MILL CREEK

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Taxing Decisions

Deciding between Taxable and Municipal Bonds

CREEN CAPITAL ADE SUR

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Executive Summary

- **Tax Rate Drives Bond Choice:** Investors' tax rates dictate whether they benefit more from municipal or taxable bonds; high-tax investors typically gain from municipals, while tax-exempt entities should focus on the highest available yield.
- **M/T Ratio for Bond Market Comparison:** The Municipal/Treasury (M/T) ratio compares yields of AAA-rated munis to Treasuries to identify the breakeven tax rate, historically around 20%.
- **Broader M/A Ratio for Portfolio Context:** For more diversified portfolios, the Muni/US Aggregate (M/A) ratio, with a breakeven tax rate of 26%, offers a more practical guide than M/T for comparing tax-exempt vs. taxable yields.
- State & Local Taxes Affect Taxable Bonds: Taxable portfolios, often subject to state and local taxes, make municipals more appealing for high-tax residents, further influencing bond choice.
- **Regular Portfolio Review for Tax Efficiency:** Investors should adjust bond allocations as income and tax rates change, blending muni and taxable bonds to optimize after-tax income.

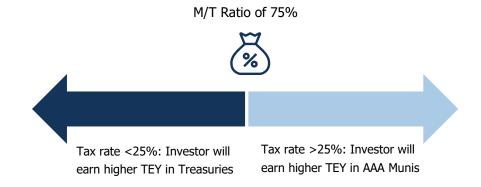
An investor's income tax rate is the key factor in deciding between the municipal and taxable fixed income markets. For those on either extreme of the tax spectrum, the decision is relatively straightforward. Tax-exempt entities such as foundations, endowments, IRAs, 529 plans, etc. should simply focus on the highest-yielding option available commensurate with their desired risk, since taxes aren't a concern. Conversely, those in the top tax brackets benefit more from municipal bonds, which generally offer better yields on an after-tax basis. But what about investors who fall somewhere in the middle? This paper aims to provide guidance on how to navigate this decision-making process.

The 'Municipal/Treasury ratio' (M/T) is the most widely accepted method to assess relative value between the municipal and taxable bond markets. It's calculated by dividing the yield of a AAA-rated municipal bond by the yield of a similar duration Treasury. These two securities are used

because they reflect the closest 'apples to apples' comparison between the two markets from a credit default perspective.

For example, consider a 10-year AAA municipal bond yielding 3% and a 10-year Treasury yielding 4%. The M/T ratio is 75% (3%/4%). Practically, this translates to a breakeven tax rate of 25% (1-75%). In other words, an individual is indifferent between buying a 4% Treasury and paying a 25% tax on income versus buying a 3% municipal bond. The M/T ratio can be quite volatile in the short term but has a long-term median of 80% (which aligns with the 20% average federal tax rate for US households during the same period).

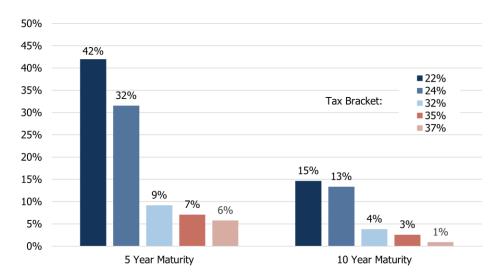
Fig. 1: Municipal Bond to Treasury Ratio Tax Equivalent Yield (TEY) Considerations



Source: Mill Creek.

For intermediate bond investors, historical data suggests (Fig. 2) that those in the top five federal tax brackets (as defined <u>here</u> for 2025) will earn a higher tax equivalent yield in the municipal market more than half of the time. However, as discussed below, there are additional factors to consider.

Fig. 2: Percentage of Time Better Off in Treasuries by Tax Bracket



Source: Bloomberg, Mill Creek. The 37%, 35% and 32% tax bracket assumes an additional 3.8% Net Investment Income Tax. Based on the period January 2001 through October 2024.

Looking Through a Different Lens

The M/T ratio serves as a useful baseline to assess value across fixed income. However, most investors aren't deploying capital in portfolios made up solely of Treasuries or AAA-rated municipal bonds. Instead, they typically hold a diversified mix of high-quality securities that offer a more attractive yield profile.

For taxable investors, this often includes US Corporate, MBS and Treasuries as represented by the Bloomberg US Aggregate Total Return Index. For tax exempt investors, it's split between revenue and general obligations bonds with credit quality ranging from AAA to BBB as tracked by the Bloomberg Municipal 1-15 Year Blend (1-17) Total Return Index. Given this reality, we believe it's prudent to compare the yields of these broader indexes – reflecting the composition of actual portfolios – rather than relying solely on the traditional M/T ratio. While there are modest duration and credit quality differences between the Bloomberg US Agg and Muni1-15 Index, their relative yields provide a more realistic basis for investment decisions.

When using the Muni 1-15/ US Agg (M/A) ratio, it's important to remember that US Corporate bonds and MBS are subject to state and local income taxes. This is not an issue for the M/T equation since Treasuries are exempt from state and local taxes. Since MBS and Corporates typically make up 50% of a taxable bond portfolio, the adjusted tax burden for a US Agg-like portfolio can be approximated as: Federal tax rate + 50%*(state + local tax rate). For a high earner in NYC, for example, this translates to an all in tax rate of: 40.8% (Includes Net Investment Income Tax of 3.8%) + 50%*(10.9%+3.9%) = 48.2%. Applied to our M/A ratio, this individual is better off in taxable bonds when the ratio is below 51.8%.

Over time, we find that the median breakeven tax rate for the M/A ratio is 26% (Fig. 3), higher than the 20% for the M/T ratio. Unless one is strictly investing in Treasuries or AAA-rated bonds,

our takeaway is that individuals with a tax rate below 26% are generally better off in a US Aggregate portfolio, while those with a tax rate above 26% should consider targeting municipal bonds, contrary to what the 20% M/T might suggest.

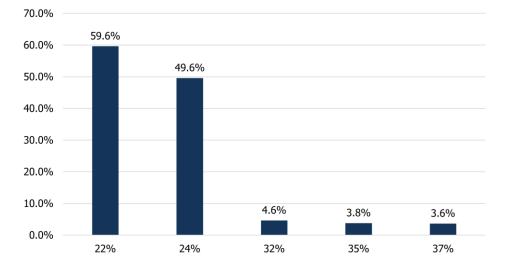


Fig. 3: Percentage of Time Better Off in the Taxable Bond Market by Tax Bracket

Source: Mill Creek, Bloomberg. The 37%, 35% and 32% tax bracket assumes an additional 3.8% Net Investment Income Tax. Based on the period January 2000 through October 2024.

When contemplating a reallocation between the two bond markets, an understanding of the amount and type of income generated by the pro forma portfolio is key. Consider an individual with a \$5mm municipal bond portfolio yielding 3%, ordinary income of \$100K, and a 22% marginal tax rate (Fig. 4, next page). This marginal tax rate is below our 26% median calculated above, suggesting scope to "fill up" the 22% and 24% tax brackets with taxable bond income. However, reallocating the entire portfolio to a US Agg bond strategy yielding 5% would go too far and push this investor into the 35% tax bracket, reducing post-tax income by \$20K. The optimal allocation in this case would be an approximately 70% (muni) / 30% (agg) blend, keeping the individual in the 24% tax bracket and balancing the benefits of higher pre-tax income with a more manageable tax impact. Financial situations are dynamic , and adding taxable income can affect whether you qualify for other tax deductions and credits, so regularly reevaluating bond portfolio allocations will help maintain income and tax efficiency over time.

Fig. 4: After-Tax Income by Bond Allocation and Tax Bracket

Municipal Bond Allocation	Taxable Bond Allocation	Total Household Income	Total Taxable Income	Tax Bracket	Taxes Owed	After-Tax Income
100%	0%	\$250,000	\$100,000	22%	\$24,500	\$225,500
90%	10%	\$260,000	\$125,000	24%	\$33,125	\$226,875
80%	20%	\$270,000	\$150,000	24%	\$39,750	\$230,250
70%	30%	\$280,000	\$175,000	24%	\$46,375	\$233,625
60%	40%	\$290,000	\$200,000	32%	\$76,600	\$213,400
50%	50%	\$300,000	\$225,000	32%	\$86,175	\$213,825
40%	60%	\$310,000	\$250,000	35%	\$103,250	\$206,750
30%	70%	\$320,000	\$275,000	35%	\$113,575	\$206,425
20%	80%	\$330,000	\$300,000	35%	\$123,900	\$206,100
10%	90%	\$340,000	\$325,000	35%	\$134,225	\$205,775
0%	100%	\$350,000	\$350,000	35%	\$144,550	\$205,450

Source: Mill Creek. We assume 3.8% NII for the 35% tax bracket and total local and state tax rate of 5% throughout (2.5% tax burden assuming 50% allocation to corporate bonds and MBS).

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