Treasuries and muni yield changes stagnant despite recent market volatility.

Bottom Line:
- Treasuries and Muni yields little changed amidst risky-asset volatility.
- Moody’s reports:
  - 2019 state pension plan improvements in 2019 to be followed by deterioration in 2020
  - State revenue declines due to COVID impacts.
  - Airport demand will be long to fully recover but credit better situated.
  - Not-for-profit healthcare medians (2019) show distinction by system size.
- Muni downgrades have yet to flourish.
- Muni funds have 20th consecutive weekly net inflow.
- S&P Puerto Rico Total Return Index +3.3% year-to-date.

What Happened in the Bond Markets Last Week?
Last week, there was plenty of volatility to be found but, none of it in the Treasury market. As the SPX fell 4.5% in the matter of 3 days and recovered 3% of it in a matter of 2 days and the Nasdaq whipping through a 9% roundtript, 10year Treasuries, acting as less of a ballast than is historically typical, moved within a 3.5 bps range and ended relatively little changed given the magnitude of risky asset swings. This cannot be said for corporate credit spreads which acted more like risky assets that they can become at times of such volatility – IG spreads moved the most to the upside since mid-June. Certainly, market gyrations are related to increasing levels of COVID and associated potential economic tightening and Congress not yet taking up any fiscal relief bill that is widely known to be needed by various constituents of the economy. Municipal bonds’ yields were little changed.

Yield Changes (week over week)
Month-to-date Yield Curve and Muni Curve Changes

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.

The 10yr AAA GO Ratio is 124.6.

The line graph to the right shows the ratio of 10-year AAA-rated muni yields to the 10-year Treasury yield over the last year.

The Bloomberg 30-Day Visible Supply currently stands at $12.9 billion down from $14.5 billion this time last week. The YTD average visible supply is $14.0 billion and the 12-mo average is $14.8 billion.
**Articles of Interest**

**State Pension and OPEB Liabilities (Moody’s):** Moody’s issued a Sector Profile report highlighting the condition of state pension and OPEB liabilities. The good news is that in 2019 states reported lower adjusted net pension liabilities (ANPL) due to good investment returns in 2018. The median ratio of ANPL to state GDP fell from 5.5% to 4.8% in 2019. However, they note that because of lower interest rates and lower investment returns in 2019 and 2020, ANPL will jump. The fiscal average investment return of 6.6% was lower than the average target return. Also, the discount rate for valuing pension liabilities fell from 4.14% to 3.51%. The combined effect will be an estimated increase of ANPLs of 19% from 2019. In 2019, over half of the states contributed above tread-water amounts to the pension plans. Unfunded OPEB liabilities fell by 10.6% in 2019.

**State Revenue Declines (Moody’s):** Moody’s issued a Sector In-Depth report on the negative impact coronavirus will have on state tax revenues. The highlights of the report include: 1) Tax revenue declines will be concentrated in a subset of states hit hardest by the virus including CA, NY, IL, and TX. Other states that were hit hard but contribute less to aggregate level of losses include HI, LA, OR and AZ. 2) Federal fiscal relief in the form of expanded unemployment benefits amounted to a temporary relief.

**Airports to See Extended Period of Below Capacity Demand (Moody’s):** Moody’s issued a Sector In-Depth report on the impact of coronavirus on airport passenger demand. The highlights of the report include: 1) an expectation that air travel will remain “significantly constrained” through 2021, begin recovering more meaningfully in 2022 and reach 2019 levels in 2024 assuming medical treatments and vaccines make travelers more accepting. They note that a return to previous demand levels is not necessary to return to stronger financial metrics – return to levels as seen in 2015 is likely but to historic best levels. 2) Cost-recovery structures allow airports to turn to airlines for revenue to compensate for lost passenger revenue. 3) Airports that served domestic leisure performed better than business of international centric airports. 4) Small and non-hub airports near larger airports have the highest credit risk.

**Not-for-Profit Healthcare Medians (Moody’s):** Moody’s issued a Sector Profile report examining 2019 medians for not-for-profit and public healthcare metrics. The highlights of the report include: 1) The Southern region was the only one that experienced revenues outpacing expenses in 2019 which resulted in the cash flow margin (8.8% for the fifth consecutive year. The Northeast lagged all other regions. The Midwest region maintained the best levels of liquidity (median days cash on hand of 203). 2) Generally, profitability declined for the smallest hospitals and increased in the largest; 6.8% cash flow margin for the smallest fifty while rising to 8.3% for the largest fifty. 3) Liquidity showed stability for the range of sizes of hospital. 4) Age of plant diverged amongst sizes with the smaller subset age rising and the larger portion’s age declining as they continued to have capital expenditures greater than depreciation. 5) Median debt to cash flow (leverage) increased for the smaller fifty while it held steady for largest fifty systems.

**Downgrades Slow Despite Known Weaknesses (Bloomberg Brief):** Halfway into September, Moody’s has cut the ratings on about 125 out of 12,000 entities they rate (fewer than Q2 and Q3 of 218) and S&P has cut the ratings on about 175 of the 20,000 issuers they rate. Only two states have been downgraded: HI by Moody’s and WY by S&P. The rating agencies broadly say that going into the pandemic entities’ financial conditions have been stronger, they have tools to deal with stressed conditions. This is not to say that haven’t turned a blind eye; Moody’s has lowered its outlook on all sectors (except housing) and S&P has assigned 1,500 issuers on negative outlook.

**University Student Enrollment Down 2.5% (Bloomberg Brief):** The National Student Clearinghouse Research Center stated that U.S. undergraduate enrollments are down 2.5% for the current academic year. The largest declines are among international non-resident (some the more lucrative students for universities) with enrollment down 11.2%.
Muni Fund Flows: According to Refinitiv Lipper, muni funds had net inflows last week, the 20\textsuperscript{th} consecutive, amounting to $499 million after $1.8 billion of net inflows during the previous week.

Puerto Rico

The S&P Municipal Bond Puerto Rico Index finished at 214.4 vs. 215.1 at the beginning of September -0.3\% and +3.3\% YTD.

Relative Value by Maturity

<table>
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<th>Maturity (yrs.)</th>
<th>9/28/2020</th>
<th>Yield-to-worst (%)</th>
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<th>35% Tax Equivalent</th>
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<tr>
<td></td>
<td>AAA Gen. Oblig.</td>
<td>Treasury</td>
<td>Spread (bps)</td>
<td>Ratio (%)</td>
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Data Source: Bloomberg
Relative Value by Rating

Muni Index Yield Curve by Credit Rating

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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