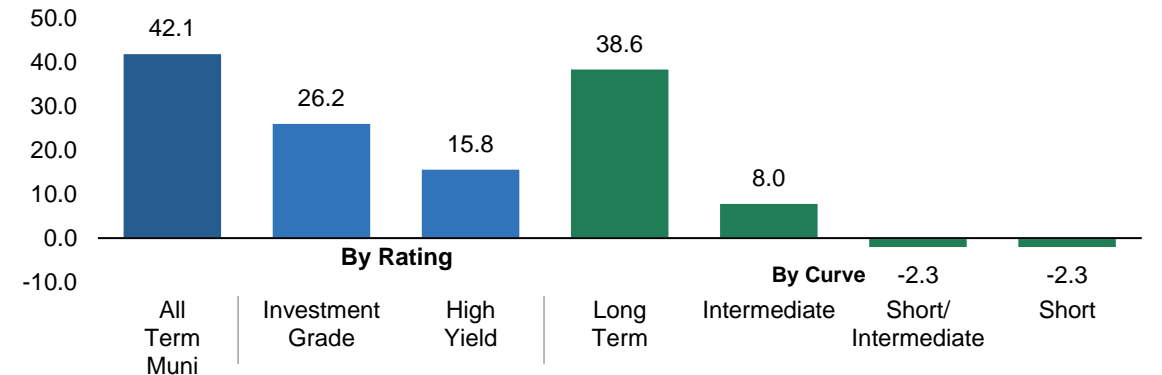
- By duration, long-term funds posted the highest inflows, while short/intermediate and short-term funds experienced outflows.
- By credit quality, both investment grade and high yield funds posted significant inflows.

### Muni Mutual Fund Flows



### Muni Fund Flows By Category

YTD Municipal Fund Flows (\$Bn)



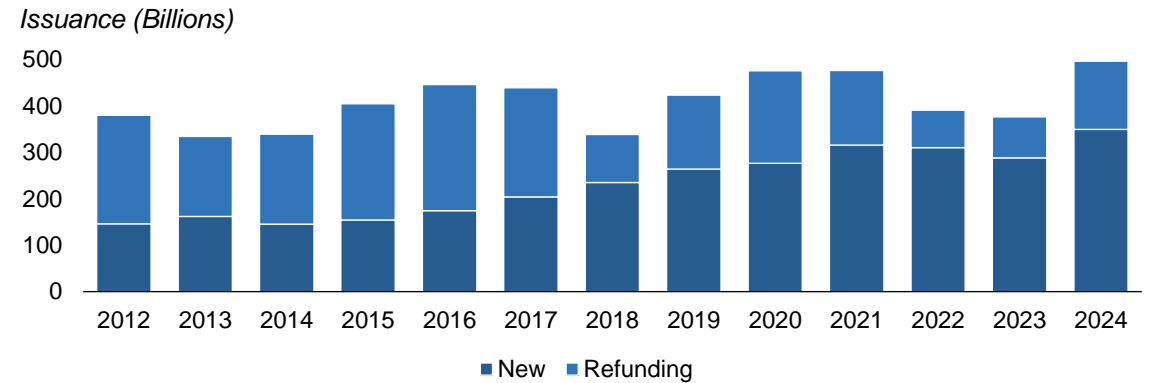
Source: Thomson Reuters Municipal Market Data. Date Range: December 2009– December 2024. Flow data provided by J.P. Morgan as of 12/31/2024.

## Municipal Issuance

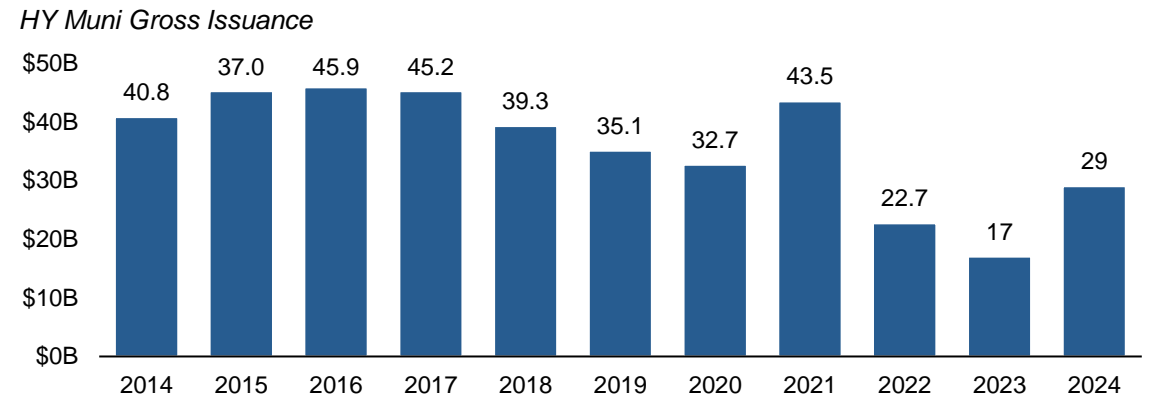
- 2024 issuance reached a record \$496bn, up 32% year-over-year. Approximately 70% of issuance was new money and 30% refunding deals.
- We anticipate issuance to remain elevated in 2024 as COVID era federal aid dries up and economic growth creates new infrastructure needs.

- At \$29bn, high yield municipal issuance was down significantly relative to its historical average of ~\$40bn per year.
- Elevated yields, moderate issuance and strong fund flows continue to provide a supportive backdrop for the high yield municipal market in 2025.

### Municipal Bond Issuance: New vs. Refunding



### Municipal Bond Issuance: High Yield



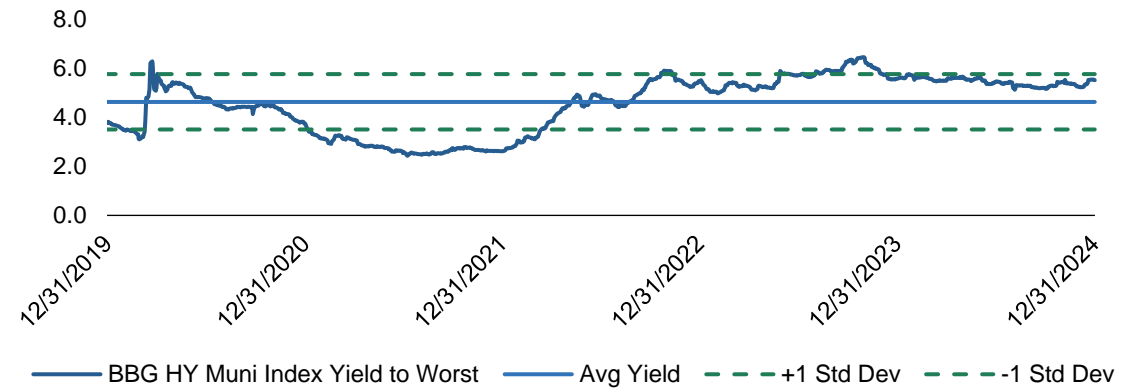
Source: Municipal Bond Issuance data from Bloomberg Barclays Research and J.P. Morgan as of 12/31/2024. Private placement issuance counted as new capital.

## High Yield Municipals

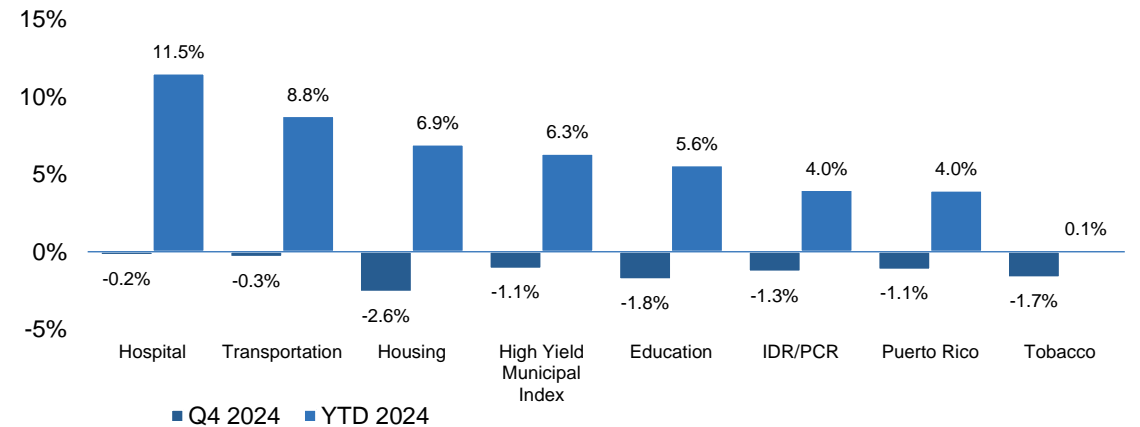
- The yield-to-worst on the High Yield Municipal Index increased 32bps during the quarter from 5.20% to 5.52%.
- At 5.52%, yields remain attractive and are one standard deviation wide to the Index's 5-year average of 4.63%.

- The Hospital, Housing, and Transportation have been top performing sectors in the High Yield Municipal Index on a year-to-date basis.
- Despite being one of the most liquid areas of the high yield market, the tobacco sector has underperformed materially due to declining MSA payments.

### High Yield Municipal Index YTW



### High Yield Municipal Sector Returns



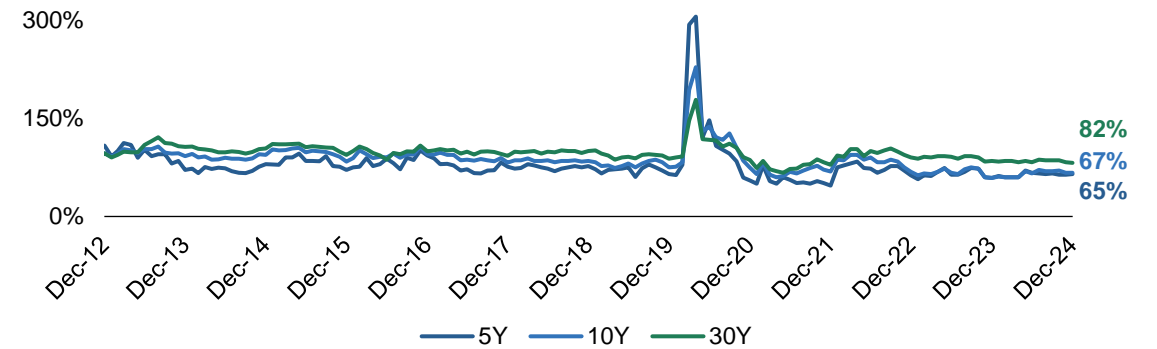
Source: Barclays and Bloomberg, as of 12/31/2024. The index performance is provided for illustrative purposes only and is not meant to depict the performance of a specific investment. **Past performance is no guarantee of future results.**

## Muni-to-Treasury Yield Ratios

- Short term muni-to-treasury ratios cheapened slightly in Q4 while longer term ratios richened.
- Specifically, the 5-year muni/treasury ratio increased from 65% to 66%, while the 10-year decreased from 69% to 67% and the 30-year decreased from 85% to 82%.

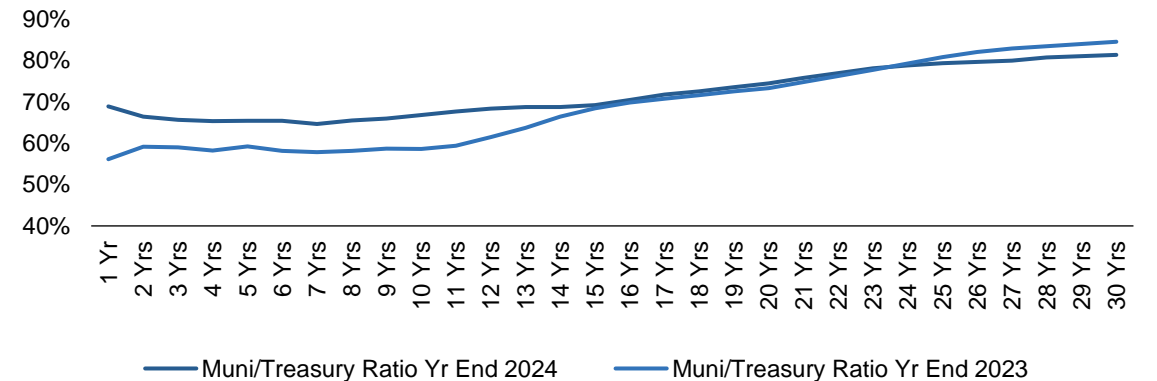
- For the year, Muni/Treasury ratios cheapened meaningfully with the 8yr, 9yr, and 10yr easing the most.
- Even with the YTD cheapening, investors may benefit from moving down in quality for attractive value and should consider active strategies focused on income and total return.

### AAA Muni-to-Treasury Yield Ratios (%)



### Muni/Treasury Ratios YTD

Muni/Treasury Ratio Comparison



Source: Thomson Reuters as of 12/31/24, Bloomberg as of 12/31/24. Past performance is no guarantee of future results. See end of report for important additional information.



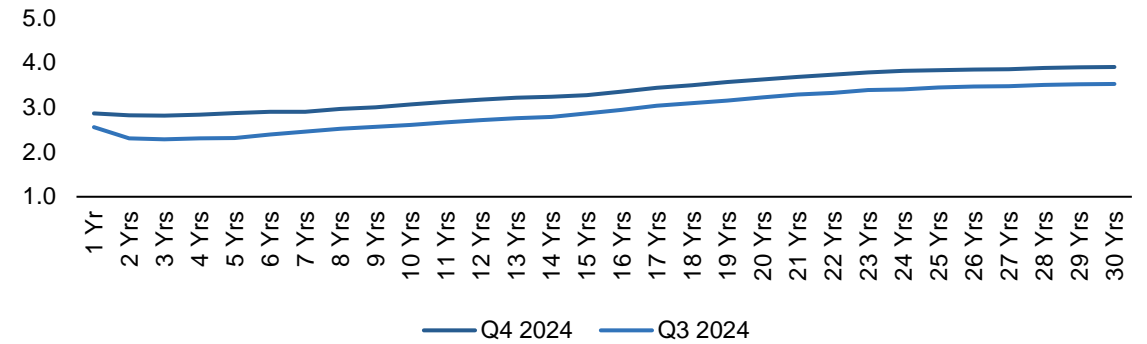
## Municipal Yield Curve

- The municipal curve flattened in Q4 as 2-year yields increased 52bps, and 30yr yields increased 38bps.
- In contrast, the treasury curve steepened slightly as the 2-year yield increased 59 bps while the 30-year yield rose 65bps.

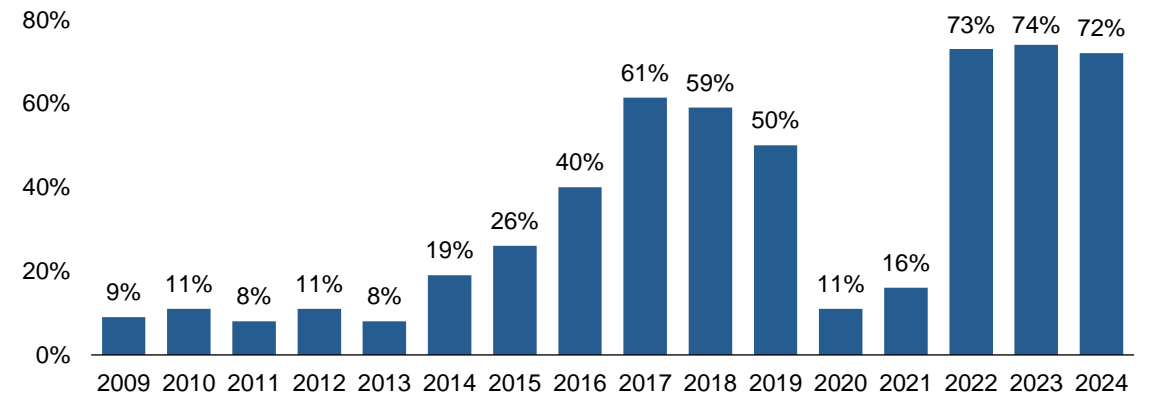
- With the Q4 flattening, the 2-year municipal now captures 72% of the 30yr yield compared to 74% at the beginning of the year.
- Short-term municipal yields remain attractive particularly compared to taxable alternatives. We believe investors should continue to consider a barbelled approach by adding duration and locking in longer-term yields.

### AAA Muni Yield Curve Comparison

Municipal AAA Yield Curve



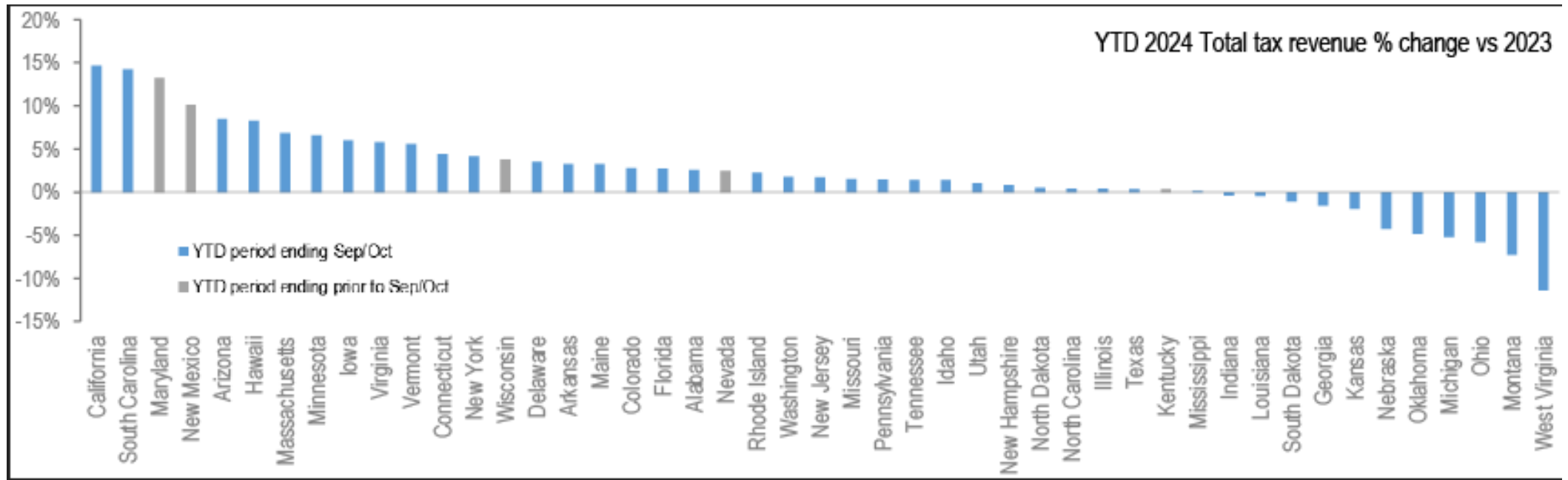
### % of Municipal Curve Captured by 2-Yr Municipal Bond



Source: Thomson Reuters as of 12/31/24, Bloomberg as of 12/31/24. Past performance is no guarantee of future results. See end of report for important additional information.

## Increasing Tax Revenue Collection

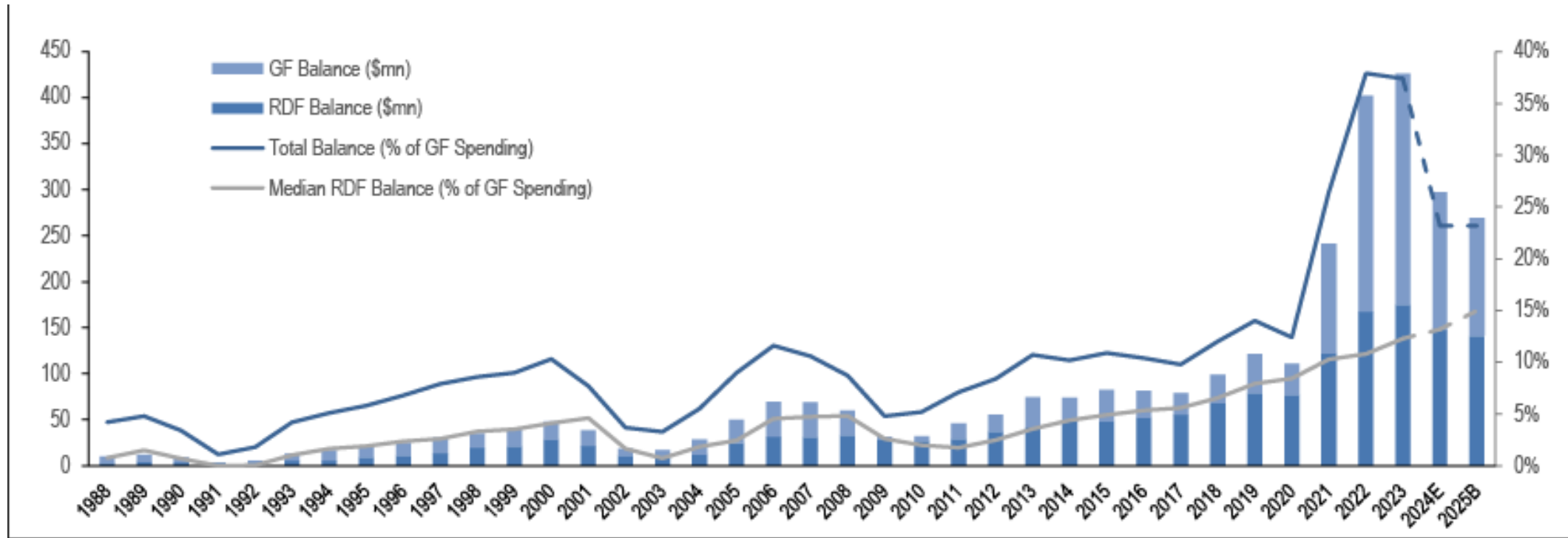
Majority of states reported positive year-to-date growth in tax revenues, indicating stable growth heading into 2025



Source: J.P. Morgan, Individual state monthly tax reports.

## Rainy Day Funds Remain Near Historical Record Highs

States' Rainy Day Funds indicate strong fiscal management

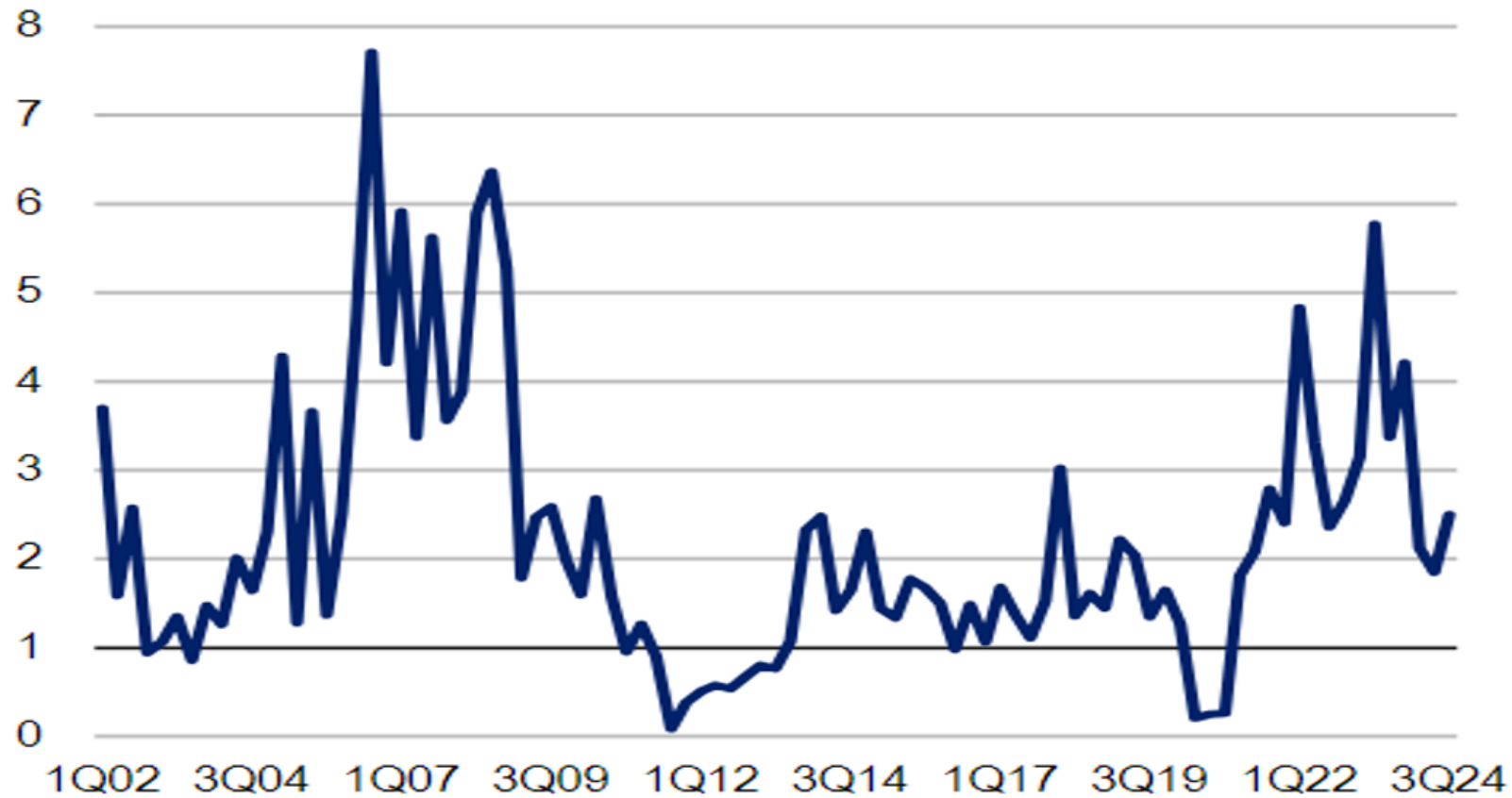


Source: National Association of Budget Officers. Note: Figures for fiscal year 2024 are estimates and fiscal 2024 are projections based on governors' recommended budgets. GF and total balance figures for FY24 exclude WI, and figures for FY25 exclude MS, VA, and WI. "2024E" refers to the expected Rainy Day Fund Balance, while "2025B" refers to the forecast Rainy Day Fund Balance.

## Municipal Credit Remains Solid

The pace of upgrades to downgrades ratio is moderating but remains strong at over 2:1

**Historical Upgrade to Downgrade Ratio**

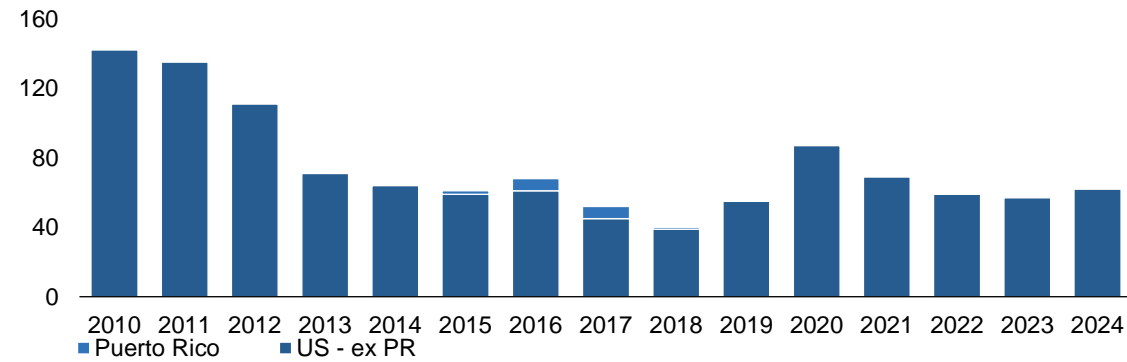


Source: BofA Global Research, Moody's Ratings, S&P Global Ratings

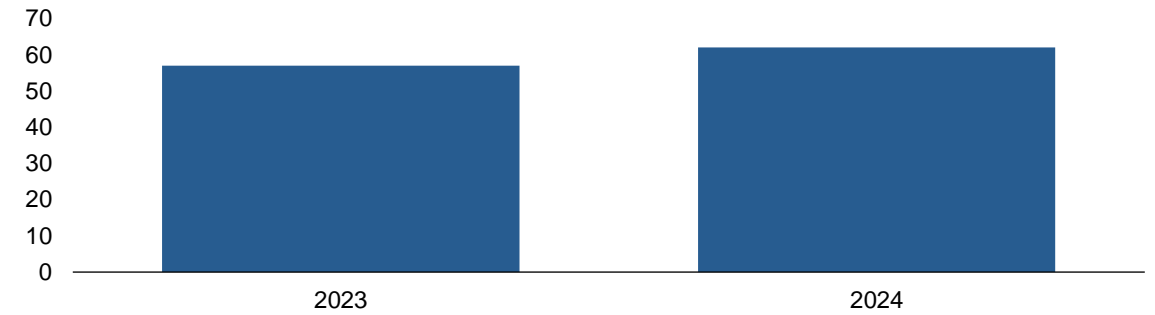
## Municipal Default Overview

### Number of Unique Annual Defaults

Number of Unique Defaults

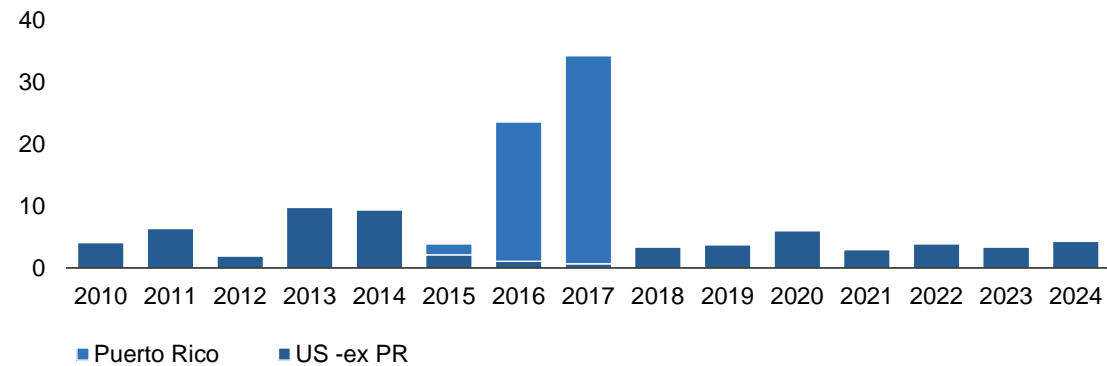


### 2024 Number of Unique Defaults was Up Slightly YoY

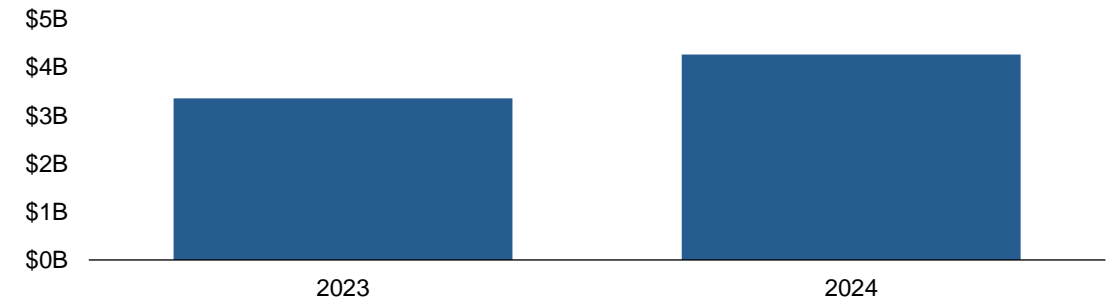


### Dollar Value of Annual Defaults (\$ Billions)

Dollar Value of Defaults (\$ Billions)



### 2024 Dollar Value of Defaults (\$ Billions) Increased by 27%

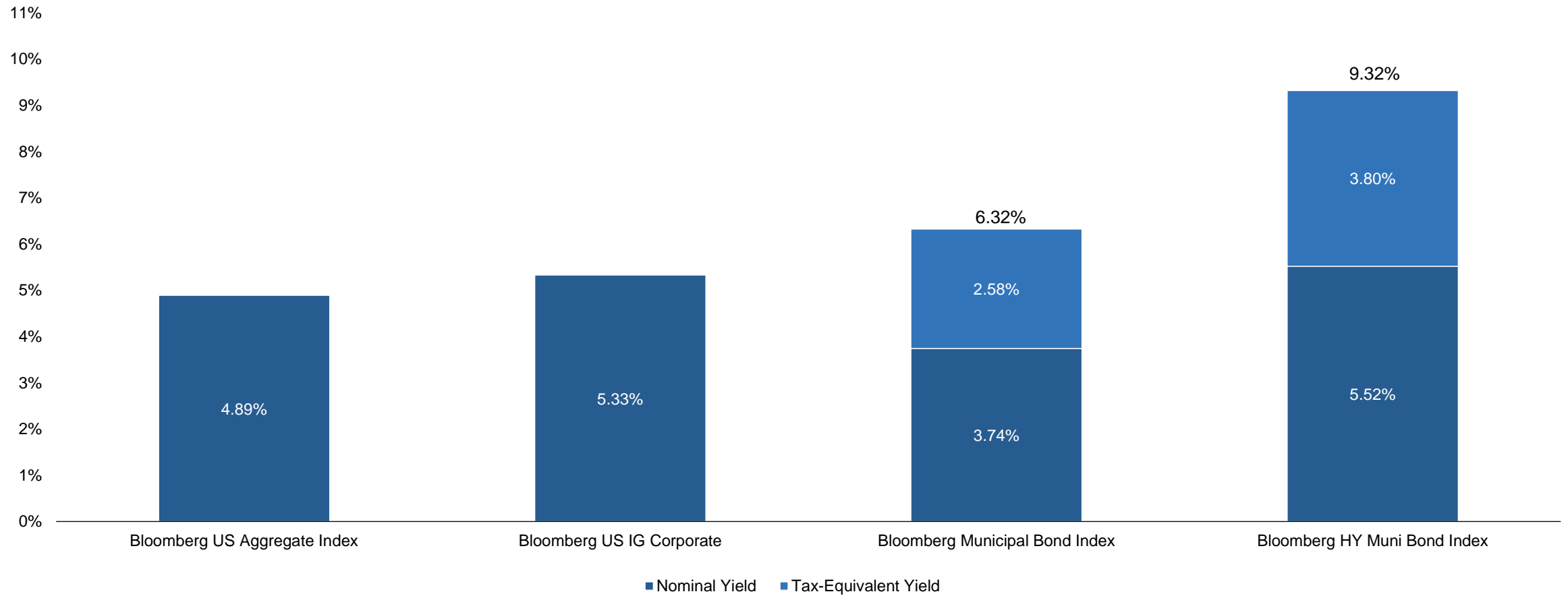


Source: MMA. Default data as of 12/31/2024

## Taxable Equivalent Yields

Municipal Taxable-equivalent Yields Appear Very Attractive Relative to Other High-Quality Options

### Taxable Equivalent Yields



Sources: Barclays Live as of 12/31/24, Tax Policy Center. This table is for illustrative purposes only and uses the highest current applicable federal tax rates plus 3.8% health care tax. **Past performance is no guarantee of future results.** It is not possible to invest directly in an index. See end of report for important additional information.

## Municipal Market Outlook

- Though the Fed cut an additional 25 bps in its December FOMC meeting, Chairman Powell indicated a reduction in the forecasted number of rate cuts to be expected in 2025.
- After the volatility in Q4, municipal yields are higher, up anywhere from 30-50 bps from Q3, providing investors a buying opportunity to lock in near decade high starting yields.
- Given the expectation for additional, albeit less, rate cuts in 2025 and higher absolute yields resulting from Q4 volatility, we anticipate a continuation of net positive flows to the asset class next year.
- Barbell curve positioning has outperformed this year and should continue to be beneficial going into 2025.
- With the election behind us but most individual tax cuts set to expire at the end of 2025, we remain focused on proposed legislation related to changes to marginal tax rates, the standard deduction, the cap on State and Local Tax deductions (SALT) and the phaseout of the Alternative Minimum Tax (AMT) exemption.
- Bottom line: With a more hawkish Fed and several potential risks stemming from fiscal policy, we are advocating for neutral duration exposure with an active management tilt to take advantage of any near-term volatility in rates.

# Appendix: Additional Slides





## Overview of Legislation and Municipal-Related Spending in Relief Bills

The Below Table Provides a High-level Summary of the Fiscal Support for Municipals Through the Four Most Recent Pieces of Legislation Passed by Congress. In Aggregate, over \$1.7 Trillion of Capital has Been Allocated to Various Parts of the Municipal Bond Market.

	2021 Infrastructure Bill	American Rescue Plan	Dec. Federal Stimulus	CARES Act
Total Muni Market Support	\$550	\$650	\$157	\$347
States	\$136	\$408	\$30	\$169
Locals	--	\$182	\$30	\$164
Community based orgs.	--	–	–	\$1
Not for Profits	--	\$0.8	\$15	–
Healthcare	--	\$13	\$4	\$108
Primary/Sec Education	--	\$137	\$58	\$25
Higher education	--	\$40	\$26	\$17
Airports/Ports	\$42	\$11	\$2	\$10
Surface transit	\$110	–	\$10	–
Mass transit	\$39	\$30	\$14	\$25
Other Transportation	\$78	\$2	\$2	–
Housing	--	\$39	\$25	–
Utilities	\$143	–	–	–

Source: US Congress, J.P Morgan. Note: Sum of individual sector amounts may not add up to aggregate total due to double counting, as much of the capital is shared across sectors.

## RISK CONSIDERATIONS

An imbalance in supply and demand in the municipal market may result in valuation uncertainties and greater volatility, less liquidity, widening credit spreads and a lack of price transparency in the market. There generally is limited public information about municipal issuers. Investments in income securities may be affected by changes in the credit worthiness of the issuer and are subject to the risk of non-payment of principal and interest. The value of income securities also may decline because of real or perceived concerns about the issuer's ability to make principal and interest payments. As interest rates rise, the value of certain income investments is likely to decline. Diversification cannot ensure a profit or eliminate the risk of loss. Debt securities are subject to risks that the issuer will not meet its payment obligations. Low rated or equivalent unrated debt securities of the type in which a strategy will invest generally offer a higher return than higher rated debt securities, but also are subject to greater risks that the issuer will default. Unrated bonds are generally regarded as being speculative.

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**Yield to Worst** is a measure which reflects the lowest potential yield earned on a bond without the issuer defaulting. The yield to worst is calculated by making worst-case scenario assumptions by calculating the returns that would be received if provisions, including prepayment, call or sinking fund, are used by the issuer.

### INDEX DEFINITIONS

**Bloomberg Municipal Bond Index** is an unmanaged index of municipal bonds traded in the U.S.

**Bloomberg High Yield Municipal Bond Index** is an unmanaged index of non-Investment Grade Municipal bonds traded in the U.S.

**Bloomberg Taxable Municipal Bond Index** is an unmanaged index of Taxable Municipal Bonds traded in the U.S.

**Bloomberg U.S. Treasury Index** measures public debt instruments issued by the U.S. Treasury.

**Bloomberg U.S. Aggregate Index** is an unmanaged index of domestic investment-grade bonds, including corporate, government and mortgage-backed securities.

**Bloomberg U.S. Corporate High Yield Index** measures USD-denominated, non-investment grade corporate securities.

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