



Municipal Securities Rulemaking Board

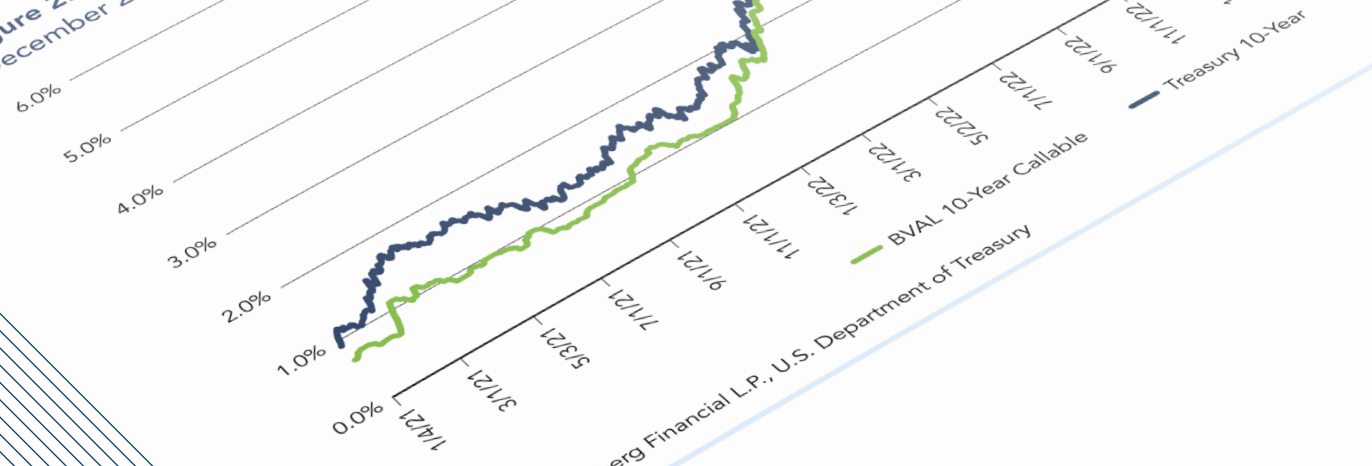
JANUARY 2024

2023 Municipal Market Year in Review

BVAL® AAA Callable and U.S. Treasury Yields					
TSY 12/29/23	Muni/TSY Ratio	BVAL 2023 Change BPS	TSY 2023 Change BPS	BVAL Change in BPS since 10/31/2023	TSY Change in BPS since 10/31/2023
4.790	54%	23	6	-122	-65
4.230	59%	-17	-18	-125	-84
4.010	58%	-23	-34	-128	-98
3.880	57%	-37	-37	-133	-100
3.880	83%	-17	22	-137	-101
4.200					
4.030					

Sources: Bloomberg Finance L.P., U.S. Department of the Treasury

Figure 2. Treasury 10-Year and Bloomberg BVAL® 10-Year Municipal Yields, January 2021–December 2023



Source: Bloomberg Financial L.P., U.S. Department of Treasury

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Municipal Securities Rulemaking Board

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Introduction¹

The past four years have been some of the most interesting times in the municipal bond market. In March of 2020, the onset of the pandemic caused uncertainty and concern in the market, causing rates to rise dramatically but recover very quickly as government and Federal Reserve Board (Fed) intervention calmed the market. In 2021, the market saw low volatility, very low rates and record low trade count. In contrast, in 2022 we saw rates and volatility rise, record net outflows² from tax-exempt mutual funds and trade count reach record high levels. In 2023, we saw rates continue to rise steadily for much of the year due to concerns about inflation and the potential for rate hikes from the Fed, then recover dramatically in the last two months of the year. We also saw trade count explode in the fourth quarter. This started with a record number of trades in October, which was topped in November, and ended up with record trade count for the fourth quarter and full year. Both 2022 and 2023 have shown the power of individual investors in the municipal securities market. Demand from individual investors for municipal bonds, either directly or through separately managed accounts (SMA), compensated for weak demand from mutual funds due to continued albeit smaller outflows, and a significant reduction in municipal bond holdings by banks and insurance companies.

As in 2022, new issue volume remained low from a historical perspective, as higher interest rates continued to dampen the attractiveness of refunding outstanding debt for issuers. New issue volume in 2022 and 2023 was under \$400 billion, compared to nearly \$500 billion issued in 2020 and 2021. Some issuers elected to use funds on hand from pandemic relief to pay for projects in lieu of issuing new debt.

¹ The views expressed in the research paper are those of the author(s) and do not necessarily reflect the views and positions of the MSRB Board and other MSRB staff.

² Tax-exempt Exchange Traded Funds (ETF) experienced net inflows in both 2022 and 2023.

Benchmark Yields

As Figure 1 shows, at the end of the year, tax-exempt yields closed 17–37 basis points lower than year-end 2022. However, if you only compared rates at the beginning and end of the year, you missed a wild roller coaster ride in rates, including a steady rise peaking in October, followed by a dramatic rally through year-end.

Figure 2 shows the significant movement in benchmark yields throughout 2023. With all the concern about inflation and talk of when the Fed would stop raising short-term rates, it is easy to forget that for much of the first four-and-a-half months of the year, tax-exempt yields experienced significant volatility. Yields dropped over 40 basis points between January and early February before rising about 50 basis points through early March and bottoming out in mid-April at 2.06%. However, inflation fears took over the market and yields steadily increased from mid-April until the end of October, climbing 150 basis points or more. At the end of October, the BVAL[®] 10-year callable tax-exempt yield peaked at 3.63%. Certain municipal indices had not seen that level since 2007 and 2008. Similarly, the 10-year Treasury yield peaked at 4.98% on October 19, the highest since July 2007.

As previous MSRB research has shown, higher yields bring increased demand from individual investors. This significant increase in demand, coupled with declines in yields in the Treasury market, spurred a quick and significant rally in the municipal bond market, driving benchmark yields down by more than 100 basis points from the beginning of November through early December. During this dramatic decline in rates, the market saw only two days where rates climbed, both times by an insignificant amount. All other days saw rates decline or remained unchanged. From November 13 until December 7, there was not a single day where 10-year tax-exempt yields rose compared to the previous day. November was the strongest month the municipal bond market had seen in more than 40 years.

The last two columns in the chart show the dramatic rally in the Treasury and municipal bond market since the end of October, with benchmark tax-exempt yields dropping 122–137 basis points and Treasury yields declining 65–101 basis points. Although the rally in municipal bonds was aided by declining inflation and yields in the Treasury bond market, tax-exempt benchmark yields outperformed the Treasury market last year. In 2023, tax-exempt benchmark rates finished the year down 17–37 basis points. Meanwhile, yields on Treasury bonds were mixed. Interestingly, the 10-year Treasury yield finished 2023 at 3.88%, exactly where it was at the end of 2022. This outperformance was potentially due to the limited new issue calendar for municipal bonds and the tremendous demand from individual investors. This price action caused municipal bond to Treasury (M/T) ratios to decline. At year end, the M/T ratio ranged from 54% in the 1-year maturity to 83% in the 30-years maturity.

Figure 1. Bloomberg BVAL® AAA Callable and U.S. Treasury Yields

Year	BVAL 12/29/23	TSY 12/29/23	Muni/TSY Ratio	BVAL 2023 Change BPS	TSY 2023 Change BPS	BVAL Change in BPS Since 10/31/2023	TSY Change in BPS Since 10/31/2023
1	2.571	4.790	54%	-23	6	-122	-65
2	2.485	4.230	59%	-17	-18	-125	-84
3	2.334	4.010	58%	-23	-21	-128	-89
5	2.191	3.840	57%	-34	-15	-133	-98
10	2.251	3.880	58%	-37	0	-137	-100
20	3.086	4.200	73%	-17	6	-126	-101
30	3.342	4.030	83%	-22	6	-125	-101

Sources: Bloomberg Finance L.P., U.S. Department of the Treasury

Figure 2. Treasury 10-Year and Bloomberg BVAL® 10-Year Callable Yields, January 2021–December 2023



Source: Bloomberg Financial L.P., U.S. Department of Treasury

Trade Volume³

Previous MSRB research has shown that higher yields lead to a higher number of trades and lower yields lead to fewer trades. The year 2023 was no exception to this pattern, as higher interest rates drove an increase in demand from individual investors as well as a significant increase in the number of customer sell trades, likely driven by individual investors entering in to tax-loss swaps to realize losses on their bond positions. In fact, 2023 broke the record for trades count established last year. In 2023, there were 12.8 million trades reported to the MSRB, up 3% compared to 2022. It may seem hard to believe, but back in 2021 we saw only 7.5 million trades in the municipal bond market, a record low number likely caused by historic low yields and low volatility. Trade count in 2023 was 72% higher than in 2021.

Although trade count was robust in the first nine months of 2023, average daily trade count rose by over 40% in the fourth quarter compared to the first nine months of the year. (See Figure 3) This dramatic increase in the number of trades coincided with yields topping out in October 2023. On November 1, there were over 86,000 trades reported to the MSRB, a new single-day record. We also saw seven days with more than 80,000 trades in October and November. Prior to October 2023, there had only been two days with more than 80,000 trades since real time trade reporting began in 2005. October set a record for trades in one month, only to be broken in November. And although December did not see as many trades as October and November, there were enough to set a record for trades in a quarter. In the fourth quarter, 4.2 million trades were reported, up 11% compared to the previous record set in the fourth quarter of 2022. The lowest quarter for trades was the third quarter of 2021, with just over 1.8 million trades.

When looking at the types of trades, 2023 was a record year for customer sell transactions as well as inter-dealer trades. The number of customer buy trades remained below levels seen in 2010 and 2011. However, compared with 2022, all trade types were up—customer buy trades by 4%, customer sell trades by 2.5% and interdealer trades by 3.2%.

One trend we continue to see is customer sell trades and inter-dealer trades increasing their overall share of trades while the share of customer buy trades is declining. Customer buys accounted for 50% of all trades in 2010 but only 36% in 2023. Meanwhile, customer sell trades have increased from just 19% of trades in 2010 to 25% of trades in 2023. Similarly, interdealer trades have increased from 31% of all trades in 2010 to 39% in 2023.

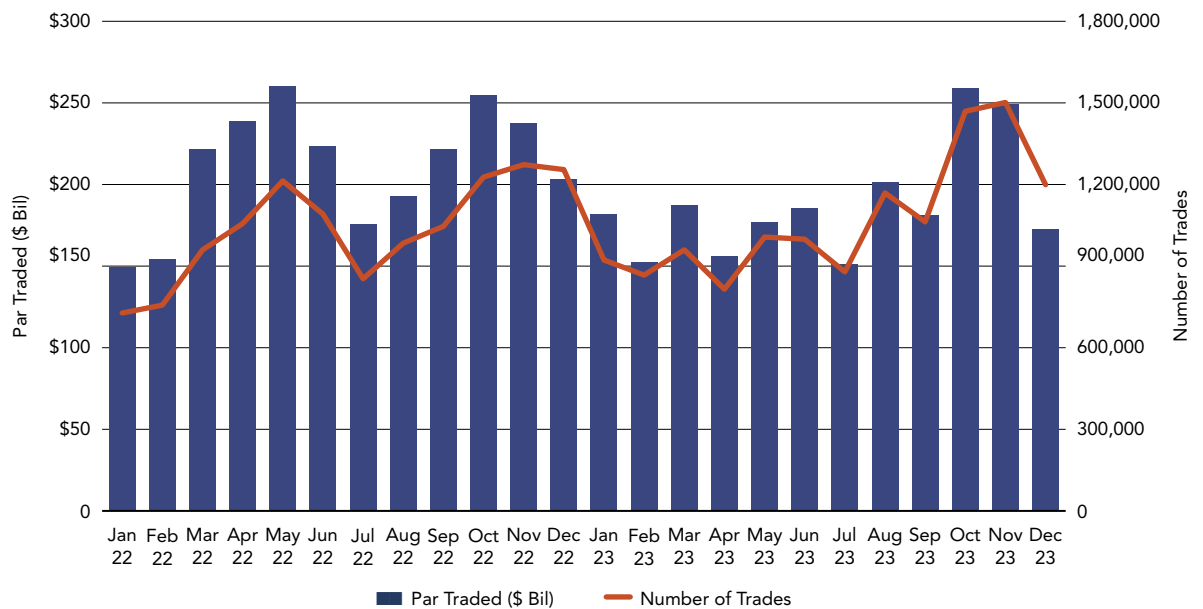
Although the par amount traded in 2023 was significant, it did not surpass the record levels reached in 2022.⁴ The par amount traded in 2023 was \$2.25 trillion, the second highest par amount traded in a year but down 11% from 2022. Of note, the par amount traded in smaller-sized trades increased to 15% from 13% in 2022 and was the highest going back to 2018. Similarly, the market share for par amount traded in blocks of \$1 million or more decreased to 64% from 69% in 2022 and was the lowest since 2018. This again shows the significance of participation from individual investors in 2023.

³ Excluding variable rate securities and municipal commercial paper.

⁴ *Ibid.*

When looking at par amount by trade type, while the share of customer purchase trades ranged from 44% to 53% of all trades since 2010, customer sales par amount has increased from 22% in 2010 to 29% in 2023. Interestingly, the par amount of interdealer trades as a percentage of all par amount traded has declined from 29% in 2010 to 24% in 2023. Interdealer trades make up more of the number of trades but less of the par amount traded in 2023 compared to 2010. This likely reflects the continued strength in trading on alternative trading systems (ATS), which tend to be dominated by smaller-sized trades.

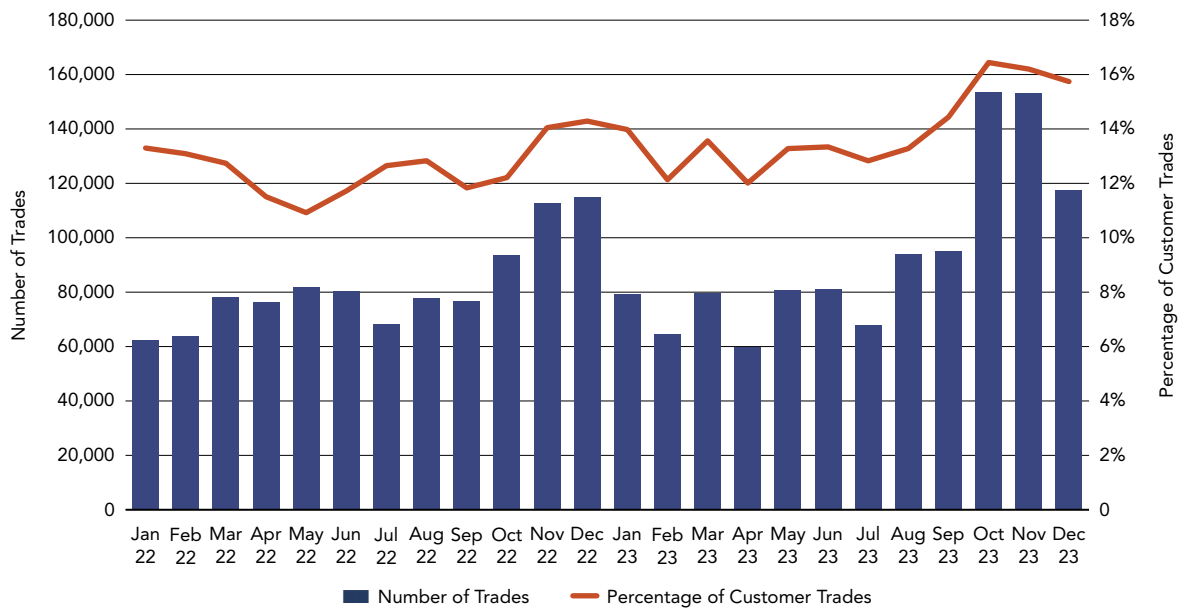
Figure 3. Monthly Municipal Market Activity, Fixed-Rate Securities, January 2022–December 2023



Trading on Alternative Trading Systems

Figure 4 shows the number of customer trades executed with the dealer of an ATS as well as the percentage of customer trades executed with the dealers of ATSs compared to all customer trades. The percentage of interdealer trades executed over an ATS was steady at 58% for 2023. Meanwhile, ATSs continue to increase their presence in trading with institutional customers. Customer trades executed by a dealer associated with an ATS represented about 14% of all customer trades in 2023 compared to 12.6% in 2022. In the fourth quarter of 2023, this percentage reached just over 16%, or 1 in 7 customer trades. The number of offerings on ATSs also increased substantially throughout the year as did the number of bid-wanted on ATS platforms.

Figure 4. Customer Trades Executed on ATS, January 2022–December 2023



Investor Demand

Demand from institutions was limited in 2023, with tax-exempt mutual funds, banks and insurance companies reducing their holdings of municipal bonds through September, while exchange traded funds (ETF) saw modest inflows. The driver for demand in 2023 was the individual investor buying individual bonds directly or through SMAs, as investors were attracted by yields not seen in fifteen years.

Although net outflows from tax-exempt mutual funds were nowhere near the levels seen in 2022, mutual funds continued to see net outflows for much of the year. According to the Investment Company Institute, through late July tax-exempt mutual funds saw small positive inflows. However, starting the week ending August 2, tax-exempt mutual funds saw 20 consecutive weeks of outflows totaling more than \$23 billion. The outflows continued throughout the significant market rally in October and November, though the market did see net inflows of almost \$200 million the week ending December 20. Through December 27, mutual funds saw net outflows of about \$17 billion. While this is a fraction of the outflows experienced in 2022, the continued outflows limited demand for municipal bonds from mutual funds.

Unlike mutual funds, tax-exempt ETFs saw positive net inflows of \$15 billion for the year and had 12 consecutive weeks of net inflows from the end of September through the beginning of December. As in 2022, it remains to be seen if these flows are the result of investors realizing losses on their mutual funds by selling the mutual fund and buying an ETF or if we are seeing a fundamental shift in strategy from investors.

According to data from the Fed,⁵ banks reduced their holdings of municipal bonds by more than \$60 billion through the first three quarters of 2023, a decrease of 10.5%. The banking sector gave the municipal bond market some concern when three banks, including Silicon Vally Bank, were taken over by the Federal Deposit Insurance Company. These banks held about \$7 billion worth of municipal bonds that would need to be liquidated. Many of these bonds were low coupon bonds that were valued at a significant discount to par because of rising interest rates. Buying bonds at a substantial discount to par has significant tax implications for the buyer, so historically we have seen limited demand from institutional investors for this bond structure. The need to sell these bonds caused concern in the municipal bond market. Fortunately, demand for the bonds showed up from some traditional and non-traditional investors because of the potential performance of these bonds if interest rates decline. By July, largely all the bonds in the bank portfolios had been sold at significantly tighter spreads than the market had anticipated. However, banks continued to reduce their net holdings throughout 2023, so they had very limited demand for municipal bonds during the year.

Although it has not gotten as much press as banks reducing their holdings, insurance companies have also reduced their holdings of municipal bonds by a sizeable amount in 2023. According to the Fed, this year, insurance companies have reduced their holdings of municipal bonds by almost \$42 billion through September, a 9.5% reduction. Insurance companies likely reduced their holdings because of significant losses incurred and the relative attractiveness of other taxable fixed income assets compared with tax-exempt municipal bonds. This means that banks and insurance companies combined have reduced their holdings of municipal bonds by \$102 billion, or 10%, in just nine months.

Typically, the municipal bond market has less depth when it comes to types of investors than other fixed income markets due to the tax exemption and the corresponding lower yields. Investors such as foreign investors and tax deferred accounts get little to no benefit from the tax exemption, so they are likely to invest in taxable fixed income, which typically has higher yields than tax-exempt bonds. In 2023, net outflows from mutual funds and the significant reduction in holdings by banks and insurance companies created a significant challenge to institutional demand for municipal bonds.

While demand from institutional investors was muted and robust demand from individual investors was the dominant theme in 2023, continued net inflows for tax-exempt mutual funds would be a positive for the municipal bond market in 2024, especially the long end of the market. Mutual funds tend to buy longer dated bonds than individual investors, so any increase in demand from mutual funds would likely benefit the long end of the market.

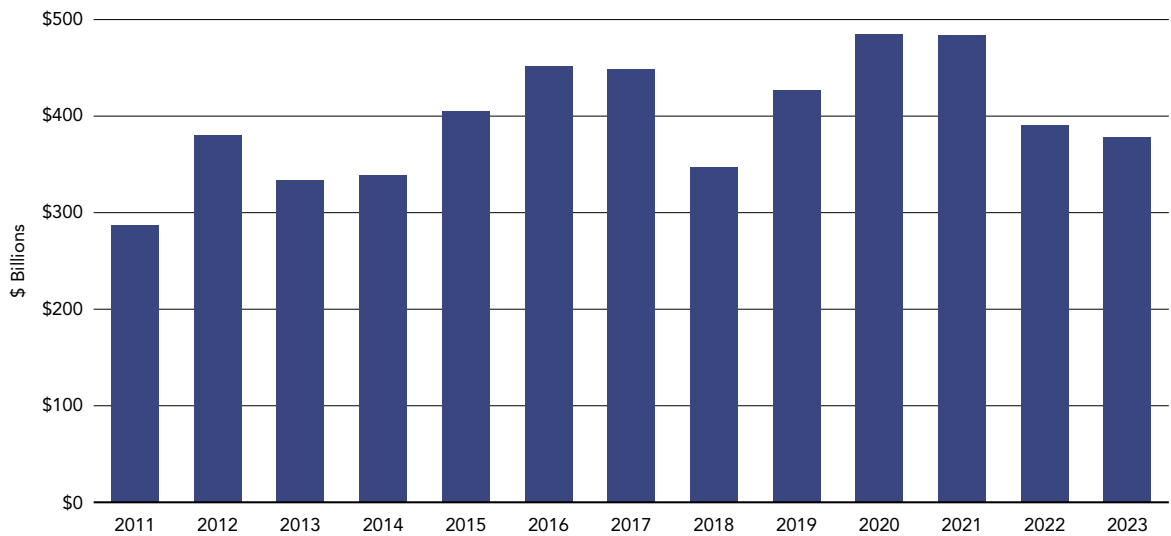
⁵ Financial Accounts of the United States, Board of Governors of the Federal Reserve System, December 7, 2023.

New Issue Volume⁶

The year 2023 is the second straight year where new issue volume was below \$400 billion, after approaching \$500 billion in 2020 and 2021. New issue volume in 2023 was \$379 billion, down 3% compared to 2022. See Figure 5.

Tax-exempt volume was \$325 billion in 2023, up 3% vs. 2022 and down 7% from 2021. Conversely, higher interest rates dramatically curtailed taxable issuance, which was only \$37 billion in 2023, down 32% compared to 2022 and down 69% compared to 2021, when taxable issuance reached \$121 billion. In 2023, taxable debt accounted for 10% of the new issue market compared to 14% in 2022 and 25% in 2021. Taxable issuance reached 28% of the market in 2009 and 2010 because of the Build America Bonds program and close to that in 2020 and 2021, when historically low interest rates enabled issues to achieve savings by refunding tax-exempt debt with taxable debt. However, previous MSRB research has shown that taxable issuance as a percentage of total issuance is normally less than 10% of the market.⁷

Figure 5. Municipal Market Issuance, 2011–2023



Source: Refinitiv

⁶ All new issue volume data excludes notes.

⁷ See “Overview of the Taxable Municipal Bond Market” The Municipal Securities Rulemaking Board, August 2021.

Dealer Departures and Potential Market Implications

In December, Citigroup (Citi) announced that it was shutting down its municipal business as part of an organizational review. At the time of the announcement, according to Refinitiv, Citi ranked sixth in underwriting with a 6% share, down from the number 2 underwriter in 2018, with a 13% market share. A review of trades in the secondary market shows a similar pattern, with Citi's market share decreasing in the past five years. Although Citi no longer had the footprint it used to, they were still a significant presence in the market.

The announcement by Citi came just a couple of months after UBS announced it was exiting the public finance business. At the time of the announcement, according to Refinitiv, UBS ranked 22nd in underwriting. Unlike Citi, UBS will continue to bid deals competitively and trade bonds in the secondary market.

Although the market seems poised to handle these departures, Citi's exit could impact liquidity over time. Previous MSRB research has shown that most firms exiting the municipal bond business were small players in the market. Citi is not.

Conclusion and Outlook

The year 2023 proved to be another eventful one in the municipal bond market, highlighted by record trade count and volatile interest rates. Once again, individual investors showed how important they are to the market, with individual investor demand surging while institutional demand was muted as mutual funds saw net outflows and banks and insurance companies reduced their holdings of municipal bonds by more than \$100 billion through September. With such a volatile interest rate environment, new issue volume also fell below \$400 billion for the second year in a row. And to top things off, UBS and Citi announced they were exiting part or all of their municipal bond business, which could have an impact on the market over time.

In 2024, demand for municipal bonds will likely be determined by the answers to a few questions:

- Will tax-exempt mutual funds see a return to net inflows?
- Will banks and insurance companies continue to reduce their holdings of municipal bonds?
- Will demand from individual investors continue with yields now dramatically lower than the highs seen in late October?

These demand factors will be especially important if we see an increase in issuance in 2024 compared to last year. What happens to new issue volume, and, of course, what actions the Fed takes will likely have a significant impact on the municipal bond market.

ABOUT THE MSRB

The Municipal Securities Rulemaking Board (MSRB) protects and strengthens the municipal bond market, enabling access to capital, economic growth, and societal progress in tens of thousands of communities across the country. The MSRB fulfills this mission by creating trust in our market through informed regulation of dealers and municipal advisors that protects investors, issuers and the public interest; building technology systems that power our market and provide transparency for issuers, institutions, and the investing public; and serving as the steward of market data that empowers better decisions and fuels innovation for the future. The MSRB is a self-regulatory organization governed by a board of directors that has a majority of public members, in addition to representatives of regulated entities. The MSRB is overseen by the Securities and Exchange Commission and Congress.



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