



Market Minute

YIELD CURVE DYNAMICS HIGHLIGHT VALUE FOR MUNICIPAL BOND INVESTORS



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Today's yield backdrop suggests intermediate- and longer-duration municipal bonds could offer attractive value versus U.S. Treasuries.

MUNI/TREASURY RATIOS PINPOINT OPPORTUNITIES

What is the muni/Treasury ratio?

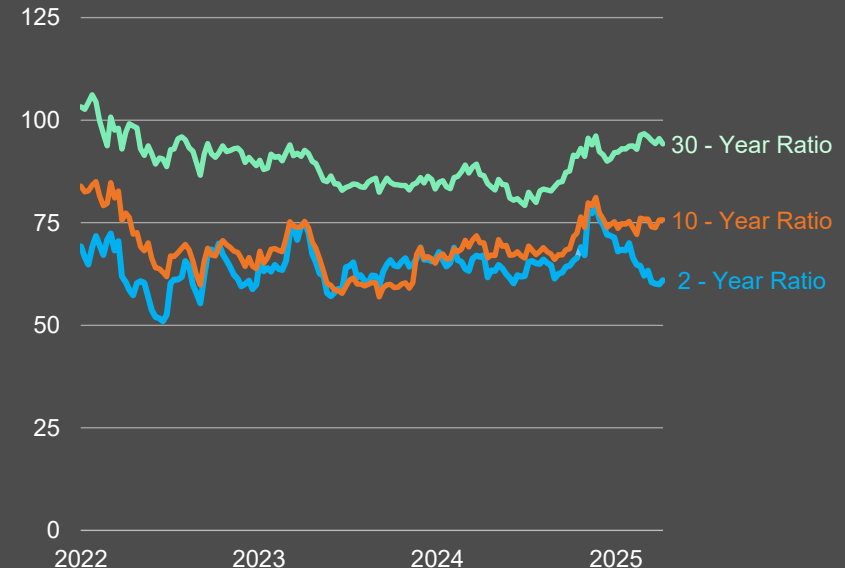
- It's a ratio that compares the yield of a municipal bond to the yield of a U.S. Treasury bond of the same maturity.
- It's calculated by dividing the yield on a municipal bond by the yield on a Treasury bond.

How do you use it?

- It helps investors understand whether municipal bonds represent good value versus Treasuries.
 - As the ratio moves higher, municipal bonds become more attractive.
 - When the ratio is moving lower, Treasuries may be more appealing.
- **Figure 1** shows the three-year trend of muni/Treasury ratios for two-, 10- and 30-year securities. The ratio has historically been higher for longer-maturity securities.

Figure 1 | Higher Ratios Signal Municipal Bond Value

Ratio of Bloomberg Municipal AAA Index yield/U.S. Treasury yield

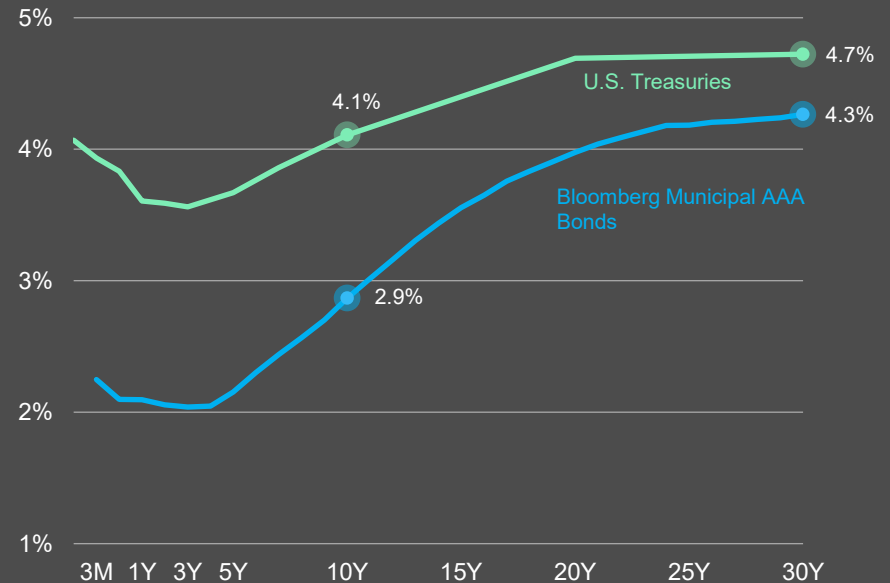


LONGER-MATURITY MUNIS MAY OFFER VALUE

Along with ratios, the muni and Treasury yield curves can help investors uncover value. **Figure 2** highlights the longer portions of the yield curves.

- The chart shows yields on 10- and 30-year munis at 2.9% and 4.3%, respectively. It also shows the yields on 10- and 30-year Treasuries at 4.1% and 4.7%, respectively.
- A 3% tax-free yield corresponds to a 5.1% taxable yield for an investor paying the highest tax rate. (See appendix.) This suggests the 10-year muni yielding 2.9% was actually a better value than the 10-year Treasury yielding 4.1%.
- Similarly, the 30-year muni represented a better value than the 30-year Treasury. The taxable-equivalent yield of a muni with a 4% yield is nearly 6.8%. (See appendix.) The 30-year Treasury yield was considerably less, at 4.7%.

Figure 2 | Opportunities Emerge Further Out On the Curve
Bloomberg Municipal AAA Index and U.S. Treasury Yields at Different Maturities



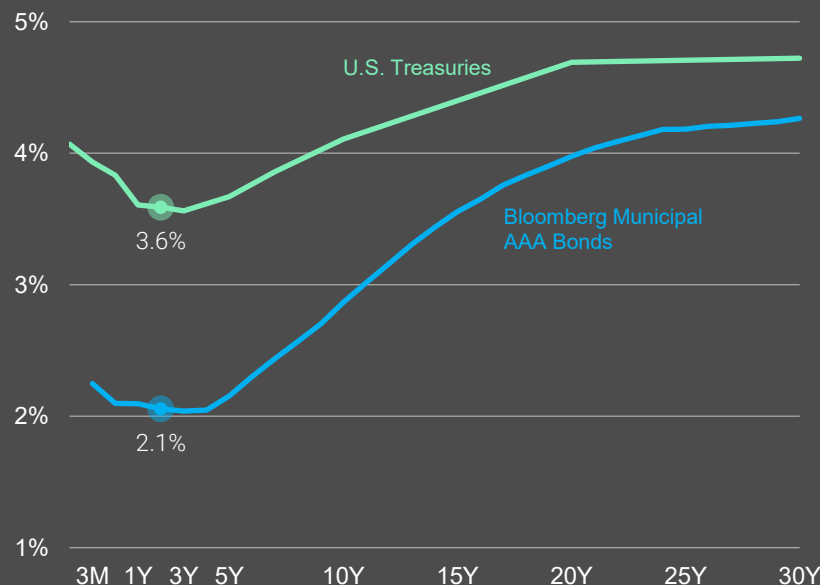
Data as of 9/23/2025. Source: FactSet, Bloomberg.

DYNAMICS DIFFER AMONG SHORTER SECURITIES

Meanwhile, among short-maturity securities, the muni/Treasury ratio recently favored Treasuries:

- **Figure 3** puts the yield on two-year high-quality munis at 2.1% and the two-year Treasury yield at 3.6%.
- A 2% tax-free yield has a taxable-equivalent yield of 3.4% for investors paying the highest federal tax rate. (See appendix.)
- As **Figure 2** illustrates, the two-year Treasury offered a yield of 3.6%. Because its yield is higher than the taxable-equivalent yield, the Treasury is a better value for investors paying the highest tax rate.

Figure 3 | Assessing Short-Maturity Dynamics
Bloomberg Municipal AAA Index and U.S. Treasury Yield Curves



Data as of 9/23/2025. Source: FactSet, Bloomberg.

BOTTOM LINE: EXTENDING DURATION MAY OFFER OPPORTUNITIES

On a relative value basis, we believe high-quality intermediate- to longer-duration securities offer compelling opportunities for municipal bond investors:

- Muni/Treasury ratios are more attractive among longer-maturity securities.
- The municipal bond yield curve is steep, meaning longer-maturity munis generally offer potential yield advantages and favorable roll-down effects.
- Meanwhile, recent dynamics suggest short-maturity ratios favor Treasuries.

What's more, even on an absolute basis, we believe today's municipal bond market offers attractive yields for fixed-income investors seeking opportunity and diversification.

APPENDIX: TAXABLE-EQUIVALENT YIELDS

A municipal bond's taxable-equivalent yield tells investors if munis make sense from a tax perspective. It puts munis and taxable bonds on an even playing field.

Figure 4 shows several tax-free yields and their taxable equivalents for each federal income tax rate. The highlighted row represents yields for the highest tax rate, which we used in the examples in slides 2 and 3.

Figure 4 | Taxable-Equivalent Yields

2025 Federal Income Tax Rate	Tax-Free Yields						
	2.00%	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%
10%	2.22%	2.78%	3.33%	3.89%	4.44%	5.00%	5.56%
12%	2.27%	2.84%	3.41%	3.98%	4.55%	5.11%	5.68%
22%	2.56%	3.21%	3.85%	4.49%	5.13%	5.77%	6.41%
27.8%*	2.77%	3.46%	4.16%	4.85%	5.54%	6.23%	6.93%
35.8%*	3.12%	3.89%	4.67%	5.45%	6.23%	7.01%	7.79%
38.8%*	3.27%	4.08%	4.90%	5.72%	6.54%	7.35%	8.17%
40.8%*	3.38%	4.22%	5.07%	5.91%	6.76%	7.60%	8.45%

*Includes a 3.8% Net Investment Income Tax. Data as of 12/31/2024. Source: American Century Investments.

GLOSSARY

Bloomberg AAA Municipal Bond Index: This index tracks the performance of AAA-rated municipal bonds issued by U.S. state and local governments. It is a subset of the broader Bloomberg Municipal Bond Index, a market value-weighted index designed for the long-term tax-exempt bond market.

Credit quality: Credit quality reflects the financial strength of the issuer of a security and the ability of that issuer to provide timely payment of interest and principal to investors in the issuer's securities. Measurements of credit quality range from AAA (highest quality; perceived as least likely to default) down to D (in default). Securities and issuers rated AAA to BBB are considered/perceived to be "investment-grade."

Duration: An indicator that measures the price sensitivity of a fixed-income investment to changes in interest rates. The longer the duration, the more a fixed-income investment's price will change when interest rates change.

Municipal bonds: These are long-term municipal securities with maturities of 10 years or longer.

Municipal securities (munis): Debt securities typically issued by or on behalf of U.S. state and local governments, their agencies or authorities to raise money for a variety of public purposes, including financing for state and local governments and financing for specific projects and public facilities. In addition to their specific set of issuers, the defining characteristic of munis is their tax status. The interest income earned on most munis is exempt from federal income taxes. Interest payments are also generally exempt from state taxes if the bond owner resides in the state that issued the security. The same rule applies to local taxes.

Municipal yield curve: The yield curve that illustrates the yields of a certain type of municipal security at its various maturities.

Municipal yield ratio: A yield ratio most often used to determine the relative value of municipal securities compared with U.S. Treasury securities. The ratio consists of the yield of a municipal security of a certain maturity divided by the yield of a U.S. Treasury security of the same maturity.

Roll-down effect: As a bond ages and its time to maturity shortens, it "rolls down" the yield curve. When the yield curve is steep, a longer-maturity bond typically has a higher yield than shorter-maturity bonds. As it rolls down the curve and moves closer to maturity, its yield decreases and its price increases.

GLOSSARY

Taxable-equivalent yield: The return a taxable investment would need to earn to equal the after-tax return of a tax-free investment. Investors use this calculation to make a fair comparison between taxable bonds and tax-free municipal bonds

U.S. Treasury securities: Debt securities issued by the U.S. Treasury and backed by the direct "full faith and credit" pledge of the U.S. government. Treasury securities include bills (maturing in one year or less), notes (maturing in two to 10 years) and bonds (maturing in more than 10 years). They are generally considered among the highest quality and most liquid securities in the world.

Yield: For bonds and other fixed-income securities, yield is a rate of return on those securities. There are several types of yield and yield calculations. "Yield to maturity" is a common calculation that takes into account total annual interest payments, the purchase price, redemption value and the amount of time remaining until maturity.

Yield curve: A line graph showing the yields of fixed income securities from a single sector (such as Treasuries or municipals), but from a range of different maturities (typically three months to 30 years), at a single point in time (often at month-, quarter- or year-end). Maturities are plotted on the x-axis of the graph, and yields are plotted on the y-axis. The resulting line is a key bond market benchmark and a leading economic indicator.

Yield ratio: A ratio of one yield divided by another. Most often used as a relative value measurement.

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Diversification does not assure a profit nor does it protect against loss of principal.

Investment return and principal value of security investments will fluctuate. The value at the time of redemption may be more or less than the original cost. **Past performance is no guarantee of future results.**

Generally, as interest rates rise, the value of the securities held in the fund will decline. The opposite is true when interest rates decline.

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