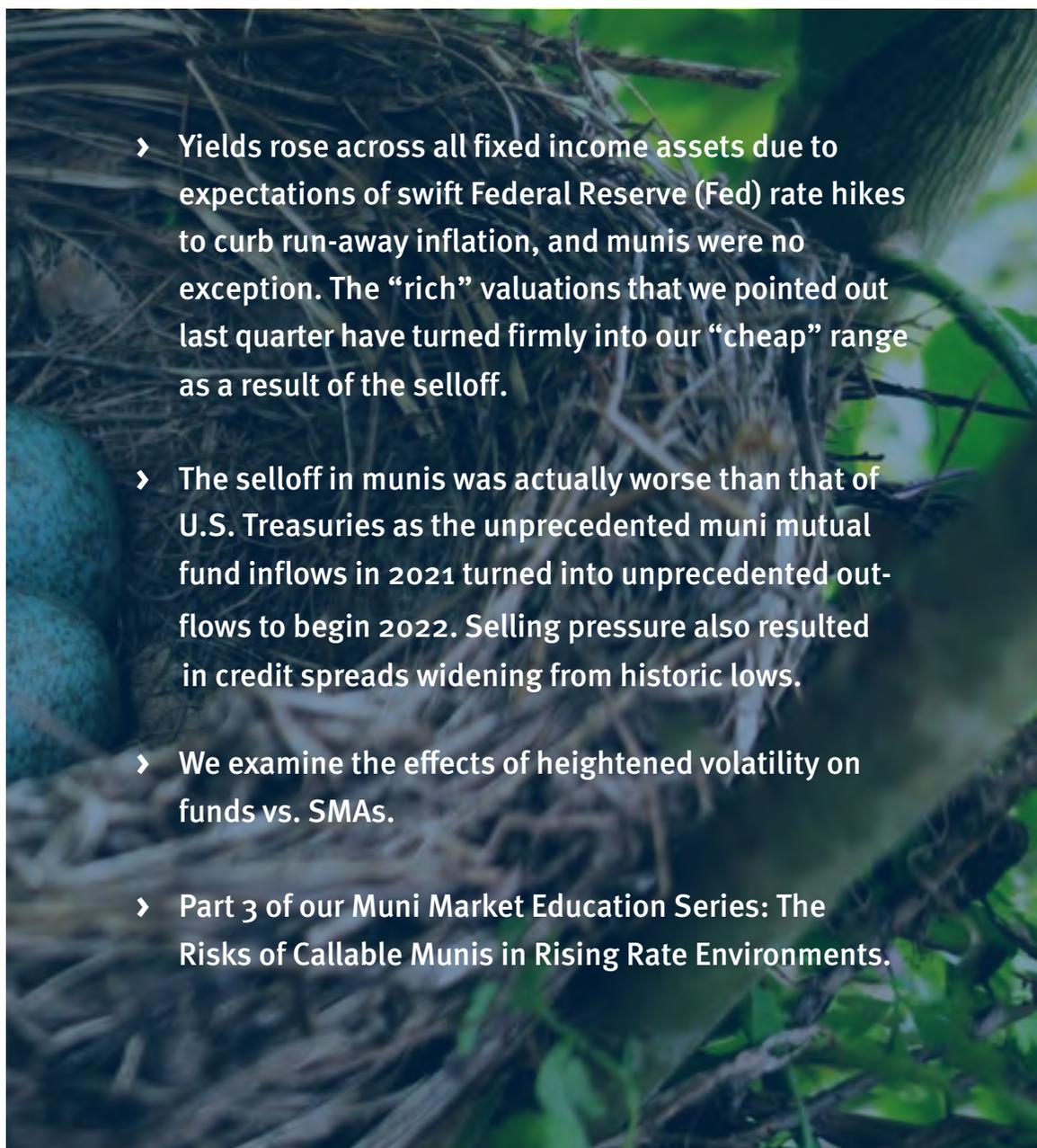


MUNIWATCH

FIXED INCOME MARKET UPDATE



- › Yields rose across all fixed income assets due to expectations of swift Federal Reserve (Fed) rate hikes to curb run-away inflation, and munis were no exception. The “rich” valuations that we pointed out last quarter have turned firmly into our “cheap” range as a result of the selloff.
- › The selloff in munis was actually worse than that of U.S. Treasuries as the unprecedented muni mutual fund inflows in 2021 turned into unprecedented outflows to begin 2022. Selling pressure also resulted in credit spreads widening from historic lows.
- › We examine the effects of heightened volatility on funds vs. SMAs.
- › Part 3 of our Muni Market Education Series: The Risks of Callable Munis in Rising Rate Environments.

Muni Yields Rise Dramatically

Due to expectations of more dramatic Fed rate hikes to curb inflation, yields on all fixed income assets rose in the first quarter. Muni yields jumped by an average of 120 basis points across the curve (graph, top-right). In comparison, U.S. Treasuries rose by an average of 80 basis points across the curve. This underperformance is reflected in the 10-year Muni-to-Treasury ratio increasing from 68% at the end of 2021 to 94% at the end of March. Negative returns were so drastic that they nearly equaled those seen in March of 2020, the height of economic uncertainty due to the pandemic. The aggregate muni index was down 3.24% in March compared to down 3.63% in March of 2020, according to Bloomberg data.

Funds Experience Outflows, Leading to Forced Selling

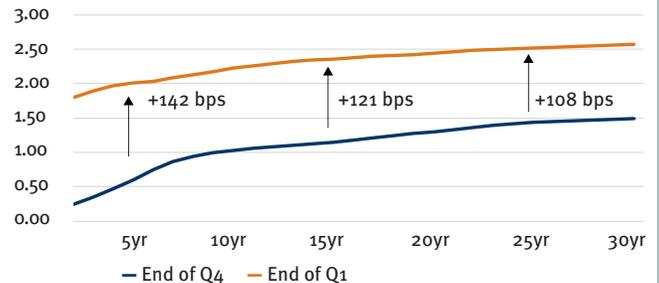
Demand from unprecedented muni mutual fund inflows in 2021 created a virtual price floor in the muni market. The opposite is true to start 2022, as muni mutual funds have seen dramatic outflows since early January, totaling nearly \$22 billion (graph, upper-middle-right). These outflows have led to forced selling (we examine the effects of volatility on funds vs. SMAs on the following page), as evidenced by outsized bid list volume, which increased from \$17.5 billion in the month of January to \$19.7 billion in February to a staggering \$26.4 billion in March, according to Bloomberg data. The selling pressure has even resulted in the widening of credit spreads. After grinding lower throughout 2021, spreads have begun to widen (graph, lower-middle-right). We do not view this as a deterioration in credit (credit metrics are in fact mostly improving) but rather a technical result of the selling pressure. We mentioned last quarter that munis were experiencing “rich” valuations. This selloff has turned the tide and we are now firmly in our “cheap” range (graph, bottom right).

Q2 Outlook

We view the current ratio levels as one of the first real buying opportunities since the pandemic began and continue to take advantage of the sharp increase in yields. Once the inflation picture and resulting plan for Fed rate hikes becomes more clear, we expect the volatility in rates to stabilize. As a result, we anticipate muni investors will return to the market and take advantage of these higher yields, prompting a return to more normal valuations.

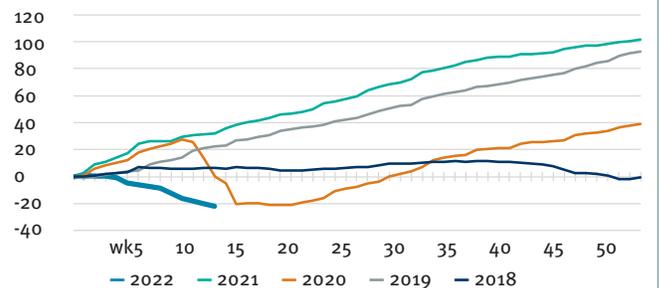
AAA MUNI YIELD CURVE

Source: Refinitiv TM3. Data as of 3/31/2022.



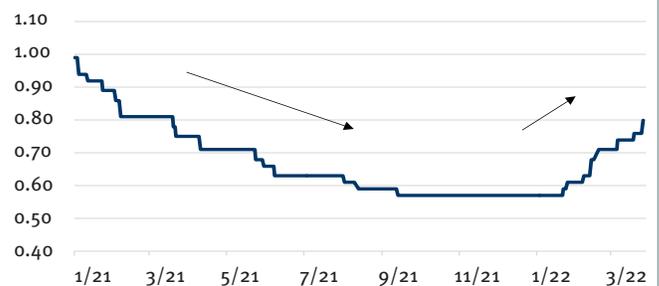
CUMULATIVE MUNI MUTUAL FUND FLOWS (BILLIONS)

Source: Refinitiv Lipper. Data as of 3/31/2022.



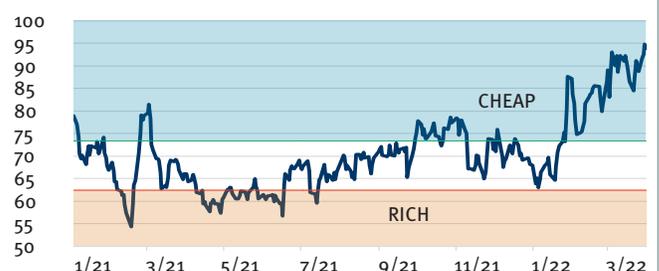
10YR MUNI BBB SPREAD

Source: Refinitiv TM3. Data as of 3/31/2022.



10YR AAA MUNI TO TREASURY YIELD RATIO

Source: Bloomberg, Refinitiv TM3. Data as of 3/31/2022.



VOLATILITY VOLATILITY

COMPARING FUNDS TO SMAS IN TIMES OF MUNI MARKET STRESS

Mutual funds and Separately Managed Accounts (SMAs) both offer exposure to specific asset classes. With an SMA, investors benefit from direct ownership of securities, versus investing in a mutual fund, where assets are pooled with those of other investors. The small, intricate muni market is prone to more extreme stress than larger, more liquid fixed income markets. As a result of the increase in assets of muni mutual funds over the past few years, these funds have begun to “control” the market and market moves have been dictated more by fund flows than by overall rate changes.

	SMA	MUTUAL FUND
Cash Added	SMA can deploy cash slowly if valuations are “rich” and/or pinpoint certain areas of the curve that offer the best value.	Fund buys to invest cash, regardless of valuation metrics.
Cash Redeemed	SMA can sell slowly if market is weak, selecting individual holdings to sell, considering market valuations and tax consequences.	Fund must sell to meet settlement date of redemptions, regardless of market weakness, sells holdings with the most favorable bid, typically higher grade and shorter duration, to maintain performance, without regard to tax consequences to investors.
Customization/ Transparency	SMA can offer income exempt from certain state taxes as well as structured to include/exclude holdings on the sector and issuer level. Investors receive regular detailed reporting on all individual holdings.	Fund can offer income exempt from certain state taxes. Most investors are “blind” to individual holdings.
Tax Efficiency	Individual holdings can be sold to generate taxable capital gains/losses on demand and/or on an ongoing basis.	Taxable capital gains/losses are passed on to all investors.
Access	WCA portfolio managers are directly available to clients and their advisors, not via a call center, wholesaler, or sales representative.	Investors typically contact a call center for information on their account and do not have direct access to portfolio managers.

MUNICIPAL BONDS: THE RISKS OF CALLABLE MUNIS

What is a Callable Bond?

A callable bond allows an issuer to pay off the bond, typically at par, prior to maturity. This creates flexibility for the issuer but adds risk for the investor. As compensation for assuming this risk, investors will usually receive a higher yield. Munis with maturities of more than 10 years are typically issued with 10-year calls.

As Interest Rates Rise, Muni Investors Should be Wary of a Special Risk Associated with Callable Bonds.

Investors use bonds to generate a *known* income stream over the life of the bond. However, the use of callable bonds adds *unknowns*; whether or not the call is exercised has the potential to change the expected maturity date and income stream, which undermines the basis for investment. Typically, a meaningful rise in yields will have a greater effect on the price of a callable bond than a non-callable bond, called *convexity*. Callable bonds are said to have *negative convexity*.

What is Negative Convexity?

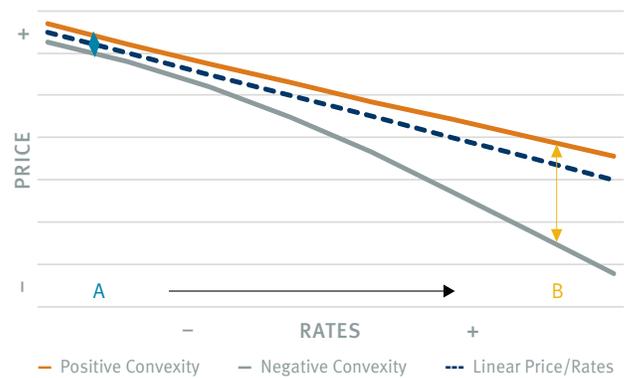
As rates rise, a callable bond will typically “pivot” from being priced to its call to being priced to its maturity as the issuer is less likely to exercise the call. Due to this “pivot,” the price of a callable bond will fall faster as rates rise. *Negative convexity* measures the non-linear relationship between price decrease and rate increase of callable bonds (see Illustrative Example, right).

A good comparison is a typical mortgage. Borrowers (issuers) are less likely to refinance their mortgage when rates rise and they have already locked in a lower rate. Mortgages have *negative convexity*.

ILLUSTRATIVE EXAMPLE: Consider two investors, Wilbur and Orville. With interest rates near historic lows, both want to buy a 10-year bond issued by the Town of Kitty Hawk. Wilbur buys a non-callable 10-year bond (positive convexity). Orville, wanting to earn some additional income, buys a 20-year bond, callable in 10 years (negative convexity).

After five years, Wilbur and Orville want to buy a new airplane. Interest rates have risen drastically since their bonds were purchased. While Wilbur’s bond has lost value, it has remained priced to its maturity, now in 5 years. Unfortunately, Orville’s bond has “pivoted” and is now priced to its final maturity, now in 15 years, and has lost more value than Wilbur’s.

Bonds with Positive Convexity Outperform in Rising Rate Environments



Source: WCA

The Good and Bad of Callable Bonds

Callable bonds outperform only when rates stay flat

Rising Rates (Bad)	<ul style="list-style-type: none"> Call option expires because rates have risen and issuer has no incentive to refinance at higher rates Investor forced to hold bond past call date as price decreases and duration increases
Flat Rates (Good)	<ul style="list-style-type: none"> Call option may or may not be exercised by issuer Investor earns additional income
Falling Rates (Bad)	<ul style="list-style-type: none"> Call option exercised because rates have fallen and issuer can refinance at lower rates Investor forced to reinvest proceeds from called position at lower rates

Negative Convexity Bond				Positive Convexity Bond			
Increase in Rates	Priced to	Price	% Price Change	Increase in Rates	Priced to	Price	% Price Change
0%	Call	111.140	0%	0%	Maturity	113.430	0%
1.00%	Call	106.280	-4%	1.00%	Maturity	108.460	-4%
2.00%	Call	101.660	-9%	2.00%	Maturity	103.730	-9%
3.00%	Maturity	93.310	-16%	3.00%	Maturity	99.245	-13%
4.00%	Maturity	83.738	-25%	4.00%	Maturity	94.983	-16%

Source: Bloomberg, WCA

While investors may be tempted to consider callable structures to increase yield, at WCA, we carefully evaluate and monitor each holding’s unique convexity factor and favor bonds with positive convexity. The in-depth monitoring offered by our active management is necessary to navigate the increasingly complex muni market while rates remain at historically low levels.



About Washington Crossing Advisors

Washington Crossing Advisors, LLC (“WCA”) is an SEC registered investment advisor and wholly owned subsidiary of Stifel Financial Corp. WCA helps supervise and manage over \$6 billion in assets under advisement for individuals and institutions.

The team is managed by Kevin R. Caron, CFA and Chad A. Morganlander, who were among the founding members of Washington Crossing Advisors.

Washington Crossing Advisors’ views on investing and markets are regularly sought by national media outlets, including *CNBC*, *Bloomberg*, *Fox Business News*, *The Wall Street Journal*, *Forbes*, and *Reuters*.

Philosophy and Process

We believe that investments should be selected only after clear and quantified measures of value, risk, and potential reward have been made. Our investment approach combines top-down analysis of the macro economy with fundamentally rooted, bottom-up security analysis.

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Description of Indices and Terms: All performance calculations of indices are calculated on a total return basis (reflecting reinvestment of dividends and other earnings). Indices are unmanaged, are not available for direct investment, and have no associated management fees.

Bloomberg Aggregate Bond Index: A composite of the Bloomberg Gov't/Corp Index, Mortgage-Backed Securities Index, and Asset-Backed Securities Index, including securities that are investment grade or better, have at least one year to maturity, and have an outstanding par value of at least \$100 million.

S&P 500 Index: Capitalization-weighted composite of 500 stocks traded on the NYSE, AMEX, and NASDAQ; not the largest 500 stocks in U.S., but rather a blend of leading companies in leading industries in the U.S. economy; index comprised of 10 broad industrial sectors.

Dow Jones U.S. Select REIT: The Dow Jones U.S. Select REIT Index intends to measure the performance of publicly traded REITs and REIT-like securities. The index is a subset of the Dow Jones U.S. Select Real Estate Securities Index (RESI), which represents equity real estate investment trusts (REITs) and real estate operating companies (REOCs) traded in the U.S.

The ICE U.S. Treasury 1-3 Year Bond Index is a market value weighted index designed to measure the performance of U.S. dollar-denominated, fixed rate U.S. Treasury securities with minimum term to maturity greater than one year and less than or equal to three years.

Markit iBoxx USD Liquid High Yield Index consists of liquid USD high yield bonds, selected to provide a balanced representation of the broad USD high yield corporate bond universe.

Moody's Baa Corporate Bond Index—An index comprised of industrial bonds rated Baa by Moody's with a minimum maturity of 20 years.

Consumer Price Index—A measure of the average change in prices over time for a basket of consumer goods.

Asset Allocation—Asset allocation does not ensure a profit or protect against loss.

The FTSE Developed All Cap ex U.S. Index is part of a range of indices designed to bench-

mark international investments. The index comprises large, mid and small cap stocks from developed markets excluding the U.S.

The FTSE Emerging Markets All Cap China A Inclusion Index is a market-capitalization weighted index representing the performance of large, mid and small cap stocks in Emerging markets. The index is comprised of approximately 3350 securities from 21 countries.

International and Emerging Markets Investing—There are special considerations associated with international investing, including the risk of currency fluctuations and political and economic events. Investing in emerging markets may involve greater risk and volatility than investing in more developed countries.

Bonds and High Yield Bonds—When investing in bonds, it is important to note that as interest rates rise, bond prices will fall. High yield bonds have greater credit risk than higher quality bonds.

Commodities and Futures—The risk of loss in trading commodities and futures can be substantial. You should therefore carefully consider whether such trading is suitable for you in light of your financial condition. The high degree of leverage that is often obtainable in commodity trading can work against you as well as for you. The use of leverage can lead to large losses as well as gains.

Real Estate—When investing in real estate companies, property values can fall due to environmental, economic, or other reasons, and changes in interest rates can negatively impact the performance.

Opportunity Disclosure: The Washington Crossing Advisors, LLC Stifel Conquest and Conquest Alternatives Portfolios require a \$25,000 minimum investment. More information on the Stifel Opportunity Program is included in the Stifel Consulting Services Disclosure Brochure and Part II of the Manager's Form ADV, which may be obtained from your Financial Advisor and which further outlines the fees, services, exclusions, and disclosures associated with this program. The information contained herein is believed to be reliable and representative of the portfolios available through Stifel; however, the accuracy of this information cannot be guaranteed. Investors should consider all terms and conditions before deciding whether the Opportunity Program and these strategies are appropriate for their needs.

The S&P CoreLogic Case-Shiller 20-City Composite Home Price NSA Index is a value-weighted average that seeks to measure the

value of residential real estate in 20 major U.S. metropolitan areas. The index is a composite of single-family home price indices for the nine U.S. Census divisions.

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