

Municipal Market Weekly Update

MACKAY MUNICIPAL MANAGERS.™ THE MINDS BEHIND MUNIS.



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Munis Rock! But, Don't Just Take Our Word For It

- Tax exempts enjoying a strong September start
- Historical performance of exempts in focus
- Latest academic study provides 3rd party support

Relative Performance

As we mentioned in our prior weekly, September has been historically (and even technically) unsupportive for the muni market, particularly in terms of reinvestment flows.

However, the recent rally in broader rates, and even munis, has turned that narrative on its head. If the month were to close out, right now, returns for the Bloomberg Municipal Bond Index would stand at ~2.38%, marking the largest September gain over the past decade. Obviously there is a lot more time left in September, and that includes a much-anticipated Federal Reserve cut, but the signs are certainly reassuring and giving support to some of our more high conviction thoughts for 2025. Highlighting the turn in fortune for longer duration tax-exempts, the Bloomberg Municipal Long Bond Index has outperformed the Bloomberg Municipal Bond 3 Year Index by 396bps, this month, alone.

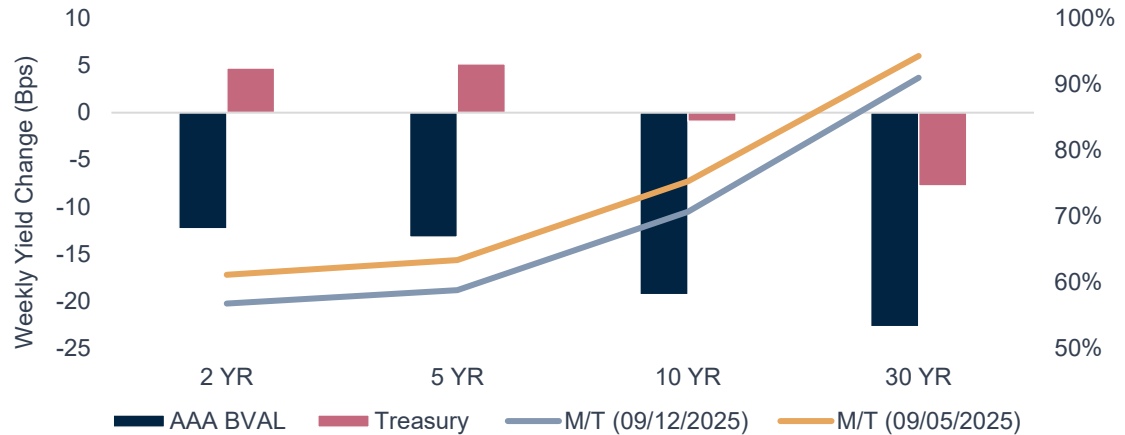
Over the past week municipals have handily outperformed their taxable equivalents, with yields dropping by double digits across the yield curve, while movements in US Treasuries was more subdued. In fact, U.S. Treasury yields appeared slightly higher through 5 years, and only showed a notable decline of 8bps in the long end of the curve. Even that 8bps decline was not enough to keep pace with the 23bps decline in tax-exempts. As such, munis experienced a tightening of muni/US Treasury ratios across the curve to some of the lowest levels of 2025.

Market Technicals

We frequently highlight the benefits of the tax-exempt sector in both our weekly publications and client calls. Recent weeklies have covered relative value, low correlation as an asset class, and the value of tax exemption across tax brackets. Still, we recognize that promoting municipal bonds as a municipal asset manager can sometimes lack objectivity.

That's why this week we're incorporating an independent perspective to reinforce our message. Led by Professor Derek Horstmeyer and his team at George Mason University's Costello College of Business, a recent study compares long-term performance of tax-exempts versus taxable alternatives, that was published in the Wall Street Journal ([Tax-Exempt Munis vs. Taxable Bonds: Which Has Higher Returns?](#)). Our initial internal review shows that over the past 30 years, tax-exempts have matched the Bloomberg U.S. Aggregate Index and outperformed the Bloomberg U.S. Treasury Index. Since both benchmarks are taxable, the relative advantage of tax-exempts is even greater when adjusted for after-tax returns.

MUNIS OUTPERFORMED TREASURIES ACROSS THE CURVE¹



1. Data as of September 12, 2025. Source: Bloomberg. Spot Muni, Spot AA rates.

Past performance is no guarantee of future results, which will vary. It is not possible to invest directly in an index.

EXEMPTS WIN OVER TIME²

	Total Return
Bloomberg U.S. Municipal Bond Index Total Return Index Value Unhedged	254.83%
Bloomberg U.S. Aggregate Total Return Value Unhedged	255.90%
Bloomberg U.S. Treasury Total Return Unhedged	218.10%

2. Data as of September 9, 2025. Source: Bloomberg.

Study Overview

- Researchers analyzed **all U.S. muni funds and comparable taxable bond funds**.
- Funds were grouped by **state concentration, average maturity, and expense ratio**.
- Three fund categories were compared:
 - General index funds
 - Short-term debt funds
 - Intermediate-term debt funds

Key Findings

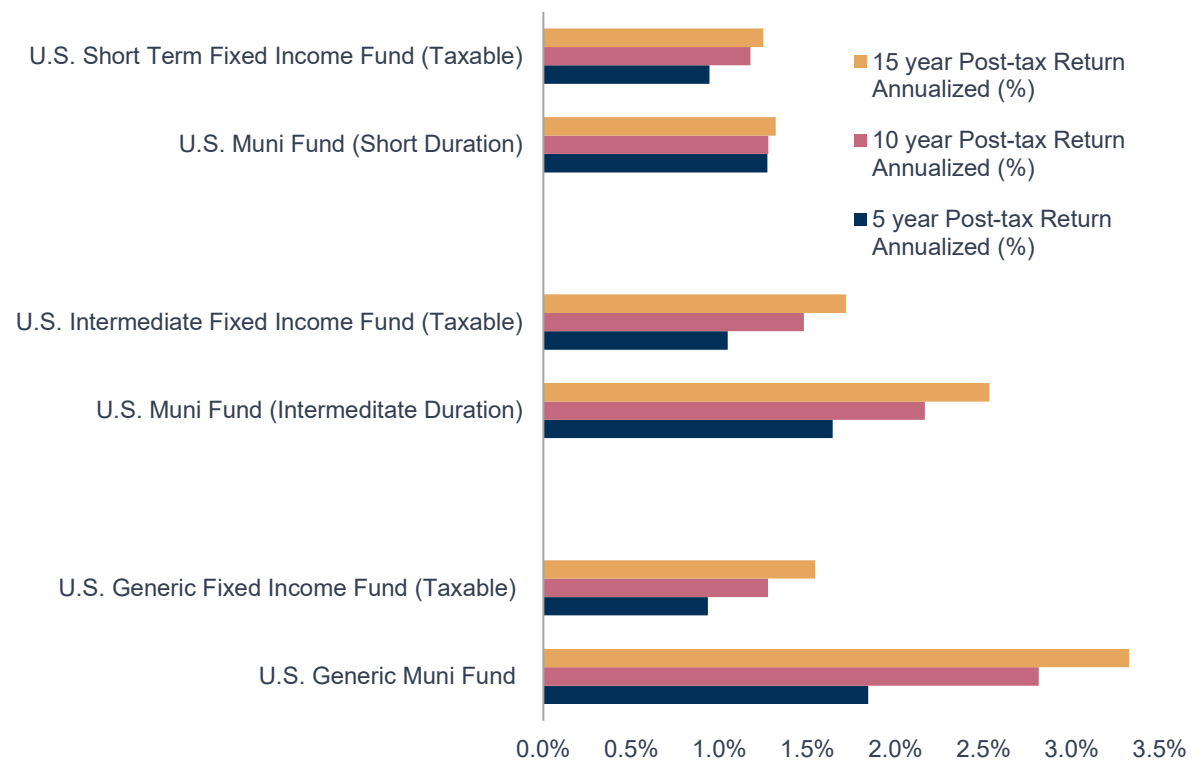
- General Bond Funds:
 - Muni Funds** 3.32% post-tax annualized return
 - Taxable Funds** 1.54% post-tax annualized return
 - Volatility³** Similar (6.33% vs. 5.11%)

3. Volatility is a measurement of how varied the returns of a given security or market index are over time. It is often measured from either the standard deviation or variance between those returns. In most cases, the higher the volatility, the riskier the security.

Key Findings (continued)

- Intermediate-Term Funds:
 - a. **Muni Funds** 2.53% post-tax annualized return
 - b. **Taxable Funds** 1.72% post-tax annualized return
 - c. **Volatility** Similar (5.14% vs. 6.28%)
- Short-Term Funds:
 - a. **Muni Funds** 1.32% post-tax annualized return
 - b. **Taxable Funds** 1.25% post-tax annualized return
 - c. **Volatility** Similar (2.24% vs. 2.35%)

EXEMPT VS. TAXABLE RETURNS⁴



4. Data as of May 31, 2025. Source: Professor Derek Horstmeyer: George Mason University, Costello College of Business ([Tax-Exempt Munis vs. Taxable Bonds: Which Has Higher Returns?](#))

This table presents the average annualized post tax returns across a 5yr, 10yr and 15yr period for two groups of funds: municipal (tax free) debt funds and taxable debt funds. Within these groupings we look at Generic funds, intermediate funds and short term debt funds. Volatility (annualized) is also presented for all funds.

Study Conclusion

- Muni funds outperform taxable funds **across all tax brackets**, even at a **10% marginal rate**.
- For **short-term debt**, taxable funds may be preferable if the investor's **marginal tax rate is below 30%**.

These findings offer compelling, data-driven validation for the long-held belief in the value of municipal bonds. By incorporating an independent academic lens, we reinforce that the tax-exempt sector not only holds its own against taxable alternatives but often surpasses them on a post-tax basis—across fund types and maturity profiles. While our role as municipal asset managers naturally aligns us with this asset class, the evidence speaks for itself: tax-exempts remain a resilient and rewarding component of long-term portfolio construction.

Questions from the Field

Q. Some clients have asked about Medicaid cut expenses being pushed down to the local government level. Is there any immediate term threat?

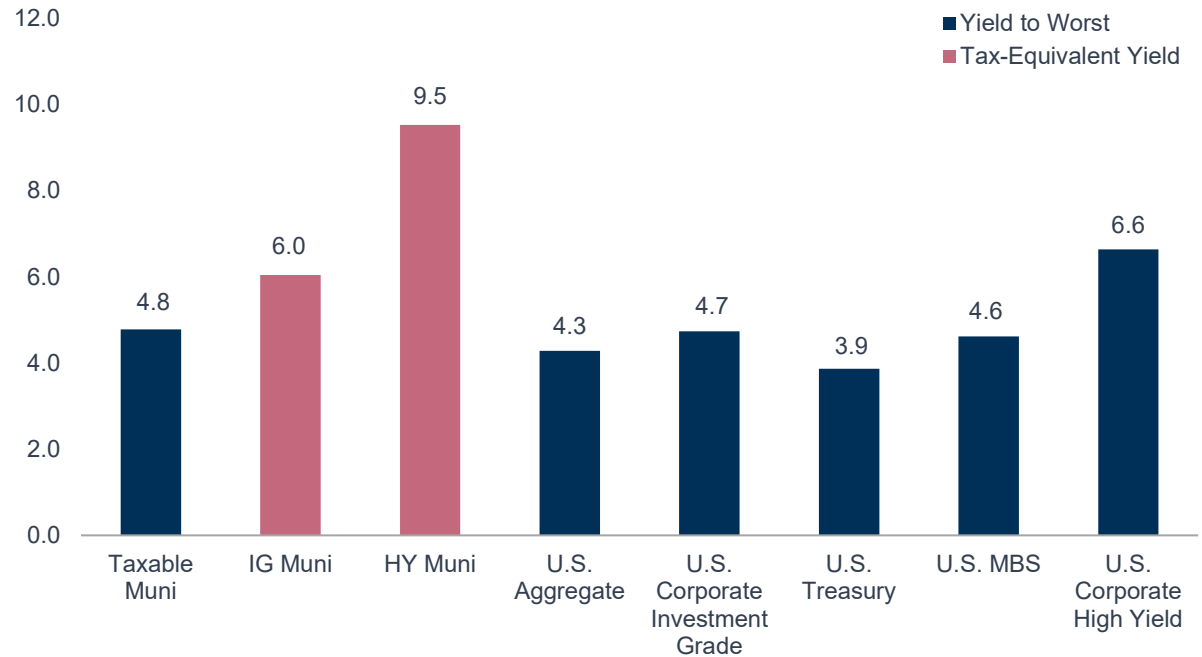
We believe the financial impact of the OBBBA's Medicaid cuts on state budgets will be modest and manageable. Although the federal government plans to reduce Medicaid spending by roughly \$1 trillion—raising concerns about state-level shortfalls—the cuts primarily stem from narrowing eligibility. As a result, most states won't face direct budget gaps. Instead, Medicaid programs will contract, and states will only address coverage gaps to the extent their budgets allow. The remaining burden will fall on care providers and recipients. This applies to both the new enrollment requirements and the restrictions on "provider taxes," which states use to boost federal Medicaid subsidies.

This view is supported by legislative developments, such as California's 2026 budget implementing enrollment restrictions, and by our conversations with state lawmakers.

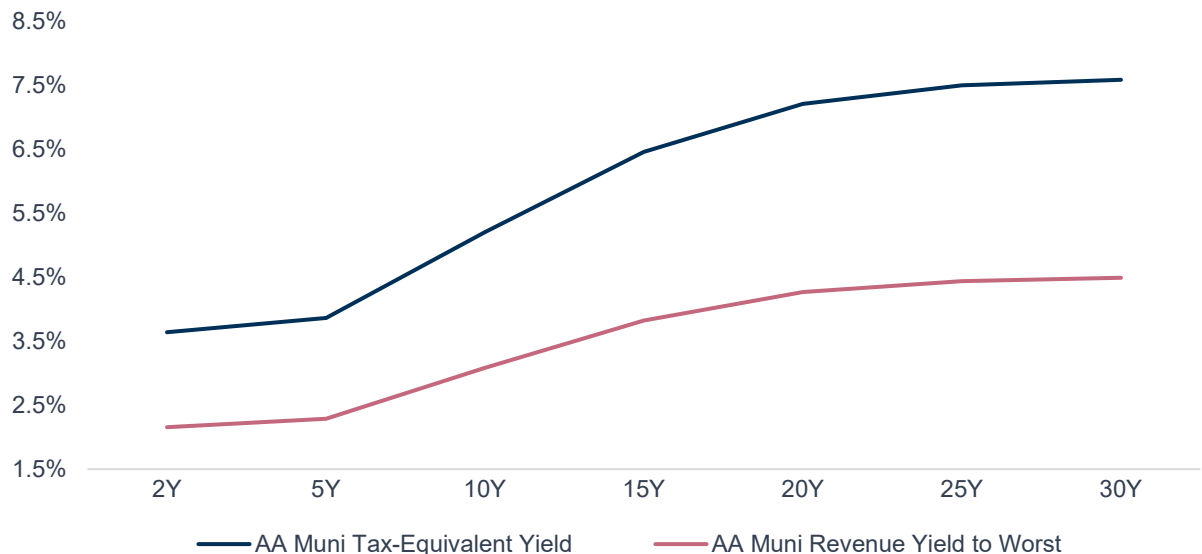
States will incur costs to implement the new requirements. For example, New York estimates \$510 million in administrative expenses, while the OBBBA allocates just \$200 million across all states. Still, these costs are manageable within broader state budgets.

A few states that expanded Medicaid via constitutional amendment must act to avoid shortfalls. They have until 2027 to resolve this, and we will continue monitoring their progress.

INDEX YIELDS (in %)⁵



AA MUNI TAX-EQUIVALENT YIELD CURVE⁶



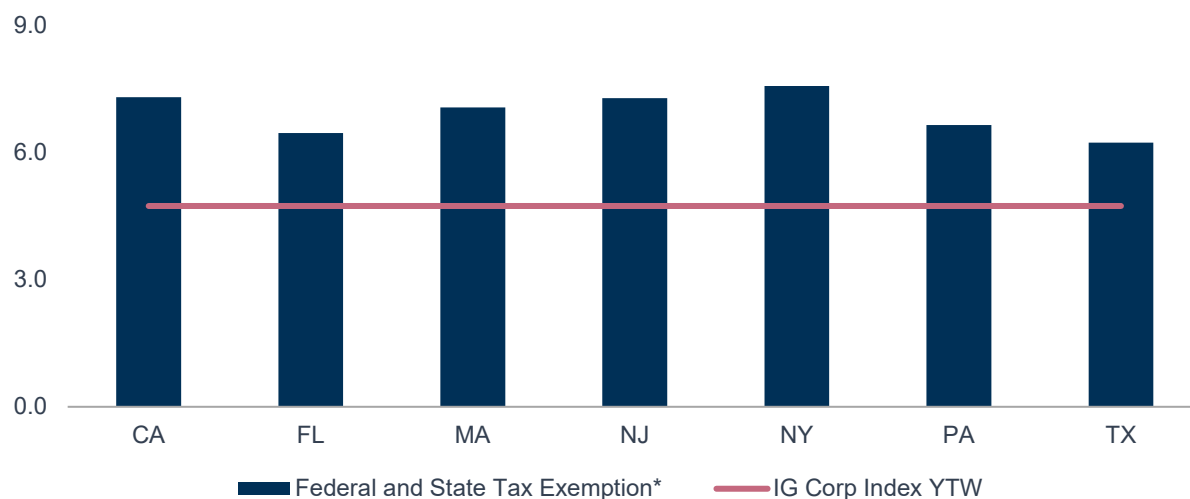
Data as of 09/12/2025.

5. Source: Bloomberg. Using 40.8% federal tax rate, including 3.8% Net Investment Income Tax. Taxable Muni: Bloomberg Taxable Municipal Bond Index; IG Muni: Bloomberg Taxable Municipal Bond Index; HY Muni: Bloomberg High Yield Municipal Bond Index; U.S. Aggregate: Bloomberg U.S. Aggregate Bond Index; U.S. Corporate Investment Grade: Bloomberg U.S. Corporate Investment Grade Index; U.S. Treasury: Bloomberg U.S. Treasury Index; U.S. MBS: Bloomberg U.S. Mortgage-Backed Securities Index; U.S. Corporate High Yield: Bloomberg U.S. Corporate High Yield Index.

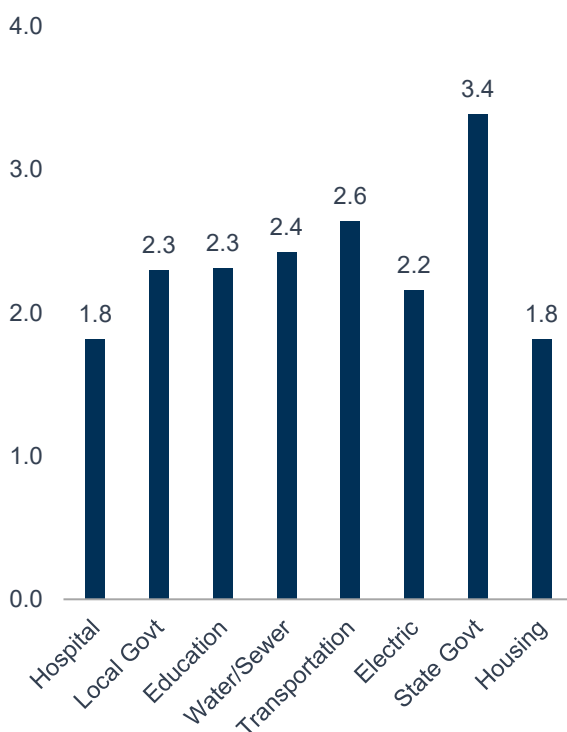
6. Source: Bloomberg. Using 40.8% federal tax rate, including 3.8% Net Investment Income Tax.

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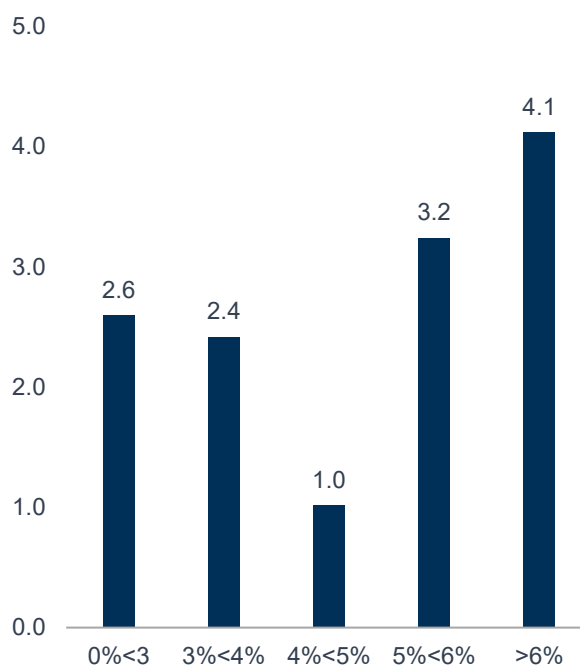
IN-STATE MUNI TAX-EQUIVALENT YTW (in %)⁷



YTD TOTAL RETURNS BY SECTOR (in %)⁸



YTD TOTAL RETURNS BY COUPON (in %)⁹



Data as of 09/12/2025.

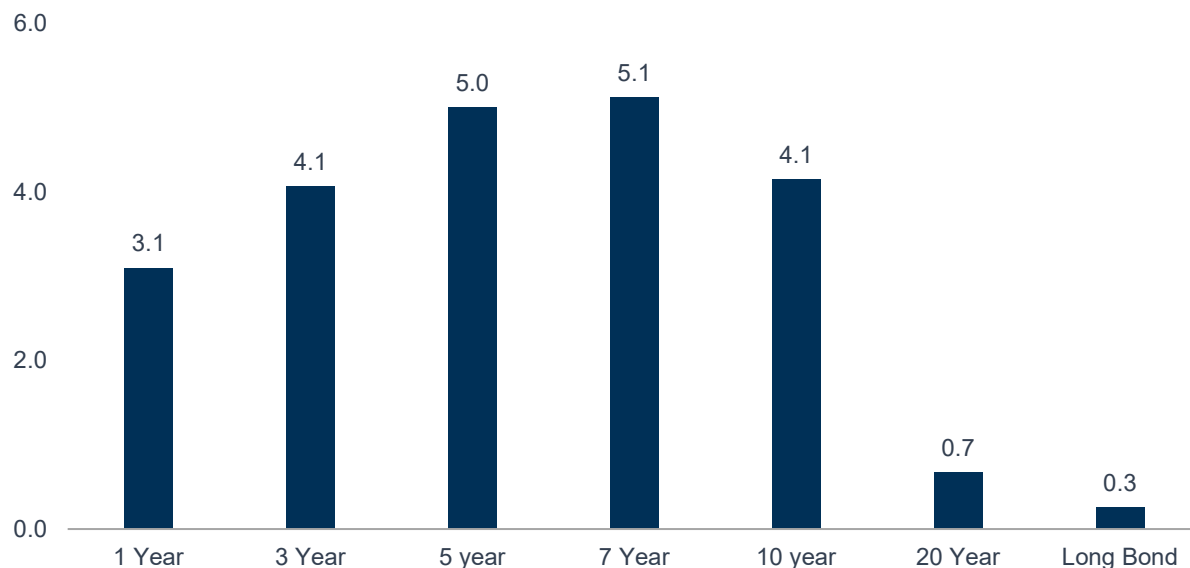
7. Source: Bloomberg. *Using 40.8% federal tax rate, including 3.8% Net Investment Income Tax. Using respective maximum state income tax rate.

8. Source: Bloomberg. Using 40.8% federal tax rate, including 3.8% Net Investment Income Tax.

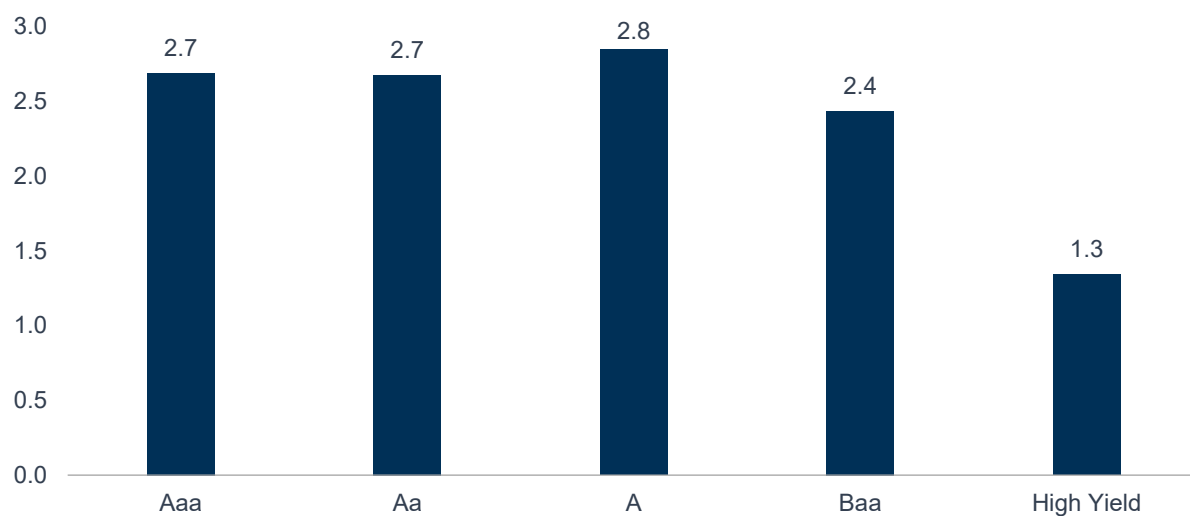
9. Source: Bloomberg. Using 40.8% federal tax rate, including 3.8% Net Investment Income Tax.

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YTD TOTAL RETURNS BY MATURITY (in %)¹⁰



YTD TOTAL RETURNS BY RATING CATEGORY (in %)¹¹



Data as of 09/12/2025.

10. Source: Bloomberg.

11. Source: Bloomberg.

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BLOOMBERG MUNICIPAL YIELD-TO-WORST¹² (YTW)



MUNI YIELDS

Tenor	09/04/2025	09/11/2025	Change (+/-)
Bloomberg AAA Muni Key Rate Yields¹³			
2-year	2.18%	2.02%	-0.16%
5-year	2.34%	2.14%	-0.19%
10-year	3.15%	2.88%	-0.27%
30-year	4.60%	4.26%	-0.33%
U.S. Treasury Key Rate Yields¹⁴			
2-year	3.59%	3.52%	-0.07%
5-year	3.65%	3.59%	-0.06%
10-year	4.17%	4.01%	-0.16%
30-year	4.86%	4.65%	-0.21%
U.S. Treasury & AAA Muni Curve Slopes¹⁴			
	2s10s	10s30s	2s30s
U.S. Treasury Curve Slope	+49 bps	+64 bps	+113 bps
AAA Muni Curve Slope	+86 bps	+139 bps	+224 bps

Data as of 09/11/2025.

12. Source: Bloomberg. "Post GIFC Average" measures the period from 01/01/2010–09/11/2025.

13. Source: Bloomberg.

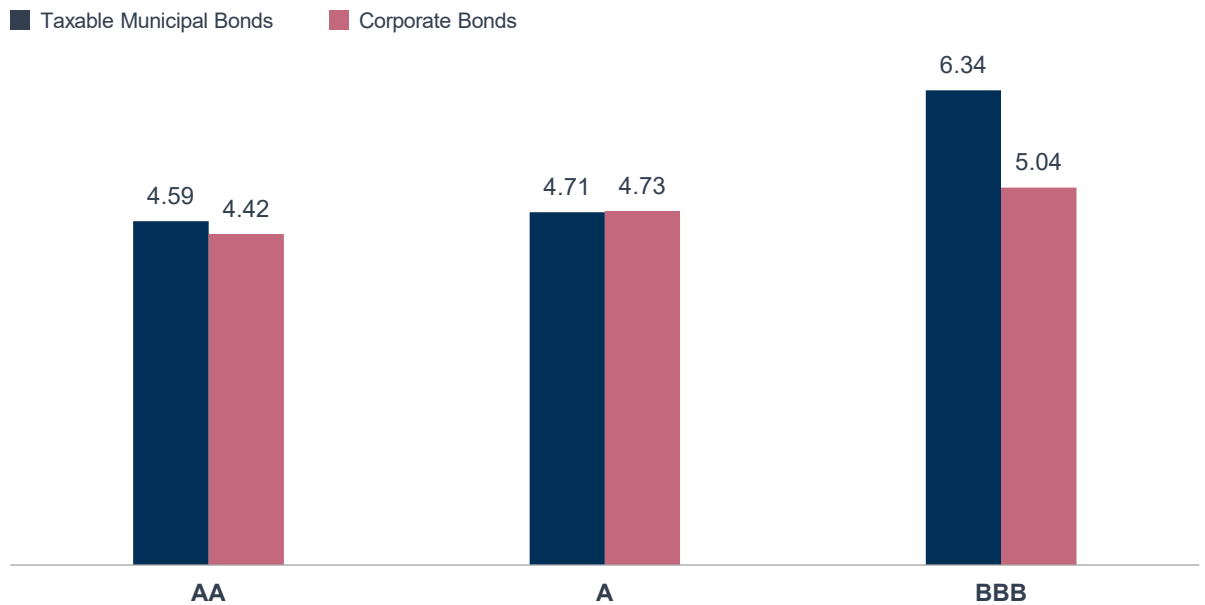
14. Source: Bloomberg. 2s10s—is spread between 10yr and 2yr yield; 10s30s—refers to spread between 30yr and 10yr yield; 2s30s—refers to spread between 30yr and 2yr yield.

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BLOOMBERG MUNICIPAL HIGH YIELD | AAA YIELD DIFFERENTIAL¹⁵



TAXABLE MUNICIPAL AND CORPORATE CREDIT YIELDS (in %)¹⁶

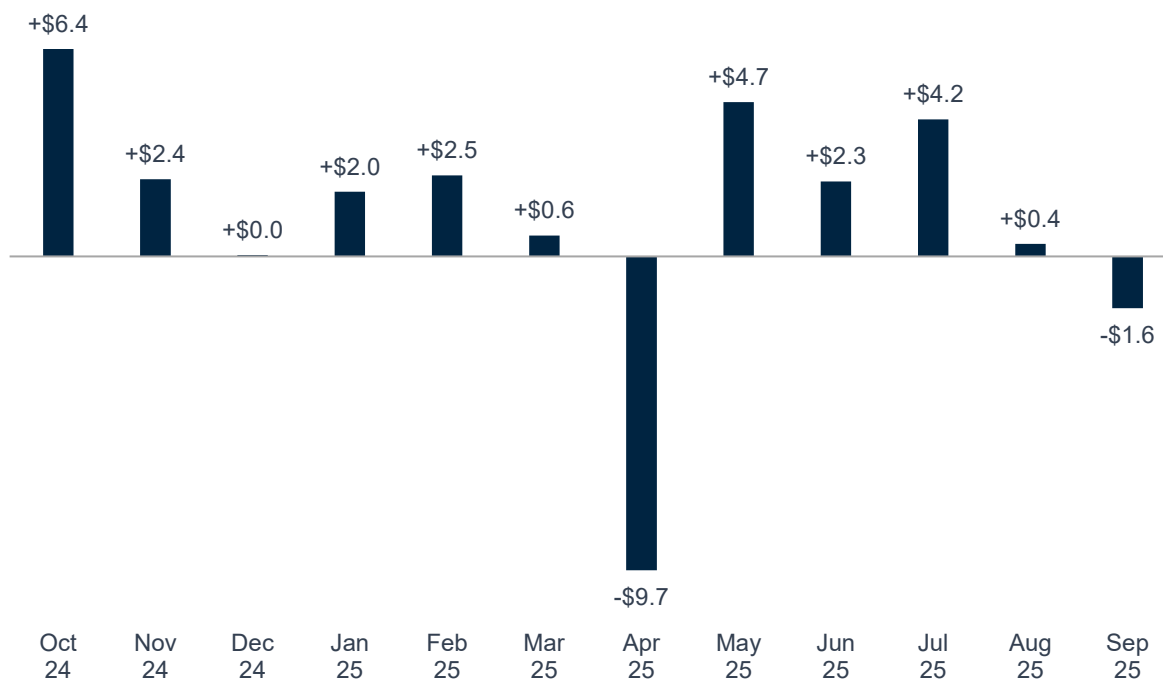


15. Data as of 09/11/2025. Source: Bloomberg.

16. Data as of 09/15/2025. Source: Bloomberg.

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LONG TERM FUND FLOWS¹⁷ (USD BILLION)



Data as of 09/12/2025.

17. Source: Bloomberg.

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INDEX DESCRIPTIONS

Bloomberg 5-Year Muni Index is a capitalization weighted bond index created by Bloomberg intended to be representative of major municipal bonds of all quality ratings with an average maturity of approximately five years.

Bloomberg U.S. Taxable Municipal Bond Index is a rules-based, market-value-weighted index engineered for the long-term taxable bond market. To be included in the index, bonds must be rated investment-grade (Baa3/BBB- or higher) by at least two of the following ratings agencies if all three rate the bond: Moody's, S&P, Fitch. If only two of the three agencies rate the security, the lower rating is used to determine index eligibility. If only one of the three agencies rates a security, the rating must be investment grade. They must have an outstanding par value of at least \$7 million and be issued as part of a transaction of at least \$75 million. The bonds must be fixed rate and must be at least one year from their maturity date. Remarketed issues (unless converted to fixed rate), bonds with floating rates, and derivatives, are excluded from the benchmark.

Bloomberg Municipal Bond Index A rules-based, market-value-weighted index engineered for the long-term tax-exempt bond market. To be included in the index, bonds must be rated investment-grade (Baa3/BBB- or higher) by at least two of the following agencies: Moody's, S&P, Fitch. If only two of the three agencies rate the security, the lower

rating is used to determine index eligibility. If only one of the three agencies rates a security, the rating must be investment-grade. They must have an outstanding par value of at least \$7 million and be issued as part of a transaction of at least \$75 million. The bonds must be fixed rate, have a date-date after December 31, 1990, and must be at least one year from their maturity date. Remarketed issues, taxable municipal bonds, bonds with floating rates, and derivatives, are excluded from the benchmark. The index has four main sectors: general obligation bonds, revenue bonds, insured bonds (including all insured bonds with a Aaa/AAA rating), and pre-refunded bonds. Most of the index has historical data to January 1980. In addition, sub-indices have been created based on maturity, state, sector, quality, and revenue source, with inception dates later than January 1980.

Bloomberg High Yield Municipal Bond Index is a flagship measure of the U.S. municipal tax-exempt non-investment grade bond market. Included in the index are securities from all 50 U.S. States and four other qualifying regions (Washington DC, Puerto Rico, Guam, and the Virgin Islands). The index includes state and local general obligation bonds and revenue bonds. All bonds in the Municipal High Yield Bond Index are tax exempt and hence are not eligible for other indices that include taxable high yield bonds, such as the U.S. High Yield Index and EM USD Aggregate Index.

Bloomberg U.S. Aggregate Bond Index measures the performance of investment grade, U.S. dollar-denominated, fixed rate taxable bond market, including Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS, and CMBS. It rolls up into other flagship indices, such as the multi-currency Global Aggregate Index and the U.S. Universal Index, which includes high yield and emerging markets debt.

Bloomberg U.S. Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD-denominated securities publicly issued by US and non-US industrial, utility, and financial issuers. The index is a component of the US Credit and US Aggregate Indices, and provided the necessary inclusion rules are met, US Corporate Index securities also contribute to the multi-currency Global Aggregate Index. The index includes securities with remaining maturity of at least one year.

Bloomberg U.S. Treasury Index measures the performance of public obligations of the U.S. Treasury, including securities that roll up to the U.S. Aggregate, U.S. Universal, and Global Aggregate Indices.

Bloomberg U.S. Mortgage-Backed Securities Index is formed by grouping the universe of individual TBA-deliverable MBS pools into pool cohorts and then applying the index inclusion rules at the cohort level. Each cohort is a representation of its mapped individual pools and contributes their total amount outstanding to the U.S. MBS Index.

Bloomberg U.S. Corporate High Yield Index measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below.

INDEX DESCRIPTIONS (continued)

Bloomberg Global Aggregate Bond Index The Bloomberg Global Aggregate Index is a flagship measure of global investment grade debt from twenty-seven local currency markets. This multi-currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers.

Bloomberg Securitized Bond Index The Bloomberg U.S. Securitized: MBS, ABS, and CMBS Index tracks all USD-denominated, investment grade, securitized issues within the "Parent Index". MBS must have a weighted average maturity of at least one year. CMBS and ABS must have a remaining average life of at least one year.

Bloomberg US Municipal Bond Index Total Return Index Value

Unhedged The Bloomberg U.S. Municipal Index covers the USD-denominated long-term tax-exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds and pre-refunded bonds

Bloomberg US Aggregate Total Return Value Unhedged The Bloomberg US Aggregate Total Return Value Unhedged Index (LBUSTRUU:IND) is a benchmark that measures the performance of the U.S. investment-grade, fixed-rate, taxable bond market, excluding any currency hedging. It tracks a broad universe of U.S. dollar-denominated securities, including U.S. Treasuries, government-related debt, corporate bonds, mortgage-backed securities (MBS), and asset-backed securities (ABS).

Bloomberg US Treasury Total Return Unhedged The Bloomberg US Treasury Index measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury.



INVESTMENTS