



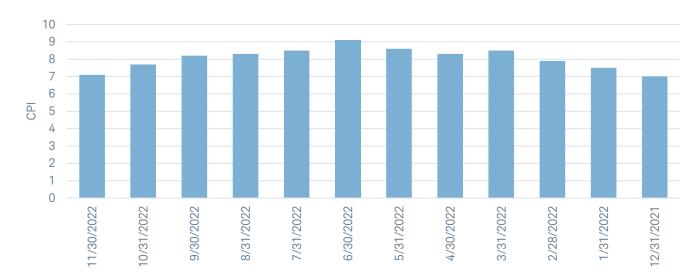
Quarterly Bond Market Overview

December 31, 2022

... and Make Sure Your Seat Belt is Securely Fastened By: Thomas N. Richmond Jr., Co-Head of Taxable SMA Strategies, Senior Portfolio Manager

In a word, investing in 2022 was bleak. The bond market was not spared in the carnage, as a toxic mixture of generationally high inflation and monetary policy tightening in response caused historically large losses across virtually every sector of every broad market. As the US Federal Reserve (Fed) raised rates a historically aggressive 425 basis points (bps) over the course of the year, the inflationary forces they continue to seek to tame remained stubbornly present, with the Consumer Price Index (CPI) spending most of the year above 7%. This caused repricing of risk assets across the board, as equities fell, interest rates rose, credit spreads widened, and volatility reigned. The fourth quarter brought a slight reprieve with some emerging signs of slowing consumer price increases, especially in less supply-chain constrained goods producing sectors, however bond market performance, as you will read, was less than stellar, and the economic backdrop remained muddled at best.

These signs of begrudgingly slowing inflation have, fortunately, continued into the first part of 2023. Goods prices have at least stabilized, if not started to disinflate, and the math behind the housing inflation data seems destined to slow those components in the coming months. Wage inflation, on the other hand, has remained stubbornly high, and the job market in the US seemingly has continued to shrug off the Fed's policy actions and remains solid. Food prices also have continued to rise, partly owing to the ongoing actions of Russia in Ukraine, and also to the tight labor markets in the US and abroad. To hear members of the Fed tell it, they believe they will need to continue raising rates this year and, once they hit an acceptably 'restrictive' policy rate, hold there for a while to finally bring inflation back to or near their longer-run target of 2%. Interestingly, members of the Fed have continued to signal that they believe they can accomplish this with only minimal harm to the economy.



Consumer Price Index (CPI)

Thus far in the New Year, the markets have not been necessarily buying what the Fed is selling. Fed Fund futures have continued to imply not only a lower 'peak' rate, but actual rate cuts later this year, in apparent disagreement with policy makers. The market appears to be implying that the aggressive rate hikes seen last year, and seemingly sure to continue in the coming months will, with the oft-discussed lag, slow the US economy to the point of needing policy 'help'. In short, how this disagreement about a 'hard' or 'soft' landing later this year resolves will almost surely determine how bond markets perform over the coming quarters.

Ultimately, we can't know for certain how the economy will perform or how the markets may react. With that said, the unusual state of the US Treasury curve may offer opportunities in the coming months. Additionally, considering the current rate and spread environment, we believe bond investors have a chance for better returns in 2023 overall.

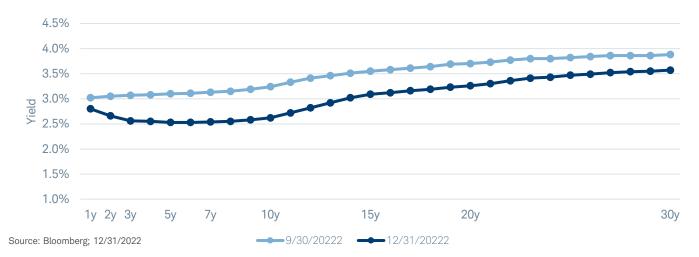
Tax Exempt Market

By: Jason D. Diefenthaler, Managing Director and Head of Tax-Exempt Strategies

Municipal bond investors enjoyed a reprieve in the fourth quarter, following a difficult nine months to start 2022. Tax exempt bond yields fell by approximately 20-60 bps despite the presence of higher yields in certain areas of the Treasury market. The Bloomberg Municipal Bond Index produced a total return of 4.10% during the period, representing the Index's best quarter since the first quarter of 2009. While interest rate volatility remained at historically elevated levels against a backdrop of persistent (albeit moderating) inflation and expectations for continued Federal Reserve rate hikes, technical dynamics in the tax exempt market (particularly supply) provided strong tailwinds, and set the stage for significant muni outperformance relative to Treasuries; the Bloomberg Municipal Bond Index outperformed the Bloomberg Treasury Index by 338 bps during the quarter, which was its 2nd best quarter of relative outperformance since 2009.

The short end of the tax exempt yield curve saw the least movement during the quarter with 1-year maturities lower by approximately 20 bps to 2.80%. The belly of the curve, from 5-10 years, saw the greatest change with 10-year yields lower by 60-65 bps to 2.62%. Longer-term maturities saw yields lower by 30-40 bps and were the best performing area of the market given their longer duration profile; the Bloomberg Long Municipal Index was up 5.19% during the quarter compared with a total return of 2.08% for the Bloomberg 3-Year Municipal Index.

One notable development during the quarter was the inversion of the municipal yield curve, with yields on 2-year maturities ending the year 3 bps higher than yields on 10-year bonds ("2s10s"). Yield curve inversions are atypical in the bond market and have historically been considered recessionary precursors. The Treasury curve has inverted only four times over the last 20+ years, and has been inverted since July 2022 (2s10s in the Treasury market ended the year at -55 bps). The tax exempt curve has traditionally resisted Treasury curve inversions, however, this was not the case in late December with the municipal market exhibiting its first inversion in modern market history. While the tax exempt curve inversion can correct once we exit the current seasonal low supply dynamic, with the market reverting to a positive slope, this nonetheless highlights the extreme flatness that developed throughout 2022 across the fixed income markets.



Bloomberg AAA Municipal Yield Curve

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Supply and Demand

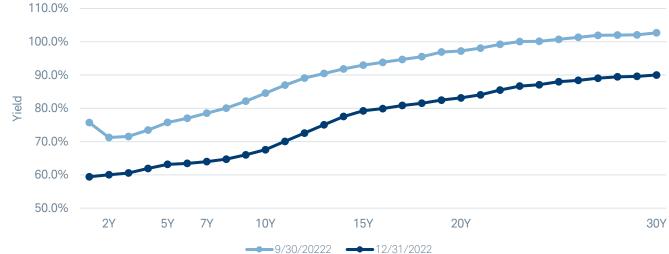
Issuance activity in the municipal market was severely depressed during the quarter, with the par value of new bonds coming to market dropping by 26% from the previous quarter and by 40% from the 4th quarter of 2021. According to Bloomberg league tables, total issuance was approximately \$72 billion – the lowest total since the first quarter of 2018 and more than 30% below the typical quarterly volume over the last decade. Even more notable than the dollar decrease in issuance was the number of bond transactions that came to market. There were 1,558 new deals during the quarter, representing the lowest volume by transaction count in over a decade and more than 40% below the average over the last 10 years. For the full year, total par issuance was approximately \$382 billion, which represents a 22% decrease from 2021 and the first time since 2018 that annual issuance has fallen below \$400 billion.

The tight supply backdrop was actually a welcome development for the market's liquidity profile given the historically weak demand that persisted during the quarter and throughout the year. Refinitiv Lipper US Fund Flows data showed retail investor outflows from municipal bond funds in 11 of the 13 weeks during the quarter, totaling -\$21 billion. For the year (through 12/28), total outflows were at a record -\$122 billion after a record \$102 billion of inflows in 2021. In addition to the lower supply backdrop, reinvestment needs from coupon and maturity payments also helped offset the impact of the weak demand technicals witnessed over the course of this past year. New bond deals that came to market had strong interest from buyers, and dealers have remained active in the secondary market when investors were seeking liquidity. If history is any indication, the strong seasonal factors supporting the market should continue to be felt into January and February of 2023.

Relative Value

Relative valuations saw significant movement throughout the year given the volatility in rates. Municipal-to-Treasury yield ratios ended the quarter at considerably lower levels than where they were over the summer, and in some areas ratios were close to where we began 2022. This is primarily an effect of the strong technical patterns described earlier, which led to the muni market's relative outperformance against Treasuries. When we step back and look at relative value across the market, the curve continues to look richest on shorter maturities and cheapest on longer maturities.

Ratios on the short end of the curve saw a dramatic decrease with 1-year ratios tightening from 76% on 9/30 to end December at 60%. 5-year ratios fell from 77% to 64%, while 10-year ratios declined to 68% from 85%. 30-year ratios declined to 91% after starting the quarter at 104%. Spreads on longer maturity, sub-5% coupon bonds ended the quarter at attractive levels, however buyers of this type of structure should be prepared for above average volatility relative to other areas of the municipal market. Cushion bonds (which are bonds with short call options and longer final maturities) were also exhibiting better value as the market favored cleaner structures during the period.



Municipal-to-Treasury Yield Ratios

Source: Bloomberg; 12/31/2022



Credit Trends

The Bloomberg BBB Municipal Index underperformed the AAA Index for the fifth consecutive quarter, trailing the Bloomberg AAA Muni Index by 40 bps. This brought the year-to-date underperformance of the BBB Index to 370 bps, representing the largest gap since the Taper Tantrum in 2013. The Bloomberg Municipal High Yield underperformed the AAA Index by 81 bps during the quarter, leaving its year-to-date underperformance at 517 bps. As we've previously noted, much of the credit underperformance this year at the index level is likely the result of structural characteristics. Investors have favored cleaner structures within the market as absolute rates have increased, and the need to reach down for sub-optimal call structures or lower coupons for yield pick-up has diminished. And while we continue to see more economic and cost sensitive sectors – specifically healthcare – struggle with operating margins and bond covenant tests, the market has been receptive toward credit spreads on A and BBB rated issuers in recent months. The healthcare sector, which struggled throughout the year, posted the second best performance across all muni sectors during the fourth quarter.

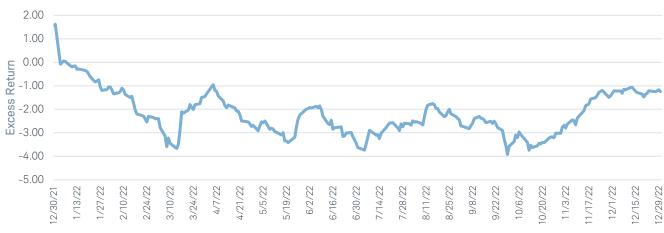
Looking Forward

Although the fourth quarter of 2022 represented somewhat of a value reset for muni investors, with absolute yields and relative ratios coming in well off the highs we witnessed earlier in the fall, the market is nonetheless positioned for a potentially strong 2023, if growth slows and the Federal Reserve moves closer to an eventual pivot in the funds rate trajectory. We're likely to see some near term volatility as the seasonal supply patterns that drove ratios lower in November and December start to unwind and the new issue calendar picks up. Demand patterns will remain a wildcard, with retail investors continuing to show sensitivity to overall levels of interest rate volatility; as long as that volatility persists, it will be difficult for mutual funds to garner consistently positive inflows. Credit quality across the market has remained broadly stable, particularly for general obligation credits, dedicated tax structures and essential service revenue sectors including water and sewer systems and transportation authorities. Slower economic activity on the horizon could lead to declining tax receipts, while costs pressures continue to be a factor given the elevated inflation environment. However, the resilient nature of the municipal market and the tendency for changes in financial conditions to materialize at a moderate pace suggests that patient investors may find pockets of opportunity across the market in the coming year.

Taxable Market

By: Christopher Sheehan, Senior Portfolio Manager

The corporate bond market saved its best for last. Every month in the fourth quarter the corporate bond market outperformed its similar duration Treasury peers. The market also posted its first positive quarterly total return in 2022 of 3.63%. The OAS of the Bloomberg Corporate Index rallied 28 bps last quarter, falling from the near widest level of the year, 158 bps, down to 130 bps by the end of December. For the year, the OAS of the index rose 38 bps resulting in a negative excess return of -125 bps, down from -357 bps at the start of the quarter. Issuance continued to decline due to higher risk-free rates and increased volatility. Total corporate issuance fell by 33% in the fourth quarter from the previous year and was down 17% for all of 2022.



Bloomberg Corporate Excess Returns

Source: Bloomberg; 12/31/2022

WASMER SCHROEDER STRATEGIES The taxable municipal market also had an encouraging quarter for bond investors, although not to the extent of the corporate market. The Taxable Muni: AGG Eligible Index outperformed in two of the three months in the fourth quarter and showed a positive overall total return of 2.03%. Issuance remained severely depressed with only \$7.5 billion of new deals coming to market in the quarter, a drop-off of 80% from 2021. The lack of refunding opportunities continued to be the primary headwind to supply. Price discovery in a dormant new issue market has both positive and negative impacts. The larger, benchmark deals benefit from secondary trading activity in a light market, whereas more off-the-run issuers tend to search for bidders.



Taxable Municipal Secondary Trading Volume

Source: Bloomberg; 12/31/2022

Similarly, the mortgage market had its best quarter of year. The Bloomberg U.S. MBS Index produced a total return of 2.14% and outperformed similar duration Treasury bonds by 108 bps. In fact, November was the best month for excess returns in the history of the index. The positive correlation of the index at the start of the quarter (0.18) due to discount dollar prices (\$87 average for the index) allowed the sector to accompany the rally in intermediate risk-free rates.

In summary, the fourth quarter offered taxable bond investors some relief from a tumultuous 2022. The pain from higher risk-free rates was mostly felt at the very front-end of the curve where the Fed hiked rates by a combined 125 bps at their two meetings during the quarter. Intermediate maturities, however, moved up in price and down in yield to the benefit of investors. Spread products earned their carry and added more return by tightening in a marginal risk-on environment. The positive market movements in the fourth quarter were small relative to the pain bond investors have felt throughout 2022, although it highlighted the potential benefits bonds offer when starting at higher all-in rates.





Thomas N. Richmond Jr.

Co-Head of Taxable SMA Strategies, Senior Portfolio Manager

Thomas Richmond is Co-Head of Taxable SMA Strategies and a Senior Portfolio Manager supporting the Wasmer Schroeder Strategies at Schwab Asset Management.

Mr. Richmond earned a Master of Science in Applied Mathematics and a Bachelor of Science in computer science with minors in economics and management from Rensselaer Polytechnic Institute.



Jason D. Diefenthaler Head of Tax-Exempt Strategies

Jason Diefenthaler is the Head of Tax-Exempt Strategies for Schwab Asset Management. In this role, he is responsible for developing, managing, and implementing Schwab Asset Management's tax-exempt fixed income investment strategies, including separately managed accounts, actively managed mutual funds, and exchange-traded funds (ETFs).

Mr. Diefenthaler earned a Bachelor of Science in finance from Florida State University. He is a member of the Southern Municipal Finance Society and the National Federation of Municipal Analysts.



Brian Ferry

Senior Portfolio Manager

Brian Ferry is a Senior Portfolio Manager supporting the Wasmer Schroeder taxable bond strategies at Schwab Asset Management.

Mr. Ferry earned a Bachelor of Science in finance from Miami University. He is a CFA® charterholder and is a member of the CFA Society of Cleveland and the CFA Institute.

Source: Bloomberg.

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