

## Munis Shrug Off Rate Hike Threats

### KEY TAKEAWAYS

- Municipals Take a Step backwards
- Has the Market Already Priced the Next Fed Move?
- Investor Mistakes

### Relative Performance

The divergence between municipals and Treasuries continued last week, but this time in the opposite direction. Municipals sold off modestly while Treasuries rallied, producing one of the weaker weeks for relative performance in recent months. AAA BVAL yields rose roughly 2 bps in 2s, 4 bps in 5s and 10s, and just over 1 bp in 30s. Treasuries, meanwhile, benefited from a flight-to-quality bid, with yields declining 3–5 bps across the curve<sup>1</sup>.

The result was meaningful ratio cheapening across maturities. The 2-year muni-to-Treasury ratio rose 0.6 points to 59.56%, while the 5-year ratio widened more than 1.5 points to 61.92%. The 10-year ratio increased another 1.5 points to 66.68%, and the 30-year ratio moved over a point higher to 86.59%<sup>1</sup>.

More importantly, we've seen this movie before. When Treasuries rally sharply and municipals lag, the resulting cheapening often creates a degree of time sensitivity. The relative underperformance improves valuations, attracts crossover demand, and can set the stage for municipals to play catch-up once technical pressures ease.

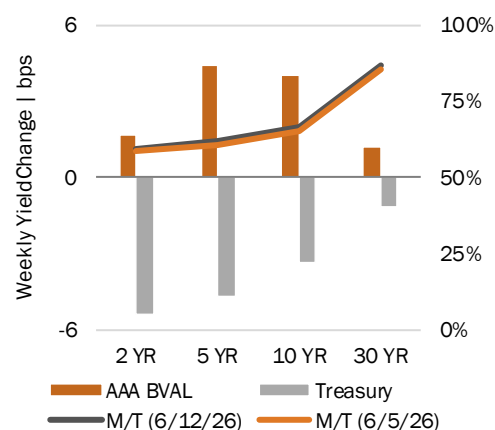
The move is also notable because it partially offsets the significant ratio richening we saw just one week ago. As we've discussed throughout the year, volatility has transformed municipals from an absolute return story into a relative value story. This week was another example of that dynamic at work.

FIGURE 1: INDEX PERFORMANCE

	MTD	YTD	2025
Muni Bond 5-Year	0.13%	0.75%	5.03%
Muni Bond 10-Year	0.10%	0.55%	5.92%
Muni Bond 15-Year	0.20%	1.62%	5.31%
Muni Long Bond	0.38%	2.59%	1.95%
Muni Managed Money	0.20%	1.27%	3.94%

Data as of June 12, 2026.  
Source: Bloomberg

FIGURE 2: MUNIS UNDERPERFORM



Data as of June 5, 2026. Spot Muni, Spot AAA rates  
AAA B VAL: AAA Municipal yield curve  
M/T: Municipal/Treasury Yield Ratio - Bloomberg  
Municipal Bond Index yield / Bloomberg US Treasury Index yield.  
Source: Bloomberg

1. Source: Bloomberg



**Market Technicals**

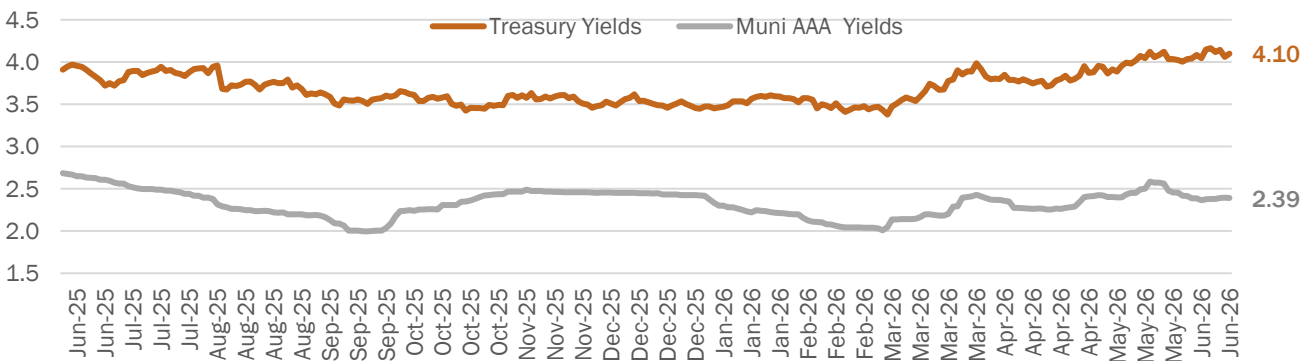
One of the more interesting developments over the past several weeks has been the shift in Fed expectations. According to Bloomberg, the market is now assigning a reasonable probability that the next move from the Federal Reserve could actually be a rate hike later this year, a notable departure from the easing narrative that dominated much of 2025.

The natural question for municipal investors is straightforward: does that matter? The answer is yes—but probably less than many investors think.

If the Fed ultimately delivers a 25-basis-point hike later this year, we believe the area most likely to feel the impact is the very front end of the curve. But it's important to remember that markets rarely wait for the Fed to act. They price expectations first.

In fact, we've already seen a meaningful repricing occur. Since the escalation of military tensions involving Iran, the 2-year Treasury yield has risen nearly 60 basis points year-to-date, while the front end of the municipal curve has remained comparatively stable. The chart below tells the story well. Treasury markets have steadily priced in a higher-for-longer policy path, while AAA municipal yields have been far less reactive.

**FIGURE 3**



Data as of June 12, 2026.  
Source: Bloomberg

That distinction matters.

If the Fed ultimately follows through with a hike, it may end up being more of a confirmation of what markets have already discounted rather than a new shock to the system.

More importantly, municipals continue to benefit from one of the steepest AAA yield curves we've seen in years. While Fed policy primarily impacts the front end, long-term rates tend to be driven by a different set of variables—growth expectations, inflation, fiscal policy, and geopolitical developments. The further out the curve you move, the less influence the Fed has and the more influence the broader economy exerts.

In our view that dynamic plays directly into the strengths of longer-duration municipal strategies. In fact, it would likely take a much more significant move in long-dated Treasury yields to create the type of pricing pressure investors experienced in prior rate cycles. In the meantime, investors continue to collect attractive levels of tax-exempt income while benefiting from a steep curve and favorable roll-down characteristics.

This illustration does not constitute tax advice. The information contained herein should not be used as a substitute for advice from your tax advisor. Neither MacKay Municipal Managers nor MacKay Shields LLC advise clients on tax matters. Consult your tax advisor for further information.

The same logic applies to taxable municipals. Despite elevated rate volatility this year, taxable munis have continued to hold its own from a relative-value perspective versus both Treasuries and investment-grade corporates. That's not surprising. Higher rates often place direct pressure on corporate margins, earnings, and refinancing costs, which can eventually lead to spread widening. Taxable municipals generally enjoy a degree of insulation from that feedback loop because investors are underwriting essential-service infrastructure rather than corporate profitability.

Stepping back, this is a long-winded way of saying that we believe the setup for municipals remains remarkably constructive.

The market has already done much of the Fed's work for it. Front-end rates have repriced materially higher, municipal curves remain steep, tax-equivalent yields remain compelling, and both tax-exempt and taxable municipal sectors continue to offer attractive relative value.

### Questions from the Field

**Q** What's the biggest mistake municipal investors are making right now?

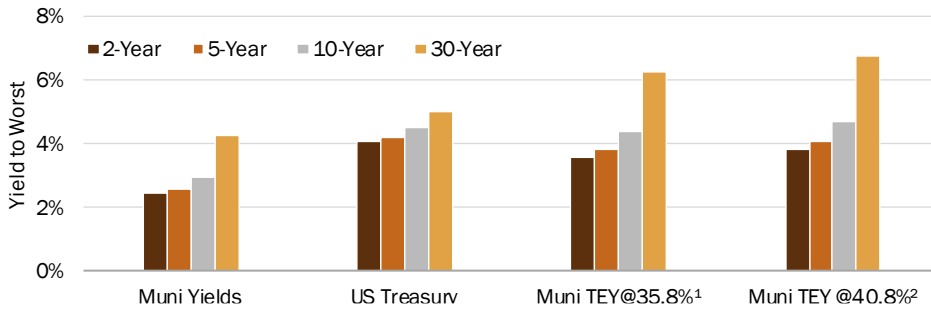
**A** Focusing too much on where rates are going and not enough on where value exists today.

Municipal investing has always been a combination of income, tax efficiency, credit selection, and duration management. Yet when volatility increases, it's easy for the conversation to become entirely about the next Fed meeting, the next inflation report, or the next move in Treasury yields.

The reality is that most of the long-term return in municipals comes from collecting tax-exempt income and reinvesting it over time. Market timing can feel important in the moment, but income is what ultimately compounds wealth.

What's interesting about today's market is that investors are being offered something we haven't seen consistently over the last decade: attractive absolute yields, compelling tax-equivalent yields, and a yield curve that rewards moving beyond the very front end of the market.

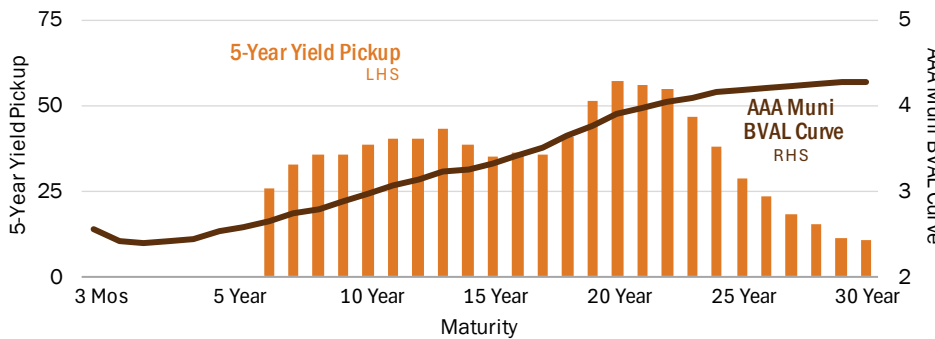
In many ways, the municipal market is healthier today than it was several years ago. Starting yields are higher, coupon structures are more defensive, and the curve offers more opportunities for carry and roll-down. Those are the types of conditions that historically have led to stronger long-term outcomes for investors.



On a tax-adjusted basis munis handily lead across tenors

1. Tax Equivalent Yield is using 32% federal tax rate, including 3.8% Net Investment Income Tax.  
 2. Tax Equivalent Yield is using 37% federal tax rate, including 3.8% Net Investment Income Tax.  
 Data as of June 12, 2026.  
 Source: Bloomberg

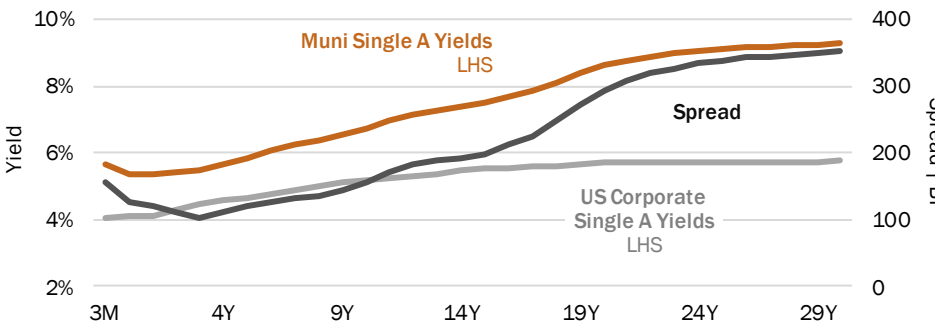
YIELD CURVE STEEPNESS



Our relative value lens focus on the area of the curve where steepness benefits returns

Data as of June 12, 2026.  
 Source: Bloomberg

MUNI EXCEEDS CORPORATE SPREADS



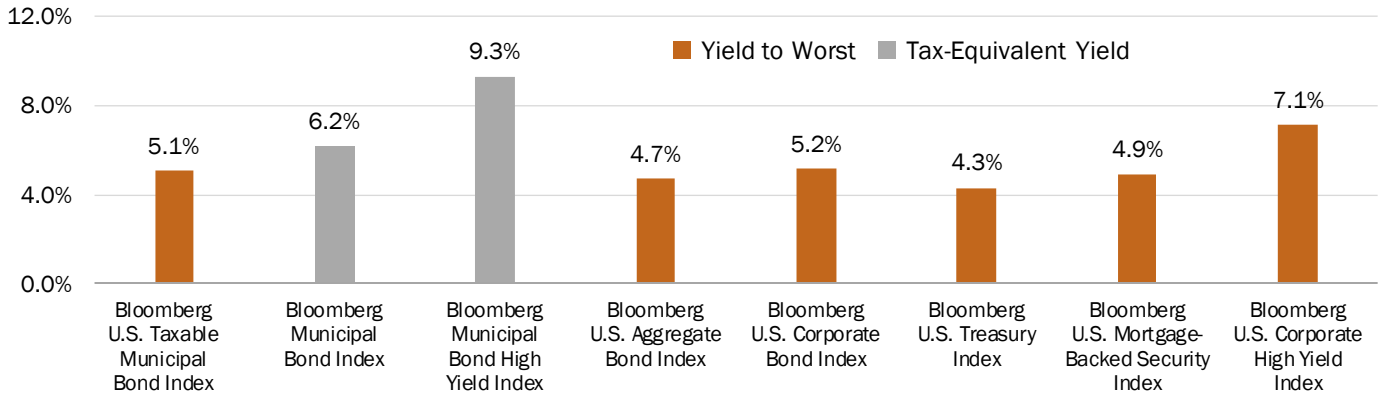
Tax equivalent munis continue to exceed corporate spread/yields

Data as of June 12, 2026.  
 Muni Single A Yields: Bloomberg Municipal Bond Index; US Corporate Single A Yields: Bloomberg Corporate Bond Index  
 Source: Bloomberg

This illustration does not constitute tax advice. The information contained herein should not be used as a substitute for advice from your tax advisor. Neither MacKay Municipal Managers nor MacKay Shields LLC advise clients on tax matters. Consult your tax advisor for further information.



INDEX YIELDS

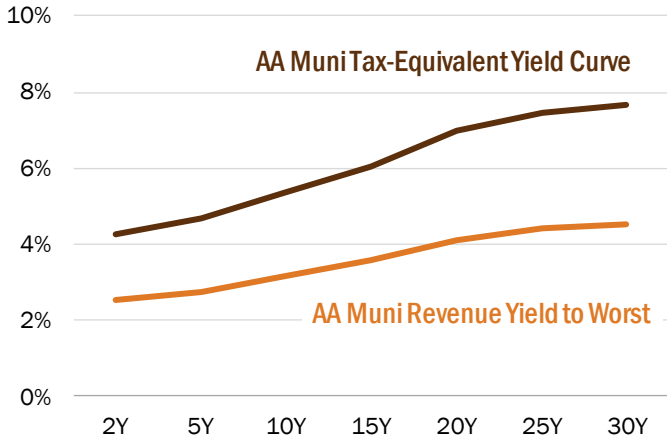


Data as of June 12, 2026

1. Using 40.8% federal tax rate, including 3.8% Net Investment Income Tax.

Source: Bloomberg

AA MUNI TAX-EQUIVALENT YIELD CURVE

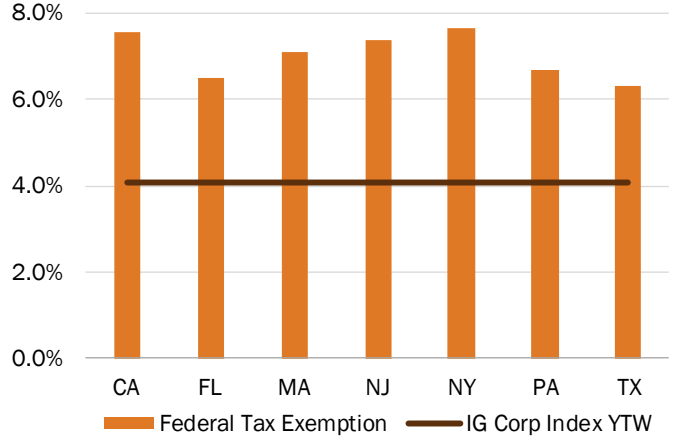


Data as of June 12, 2026

1. Using 40.8% federal tax rate, including 3.8% Net Investment Income Tax.

Source: Bloomberg

IN-STATE MUNI TAX-EQUIVALENT YTW



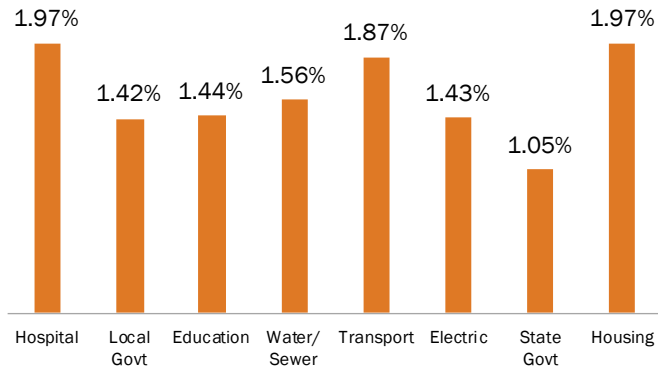
Data as of June 12, 2026

1. Using 40.8% federal tax rate, including 3.8% Net Investment Income Tax.

Source: Bloomberg

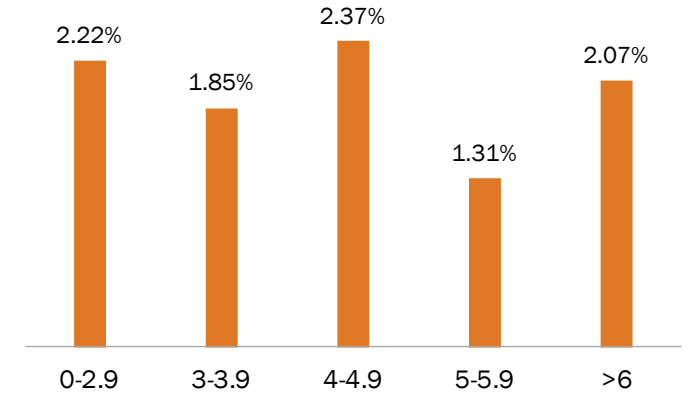


YTD TOTAL RETURNS BY SECTOR



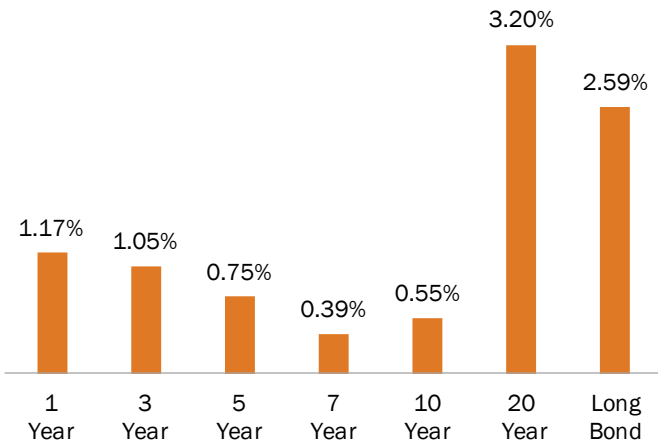
Data as of June 12, 2026  
Source: Bloomberg

YTD TOTAL RETURNS BY COUPON



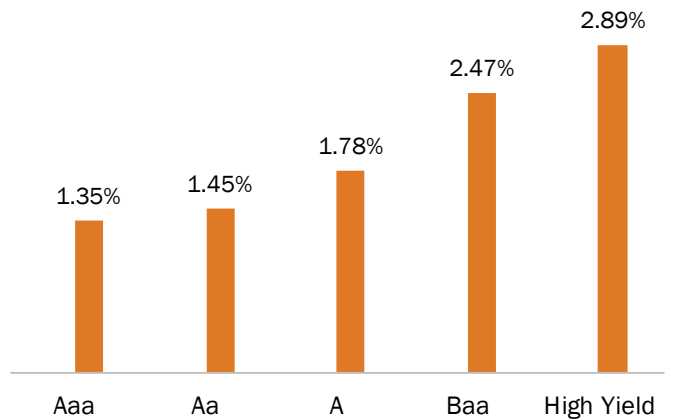
Data as of June 12, 2026  
Source: Bloomberg

YTD TOTAL RETURNS BY MATURITY



Data as of June 12, 2026  
Source: Bloomberg

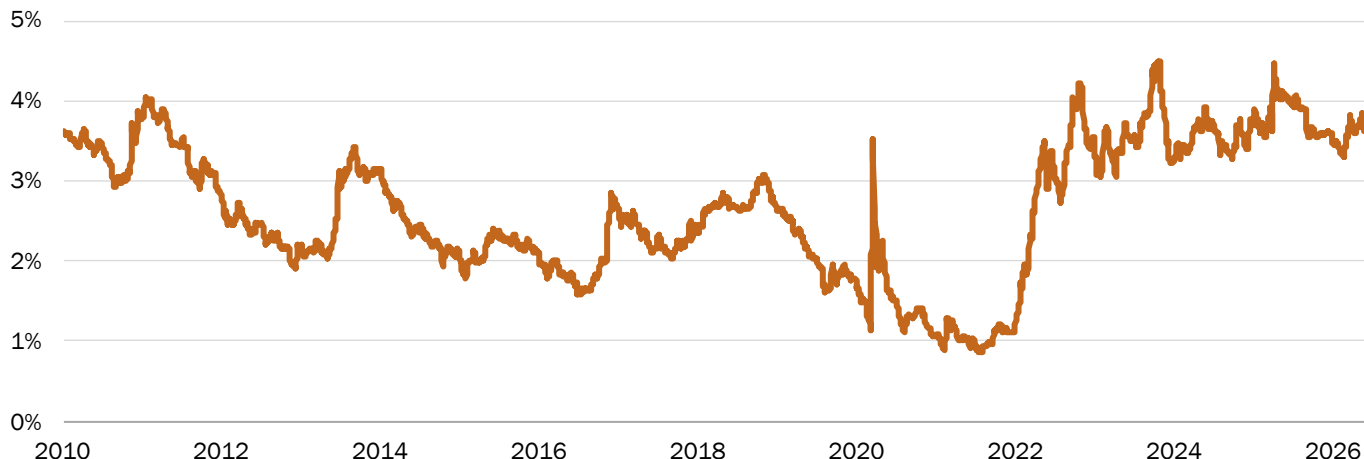
YTD TOTAL RETURNS BY RATING CATEGORY



Data as of June 12, 2026  
Source: Bloomberg



**BLOOMBERG MUNICIPAL YIELD-TO-WORST**



Data as of June 11, 2026

“Post GFC Average” measures the period from 1/1/2010 – 5/1/2026

Source: Bloomberg

**MUNI YIELDS**

Tenor	6/11/2026	6/4/2026	Change (+/-)
<b>BLOOMBERG AAA MUNI KEY RATE YIELDS</b>			
2 YEAR	2.41%	2.39%	0.03%
5 YEAR	2.59%	2.53%	0.06%
10 YEAR	2.97%	2.92%	0.05%
30 YEAR	4.29%	4.26%	0.03%
<b>US TREASURY RATE YIELDS</b>			
2 YEAR	4.05%	4.05%	0.00%
5 YEAR	4.18%	4.18%	0.00%
10 YEAR	4.45%	4.47%	-0.02%
30 YEAR	4.95%	4.97%	-0.02%
<b>US TREASURY &amp; AAA MUNI CURVE SLOPES<sup>1</sup></b>			
	<b>2s10s</b>	<b>10s30s</b>	<b>2s30s</b>
US TREASURY CURVE SLOPE	+ 40 bps	+ 50 bps	+ 90 bps
AAA MUNI CURVE SLOPE	+ 56 bps	+ 132 bps	+ 187 bps

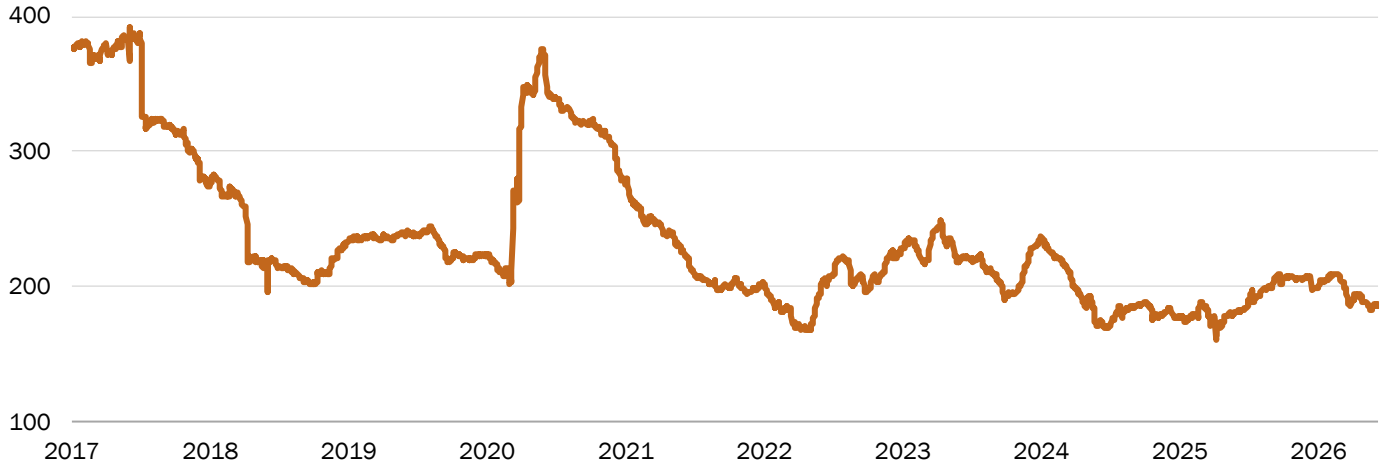
Data as of June 11, 2026

1. 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

Source: Bloomberg

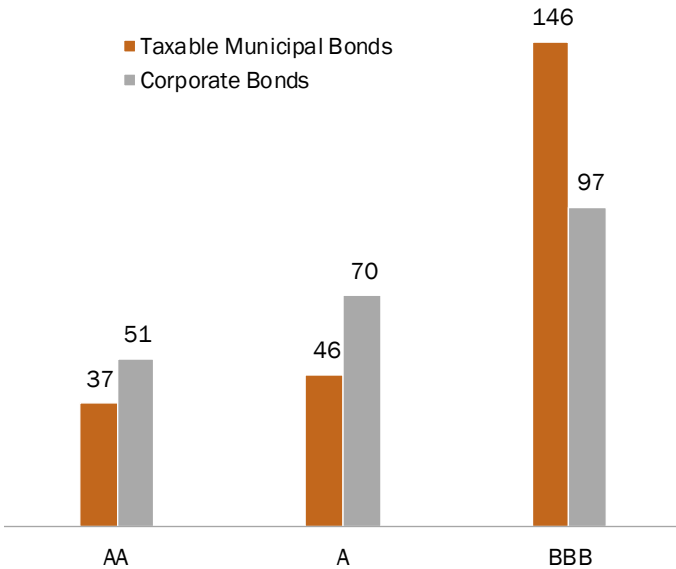


BLOOMBERG MUNICIPAL HIGH YIELD | AAA YIELD DIFFERENTIAL



Data as of June 11, 2026  
Source: Bloomberg

TAXABLE MUNICIPAL AND CORPORATE CREDIT SPREADS



Data as of June 11, 2026  
Source: Bloomberg



## DISCLOSURES

Availability of this document and products and services provided by MacKay Shields LLC may be limited by applicable laws and regulations in certain jurisdictions and this document is provided only for persons to whom this document and the products and services of MacKay Shields LLC may otherwise lawfully be issued or made available. None of the products and services provided by MacKay Shields LLC are offered to any person in any jurisdiction where such offering would be contrary to local law or regulation. It does not constitute investment advice and should not be construed as an offer to buy securities. The contents of this document have not been reviewed by any regulatory authority in any jurisdiction. This material contains the opinions of the MacKay Municipal Managers™ team of MacKay Shields LLC but not necessarily those of MacKay Shields LLC. The opinions expressed herein are subject to change without notice. This material is distributed for informational purposes only. Forecasts, estimates, and opinions contained herein should not be considered as investment advice or a recommendation of any particular security, strategy or investment product. Information contained herein has been obtained from sources believed to be reliable, but not guaranteed. Any forward-looking statements speak only as of the date they are made and MacKay Shields assumes no duty and does not undertake to update forward-looking statements. No part of this document may be reproduced in any form, or referred to in any other publication, without express written permission of MacKay Shields LLC. ©2026, MacKay Shields LLC. All Rights Reserved.

**MacKay Shields LLC does not offer or sponsor any funds registered under the Investment Company Act of 1940, as amended (“Registered Funds”). MacKay Shields LLC serves in the capacity as investment manager of certain Registered Funds through sub-advisory arrangements.**

MacKay Municipal Managers is a trademark of MacKay Shields LLC.

MacKay Shields LLC is a wholly owned subsidiary of New York Life Investment Management Holdings LLC, which is wholly owned by New York Life Insurance Company. “New York Life Investment Management” is the brand name and service mark used to represent a group of affiliated investment advisors of New York Life Insurance Company, including New York Life Investment Management LLC, a registered investment advisors.

**It is not possible to invest directly in an index. Past performance is not indicative of future results.**

## NOTE TO UK AND EUROPEAN UNION INVESTORS

This document is intended only for the use of professional investors as defined in the Alternative Investment Fund Manager’s Directive and/or the UK Financial Conduct Authority’s Conduct of Business Sourcebook. To the extent this document has been issued in the United Kingdom, it has been issued by NYL Investments UK LLP, 200 Aldersgate Street, London UK EC1A 4HD, which is authorised and regulated by the UK Financial Conduct Authority. To the extent this document has been issued in the EEA, it has been issued by NYL Investments Europe Limited, 77 Sir John Rogerson’s Quay, Block C Dublin D02 VK60 Ireland. NYL Investments Europe Limited is authorized and regulated by the Central Bank of Ireland (i) to act as an alternative investment fund manager of alternative investment funds under the Alternative Investment Fund Managers Directive (Directive 2011/61/EU) and (ii) to provide the services of individual portfolio management, investment advice and the receipt and transmission of orders as defined in Regulation 7(4) of the AIFMD Regulations to persons who meet the definition of “professional client” as set out in the MiFID Regulations. It has passported its license in additional countries in the EEA.

This document only describes capabilities of certain affiliates of New York Life Investment Management and/or MacKay Shields LLC. No such affiliates will accept subscriptions in any funds not admitted to marketing in your country or provide services to potential customers in your country, including discretionary asset management services, except where it is licensed to do so or can rely on an applicable exemption.

MacKay Shields LLC is a wholly owned subsidiary of New York Life Investment Management Holdings LLC, which is wholly owned by New York Life Insurance Company. “New York Life Investment Management” is the brand name and service mark used to represent a group of affiliated investment advisors of New York Life Insurance Company, including New York Life Investment Management LLC, a registered investment advisor.

## NOTE TO CANADIAN RECIPIENTS

The information in these materials is not an offer to sell securities or a solicitation of an offer to buy securities in any jurisdiction of Canada. In Canada, any offer or sale of securities or the provision of any advisory or investment fund manager services will be made only in accordance with applicable Canadian securities laws. More specifically, any offer or sale of securities will be made in accordance with applicable exemptions to dealer and investment fund manager registration requirements, as well as under an exemption from the requirement to file a prospectus, and any advice given on securities will be made in reliance on applicable exemptions to adviser registration requirements.

## NOTE TO JAPANESE RECIPIENTS

In Japan, this is issued by New York Life Investment Management Asia Limited (Financial Instruments Business Operator, Kanto Local Finance Bureau (FIBO) No. 2964, Member of the Investment Management Association of Japan and the Type 2 Financial Instruments Firms Association) for institutional investors only. As costs and/or fees to be borne by investors vary depending on circumstances such as products, services, investment period and market conditions, the total amount nor the calculation methods cannot be disclosed in advance. All investments involve risks, including market fluctuation and investors may lose the principal amount invested. Investors should obtain and read the prospectus and/or information set forth in Article 37-3 of the Financial Instruments and Exchange Act carefully before making investment decisions.

## COMPARISONS TO AN INDEX

Comparisons to a financial index are provided for illustrative purposes only. Comparisons to an index are subject to limitations because portfolio holdings, volatility and other portfolio characteristics may differ materially from the index. Unlike an index, portfolios within the composite are actively managed and may also include derivatives. There is no guarantee that any of the securities in an index are contained in any managed portfolio. The performance of an index may assume reinvestment of dividends and income, or follow other index-specific methodologies and criteria, but does not reflect the impact of fees, applicable taxes or trading costs which, unlike an index, may reduce the returns of a managed portfolio. Investors cannot invest in an index. Because of these differences, the performance of an index should not be relied upon as an accurate measure of comparison.

## SOURCE INFORMATION

“Bloomberg®”, “Bloomberg Indices®”, Bloomberg Fixed Income Indices, Bloomberg Equity Indices and all other Bloomberg indices referenced herein are service marks of Bloomberg Finance L.P. and its affiliates, including Bloomberg Index Services Limited (“BISL”), the administrator of the indices (collectively, “Bloomberg”) and have been licensed for use for certain purposes by MacKay Shields LLC (“MacKay Shields”). Bloomberg is not affiliated with MacKay Shields, and Bloomberg does not approve, endorse, review, or recommend MacKay Shields or any products, funds or services described herein. Bloomberg does not guarantee the timeliness, accurateness, or completeness of any data or information relating to MacKay Shields or any products, funds or services described herein.

## SOURCE INFORMATION (CONT'D)

All ICE Data indices referenced herein (each such index, the "Index"), are products of ICE data indices, LLC ("ICE Data"), and are used with permission. ICE® is a registered trademark of ICE Data or its affiliates, and BofA® is a registered trademark of Bank of America Corporation licensed by Bank of America Corporation and its affiliates ("BofA") and may not be used without BofA's prior written approval. ICE Data, its affiliates and their respective third party suppliers disclaim any and all warranties and representations, express and/or implied, including any warranties of merchantability or fitness for a particular purpose or use, including the indices, index data and any data included in, related to, or derived therefrom. Neither ICE Data, its affiliates nor their respective third party suppliers shall be subject to any damages or liability with respect to the adequacy, accuracy, timeliness or completeness of the indices or the index data or any component thereof, and the indices and index data and all components thereof are provided on an "as is" basis and your use is at your own risk. Inclusion of a security within an index is not a recommendation by ICE Data to buy, sell, or hold such security, nor is it considered to be investment advice. ICE Data, its affiliates and their respective third party suppliers do not sponsor, endorse, or recommend MacKay Shields LLC, or any of its products or services.

## DEFINITION OF TERMS

### Option-Adjusted Spread

The option-adjusted spread (OAS) measures the spread between a bond's rate and the risk-free rate, while adjusting for any embedded options like callables or mortgage-backed securities.

### Standard Deviation

Standard deviation is a statistical measurement that looks at how far discrete points in a dataset are dispersed from the mean of that set. It is calculated as the square root of the variance.

### Tax Equivalent Yield

The tax-equivalent yield is the return a taxable bond needs to equal the yield on a comparable tax-exempt municipal bond. Investors use this calculation to compare the returns between a tax-free investment and a taxable alternative.

### Tax Equivalent Yield to Worst

Tax Equivalent YTW is calculated by dividing the tax-exempt yield by one minus the marginal income tax. This is used to compare YTW on a tax-exempt investment to a taxable investment.

### Volatility

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.

### Yield to Worst

Yield to worst is a measure of the lowest possible yield that can be received on a bond that fully operates within the terms of its contract. It is a type of yield that is referenced when a bond has provisions that would allow the issuer to close it out before it matures. YTW helps investors manage risks and ensure that specific income requirements will still be met even in the worst scenarios.

### Additional Yield Definition

BVAL AA, A, BBB and BB Yields is calculated by Bloomberg and is representative of the average 2YR spot rate on respective Bloomberg Yield curves of corporate credits with the respective average credit rating that are valued by Bloomberg's valuation service.

## INDEX DESCRIPTIONS

### Bloomberg U.S. Taxable Municipal Bond Index

The 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 AMT index

The Bloomberg Municipal AMT index refers to a specific Bloomberg municipal bond index that includes bonds subject to the Alternative Minimum Tax (AMT). Unlike most municipal bond indices, which exclude AMT-subject securities, these indices contain bonds that typically offer higher yields to individuals who are subject to the AMT.

### Muni IG AMT ex Territories Index

The Muni IG ex. AMT and ex Territories Index is the Bloomberg Municipal Bond Index excluding AMT and US. Territory exposure.

### 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 5-Year Muni Index

The Bloomberg 5 Year Municipal Bond 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.

## INDEX DESCRIPTIONS (CONT'D)

### Bloomberg Municipal 1-10 Year Blend 1-12 Year Index

The Bloomberg Municipal 1-10 Year Blend 1-12 Year Index measures the performance of short and intermediate components of the Municipal Bond Index – an unmanaged, market value-weighted index which covers the U.S. investment grade, tax-exempt bond market.

### Bloomberg Municipal Long Bond 22+ Index

The Bloomberg Municipal Long Bond 22+ Index (often referred to as the Bloomberg Long-Term Municipal Bond Index) tracks the performance of long-term, tax-exempt U.S. municipal bonds with maturities of 22 years or longer. This index serves as a benchmark for high-quality municipal debt and covers various sectors, including general obligation, revenue, insured, and pre-refunded bonds.

### Bloomberg Municipal Bond High Yield Index

The Bloomberg Municipal Bond: High Yield Index is a flagship measure of the US municipal tax-exempt non-investment grade bond market. Included in the index are securities from all 50 US 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.

### Bloomberg U.S. Aggregate Bond Index

The 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

The Bloomberg US Corporate 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

The 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 Security Index

The US MBS 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 US MBS Index.

### Bloomberg U.S. Corporate Bond Index

The Bloomberg US 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.

### Bloomberg U.S. Corporate High Yield Index

The Bloomberg US Corporate High Yield Bond 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.

### 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 Taxable Municipal Bond Index

The Bloomberg US 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 US Treasury Total Return Unhedged

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