High-yield municipal bonds: an overlooked sector

Federated Hermes

Portfolio Construction Solutions

Key takeaways

- **High-yield (HY) municipal bonds (munis) have produced tax-advantaged income and strong total returns, representing an attractive opportunity for investors.**
- **An analysis of the fundamental risk characteristics of municipal high-yield bonds reveals a lower risk profile than one might anticipate.**
- **Further examination shows that an appropriate mix of investment grade and high-yield munis may produce more desirable return/risk characteristics than an allocation to investment grade munis alone.**

Municipal high-yield bonds overview

High-yield municipal bonds are an asset class that has produced tax-advantaged total returns with a heavy yield component. Additionally, high-yield municipals have shown to be less efficient than many other asset classes, representing a potential opportunity for active managers.

The natural investor in municipal bonds tends to be risk-averse. Over 66% of all municipal bonds are owned by individual investors through a combination of direct ownership and funds[1]. In contrast to investment grade municipals, high-yield municipal bonds are more volatile and have greater credit risk. The relatively conservative nature of these municipal bond investors creates an opportunity for high-yield municipal bond managers performing fundamental credit analysis to identify misvalued securities.

An analysis of the fundamental risk characteristics of municipal high-yield reveals a lower risk profile than one might anticipate, despite its relatively elevated risk profile compared to investment grade munis.

The municipal bond market

With over one million issues and over 40,000 issuers[2], the municipal bond market is highly fragmented, more volatile, less liquid and less efficient than in the past. Before the Great Financial Crisis, bond insurers guaranteed 60% of all new issues. Currently, insurers guarantee 8-9% of new issues[3], making fundamental credit analysis more critical than ever. The high-yield muni market includes several sectors lightly represented within investment grade munis, such as charter schools and life care. Also, over 60% of the high-yield market comprises revenue bonds—backed by revenues from specific services, not tax receipts. These may be more defensive in recessionary periods than similarly-rated corporate bonds, as toll roads and essential services remain vital.

The relative lack of participation from institutions in high-yield munis creates an opportunity for actively-managed portfolios due to potential inefficiencies caused by a relatively small pool of buyers. Tax-exempt entities, such as endowments and foundations, do not benefit from tax-exempt interest from municipal bonds. Other institutional investors, such as insurance companies, focus on investment grade municipals.

Credit research

As an asset class, high-yield municipal bonds are more credit-centric than investment grade municipals. Views on creditworthiness—versus interest rates—are typically the predominate influence on individual high-yield municipal bond price movements. Further, higher yields/coupons can meaningfully offset negative price movement due to spreads widening or rates rising.

Municipal default rates have been much lower than corporate default rates—BBB municipal bonds have defaulted at a lower rate than AAA corporate bonds.

Exhibit 1 – Standard and Poor's bond default analysis

10-Year Cumulative Average Default Rates

Credit Rating	Municipal* 1986 – 2022	Corporate** 1981 – 2022
AAA	0.00%	0.83%
AA	0.03%	0.96%
A	0.08%	1.65%
BBB	0.71%	3.93%
BB	3.63%	13.35%
B	10.29%	24.79%
CCC – C	36.86%	54.98%

Past performance is no guarantee of future results.

*Source: Standard & Poor's RatingsDirect® 2022 Annual U.S. Public Finance Default and Rating Transition Study, March 30, 2023.

**Source: Standard & Poor's RatingsDirect® 'Default, Transition, and Recovery: 2022 Annual U.S. Corporate Default and Rating Transition Study, June 13, 2023.

The amount of public information available about municipal securities is generally less than that for corporate bonds. Special factors, such as legislative changes and local and business developments, may adversely affect the yield or value of municipal securities.

Credit ratings do not remove market risk.

Default rates among high-yield municipal bonds have been higher than investment grade municipal bonds. However, put in context, high-yield municipal credits have compared favorably to high-yield corporates as seen in Exhibit 1.

Low correlation

High-yield municipal bonds have exhibited low correlation with other risk asset classes. Over the past ten years (ending 6/30/23), high-yield municipal bonds exhibited a modest 0.36 correlation with the S&P 500 and a 0.70 correlation with the Bloomberg Barclays US Aggregate Bond Index. This correlation profile compares favorably to other yield-oriented diversifiers. For example, when against the S&P 500, Real Estate Investment Trusts (REITs) have a 0.73 correlation, and the Bloomberg Credit Index has a 0.52 correlation. This quality can make munis attractive from a portfolio construction perspective. Few, if any, asset classes have provided similar yield and correlation opportunities.

Investors should note that the strategy has shown a high correlation to investment grade municipal bonds of 0.89. Please see the correlation exhibits below:

Exhibit 2: High-yield municipal bond return correlations — 10 years ending 6/30/23

	Index	1	2	3	4	5	6	7
1	**Bloomberg HY Municipal Index**	1.00						
2	**Bloomberg Municipal Index**	0.89	1.00					
3	**Bloomberg US Aggregate Bond Index**	0.70	0.85	1.00				
4	**Bloomberg US Credit Index**	0.77	0.82	0.91	1.00			
5	**S&P 500 Index**	0.36	0.30	0.30	0.52	1.00		
6	**MSCI ACWI Ex USA Index**	0.45	0.39	0.34	0.57	0.86	1.00	
7	**FTSE Nareit All Equity REIT Index**	0.56	0.51	0.50	0.66	0.73	0.65	1.00

Sources: Morningstar Inc.; Federated Hermes. **Past performance is no guarantee of future results.** For illustrative purposes only.

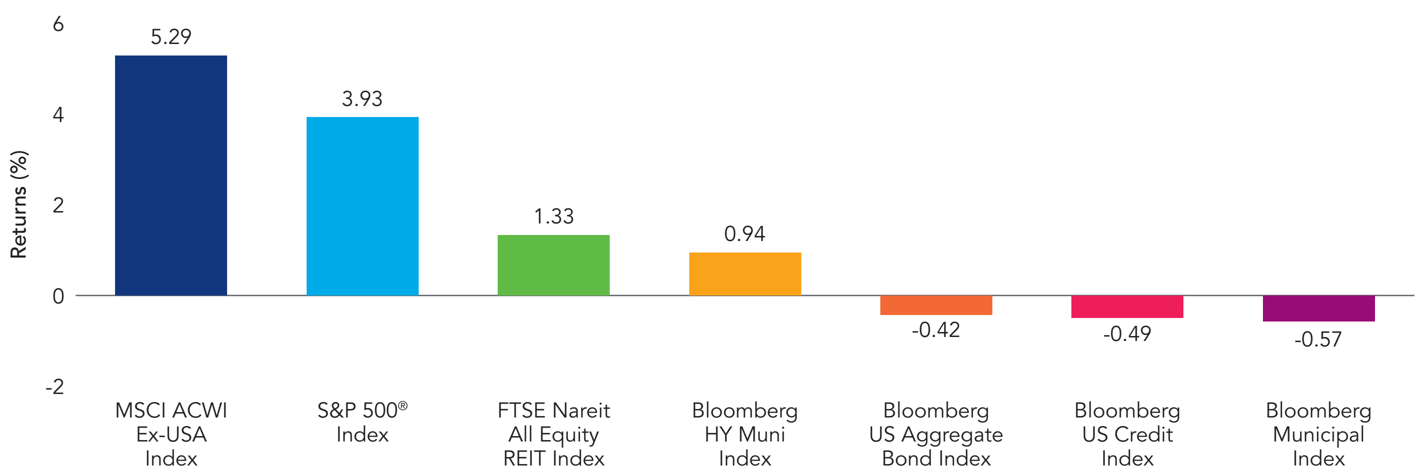
Munis and inflation

As we saw in 2022, bond prices can be highly sensitive to inflation and inflation expectations. Because of the income generating nature of bonds, many investors will own them as a permanent allocation in their portfolios and tolerate some price volatility to generate that income.

High-yield municipal bonds can be a way to maintain an attractive income stream that can offset inflation. Investors concerned with maintaining the long-term purchasing power of their wealth, may find the near-term coupon of high-yielding securities has considerable value. Furthermore, sales tax revenue or other income sources that correlate to inflation may secure some issues providing a measure of protection against inflation.

Exhibit 3 below shows that high-yield municipal bonds have shown a higher sensitivity (beta) to inflation and would be more attractive in an inflationary environment than their investment grade counterparts. This profile stands in contrast to other lower-yielding, more interest rate sensitive fixed income options.

Exhibit 3: Inflation sensitivity – Median beta to CPI — rolling 1 year returns 1/1/01 to 6/30/23



Source: Morningstar Inc.; Bureau of Labor Statistics; Federated Hermes. Consumer Price Index (CPI) for all urban consumers: all items in U.S. city average; percent change from year prior; monthly; seasonally adjusted vs. rolling 1-year index returns. The beta calculation is a historical measure of the index/asset class price sensitivity to movements in the CPI. A higher number indicates there has been greater response to movements in CPI. A negative beta indicates a price that has moved in the opposite direction of CPI. **Past performance is no guarantee of future results.** For illustrative purposes only.

Total return with a tax-advantaged yield

We have seen high-yield municipal bonds produce attractive, tax-advantaged total returns over a full market cycle. The indexes in Exhibit 4 have produced the indicated annualized returns over the trailing 15 years ending 6/30/23. Over a 15-year period that includes the negative returns of 2022 and two rate hike cycles, the municipal high-yield index outperformed many fixed income and equity indexes.

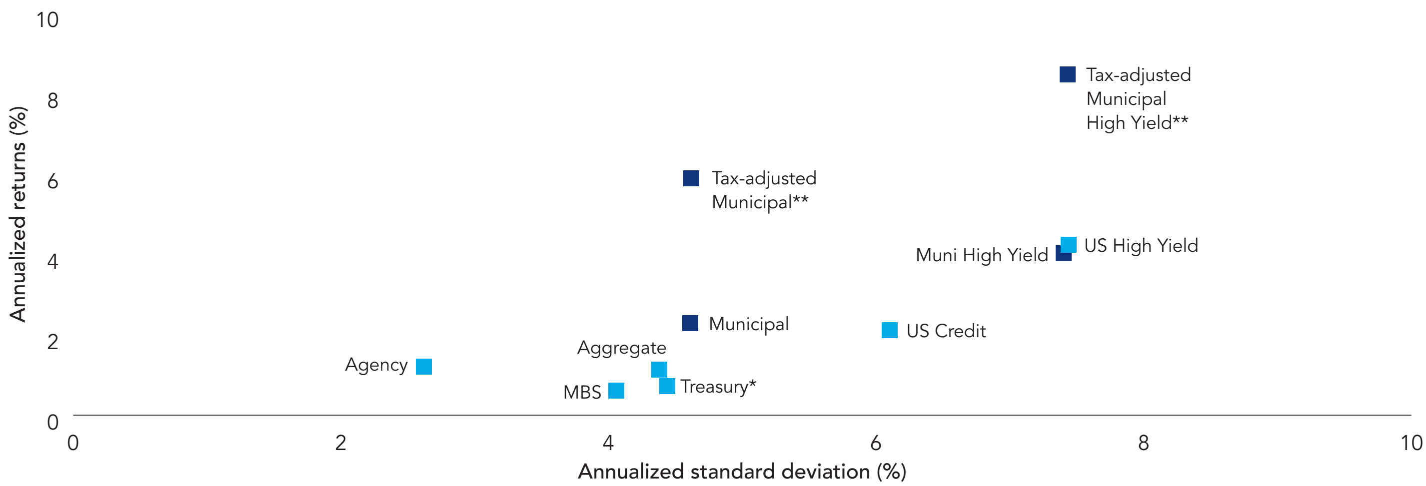
Exhibit 4: Comparative total returns

Index	15-year annualized total return through 6/30/23
S&P 500 Index	10.88
FTSE Nareit All Equity REITs Index	7.11
Bloomberg High-Yield Muni Index	4.93
Bloomberg US Credit Index	3.97
Bloomberg Municipal Index	3.56
MSCI All Country World Index Ex-USA	2.87
Bloomberg US Aggregate Bond Index	2.73

Sources: Morningstar Inc.; Federated Hermes.

When assuming one-half of the total return is tax-exempt interest (a generally conservative assumption) total returns from high-yield municipal bonds have shown to be mid- to high-single digits on a taxable equivalent basis, depending individual tax circumstances.

Exhibit 5: Taxable equivalent returns — 10 years ending 9/30/23



Sources: Barclays Research; Bloomberg. More information on index definitions at the end of the document.

*U.S. Treasury bond income is exempt from state income taxes and is adjusted using a national state average (top bracket), net of federal income tax.

**Based on an equally-weighted national average federal and state (top bracket) income tax rate; local taxes have not been considered.

Bloomberg indexes	Annualized return (%)	Annualized standard deviation (%)
Tax-adjusted Municipal **	5.89	4.62
Tax-adjusted Municipal High Yield **	8.48	7.43
Municipal	2.29	4.61
Muni High Yield	4.03	7.40
Aggregate	1.13	4.38
Treasury*	0.73	4.44
Agency	1.21	2.62
US Credit	2.12	6.10
MBS	0.61	4.06
US High Yield	4.24	7.44

Sources: Barclays Research; Bloomberg. More information on index definitions at the end of the document.

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Past performance is no guarantee of future results. The above charts are for illustrative purposes only and are not representative of performance for any specific investment.

Effects of duration

In March 2022, the U.S. Federal Reserve began raising the federal funds rate, continuing throughout 2023. These were the first increases in interest rates since 2018 and the first substantial ones since 2004-06, albeit at a much sharper pace.

Interest rate sensitivity (often measured as duration) is a key risk factor in fixed income portfolios. As long as the potential for rate hikes lingers, investors should be mindful of this risk. The duration of the Bloomberg Municipal High Yield Index was 7.6 years as of 6/30/23. In theory, a 100 bps rise in rates should cause a 7.6% decline in the portfolio's value.

However, high-yield municipal bond portfolios are more "credit-centric" and trade less on duration, or interest rate risk, than their investment grade counterparts. The track records of high-yield municipal bond indexes show that this asset class has produced positive total returns during two of the past four rate hike cycles and outperformed the Bloomberg US Aggregate Bond Index in three of the past four cycles.

When bonds decline in price, the offsetting effects of yield have the potential to be substantial. Active managers may gain an edge over the broader municipal bond market by leveraging credit research to identify municipal bonds with attractive yield and risk characteristics.

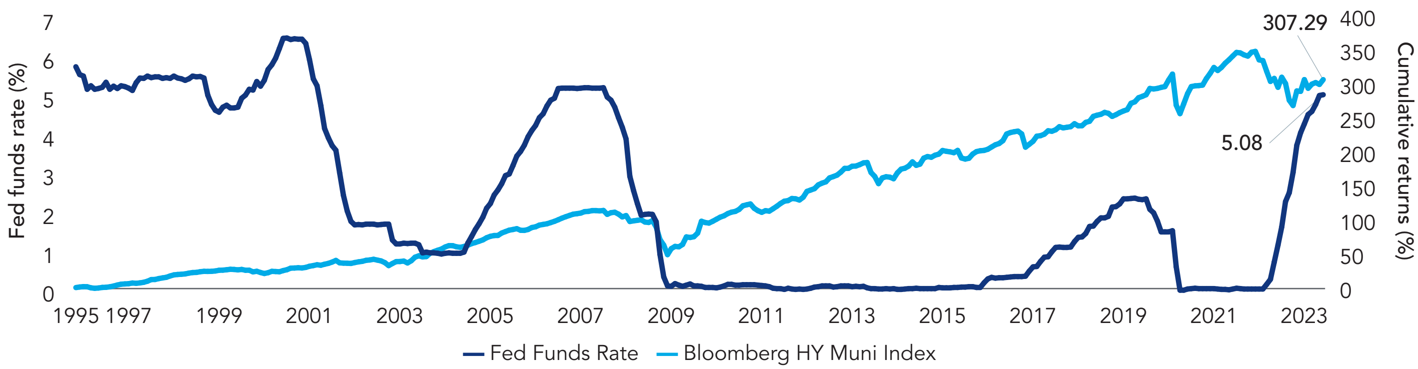
Exhibit 6: Returns in past hiking cycles

Periods when Fed tightened	Cumulative Fed funds change	Bloomberg Municipal HY Index	Bloomberg US Aggregate Bond Index
June 1999-May 2000	1.75	-2.70	2.29
June 2004-June 2006	4.25	10.87	2.99
Dec. 2015-Dec.2018	2.25	5.78	1.98
March 2022-June 2023	5.00	-3.34	-4.58

Sources: Federal Reserve; Bloomberg; Federated Hermes.

Exhibit 7: Returns over time

As illustrated in Exhibit 6 and below, municipal high yield has produced attractive returns through multiple rate hike cycles.



Source: Morningstar Inc. **Past performance is no guarantee of future results. The above charts are for illustrative purposes only and are not representative of performance for any specific investment.**

Determining the right allocation

For investors considering high-yield municipal bonds, an allocation to an existing diversified portfolio of equities and investment grade municipals—for most muni investors, this might be an allocation of 25% of a fixed income sleeve—may provide a good starting point.

The following returns illustrate a portfolio of 60% S&P 500/40% investment grade municipals compared to 60% S&P 500/30% investment grade municipals/10% high-yield municipals. In addition to greater long-run return and competitive yield, there is a modest increase in volatility and drawdown. However, the portfolio Sharpe ratio is greater in the portfolio that holds an allocation to high-yield municipals, indicating that the asset class can add value to the portfolio.

Additional consideration should be given to manager selection. High-yield munis are a unique asset class with a premium on security selection. Performance, methodology and level of experience are critical to manager evaluation in this inefficient sector of the market.

Exhibit 8: Index and hypothetical portfolio returns—7/1/03 to 6/20/23

	Total return	Standard deviation	Sharpe ratio
Bloomberg Municipal Index	3.55	4.59	0.47
Bloomberg HY Muni Index	5.19	7.58	0.50
HY Muni Difference	**1.64**	**2.99**	**0.03**
Bloomberg US Aggregate Bond Index	3.01	4.00	0.40
Bloomberg US High Yield 2% Issuer Cap Index	6.64	9.00	0.58
Taxable Difference	**3.63**	**5.00**	**0.18**
60% S&P 500, 40% Bloomberg Muni Bond (Annual Rebal)	7.75	9.24	0.68
60% S&P 500, 30% Bloomberg Muni Bond, 10% Bloomberg HY Muni (Annual Rebal)	7.89	9.42	0.68
Portfolio Difference	**0.14**	**0.18**	**0.00**

The hypothetical scenarios do not represent performance that any investor actually attained and are not a guarantee of future results. In addition, they do not reflect management or other fees which would reduce the returns that an investor would receive.

[1] Page 7: https://www.msrb.org/sites/default/files/Trends-in-Municipal-Securities-Ownership.pdf

[2] # of issuers Page 26 of S&P 2022 Annual U.S. Public Finance Default and Rating Transition Study

[3] www.bondbuyer.com/news/overall-bond-insurance-falls-despite-higher-industry-concentration

Definitions

Beta is a measure of an asset's sensitivity to market forces.

Correlation measures the degree to which two assets move in relation to each other. Correlations are used in advanced portfolio management, computed as the correlation coefficient, which has value that must fall between -1 and 1.

Duration is a measure of a asset's price sensitivity to changes in interest rates. Assets with longer durations are more sensitive to changes in interest rates than assets of shorter durations.

Standard Deviation is measure of volatility. More formally defined, a statistical measurement of dispersion about an average, which depicts how widely an investment's returns varied over a certain period of time.

Sharpe Ratio is calculated by using standard deviation and excess return to determine reward per unit of risk.

Bloomberg High Yield Municipal Bond Index: Is an unmanaged index made up of bonds that are non-investment grade, unrated or rated below Ba1 by Moody's Investors Service with a remaining maturity of at least one year.

Bloomberg Municipal Bond Index: Is a market-value-weighted index for the long-term tax-exempt bond market. To be included in the index, bonds must have a minimum credit rating of Baa. They must have an outstanding par value of at least $7 million and be issued as part of a transaction of at least $75 million. The bonds must be fixed rate, have a dated-date after December 31, 1990 and must be at least one year from their maturity date.

Bloomberg US Aggregate Bond Index: Is an unmanaged index composed of securities from the Bloomberg Government/Corporate Bond Index, Mortgage- Backed Securities Index and the Asset-Backed Securities Index. Total return comprises price appreciation/depreciation and income as a percentage of the original investment. Indices are rebalanced monthly by market capitalization.

Bloomberg US Corporate High Yield Index: Is an unmanaged index that is comprised of issues that meet the following criteria: at least $150 million par value outstanding, maximum credit rating of Ba1 (including defaulted issues) and at least one year to maturity.

Bloomberg US Credit Index: Is composed of all publicly issued, fixed-rate, nonconvertible, investment-grade corporate debt. Issues are rated at least Baa by Moody's Investors Service or BBB by Standard & Poor's, if unrated by Moody's. Collateralized Mortgage Obligations (CMOs) are not included. Total return comprises price appreciation/depreciation and income as a percentage of the original investment.

Bloomberg US Government Agency Index: Is a market value weighted index of U.S. government agency securities (other than mortgage securities) with maturities of one year or more.

Bloomberg US Mortgage-Backed Securities (MBS) Index: Tracks agency mortgage-backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA) and Freddie Mac (FHLM).

Bloomberg US Treasury Bond Index: Is part of Bloomberg global family of government bonds indices. The index measures the performance of the U.S. Treasury bond market, using market capitalization weighting and a standard rule based inclusion methodology.

The **FTSE Nareit US Real Estate Index Series** is a comprehensive family of REIT-focused indices that span the commercial real estate industry, providing market participants with a range of tools to benchmark and analyze exposure to real estate across the US economy at both a broad industry-wide level and on a sector-by-sector basis.

MSCI ACWI ex USA Index: Captures large- and mid-cap representation across 22 of 23 developed markets countries (excluding the U.S.) and 27 emerging markets countries. The index covers approximately 85% of the global equity opportunity set outside the U.S.

S&P 500® Index: Is an unmanaged capitalization-weighted index of 500 stocks designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.

Indexes are unmanaged and cannot be invested in directly.

Standard and Poor's Municipal Ratings

Bond credit ratings measure the risk that a security will default. Credit ratings of A or better are considered to be high credit quality; credit ratings of BBB are good credit quality and the lowest category of investment grade; credit ratings of BB and below are lower-rated securities; and credit ratings of CCC or below have high default risk.

A word on risk

Bond prices are sensitive to changes in interest rates and a rise in interest rates can cause a decline in their prices.

High-yield, lower-rated securities generally entail greater market, credit/default and liquidity risk and may be more volatile than investment-grade securities.

Interest income from municipal bonds may be subject to the federal alternative minimum tax (AMT) for individuals and corporations, and state and local taxes.

Diversification and asset allocation do not assure a profit nor protect against loss.

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