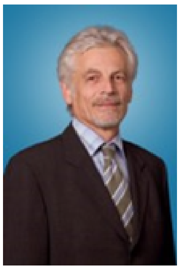
Trust must be earned

Amundi

September 2023

Positive Signs for Municipal Bonds

INVESTMENT TALKS



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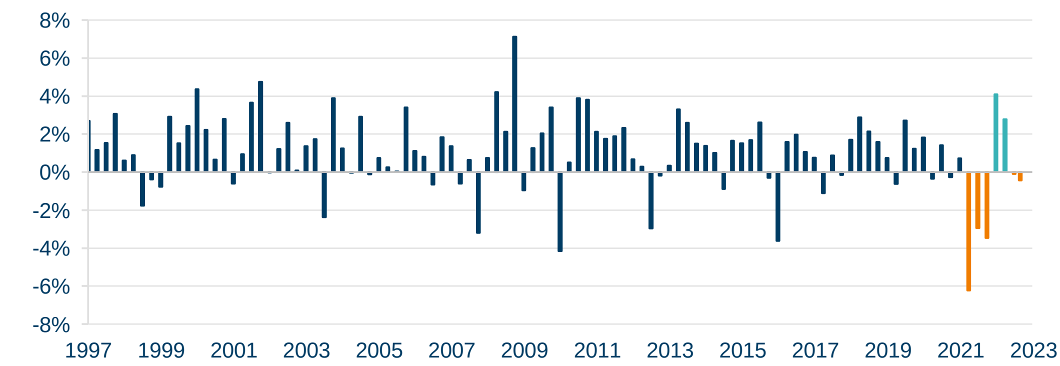
Executive summary

- *After a historic sell-off and only a partial recovery, we believe strong fundamentals support a positive outlook for municipal bond markets.*
- *We believe that high rainy day fund balances, federal support, and a lack of leveraging have left many state and local governments in a strong position.*
- *Historically, tax exemptions have tended to become more valuable with higher levels of interest rates.*

From Q1 through Q3 of 2022, the municipal bond market experienced a sell-off unprecedented in over 40 years, with the Bloomberg Municipal Bond Index falling more than 12%. Since that time, the market has recovered somewhat, returning 6.42% from 9/30/2022 through 8/10/2023. It is important to note that total return figures include the index yield, suggesting the price sell-off was more pronounced and is subsequently less recovered.

Much of the 2021/2022 sell-off was driven by macro factors such as persistent inflation and the US Federal Reserve's aggressive measures to tame it, while some of the pain was self-inflicted as investors hit the panic button – leading to over $115 billion of outflows. In our opinion, very little, if any, of the sell-off was due to fundamental concerns.

Exhibit 1: Historic Context of the Bloomberg Municipal Bond Index Sell-Off (Quarterly Returns)



Source: Bloomberg, 8/10/2023. Indices are unmanaged and their returns assume reinvestment of dividends and, unlike mutual fund returns, do not reflect any fees or expenses. Past performance is no guarantee of future results. It is not possible to invest directly in an index. See last page for further information about indices shown.

Fundamentals Remain Strong

While fixed income returns can be dominated in the short term by technical factors and Fed rate hikes, long-term bond performance has tended to follow yields less any reduction from credit events (defaults). While a portfolio of multiple bonds has many moving parts, it is generally expected to act similarly to the average characteristics of its underlying bonds.

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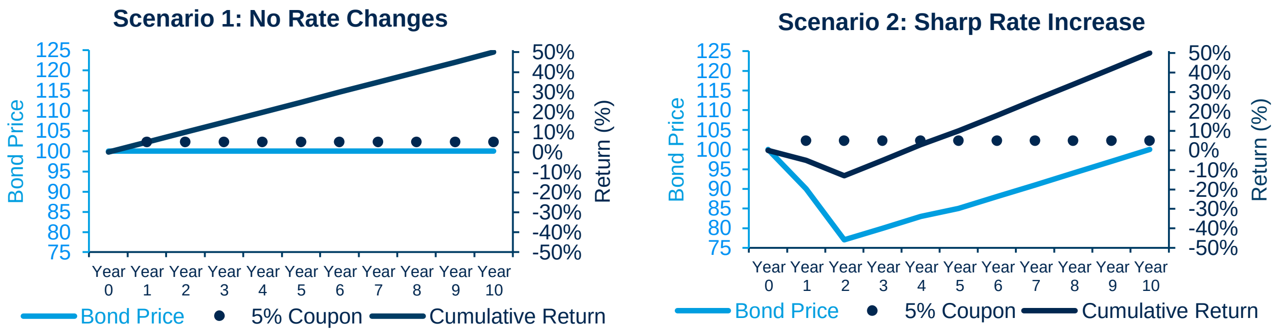
For example, we take a hypothetical 10-year bullet maturing bond (a bond whose entire principal value is paid upon maturity) paying a 5% coupon and purchased at 100 (par). Without a default, the bond should earn its coupons, then return par at maturity. However, prior to maturity, volatility from interest rates, selling pressure, or macro headlines can drastically change that path.

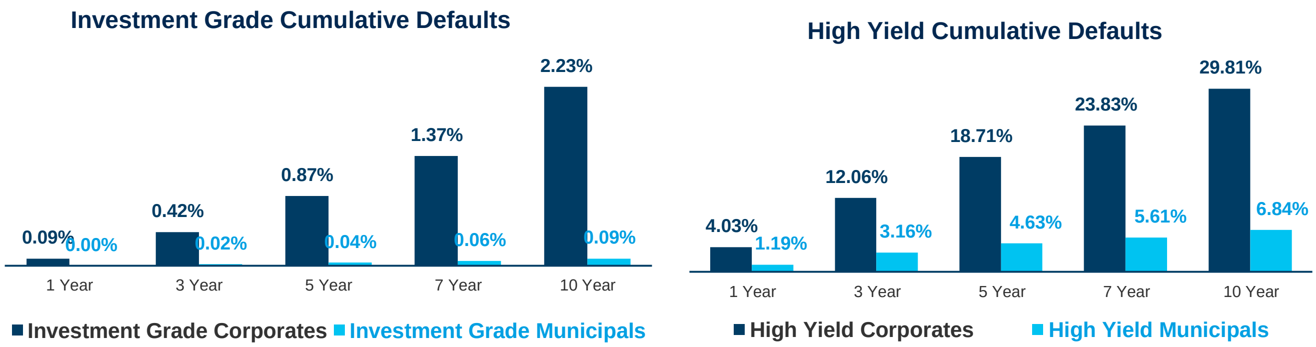
Exhibit 2: Hypothetical bullet bond performance with and without rate changes



Source: Amundi US, 8/10/2023. Hypothetical scenario for illustrative purposes only. Not meant to represent an actual bond or any Amundi US portfolio.

In Scenario 2, rising interest rates lead the bond to experience large initial losses, then take a steeper positive return path to arrive at the same endpoint as the bond in the flat rate environment of Scenario 1. The bond in neither scenario is assumed to default. Municipal bond defaults have been exceedingly rare, as represented in the charts below, they have only experienced a fraction of the defaults experienced by comparably rated corporate bonds.

Exhibit 3: Municipal bond defaults have been exceedingly rare



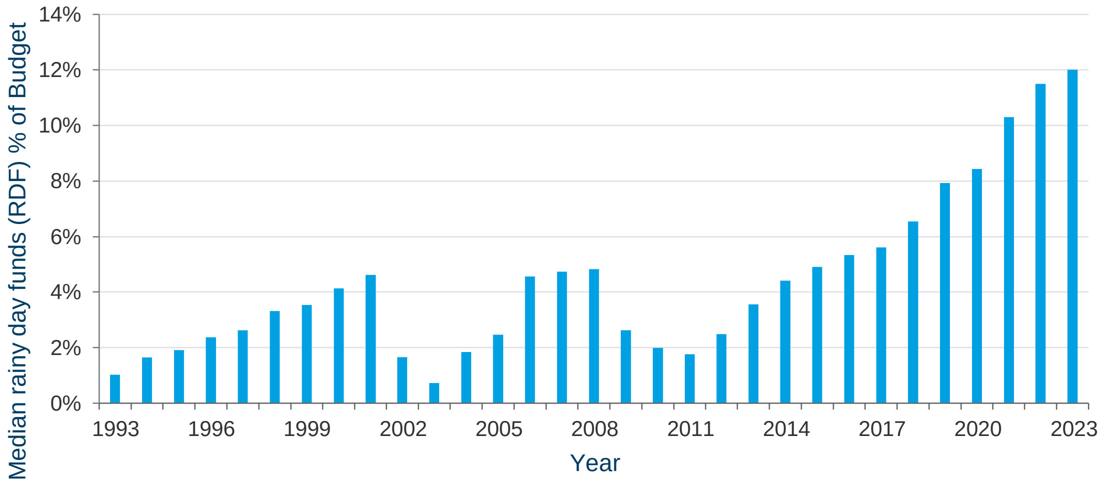
Source: Moody's Annual Default Study 2022, cumulative default rate of Moody's rated bonds since inception as per Moody's US Investment Grade Bond Index and Moody's High-Yield Bond Index. Indices are unmanaged and their returns assume reinvestment of dividends and do not reflect any fees or expenses. It is not possible to invest directly in an index.

Despite current macro uncertainty and increased recession fears, there are three reasons we do not expect the near-term default outlook for municipal bonds to be meaningfully higher than historic levels.

Reason #1: At the state level, revenues and rainy-day fund balances are higher than pre-pandemic levels

The year 2021 was a banner one for tax receipts. On average, states received roughly 16.5% more revenue from income tax, sales tax, business tax, and property taxes in 2021 than they received in either the 2019 or 2020 calendar years. According to the National Association of State Budget Officers' (NASBO) state fiscal surveys, 2022 tax collections posted another extremely strong year, coming in 14.5% higher in 2022 than in 2021, leaving state finances in what we consider to be the strongest place they have been in years. Revenue collections are expected to take a breather in 2023, currently projected to be about -0.3% under 2022 totals. This fiscal health is depicted by the swelling of rainy day funds (RDF), which are reserve funds stashed away by governments in good times, ready to be drawn upon during tougher economic periods. As measured by the percentage of overall budget expenditures, RDF balances are at their highest recorded levels of the past 30+ years.

Exhibit 4: Rainy day fund balances are at their highest recorded levels of the past 30+ years

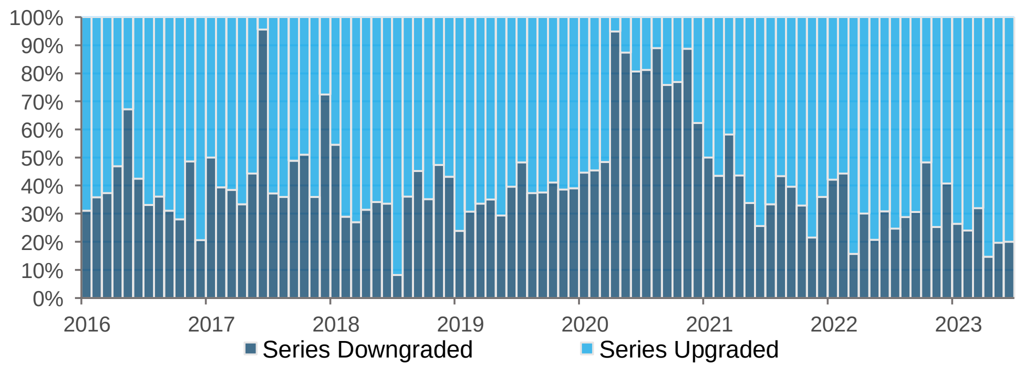


Source: The National Association of State Budget Officers 6/30/2023

Reason #2: Federal programs are also supporting municipal projects

With the federal government implementing a number of projects during the COVID-19 pandemic ($350 billion to state and local governments as part of the American Rescue Plan, plus an additional ~$300B+ to education and transit), smaller municipalities and revenue projects have benefitted alongside the state-level governments. Revenues agreed upon in the Infrastructure Investment and Jobs Act passed in late 2021 are still being distributed around the country. These funds are earmarked for improving connectivity, safety, and transportation as well as aiming to reduce environmental risks. While it would prove difficult to quantify how much each municipal project has benefitted from these programs, municipal financing is the backbone of education, mass transit, road & bridges, and other public infrastructure projects. Aggregate rating agency data (including general obligation and revenue issuances) depicts a strong migration from downgrades during the onset of the COVID-19 pandemic, to subsequent upgrades in 2021, 2022, and 2023.

Exhibit 5: Upgrade trends may reflect fundamental strength

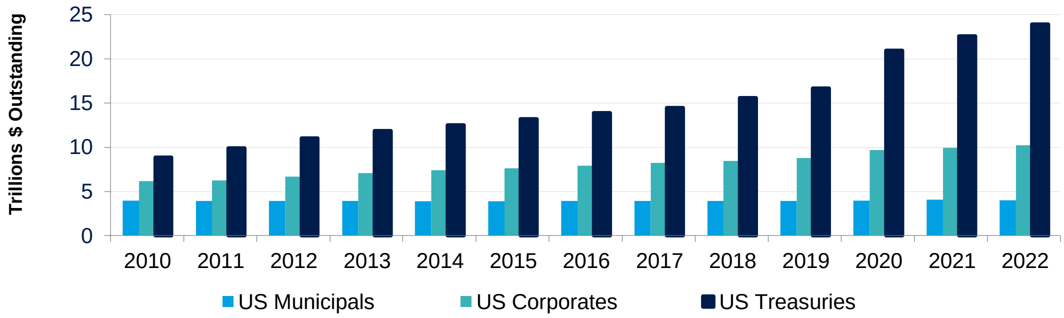


Source: Bloomberg, S&P, Fitch, as of 6/12/2023.

Reason #3: Overall, the municipal space hasn't been leveraging

The US corporate market has piled on roughly $4 trillion of additional debt over the past decade, while the federal government has more than doubled its outstanding debt total. In contrast, aggregate outstanding municipal debt has remained stable at about $4 trillion over the past 10-plus years. This suggests municipalities have generally been responsible with their borrowing and spending levels, and could have ample room to leverage in the future if necessary.

Exhibit 6: Total US Dollars Outstanding by Sector

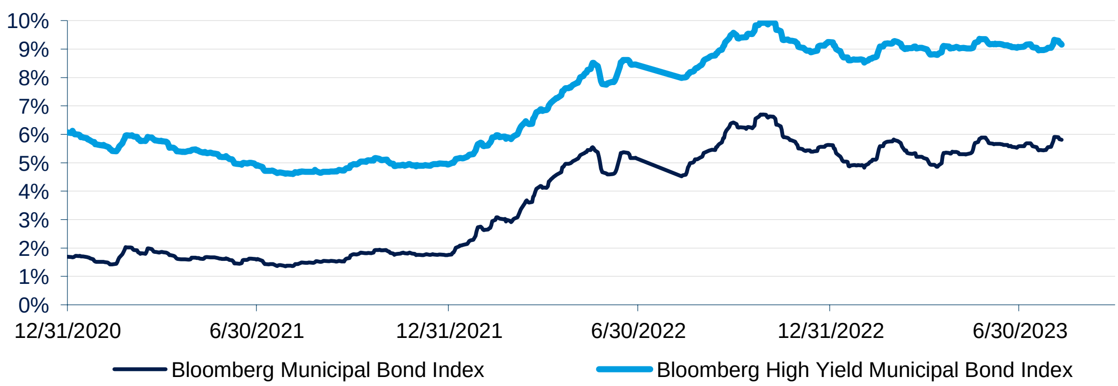


Source: The Securities Industry and Financial Markets Association, 12/31/2022.

Municipal bonds go on sale

Torrid technicals have led to attractive valuations across both investment grade and high yield municipal bond sectors. Tax-adjusted valuations seem even stronger on a relative-value basis. As interest rates and bond yields go higher, the value of the tax exemption becomes more valuable (for example, a 0.00% yield would result in no difference between tax-exempt and taxable net income). Despite the partial recovery, as of June 30th, 2023, yields adjusted at a 37% tax rate are 9.07% in the Bloomberg High Yield Muni Index and 5.58% in the Investment Grade Index.

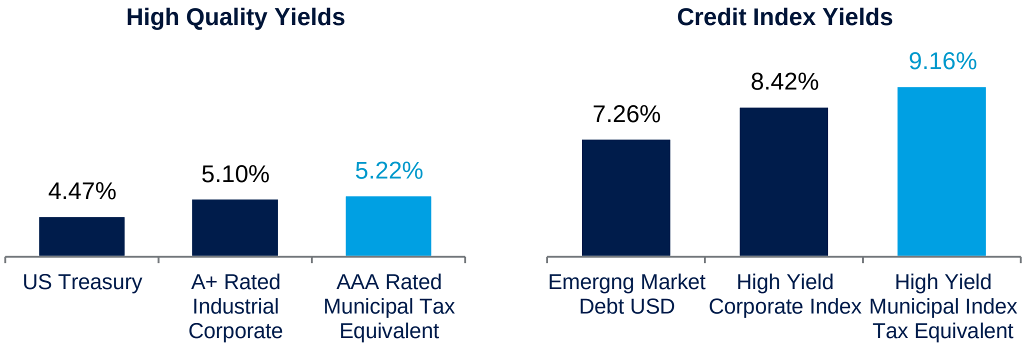
Exhibit 7: Tax Equivalent Municipal Bond Yields



Source: Bloomberg 8/10/2023, yields tax adjusted at 37%. Indices are unmanaged and their returns assume reinvestment of dividends and, unlike mutual fund returns, do not reflect any fees or expenses. Past performance is no guarantee of future results. It is not possible to invest directly in an index. See last page for further information about indices shown.

To put the current after-tax relative value of municipal bonds in context, AAA-rated municipal bonds (such as those issued by universities such as Harvard, MIT, and Stanford) have not only provided higher yields ("out-yielded") than US Treasuries by a wide margin historically, they have also out-yielded lower-rated corporate bonds, such as the A-rated industrials shown. On an after-tax basis, high yield municipal bonds have out-yielded their high yield corporate bond counterparts, as well aggregated sovereign and corporate bonds issued in emerging market countries.

Exhibit 8: High Quality Yields vs Credit Index Yields



Source: Bloomberg 8/10/2023, Treasury, US Corporate Industrials A Rated, and US Municipal AAA Rated BVAL 15 year points. Tax adjusted at 37%. Chart 2: Bloomberg Emerging Market Hard Currency Index USD, Bloomberg High Yield Corporate Index, Bloomberg High Yield Municipal Index. Indices are unmanaged and their returns assume reinvestment of dividends and do not reflect any fees or expenses. It is not possible to invest directly in an index. See last page for further information about indices shown.

Conclusion

Higher index yield levels have resulted from a culmination of the market forces discussed above, which we believe gives investors an opportunity to seek high-quality municipal bonds at discounted prices. While the recent technical environment has driven caution into the market, experienced investors may see opportunities in strong credits at still-attractive price levels. With a clear focus on fundamental bond picking, an eye towards avoiding permanent impairment of capital from defaults, and an ability to seek opportunities where others are selling at dislocated prices, we hold a promising view of the outlook for municipal bonds.

Index and Term Definitions

- **Bloomberg Emerging Market Hard Currency Index** is designed to measure the performance of hard currency emerging markets (EM) debt, including fixed and floating-rate U.S. dollar-denominated debt issued from sovereign, quasi-sovereign, and corporate EM issuers.
- **Bloomberg High Yield Corporate Index** is designed to measure the USD-denominated, high yield, fixed-rate corporate bond market.
- **The Bloomberg High Yield Municipal Bond Index** is designed to measure the performance of U.S. dollar-denominated high-yield municipal bonds issued by U.S. states, the District of Columbia, U.S. territories and local governments or agencies.
- **The Bloomberg Municipal Bond Index** tracks performance of USD denominated long-term tax-exempt bonds. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds.
- **Bullet bonds:** bonds that do not pay principal before their stated maturity and are not callable before their maturity.
- **Municipal bonds (also called "munis")** are bonds are debt securities issued by states, cities, counties and other governmental entities to fund day-to-day obligations and to finance capital projects such as building schools, highways or sewer systems.
- **The tax-equivalent yield** is the return that a taxable bond would need to equal the yield on a comparable tax-exempt bond.

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