4Q 2022

MUNICIPAL FIXED INCOME TEAM

Municipal Basis Points

New Landscape for Active Managers

The current year has been a tough one for fixed income investors, beset by high inflation, interest rate increases and economic uncertainty. Although municipal bonds have faced such headwinds, it's clear to the Neuberger Berman Municipal Fixed Income team that recent volatility is largely a function of macro issues and Federal Reserve policy, rather than underlying credit fundamentals, which remain strong. As year-end approaches, the team believes that higher yields and market turbulence could provide new opportunities for managers in seeking to add value over time.



"It's not whether you get knocked down, but whether you get up."

- VINCE LOMBARDI



JAMES L. ISELIN HEAD OF MUNICIPAL FIXED INCOME

New Landscape for Active Managers

Rate-related volatility is opening up potential opportunities across the municipal market.

As far as markets are concerned, the only good thing about the third quarter is that it came to an end. The quarter began on a decent note with bonds and risk assets rallying strongly in July. The markets looked at weakening economic data and surmised that a Federal Reserve pivot and peak inflation could be around the corner. In effect, bad news was good news despite no clear signs that inflation had peaked or was about to roll over. In August and September, the Fed tightened up its messaging and told the markets that it was committed to fighting inflation—and if the economy and employment had to take a hit in the process, so be it. Jerome Powell's annual Jackson Hole speech in late August was particularly hawkish and left little doubt of the Fed's resolve to bring inflation back under control. As expectations for tighter monetary policy increased, interest rates continued their march higher. As a result, bond returns were very soft in August and September, with the Bloomberg Municipal Bond index dropping 2.19% and 3.84%, respectively. Year-to-date through September 30, the index was down 12.13%. It is important to note that the sell-off in munis and other higher-quality fixed income has been driven primarily by a significant upward move in interest rates. There is no discernible evidence that the market has changed its view on the creditworthiness of the municipal asset class. In our view, that makes sense given that munis are among the highest-rated fixed income asset classes in the world. In addition, credit quality is generally strong due to above-trend economic growth in 2021 and unprecedented fiscal support during the pandemic. While credit quality has almost certainly peaked for this economic cycle, it is premature to be sounding alarm bells as they relate to the credit quality of higher-rated munis.

We recognize how tough this year has been for bond investors. Most portfolios are not impervious to this type of move in rates, but a focus on intermediate- and shorter-duration strategies has generally provided a modest cushion relative to the broader market.

The bright side of this historical market sell-off is that income has returned to fixed income in a major way. Across the yield curve, 3% or higher yields are abundant for high-quality munis. At five years, AAA rated munis were yielding roughly 3.10% at quarter-end, which is the taxable equivalent of around 5.24% for someone in the highest tax bracket. In contrast, five-year Treasuries were yielding 4.09% at quarter-end, so munis are generating a meaningful benefit on a tax-adjusted basis.

Going forward, the move in rates is likely to create additional inefficiencies in the market. We think this environment is ripe for active management to shine and for value to be added at the security level. In particular, we continue to favor reinvesting and buying bonds at these improved yields, which means pushing the book yields of portfolios higher. While volatility may persist, investors can now have much more yield in portfolios, which can serve as a buffer if rates continue to rise. The benchmark we use for our core intermediate strategy had a yield of 3.59% at quarter end. Finally, it's important to continue looking for tax-loss-swapping opportunities across portfolios. Tax-loss swaps are a good way to deliver value in periods where absolute returns are negative.

We want to thank all of our clients for their continued support during these challenging markets. With the improvement in yields, we are hopeful that better days lie ahead.

TRADING NOTES

RANDY L. GROSS SENIOR PORTFOLIO MANAGER MUNICIPAL FIXED INCOME

> "A champion is defined not by their wins, but by how they can recover when they fall."

-SERENA WILLIAMS

The Fed Has Spoken, Loud and Clear

Monetary policy is likely to tighten until the job is done.

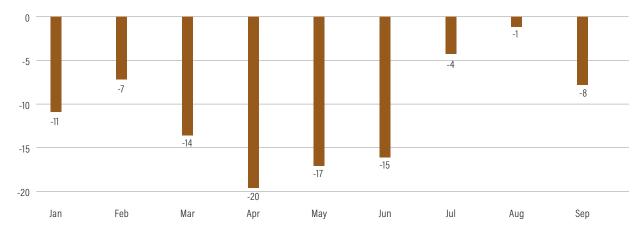
At the conclusion of the September Federal Open Market Committee meeting, most market pundits viewed the Federal Reserve's comments as indicating its most hawkish meeting of the year. The reaction from investors was swift, as U.S. Treasury yields moved higher across the yield curve, immediately pricing in further rate hikes in the coming November and December meetings.

The central bank also ramped up its scheduled balance sheet reduction to \$95 billion per month (\$60 billion in U.S. Treasuries and \$35 billion in mortgage-backed securities). As a quick reminder, the Fed swelled its balance sheet to around \$9 trillion in direct response to the pandemic to help guide longer-term rates lower. As the Fed steps away from being the largest buyer of longer-maturity Treasuries, new buyers will have to step in to fill this void, which may lead to continued volatility in longer-term U.S. Treasury rates.

All of the above, in concert with persistent mutual fund outflows, contributed to the negative municipal price performance experienced for most of the third quarter.

INVESTOR MOVEMENT OUT OF MUNICIPAL STRATEGIES

Municipal Fund Flows (Year-to-Date) \$ in Millions



Source: Lipper.

In the current Fed hiking cycle, it can be argued that the central bank began hiking rates "too late," is raising rates "too much" and plans to keep interest rates high for "too long." Jerome Powell's Fed appears to be aiming for short-term pain in exchange for long-term gain, understanding that its determination to achieve price stability could contribute to substantially lower growth. Given this backdrop, the direction of interest rates is likely to remain foggy as the Fed continues fighting inflation by cooling the economy.

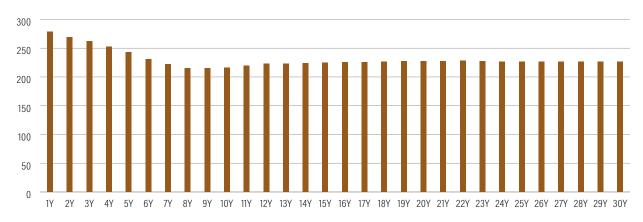
Locking In Attractive Yields

At present, investment grade municipal yields across the yield curve are hovering around multiyear highs, which is a major benefit to savers, who can lock in those higher yields and increase their valuable tax-free income.

At this point, the Fed is seemingly focusing on a singular mandate of price stability at the expense of maximum employment—a break from its traditional dual mandate. In our view, the slowdown seen in housing as mortgage rates have soared could portend that inflation may moderate in other sectors as Fed tightening is fully absorbed. When the central bank eventually shifts its focus to the economy and deems inflation contained, bonds purchased today would likely experience price appreciation, while any unrealized losses on current holdings could be reversed.

MUNICIPAL YIELDS HAVE RISEN SHARPLY

YTD AAA Yield Change (bps)



	As of September 30				
	AAA Muni Yield	Taxable-Equivalent AAA	A Muni Yield	Taxable-Equivalent A	Treasury Yield
2 Yr	3.09%	5.22%	3.33%	5.63%	4.28%
5 Yr	3.12%	5.27%	3.41%	5.76%	4.09%
10 Yr	3.30%	5.57%	3.74%	6.32%	3.83%

Source: Bloomberg, as of September 30, 2022. For illustrative purposes only. Assumes 37% marginal tax bracket and subject to an additional 3.8% ACA tax for a total of 40.8%.

Coupon Liquidity

Throughout the spike in rates witnessed this year, the volatility of lower-coupon bonds increased substantially as some bonds became subject to de minimis tax implications—a negative tax consequence as their prices fell below 100 rapidly. This makes lower-coupon bonds (below 3%) less desirable in the marketplace and can cause more price erosion than for premium bonds with like maturities. Since premium coupons are coveted for their above-market income streams and market-defensive qualities, they tend to be much more liquid and less volatile than par bonds of similar maturities in a rising-rate environment. We currently favor premium-coupon bonds in light of these defensive characteristics. These coupon structures have, in general, comfortably outperformed lower coupons as yields have risen dramatically this year.

And Lastly...

We appreciate that most investors share our regard for this asset class' preservation of capital and tax-advantaged benefits. As events unfold in the coming months, security selection and proactive credit research, independent of ratings agencies, are likely to remain essential. In our opinion, active professional management should continue to add meaningful value and outperformance versus passive strategies.

FUNDAMENTAL FOCUS

JAMES A. LYMAN DIRECTOR OF MUNICIPAL RESEARCH "A tree with strong roots can withstand the most violent storm, but the tree can't grow roots just as the storm appears on the horizon."

-DALAI LAMA

Looking for Safe Harbors

Municipal credit has peaked, but there are plenty of places to wait out the storm.

While we believe that overall municipal credit quality has peaked, the asset class is unique and should not be compared to corporates when considering characteristics and behavior across economic cycles. Municipal credit has positive attributes that allow an investor to reposition portfolios for a down cycle and reduce credit volatility that comes with a weak economic backdrop. To better understand this concept, it helps to first discuss some of these unique attributes. Nonetheless, as the above quote from the Dalai Lama implies, a portfolio that is able to perform in a storm has to be maneuvered in preparation for that storm. Below we describe how the municipal market enables us to do that.

Lower Correlation Than Corporates

Municipal issues have a much lower correlation of credit risk than corporates. For example, in the corporate energy sector, if the price of oil declines, then topline revenues and earnings should decline across all the companies in that space. However, in the municipal general obligation sector, two issuers adjacent to one another during an economic decline could see different credit impacts because they have different tax bases and/or offer different levels of service. They may share the same regional economy, but the taxpayers may reflect different components of that regional economy, some of which could be immune to the down cycle because of factors such as wealth level. These differentials can be common and are often quite visible, allowing analysts to make distinctions in their analysis.

More Gradual/Delayed Response to Economic Decline

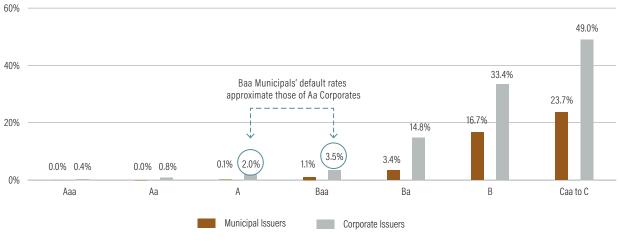
For the most part, municipalities are a trailing indicator of economic decline, particularly those that are reliant on property tax for funding. This is because the value of a property tax base is typically set based on the previous year's real estate market, and the taxes are collected over the course of the subsequent year. Also, during recessions, property-tax-collection ratios tend to decline at most within the single-digit range. The real stress, if it were to occur, would start to show in the preparation of a negatively impacted issuer's budget a year after the economic decline is registered, as the tax base now shows that economic decline. This trailing nature is an advantage to municipal bond investors since it gives them the ability to position portfolios for the decline.

It is important to mention that U.S. states have somewhat different credit behavior from municipalities. They tend to have more economically sensitive revenue streams such as income or sales tax. Therefore, they generally show economic stress that is coincident to a recession. Some states are more economically sensitive, depending on their tax structure and economic base. For example, California has historically been one of the most volatile credits, swinging from the top to the bottom of investment-grade range during down cycles in the early 1990s and again in the early 2000s. However, today, California is much better positioned to withstand fiscal stress given its huge accumulated rainy-day funds, which are equal to almost \$35 billion or the maximum 10% allowed under the state constitution. Additionally, some major city issuers with complex revenue streams and social service mandates, such as New York City, also show above-typical volatility, but these large and complex municipalities tend to be the exception.

In summary, the many safe havens in the municipal market allow for defensive positioning while generating competitive yields relative to high-quality corporates. The asset class also benefits from the delayed impacts of recession, which allows investors to better anticipate declines in credit quality. Finally, it should be noted that municipal default rates are very low compared to corporates (see display below).

MUNICIPAL QUALITY ADVANTAGE

Average Cumulative Default Rates for Rolling 10-Year Periods, 1970 - 2021



Source: Moody's Investors Service.

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