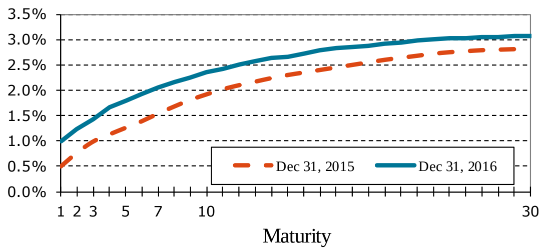
Baird Advisors
Municipal Fixed Income Market Comments
2016 – Year in Review

2016 - A Tale of Two Halves

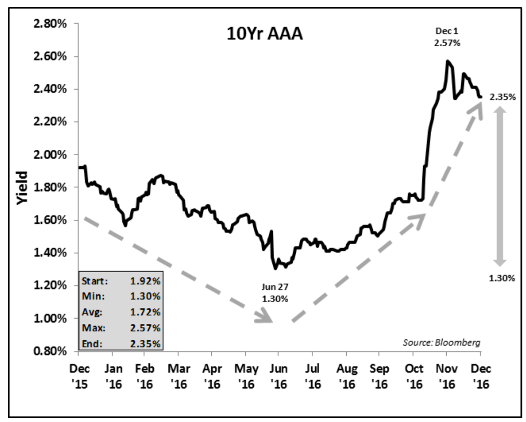
Tax-free yields rose more than 50 bps year-over-year among intermediate maturities, but that analysis alone misses the volatility in rates this year. **It is perhaps best to think of 2016 as a year of two phases, as there were two distinct phases of rate movements, fund flows, and credit spreads.** In the first phase, 10-year tax-free rates *fell* by more than 60 bps as sluggish U.S. economic growth, which averaged just 1.1% through June, dovish Fed rhetoric, and global uncertainty following the Brexit vote, all contributed to the decline in yields. A favorable supply/demand backdrop strengthened the municipal market in the first phase as steady tax-free fund inflows more than offset a marginal increase in new supply relative to 2015's pace. Long-term rates led the move lower in the first phase as 30-year yields fell 82 bps as 2-year yields fell 18 bps, resulting in a flatter curve.

AAA Municipal Yields

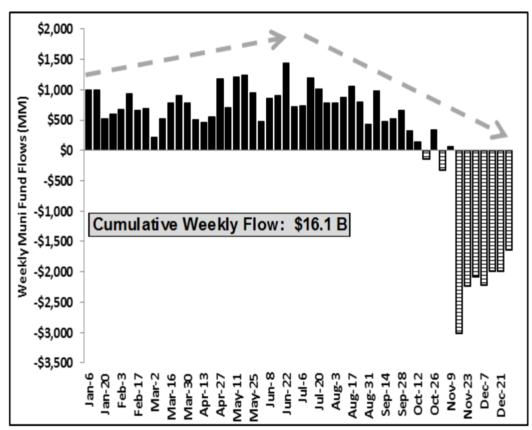


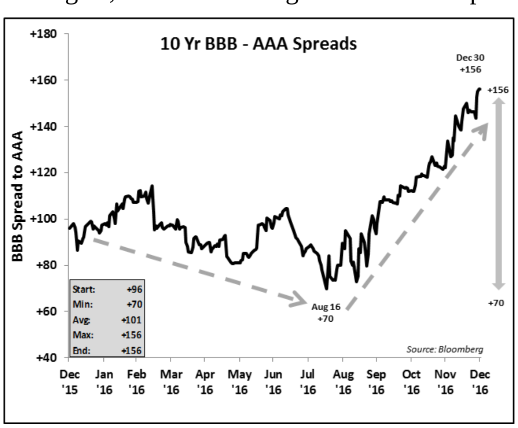
Maturity	Dec 31, 2015	Sep 30, 2016	Nov 30, 2016	Dec 31, 2016	1Mo Change	3Mo Change	YTD Change
1	0.50%	0.78%	0.91%	1.00%	0.09%	0.22%	0.50%
2	0.77%	0.82%	1.16%	1.23%	0.07%	0.41%	0.46%
3	0.99%	0.88%	1.43%	1.43%	0.00%	0.55%	0.44%
5	1.26%	1.02%	1.85%	1.80%	-0.05%	0.78%	0.54%
7	1.54%	1.19%	2.12%	2.05%	-0.07%	0.86%	0.51%
10	1.92%	1.51%	2.52%	2.35%	-0.17%	0.84%	0.43%
30	2.82%	2.31%	3.26%	3.08%	-0.18%	0.77%	0.26%

The second phase of the 2016 rate cycle began near mid-year as supply levels and economic data both improved as the curve resteepened. The supply boost came both from higher refunding volume and a higher level of new money financings. The pace of issuance accelerated through the fall, peaking in October at over $53B in total supply, the largest single month of issuance since 1985. Total supply in 2016 set a new record at $445B. Economic growth improved as 3Q GDP accelerated to a 3.5% pace and the Fed signaled a desire to hike the fed funds rate, which they did in December by 25 bps. **It was the surprise election of Donald Trump, however, combined with the GOP maintaining majorities in both the House and Senate, that ultimately pushed tax-free rates up sharply** as market sentiment shifted toward faster growth and higher inflation. With Republicans in full control of the agenda in Washington the probability of both corporate and personal tax reform increased, putting extra pressure on municipal prices following the election.



Demand shifted after a streak of 55 consecutive weekly municipal fund inflows ended in September and post-election outflows of at least $2B/week continued through year end (right graph). Investor selling was driven in part by concern over rising interest rates but was primarily due to the narrow window investors had to harvest tax losses before year end. The heavy selling also pushed municipal credit spreads wider. An example of this can be seen in the yield difference between 10-year, BBB and AAA rated tax-free yields (left graph below). The yield advantage for BBB's had narrowed to just +70 bps in August, before widening back to +156 bps at year end. While the trend for municipal credits from the end of the recession in 2009 through mid-2016 had been steadily narrower (see Baird's ["Managing Through a Municipal Credit Cycle"](#)), the recent widening of spreads was primarily technical in nature, not driven by fundamental credit weakness. On the contrary, the fundamental credit outlook for the vast majority of municipalities remains strong and stable. In 2016 the upgrade-to-downgrade ratio for S&P-rated municipal bonds was over 3:1, the fourth consecutive year with a positive ratio. While overall state revenue growth likely slowed in 2016 relative to the prior year, local governments benefited from solid property tax growth thanks to rising real estate prices and assessed valuations.





2016 Key Municipal Credit Events

- Puerto Rico opened 2016 with a default on public corporation debt and by mid-year had stopped payments on most other outstanding debt. In late-June, President Obama signed the Puerto Rico Oversight, Management, and Economic Stability Act (PROMESA) which placed a temporary stay on all debt-related litigation and also established a federal oversight board. The board will attempt to work closely with new governor, Ricardo Rossello, who favors statehood for Puerto Rico, and expressed a willingness to work with the PROMESA board. Much work and significant hurdles remain before bondholders will know how they will fare relative to unfunded pension liabilities and other creditors.

- Illinois and Chicago struggled with persistent political, fiscal, and pension-related challenges. The Republican governor and Democratic Legislature went without a budget for all of FY2016 and operated with just a temporary spending bill through the first-half of FY2017 as the two parties remain deeply divided. The Democrats lost their supermajority in the House in the recent elections but remain firmly in control of the legislative process. Chicago's near-term outlook improved with the passage of a property tax hike and a new utility tax to help meet rising pension costs. So far, state courts have prevented pension reform attempts and long-term fiscal challenges remain for both the city and the state.

- Public pension-related news remained the other consistent credit topic in 2016. Pension investment returns lagged target assumptions for the second straight year, even as pension boards gradually lowered long-term return expectations. For example, the California Public Employees' Retirement System (CalPERS) Board recently lowered the investment return assumption from 7.5% to 7.0%, phased in over the next three years. The gradual decline was requested by local municipal officials, allowing them time to adjust to the higher annual payments that will be required.

Sharp Quarterly Declines

Although December returns were positive, municipal market returns were sharply negative in the fourth quarter, wiping out the full year gains for most segments of the market. In 4Q, longer maturities underperformed the rest of the yield curve as the sharp steepening weighed on longer benchmarks more so than shorter maturities. The Pre-refunded sector, given its shorter average duration, outperformed other market sectors, and lower quality issues lagged higher quality for the quarter.

Total Returns of Selected Barclays Municipal Indices and Subsectors

Bloomberg Barclays Index/Sector	December	4Q	1 Yr	Bloomberg Barclays Quality	December	4Q	1 Yr
Municipal Bond Index	1.17%	-3.62%	0.25%	AAA	1.16%	-3.32%	-0.17%
General Obligation bonds	1.11%	-3.70%	-0.23%	AA	1.16%	-3.44%	0.05%
Revenue bonds	1.32%	-3.90%	0.43%	A	1.21%	-3.96%	0.85%
Prerefunded bonds	0.26%	-0.96%	-0.01%	BBB	1.16%	-4.45%	0.35%
Long maturities (22+ yrs.)	1.58%	-4.95%	0.88%	High Yield	1.38%	-5.84%	2.99%
Intermediate maturities (1 - 17 yrs.)	0.97%	-3.08%	0.01%	HY, ex-Puerto Rico	1.61%	-6.14%	1.71%
Short maturities (1 - 5 yrs.)	0.29%	-1.07%	0.07%				

2017 Outlook – More Questions Than Answers

The range of possible forecasts for 2017 is unusually wide. Although broad plans and themes have been discussed in the post-election period, until greater clarity and details are put forward by the Trump Administration and GOP-controlled Congress, there are perhaps more questions than answers as to what specific policy changes might actually occur, when they may occur, and, importantly, how much of the expected changes are already priced-in to the municipal market. Clearly, a significant shift in yield and valuation occurred in the tax-free market after the election. While tax reform is a goal of the Republican party, it is likely to occur through the reconciliation process which requires only a simple majority vote in the Senate to pass legislation rather than the filibuster proof 60 votes under normal procedures. Reconciliation rules do require, however, that the changes be scored as "revenue neutral" to the budget. How that will square with the Trump and House proposals, which would certainly increase future budget deficits, even when measured through the Republican-favored dynamic scoring process, will be important to monitor. Another significant uncertainty surrounds infrastructure spending plans. Most policy makers agree on the need for more spending on our nation's roads, bridges, airports, ports, dams, and utilities, but how much to spend, over what time frame, and how to finance it remains very uncertain. The municipal market could (should) play a very integral role in the infrastructure financing plans, but if tax reform increases the cost of borrowing for municipalities then this would partially offset the fiscal stimulus benefit that is sought. **The outcome of these two agenda items alone, tax reform and infrastructure spending, is likely to impact municipal market returns in 2017.** Ironically, evidence suggests that tax rate changes have had little direct effect historically on tax-free valuations. More important to the relative appeal of municipal debt has been the level of market yields, the slope of the curve, and the trend for net supply. Viewed in this broader context, we are optimistic that the municipal market will remain an appealing, high quality, core fixed income sector for both individual and institutional investors alike. Rates have risen since the election, providing more incentive for investors. The yield curve resteepened in the fourth quarter, offering more potential reward from rolling along the curve, and supply is likely to decline from 2016's record pace as refunding volume slips. Any increase in infrastructure borrowing will likely ramp up very gradually, if at all, in 2017. Market uncertainty often creates opportunity for investors, and 2017 may very well be another one of those situations for municipal investors.

Disclosures

This is not a complete analysis of every material fact regarding any company, industry or security. The information has been obtained from sources we consider to be reliable, but we cannot guarantee the accuracy.

Fixed income is generally considered to be a more conservative investment than stocks, but bonds and other fixed income investments still carry a variety of risks such as interest rate risk, credit risk, inflation risk, and liquidity risk. In a rising interest rate environment, the value of fixed-income securities generally decline and conversely, in a falling interest rate environment, the value of fixed-income securities generally increase. High yield securities may be subject to heightened market, interest rate or credit risk and should not be purchased solely because of the stated yield.

Indices are unmanaged, and are not available for direct investment. *Past performance is not a guarantee of future results.*

The Bloomberg Barclays Aggregate Bond Index is an index comprised of approximately 6000 publicly traded bonds including U.S. Government, mortgage-backed, corporate, and Yankee bonds with an average maturity of approximately 10 years.

The Bloomberg Barclays Government/Credit Index is a combination of the Government Index which measures government-bond general and Treasury funds, and the Credit Bond Index, which is a market value-weighted index which tracks the returns of all publicly issued, fixed-rate, nonconvertible, dollar-denominated, SEC registered, investment grade Corporate Debt.

The Bloomberg Barclays Intermediate Government/Credit Index is a combination of the Government Index which measures government-bond general and Treasury funds, and the Credit Bond Index, which is a market value-weighted index which tracks the returns of all publicly issued, fixed-rate, nonconvertible, dollar-denominated, SEC registered, investment grade Corporate Debt with maturities between one and ten years.

The Bloomberg Barclays Government/Credit Intermediate Index (1 – 3 yr.) is a combination of the Government Index which measures government-bond general and Treasury funds, and the Credit Bond Index, which is a market value-weighted index which tracks the returns of all publicly issued, fixed-rate, nonconvertible, dollar-denominated, SEC registered, investment grade Corporate Debt with maturities between zero and three years.

The Bloomberg Barclays U.S. Treasury Index includes public obligations of the U.S. Treasury. Treasury bills are excluded by the maturity constraint of at least one year but are part of a separate Short Treasury Index. In addition, certain special issues, such as state and local government series bonds (SLGs), as well as U.S. Treasury TIPS, are excluded. STRIPS are excluded from the index because their inclusion would result in double-counting. Securities in the Index roll up to the U.S. Aggregate, U.S. Universal, and Global Aggregate Indices. The U.S. Treasury Index was launched on January 1, 1973.

U.S. Agency: This index is the U.S. Agency component of the U.S. Government/Credit index. Publicly issued debt of U.S. Government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. Government (such as USAID securities). The largest issues are Fannie Mae, Freddie Mac, and the Federal Home Loan Bank System (FHLB). The index includes both callable and non-callable agency securities.

U.S Corporate – Investment Grade: This index is the Corporate component of the U.S. Credit index. It includes publicly issued U.S. corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity, and quality requirements. To qualify, bonds must be SEC-registered.

CMBS (Commercial Mortgage-Backed Securities): This index is the CMBS component of the U.S. Aggregate index. The Bloomberg Barclays CMBS ERISA-Eligible Index is the ERISA-eligible component of the Bloomberg Barclays CMBS Index. This index, which includes investment grade securities that are ERISA eligible under the underwriter's exemption, is the only CMBS sector that is included in the U.S. Aggregate Index.

MBS (Mortgage-Backed Securities): This index is the U.S. MBS component of the U.S. Aggregate index. The MBS Index covers the mortgage-backed pass-through securities of Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC). The MBS Index is formed by grouping the universe of over 600,000 individual fixed rate MBS pools into approximately 3,500 generic aggregates.

ABS (Asset-Backed Securities): This index is the ABS component of the U.S. Aggregate index. The ABS index has three subsectors: credit and charge cards, autos, and utility. The index includes pass-through, bullet, and controlled amortization structures. The ABS Index includes only the senior class of each ABS issue and the ERISA-eligible B and C tranche. The Manufactured Housing sector was removed as of January 1, 2008, and the Home Equity Loan sector was removed as of October 1, 2009.

Corporate High Yield: The Bloomberg Barclays U.S. High Yield Index covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included. Original issue zeroes, step-up coupon structures, 144-As and pay-in-kind bonds (PIKs, as of October 1, 2009) are also included.

The Bloomberg Barclays Municipal Bond Index is a broad-based, total-return index. The bonds are all investment-grade, tax-exempt, and fixed-rate securities with long-term maturities (greater than 2 years). They are selected from issues larger than $50 million.

The Bloomberg Barclays TIPS Index consists of Treasury Inflation Protected Securities (TIPS). TIPS are securities whose principal is tied to the Consumer Price Index. TIPS pay interest semi-annually, based on the fixed rate applied to the adjusted principal.

Ratings are measured on a scale that ranges from AAA or Aaa (highest) to D or C (lowest). Investment grade investments are those rated from highest down to BBB- or Baa3.