Treasury yields ultimately moved slightly higher amidst volatile equity markets. Real-yields continue to march higher. Muni yields little changed.

**Bottom Line:**
- Treasury yields moved modestly higher during a week of still heightened equity volatility.
- Muni yields were little changed.
- Muni fund flows were significantly negative for a second consecutive week.
- Bond Insurance premium at 5.8% in Q3.
- State Pension funding status improves in 41 states (Bloomberg).
- Moody’s notes the U.S fiscal budget deficits are on credit negative track.
- S&P Puerto Rico Total Return Index was -0.1% last week; 24.6% YTD.

**What Happened in the Bond Markets Last Week?**
- Treasury yields backed up a bit last week amidst still somewhat tumultuous domestic equity markets which for the most part finished in the general vicinity of which they began. Yields spent the first two days ignoring lower than expected retail sales and higher than expected (but below last quarter) industrial production and weak housing starts. On Wednesday, yields shot several bps higher after the FOMC Meeting Minutes, which to this author offered little new information but made apparent a Fed that is ready to move rates higher. As equities dove on Thursday, Treasuries provided their traditional, but not so recently exercised, role as a market diversifier during which it gained back every bit they lost on the previous day. Of particular note, the entire move higher in yields last week was done so in real-yield space (10yr real-yield was +5.6 bps and now at the highest level since early 2011 - graph) as inflation breakevens fail to gain any traction.
- Municipal bond yields were little changed.

**Yields (Figure 1):**
- For the week ending 10/19/18, Treasury yields were higher; 2-year Treasury Note yields were +5.1 bps at 2.90%, 5-year Notes yields were +3.7 bps at 3.05%, 10-year Notes yields were +3.3 bps to 3.19% and 30-year bonds yields were +4.3 bps at 3.38%.
- Bloomberg Municipal Index curve yields were flat to slightly lower; AAA-rated GO yields; 2-year bonds were flat at 2.06%, 5-year bond yields were -1 bps at 2.32%, 10-year bond yields were flat at 2.76% and 30-year bonds were flat at 3.45%.
- The Ratio of 10-year AAA GO debt to 10-year Treasury yields moved lower to 86.6 last week off the cheapest level since April. The year-to-date average is 85.5 and the 12-month average is 85.6.
One can observe these changes by looking at how rates have changed along the curve for both the Treasury curve and for the AAA-rated G.O. Index since last week. The top panel shows four yield curves; two for the Treasury curve - one for the most current date and one from last week and two for the AAA-rated G.O. - current and last week. The bottom panel of the graph shows changes in the rates along both curves for the week for both Treasuries and the AAA G.O. Index.
**Supply (Figure 3)** – Bloomberg 30-Day Visible Supply currently stands at $9.1 billion down from $14.1 billion this time last week. The YTD average visible supply is $8.9 billion and the 12-mo average is $10.3 billion.
Articles of Interest

**Municipal Fund Flows:** According to Lipper data, muni funds had $642 million of outflows after the previous week’s outflows of $847.9 million. The four-week moving average is -$479.6 million. ETFs had net inflows and high-yield funds had net outflows. Investors have pulled funds out of high-yield funds at the fastest pace in nearly two years.

**U.S. Budget Potentially the Beginning of Longer-term Decline in Fiscal Strength (Moody's):** Moody’s notes that the U.S. fiscal condition is on trend for a long-term decline in fiscal strength. After the $779 billion deficit (3.9% of GDP) the largest since 2012 when the spending was partially a function of countercyclical recessionary fiscal spending post financial crisis. Recent tax cuts (where individuals’ tax ticket was up 6.1% while corporate tax ticket was down 31%) and increased expenditures (mostly from increased interest expense and military spending and entitlement spending) in additions to age-related programs will drive deficits even wider over coming years even irrespective of any potential recession which would widen the deficit as a percentage of GDP even further. Moody's expects debt service to account for more than half of the deterioration by 2028 and debt to GDP will surpass 100% by 2028.

**Atlantic City Upgraded:** S&P upgraded Atlantic City, NJ two notches to ‘B’ (Stable) citing “an improved operating environment and structural financial improvement following settlement of outstanding tax appeals and continuation of extensive state oversight”.

**Bond Insurance Business:** The municipal bond penetration level fell to 5.4% at the end of Q3. The par amount insured amounted to $13.1 billion, down from $16.9 billion Q3’17.

**State Pension Funding Better in 41 States (Bloomberg):** A strong equity market has helped states improve their pension funding ratios. The nationwide ratio has risen to 73.7% from 71% in 2016 but most are still where they were in 2015. The pension funding gap fell in only seven states last year. Oft cited difficulties remain in IL (38.4%), KY (33.9%), NJ (35.8%), and CT (43.8%).

**State and Local Other Retirement Employee Benefits (Moody’s):** Moody’s issued a Sector In-Depth Comment on state and local government retiree healthcare liabilities (OPEB). The highlights of the report include: 1) OPEB liabilities, a call on government resources will compete with debt payments and funding of services. 2) While OPEB is relatively small as compared to pension liabilities for most governments can be quite large in many and the cost to service it can be significant. 3) The flexibility to reform OPEB through benefit cuts, while politically unappetizing, is greater than it is to reform pension liabilities.

**Puerto Rico:**
- A group of creditors wants to stop PROMESA from continuing with the current plan for restructuring COFINA debt.
- **The S&P Municipal Bond Puerto Rico Index** finished at 179.6 on Friday vs. 179.8 at the end of the previous week, -0.1%. Year-to-date the index is +24.6%.
Relative Value by Maturity

Table 1 - AAA Muni Ratios and Spreads by Maturity - Data Source: Bloomberg

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<th>Maturity (yrs.)</th>
<th>Yield-to-worst (%)</th>
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<th>35% Tax Equivalent</th>
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<td>AAA Gen. Oblig.</td>
<td>Treasury</td>
<td>Spread (bps)</td>
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<tr>
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Figure 4 – AAA General Obligation Ratios and Spreads – Data Source: Bloomberg

Relative Value by Rating

Figure 5 – Muni Index Yield Curve by Credit Rating – Data Source: Bloomberg

For more information please contact your Financial Advisor.
Appendix – Important Disclosures

Some of the potential risks associated with fixed income investments include call risk, reinvestment risk, default risk and inflation risk. Additionally, it is important that an investor is familiar with the inverse relationship between a bond’s price and its yield. Bond prices will fall as interest rates rise and vice versa.

When considering a potential investment, investors should compare the credit qualities of available bond issues before they invest. The two most recognized rating agencies that assign credit ratings to bond issuers are Moody's Investors Service ("Moody's") and Standard & Poor's Corporation ("S&P"). Moody's lowest investment-grade rating for a bond is Baa3 and S&P's lowest investment-grade rating for a bond is BBB-. Ratings are measured on a scale that ranges from AAA or Aaa (highest) to D or C (lowest).

The Bond Buyer 20-Bond Index consists of 20 general obligation bonds that mature in 20 years. The average rating of the 20 bonds is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corp.'s AA. The Bond Buyer 11-Bond Index uses a select group of 11 bonds in the 20-Bond Index. The average rating of the 11 bonds is roughly equivalent to Moody's Aa1 and S&P's AA-plus. The Bond Buyer Revenue Bond Index consists of 25 various revenue bonds that mature in 30 years. The average rating is roughly equivalent to Moody's A1 and S&P's A-plus. The indexes represent theoretical yields rather than actual price or yield quotations. Municipal bond traders are asked to estimate what a current-coupon bond for each issuer in the indexes would yield if the bond was sold at par value. The indexes are simple averages of the average estimated yields of the bonds, are unmanaged and a direct investment cannot be made in them.

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