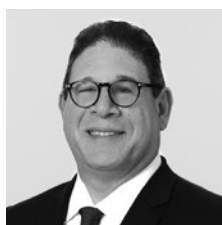


Invesco Fixed Income Investment Insight

US Municipal Bond Market Recap and Outlook

Second Quarter 2020



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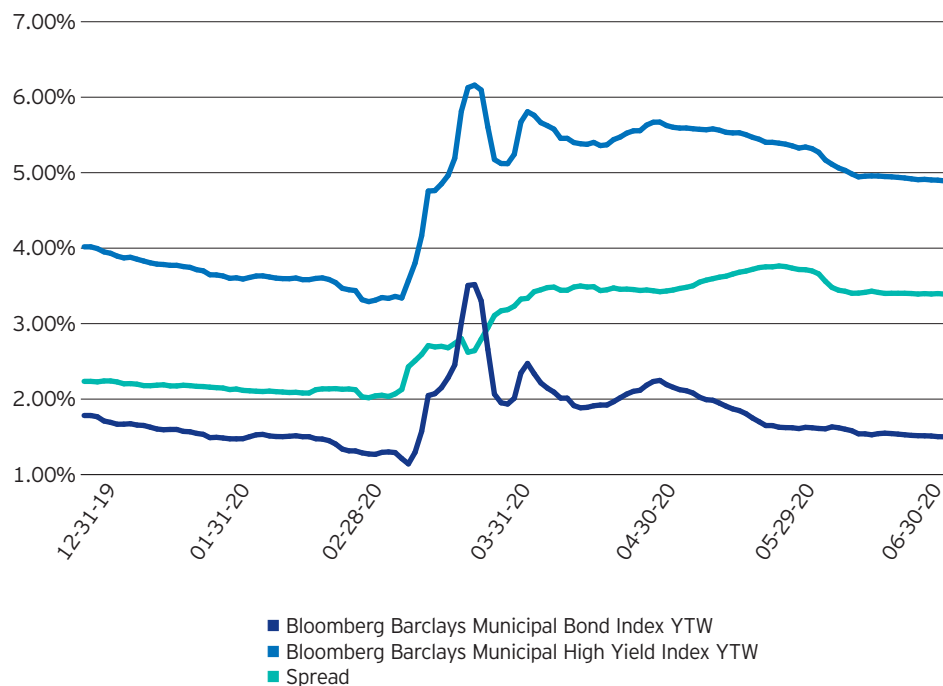
Highlights

- + Municipal bonds generated positive returns during the second quarter, rebounding from a first-quarter decline.
- + Monetary and fiscal stimulus from the US federal government helped support the municipal market, which helped to fuel the recovery.
- + Investment grade municipal yields fell but yields in the high yield municipal market dropped only slightly, creating attractive relative value opportunities in high yield municipal bonds.
- + Municipal securities benefited from favorable supply-and-demand conditions, as new issuance remained light and investors flocked back to tax-exempt debt.

Municipal bond prices rose during the second quarter, with investment grade and high yield municipal bond markets returning 2.73% and 4.55%, respectively.¹ The quarter began with a continued decline in bond prices, picking up where March left off - with liquidity pressures leading to the heavy selling of municipal bonds, regardless of credit quality or duration. As we entered May performance improved and remained positive through June, as investors moved back into municipal bonds driven by a thirst for yield and an appetite for tax-exempt income.

The recovery was first seen in the investment grade municipal bond market. After reaching high levels in late March, investment grade municipal yields fell back to levels last seen in January 2020. High yield municipal yields trended down slightly but remained elevated. As a result, the spread, or difference between the two yields, increased, signaling there might be attractive opportunities in high yield municipal bonds for discerning investors. (See Exhibit 1.)

Exhibit 1: High yield municipal yields lagged investment grade yields during the second quarter



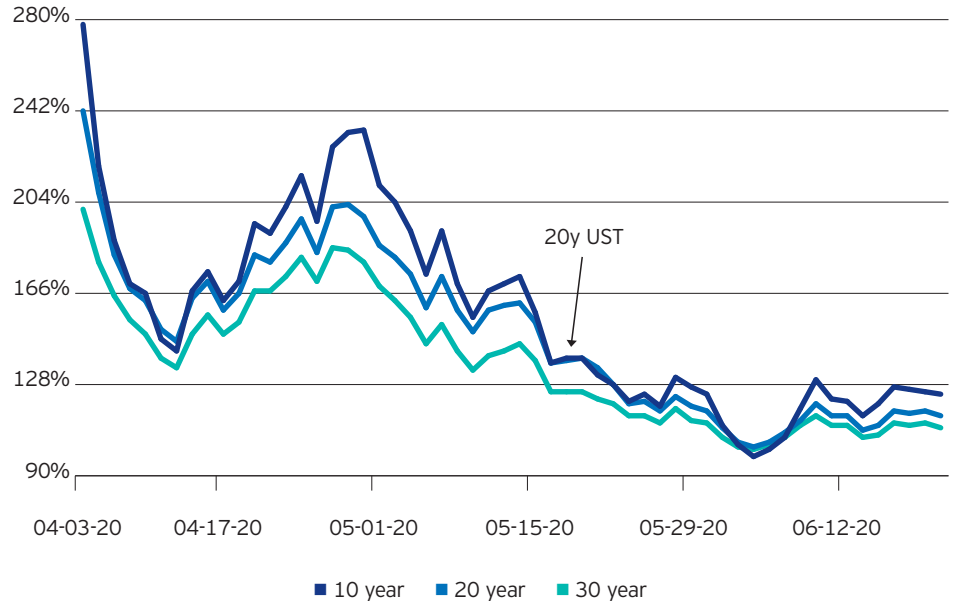
Source: Bloomberg L.P., data from Dec. 31, 2019 to June 30, 2020. YTW is yield to worst.

During the second quarter, municipal yields fell along the curve. The yield of a three-year AAA GO municipal bond declined 79 basis points (bps) to 0.28%, while the yield of a five-year AAA GO municipal bond dropped 68 bps to 0.41%. The yield of a 10-year AAA GO municipal bond decreased 43 bps to 0.90%, and the yield of a 30-year AAA GO municipal bond fell 36 bps to 1.63%. Spreads between AAA GO municipal bonds and BBB GO municipal bonds remained wide at the end of the quarter, with the 10-year spread at 146 bps and 30-year at 157 bps.

In the Treasury market, yields changed very little. Short- and intermediate-term yields dropped, while long-term yields rose. The yield of a three-year Treasury bond declined 11 bps to 0.18%, the yield of a five-year Treasury bond fell eight bps to 0.29%, and the yield of a 10-year Treasury bond dropped four bps to 0.66%. The yield of a 30-year Treasury bond rose six bps to 1.41%.

Municipal-Treasury (M/T) ratios, which hit rarely seen highs near the end of March, declined during the second quarter but remained above their historical norms (see Exhibit 2.) (M/T ratios compare the yields of municipal bonds to the yields of duration-equivalent US Treasuries. If M/T ratios are above 100%, municipal bonds appear inexpensive compared to Treasuries.) For example, 10-year AAA-rated municipals began the quarter trading at yields roughly 283% of the yield on comparable maturity US Treasuries and at quarter end, they were trading at 135% - significantly higher than their historical norm of approximately 90%.

Exhibit 2: Municipal-Treasury ratios declined but remained elevated relative to the historical norm of between 80% and 90%



Source: Muni Market Dataline, Barclays Research. Data as of June 30, 2020.

Federal stimulus continued to support the municipal market during the second quarter. Some of that assistance included the Federal Reserve's (Fed) plan to purchase up to \$500 billion in short-term municipal bonds to promote increased liquidity in the market. The Fed launched the Municipal Liquidity Facility (MLF) which enables select large borrowers – two issuers per state, city or county are eligible – to use proceeds from the sale of notes to service their debt payments. State and local governments, as well specific municipal sectors, also received federal support through the Coronavirus Aid, Relief, and Economic Security Act (CARES Act).

Improving supply-and-demand dynamics supported municipal gains

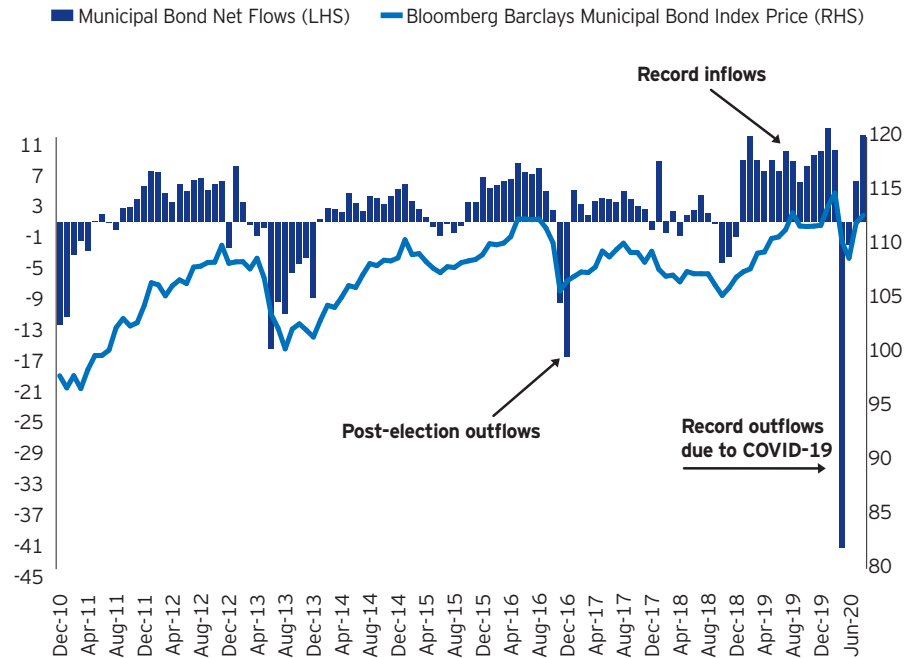
Supply-and-demand conditions were weak at the beginning of the second quarter, as uncertainty about the economic fallout of the novel coronavirus (COVID-19) drove a decline in new issuance and continued investment outflows from municipal bond mutual funds. The environment improved in mid-May, which helped municipal bond prices rise.

Issuance was almost non-existent during April, as many issuers delayed new money projects due to the COVID-19 pandemic and elevated yields. The new issue calendar was light in May but then increased during June. The uptick was mainly the result of an increase in taxable municipal issuance, with states and localities taking advantage of low interest rates to issue new debt and to advance refund tax-exempt municipal debt. Tax-exempt issuance was modest, partly because of the 2018 Tax Cuts and Jobs Act (TCJA). The TCJA had eliminated the tax exemption for advance refundings that had previously represented a significant portion of tax-exempt supply. In the second quarter overall, new issuance totaled \$107 billion, nearly 16% more than in the first quarter. High yield municipal issuance lagged investment grade, as the economic challenges of COVID-19 led to the cancellation or postponement of speculative projects.

As for demand, the municipal market saw substantial investment outflows when the second quarter began, as many municipal bond mutual funds sold both high yield and investment grade securities into a distressed market to meet shareholder redemptions. Conditions changed in mid-May, as investors came back into the municipal market in search of higher yields and tax-advantages. The change in appetite was especially beneficial for high yield municipal bonds, which rallied as demand outstripped supply. High yield municipal funds, which experienced 11 weeks of investment outflows from early March through the middle of May, saw six consecutive weeks of inflows through the end of the quarter.² Overall, investment inflows to municipal bond mutual funds were \$13.4 billion in the second quarter (see Exhibit 3).

The shift in appetite may also have been driven by the increase in federal spending. As market participants speculated about how the federal government was going to pay for its stimulus programs, some may have remembered the role that municipal securities can play in a portfolio. Tax-exempt income can look even more appealing in the face of a potential federal tax increase. In addition, the TCJA's \$10,000 cap on state and local tax deductions continued to create larger tax bills for people in states with high income taxes.

Exhibit 3: Municipal bond investment flows, which were negative in March and April, reversed in May and stayed positive through the end of the quarter



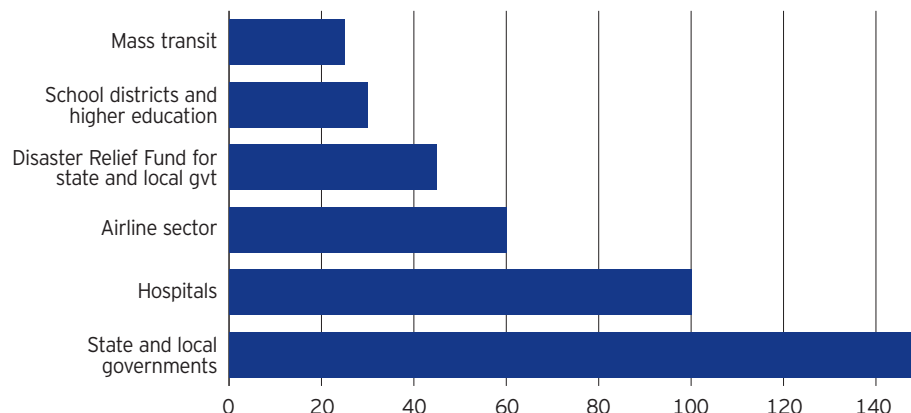
Sources: Strategic Insight (SI), Bloomberg L.P., as of June 30, 2020. The Bloomberg Barclays Municipal Bond Index is an unmanaged index considered representative of the tax-exempt bond market. An investment cannot be made directly in an index. Past performance is not a guide of future performance.

We believe that despite potential heightened credit uncertainty in certain sectors of the market, on a overall basis defaults across the market should be limited

The financial impact of COVID-19 on municipal issuers has been significant. They have experienced major revenue declines, as income and sales tax collections - two of their largest revenue streams - dropped due to mandated shutdowns and lockdowns. States and localities also increased their expenditures to fight COVID-19, which continues to weigh on their budgets.

Some of these challenges should be eased by federal government support. The CARES Act provides for \$150 billion for state and local governments, the establishment of a Disaster Relief Fund, and additional funding for state agencies and municipalities (see Exhibit 4.) The hospital sector has also received federal funding. In addition, the Fed is providing market access to states, large cities, and large counties through the Municipal Liquidity Facility. As the third quarter begins, there are discussions about additional support coming out of Washington.

Exhibit 4: The federal government has provided financial support through the CARES Act (USD billion)



Source: US Department of the Treasury, March 27, 2020.

That said, there was some political posturing early in the quarter when the Senate majority leader Mitch McConnell suggested that states should be able to file for bankruptcy if they were in financial distress. In our view, McConnell was signaling to states that they need to act on their own to solve budget problems. Indeed, a number of states and localities had already announced budget cuts, with many observers expecting tax increases to follow.

Nevertheless, some market participants have raised the specter of defaults in the municipal market. Although we expect to see further credit bifurcation, with the weak getting weaker and the potential for credit downgrades on the horizon, we do not anticipate a wave of defaults. While it is possible that few defaults may make dramatic headlines, we believe the vast majority of municipal bonds will continue to pay coupons and principal as they come due. Municipal credits have a long history of low default rates as many provide essential services. Furthermore, market access is vital for states and municipalities, all the more during difficult fiscal times. A default will hamper that access - today and down the road.

Senior living communities continue forward

The COVID-19 pandemic has increased media focus on the senior living sector, as the virus hit the elderly population and nursing homes the hardest. However, not all senior living facilities are nursing homes. A Continuing Care Retirement Community (CCRC), also known as a Life Plan Community, is a facility where a resident has access to multiple levels of care on a single campus. The benefit of this continuum of care is that residents can age in one place as their health changes over the years. Typically, a CCRC offers a combination of independent living, assisted living, and/or nursing care.

One of the many under-appreciated features of a CCRC is the sense of community these facilities provide to their residents. Meals, medicine, groceries, and supplies are delivered to their door. Residents also receive frequent wellness checks, and facilities are taking extraordinary care to protect residents and employees against COVID-19. While these features increase costs, much of the CCRC sector is able to withstand the headwinds.

Given that 10,000 baby boomers are turning 65 every day,³ we continue to believe there will be strong demand for CCRC bonds, especially post-pandemic. In addition, the yield pickup in the sector was substantial at the end of the second quarter.

Outlook

Before the COVID-19 pandemic, the US economy had experienced an unprecedented period of growth, resulting in strong balance sheets and ample cash on hand among many municipal issuers. Although many states and localities are facing budgetary challenges, we do not believe we will see mass defaults in the coming months, though there are likely to be hotspots, particularly with issuers that were already in trouble before COVID-19. In our view, the vast majority of municipal bonds will pay current principal and interest, as history has shown.

Though we cannot predict when the coronavirus pandemic will abate or how acute market volatility will be going forward, we continue to rely on our extensive credit research to sift through the media noise and find attractive opportunities during this time of uncertainty.

It is important to remember that there is a high likelihood that federal stimulus packages will push federal taxes higher, as the government will have to pay for the programs it has established. Much of the burden is likely to fall on taxpayers, which should make the tax exemption provided by municipal bonds that much more attractive.

- 1 Source: FactSet Research Systems Inc. Investment grade municipal bonds are represented by Bloomberg Barclays Municipal Bond Index. High yield municipal bonds are represented by Bloomberg Barclays Municipal High Yield Bond Index.
- 2 "Coronavirus Surge Strains Municipal Bond Market, but Investors Still Pile In," The Wall Street Journal, July 2, 2020. <https://www.wsj.com/articles/coronavirus-surge-strains-municipal-bond-market-but-investors-still-pile-in-11593682200>
- 3 Source: US Census Bureau, <https://www.census.gov/library/stories/2019/12/by-2030-all-baby-boomers-will-be-age-65-or-older.html>, Dec. 10, 2019.

Invesco Municipal Bond Team

The Invesco Fixed Income Municipal Bond Team's investment philosophy is based on the belief that creating long-term value through comprehensive, forward looking research is the key to providing clients with diversified portfolios that aim to maximize risk-adjusted returns.

Proprietary credit research and risk management are the foundations of our investment process, supported by a deep and experienced team of investment professionals with expertise that spans the entire municipal investment universe. We maintain an integrated, team-based investment process that combines the strength of our fundamental credit research analysts with the market knowledge and investment experience of our portfolio managers.

Our position among the top-10 municipal investment managers by assets in the US enables us to access preferred market opportunities and gain valuable market insight. Our team has established relationships with more than 120 national and regional municipal debt dealers in the US. We believe these established relationships, as well as our size, allow us to achieve fluid execution in daily transactions. Our ability to aggregate trades across multiple portfolios also enables us to obtain lower institutional pricing, which can contribute to portfolio performance.

About Risk

Municipal securities are subject to the risk that legislative or economic conditions could affect an issuer's ability to make payments of principal and/or interest.

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Junk bonds involve greater risk of default or price changes due to changes in the issuer's credit quality.

The values of junk bonds fluctuate more than those of high quality bonds and can decline significantly over short time periods.

All fixed income securities are subject to two types of risk: credit risk and interest rate risk. Credit risk refers to the possibility that the issuer of a security will be unable to make interest payments and/or repay the principal on its debt. Interest rate risk refers to the risk that bond prices generally fall as interest rates rise and vice versa.

Municipal bonds are issued by state and local government agencies to finance public projects and services. They typically pay interest that is a tax in their state of issuance. Because of their tax benefits, municipal bonds usually offer lower pre-tax yields than similar taxable bonds.

The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested.

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Past performance does not guarantee future results.

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Diversification does not guarantee a profit or eliminate the risk of loss.

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There is no guarantee the outlooks mentioned will come to pass. These opinions may differ from those of other Invesco investment professionals.

A basis point is a unit that is equal to one one-hundredth of a percent.

Bloomberg Barclays High Yield Municipal Bond Index is generally representative of bonds that are noninvestment grade, unrated or rated below Ba1.

Bloomberg Barclays Municipal Bond Index is an unmanaged index considered representative of the tax-exempt bond market. An investment cannot be made into an index.