**Highlights**

- Municipal bond prices recovered from their first-quarter slump, posting positive returns, outperforming most sectors of the fixed income market.
- The continued drop in supply as states and municipalities deferred borrowing, combined with strong demand and low new issuance created a favorable environment for municipal bonds.
- Municipal yields ended the quarter near where they began, which further supported prices.

Municipal bonds produced positive returns during the second quarter, one of the few fixed income sectors to do so. The positive performance was due largely to market technicals, as low new issuance was inadequate to meet investor demand. The investment grade municipal bond market returned 0.87% for the second quarter, while the high yield municipal market returned 3.06%, benefiting from a rally in tobacco and Puerto Rico bonds.1

Municipal bond prices were also bolstered by the relative stability of tax-exempt yields, which ended the quarter near where they began. As a result, the municipal yield curve remained relatively flat. The yield on a three-year AAA GO rose by 3 basis points (bps) to 1.79%, while the yield on a five-year AAA GO fell by 5 bps to 1.99%. Yields on 10-year AAA GO municipal bonds rose 4 bps to 2.46%, and yields on 30-year AAA GOs fell by 1 bp to 2.94%.2

In contrast, US Treasury yields climbed along the curve. Short-term interest rates rose more than intermediate- and longer-term rates, as the Fed continued to hike the federal funds rate by 0.25% in June to a range between 1.75% and 2.00%. Inflation breached the Fed 2% target during the quarter, suggesting the Fed might speed the pace of monetary policy tightening. Indeed, after their June policy meeting, Fed officials said they were likely to raise short-term interest rates a total of four times during 2018, up from the three they’d forecasted at their March policy meeting. They also said three rate hikes were on tap for 2019. During the second quarter, the yield of the 10-year US Treasury bond increased 11 bps to 2.85%, while the 30-year Treasury yield edged up 1 bp to 2.99%.3
Given that Treasury yields rose more than tax-exempt yields, municipal securities outperformed US Treasuries during the quarter. Municipal bonds also outperformed investment-grade corporate bonds and the broad fixed income market.

**Figure 1: 2Q18 Asset class total returns**

<table>
<thead>
<tr>
<th>%</th>
<th>US corporate</th>
<th>US treasury</th>
<th>US Aggregate</th>
<th>US agency</th>
<th>US high yield</th>
<th>Taxable munis</th>
<th>Muni</th>
<th>Muni HY</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1.0</td>
<td>-0.98</td>
<td>0.1</td>
<td>-0.16</td>
<td>-0.16</td>
<td>1.03</td>
<td>0.02</td>
<td>0.87</td>
<td>3.06</td>
</tr>
</tbody>
</table>


As performance this quarter exhibited tax-exempt securities have historically been shown to have less sensitivity to changes in interest rates than other fixed income securities (See Figure 2).

**Figure 2: Tax-exempt municipal bonds may offer portfolio diversification**

<table>
<thead>
<tr>
<th>Investment grade municipal bond correlations</th>
<th>High yield municipal bond correlations</th>
</tr>
</thead>
</table>


Meanwhile, lower-rated municipal bonds outperformed higher-rated municipal bonds, as spreads tightened. (See Figure 3.) The tighter the spreads, the less the perceived risk. The tightening of spreads during the quarter reflected increased investor demand for lower-rated municipal securities amid exceptionally low issuance of municipal bonds overall.
Figure 3: Lower rated munipals outperformed higher rated munipals as spreads tightened

High Yield Excluding Puerto Rico and BBB-Rated municipal spreads
June 1998 to June 2018

Source: Bloomberg Barclays. As of June 30, 2018. BBB spread represents the yield spread between Bloomberg Barclays BBB-rated Muni and Bloomberg Barclays AAA-rated Muni Indices. High yield ex-PR municipal spreads represent the yield spread between Bloomberg Barclays Municipal HY Ex-PR and Bloomberg Barclays Municipal IG Indices. Past performance cannot guarantee comparable future results. The Bloomberg Barclays Municipal Bond Index is considered representative of the broad market for investment grade, tax-exempt bonds with a maturity of at least one year. The Bloomberg Barclays Municipal AAA and BBB Indices are subsets of the broader index. The Bloomberg Barclays Municipal High Yield Ex-PR Index Bond index is an unmanaged index consisting of noninvestment-grade, unrated or below Ba1 bonds, excluding Puerto Rico issues. The Bloomberg Barclays Municipal Investment Grade Index is an unmanaged index considered representative of investment grade municipal bonds. An investment cannot be made in an index. Spread is the difference between yields on differing debt instruments, calculated by deducting the yield of one instrument from another. A basis point is the movement of interest rates or yields expressed in hundredths of a point.

Market technicals drove municipal bond performance

$53 billion in new issuance came to market in the second quarter, a 15% drop year-over-year. This brought 2018 year-to-date issuance to $161 billion, a drop of approximately 20% versus the same period in 2017.4 (See Figure 4).

Figure 4: 2018 year to date municipal issuance near record lows

Municipal bond issuance ($ billion)
1991 to June 2018


The size of the municipal bond market has decreased in size so far in 2018, by approximately $20 billion in the first quarter alone.5 Significant new issuance had been pulled into the fourth quarter of 2017 ahead of tax reform legislation that ended the tax-exemption for advance refunding bonds. Advance refunding bonds are issued by state and local governments seeking to refinance their debt at lower interest rates. The proceeds of
the issuance were generally invested in government securities, with the income used to pay off debt on outstanding bonds until they mature or can be called. The elimination of tax-exempt advance refundings meant that state and local government had fewer ways to reduce the cost of refinancing existing municipal debt.

At the same time, investor interest has remained strong. Municipal bond fund flows were positive in the second quarter, though the market did experience outflows during April due to tax season-related redemptions. Total net inflows during the second quarter were approximately $7.7 billion, a slight uptick from the $7.6 billion experienced during the first quarter. Demand far exceeded available supply, with many new deals being heavily oversubscribed. The strong demand allowed issuers to reduce the yields they offered on new issues, which had the effect of pushing up prices.

The municipal market is in the midst of a sea change

In the wake of tax reform, the municipal bond market has seen changes to demand patterns. Individual investors continue to be the largest holders of municipal securities, comprising 66% of the $3.8 trillion municipal market either through direct ownership or through commingled funds. While we expect this trend to continue, it is important to note that individual investors’ share of the municipal market shrank slightly during the first quarter of 2018. Foreign investors also held fewer municipal bonds during the first quarter. In our view, this is a temporary phenomenon resulting from higher global interest rates and strength in the US dollar.

The big change is in ownership by banks, which have historically been major buyers of municipal bonds. Banks reduced their municipal bond holdings by $16 billion in the first quarter. (See Figure 5.) We believe they may have less need for tax-exempt investments, given that tax reform cut the corporate tax rate from 35% to 21%. Meanwhile, property and casualty insurers generally maintained their municipal investments, while life insurers slightly increased them, perhaps because of simplified guidelines in the 2017 tax reform law.

Figure 5: Net changes in municipal holdings (Q118)

<table>
<thead>
<tr>
<th></th>
<th>Total net change</th>
<th>Banks</th>
<th>Corp.</th>
<th>Funds</th>
<th>Retail</th>
<th>Foreign</th>
<th>P&amp;C</th>
<th>Life</th>
<th>Dealers</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ billions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source: Fed Flow of Funds as of June 30, 2018</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

US economic growth remains a boon for state and local governments

Fiscal conditions continue to improve in many states and localities, driven by strength in the US economy. Thirty-nine states had enacted new or revised budgets by the end of the second quarter, with many of them showing improving credit fundamentals and higher tax collections. In the first quarter of 2018, state and local tax collections grew 5.9%, compared to the average of 3.6% after the 2008 financial crisis. That said, pension and other fixed cost burdens continue.

New Jersey, for example, has the lowest state public pension funded ratio in the US. It also has structural cash flow issues and lacks a “rainy day” fund. As a result, a budget standoff between the governor and the legislature presented a significant risk. Without a budget, New Jersey could not have paid debt service on its appropriated debt. Fortunately, the state averted a government shutdown when it passed a budget on June 30, 2018, just hours before the 2019 fiscal year began on July 1st.
The revenue picture is likely to get better for states in the coming months. On June 21st, the US Supreme Court ruled that state governments can require all online merchants to collect sales taxes. Previously, a brick-and-mortar establishment was necessary before an online merchant would be obliged to charge sales tax on a purchase within a given state. We expect highly populated states to benefit most from the ruling. In addition, high sales-tax states are likely to see a substantial increase in revenue. For instance, New Jersey, which has a 6.635% sales tax, would have received additional revenues of between $216 million and $351 million if it had been able to collect online sales taxes during 2017.\textsuperscript{10} New Jersey Governor Phil Murphy’s office estimates that the Supreme Court ruling could result in $125 million of additional revenues during the 2019 fiscal year.\textsuperscript{11}

Under the circumstances, the fiscal situations in many states and localities should continue to improve in the months ahead. The National Association of State Budget Officers (NASBO) projects that state general fund spending could grow 3.2% in fiscal 2019, compared to fiscal 2018. NASBO also notes that states are continuing to strengthen their reserves, with the median balance as a share of general fund spending rising to 6.2% in fiscal 2019, from a recent low of 1.9% in fiscal 2011.\textsuperscript{12}

\textbf{Outlook}

In the near term, we believe market technicals will continue to be the largest driver of municipal bond performance. Supply-and-demand conditions are likely to remain favorable during the summer, given the seasonally high redemptions expected in the summer months, and the continued residual impact of the 2017 year-end rush. (See Figure 6.) For 2018 as a whole, our estimate for new issuance is $300–$330 billion, which is less than in years past, as a result of the aforementioned fourth quarter of 2017 and lack of refunding issues due to tax reform.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|}
\hline
\textbf{Month (2018)} & \textbf{Forecasted gross issuance} & \textbf{Net supply forecast\textsuperscript{*}} & \textbf{Supply tailwind/headwind indicator} \\
\hline
January & 22 & -3 & \\
February & 22 & -5 & \\
March & 30 & 6 & \\
April & 29 & 7 & \\
May & 29 & 2 & \\
June & 31 & -4 & \\
July & 26 & -17 & \\
August & 25 & -13 & \\
September & 22 & 0 & \\
October & 32 & 6 & \\
November & 24 & -4 & \\
December & 24 & -4 & \\
\hline
\textbf{Full year} & 315 & & \\
\hline
\end{tabular}
\caption{Forecasted net negative supply during the summer should support municipal bond prices}
\end{table}

\textsuperscript{*}Net supply forecasts do not include coupon payments.

At the same time, we expect demand to remain steady, as investors continue to seek municipal bonds for the tax benefits they provide. In our view, households and mutual funds will remain the main buyers of municipal bonds. Given the smaller-than-expected individual tax cuts that took effect in January, municipal securities may become even more attractive, especially if municipal yields rise.
**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.
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.

Junk bonds involve a 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.
Important information

This document has been prepared only for those persons to whom Invesco has provided it for informational purposes only. This document is not an offering of a financial product and is not intended for and should not be distributed to retail clients who are resident in jurisdiction where its distribution is not authorized or is unlawful. Circulation, disclosure, or dissemination of all or any part of this document to any person without the consent of Invesco is prohibited.

This document may contain statements that are not purely historical in nature but are “forward-looking statements”, which are based on certain assumptions of future events. Forward-looking statements are based on information available on the date hereof, and Invesco does not assume any duty to update any forward-looking statement. Actual events may differ from those assumed. There can be no assurance that forward-looking statements, including any projected returns, will materialize or that actual market conditions and/or performance results will not be materially different or worse than those presented.

The information in this document has been prepared without taking into account any investor’s investment objectives, financial situation or particular needs. Before acting on the information the investor should consider its appropriateness having regard to their investment objectives, financial situation and needs.

You should note that this information:
- may contain references to amounts which are not in local currencies;
- may contain financial information which is not prepared in accordance with the laws or practices of your country of residence;
- may not address risks associated with investment in foreign currency denominated investments; and
- does not address local tax issues.

All material presented is compiled from sources believed to be reliable and current, but accuracy cannot be guaranteed. Investment involves risk. Please review all financial material carefully before investing. The opinions expressed are based on current market conditions and are subject to change without notice. These opinions may differ from those of other Invesco investment professionals.

The distribution and offering of this document in certain jurisdictions may be restricted by law. Persons into whose possession this marketing material may come are required to inform themselves about and to comply with any relevant restrictions. This does not constitute an offer or solicitation by anyone in any jurisdiction in which such an offer is not authorised or to any person to whom it is unlawful to make such an offer or solicitation.