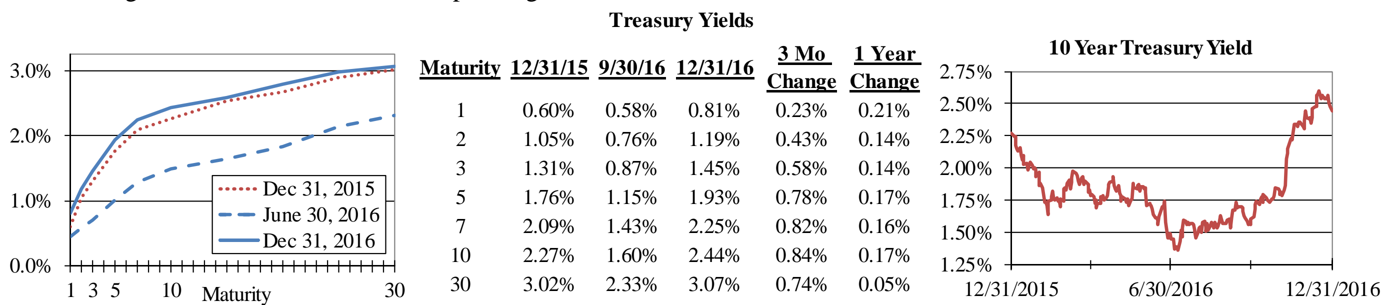
Baird Advisors
Fixed Income Market Comments
2016 - Year in Review

Treasury Yields Fall in 1H, Rise in 2H on Shifting Economic Data, Central Bank, Political Landscape

The Treasury market experienced significant volatility in 2016, driven by changing U.S. and global growth expectations, shifting global central bank policies, and political surprises both in the U.S and abroad. After a sharp dip in the 1st half and rebound in the 2nd half, the Treasury yield curve ended 2016 higher - the 10yr traded in a 123 bps range throughout the year before ending the year 17 bps higher at 2.44%. Early in 2016 global growth concerns focused on China shook global equity and credit markets as oil prices hit the lowest levels since 2003. By the end of March, however, volatility subsided and markets rebounded as global central banks took actions to abate market concerns - the European Central Bank announced an expanded bond-buying program, the Bank of Japan set a 0% target for its 10yr sovereign debt, and the Fed signaled it too would keep rates lower for longer as Yellen noted “caution was especially warranted” in removing monetary stimulus. The Fed had started 2016 with a much more optimistic forecast than the market, projecting four rate hikes in the year, but ultimately only made one 25 bps hike at its December meeting, setting the Fed funds target range at 0.50%-0.75%. Britain’s unexpected “Brexit” vote on June 23rd to leave the European Union triggered a drop in global bond yields and the 10yr and 30yr U.S. Treasury yields hit all-time lows. Treasury yields began moving higher two weeks after the surprise “Brexit” vote as the market’s negative reaction was short-lived, allowing investors to focus on the policy shift that was taking place globally that would emphasize fiscal stimulus and move away from a sole reliance on central bank monetary stimulus. The U.S. economy also showed signs of improving growth in the second half of the year as annualized 3Q GDP rose +3.5%, bouncing back from a weak first half of +1.1% annualized growth. Treasury yields rose sharply in response to the surprising U.S. election results in November as Trump won the presidency while the Republican Party held on to a majority of seats in the House and Senate. The 10yr Treasury rose from 1.86% on Election Day to 2.44% on 12/31/2016 in anticipation of higher growth and inflation if President Trump delivers on his promises of fiscal stimulus through tax cuts and infrastructure spending.



Treasury Yields

Maturity	12/31/15	9/30/16	12/31/16	3 Mo Change	1 Year Change
1	0.60%	0.58%	0.81%	0.23%	0.21%
2	1.05%	0.76%	1.19%	0.43%	0.14%
3	1.31%	0.87%	1.45%	0.58%	0.14%
5	1.76%	1.15%	1.93%	0.78%	0.17%
7	2.09%	1.43%	2.25%	0.82%	0.16%
10	2.27%	1.60%	2.44%	0.84%	0.17%
30	3.02%	2.33%	3.07%	0.74%	0.05%

Volatile Credit Spreads End 2016 Tighter as Heavy Issuance Absorbed by Strong Global Demand and Fund Inflows

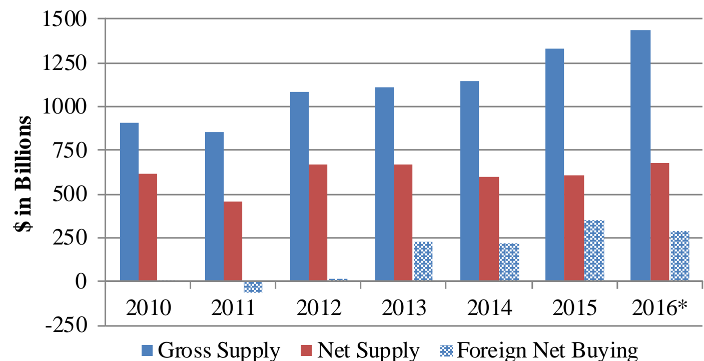
Spreads experienced significant volatility in 2016 – after hitting a wide of 214 bps on 2/11/2016, investment grade corporate spreads ended the year 42 bps tighter at 123 bps. While corporate leverage increased in 2016, the increase in debt levels has been concentrated in higher quality issuers such as Apple and Microsoft that have cash-rich balance sheets. Foreign net buying of corporate bonds, which had been close to zero and even negative from 2010-2012 grew as foreign direct net purchases of U.S. corporates was on pace to exceed $290 billion for 2016 (see graph below right). In addition to strong demand from foreign direct buying, robust net flows into fixed-income mutual funds and ETFs ended the year just under $190 billion according to ICI estimates. High Yield corporates also benefitted from flows, tightening an impressive 251 bps to end the year at 409 bps.

Option-Adjusted Spreads (in bps)

	12/31/15	9/30/16	12/31/16	3Mo Chg	12Mo Chg
U.S. Aggregate Index	56	47	43	-4	-13
U.S. Agency (non-mortgage)	21	21	21	0	0
Mortgage and ABS Sectors					
U.S. Agency Pass-throughs	24	14	15	1	-9
Asset-Backed Securities	72	55	59	4	-13
CMBS	121	84	75	-9	-46
Corporate Sectors					
U.S. Investment Grade	165	138	123	-15	-42
Industrial	183	140	125	-15	-58
Utility	150	132	117	-15	-33
Financial Institutions	134	137	120	-17	-14
U.S. High Yield	660	480	409	-71	-251

Sources: Bloomberg Barclays Indices

Credit: Gross/Net Supply, Foreign Demand



**2016 Foreign Net Buying is YTD annualized rate through 3Q16*
Sources : Federal Reserve, Barclays

Volatile Interest Rate Moves Create Bumpy Ride for Agency Mortgage-Backed Securities

The volatile interest rate moves of 2016 had a profound impact on Agency Mortgage-backed securities. Record low Treasury yields midyear helped push 30-year mortgage rates down nearly 60bps to a 3.32% low, spurring borrowers to pay off their existing mortgages by refinancing into new mortgages with lower rates. As shown in the table (right), heightened prepayments shortened the duration of the MBS index from 4.49yrs at the end of 2015 to 2.45yrs by the end of June. However with the sharp rise in rates post-election, the refinancing opportunity quickly receded. As refinancing activity slowed, the MBS Index duration extended all the way to 4.61yrs by year end and pushed the duration of the Aggregate index (of which 28% is MBS) to 5.89yrs. This adverse duration drift (i.e. negative convexity) made MBS one of the worst performing index sectors in 2016 as tight spreads weren't enough to compensate investors for this risk.

Mortgage - Adverse Duration Drift

	12/31/2015	6/30/2016	12/31/2016
30yr Mortgage Rate (Bankrate)	3.90%	3.53%	4.06%
U.S. MBS Index Duration	4.49	2.45	4.61
U.S. Aggregate Index Duration	5.68	5.47	5.89

Source: Bankrate, Bloomberg Barclays Indices

Investment-Grade Returns Negative in 4Q, Positive for the Year

Rising Treasury yields led to negative returns for the 4th quarter although returns stayed positive for the year. Treasuries and Tax-exempt municipal bonds were particularly hard-hit (-3.84% and -3.62% respectively) due to the post-election rise in yields and the prospect of lower marginal tax rates in 2017. For the year, strong demand for yield drove outperformance for non-government sectors. Investment grade corporates posted strong annual returns (+6.11%) buoyed by tighter spreads. High yield corporates posted equity-like returns for the year (+17.13%) after dropping early in 2016 as fundamentals became worrisome in commodity-sensitive sectors. The sector recovered sharply as growth concerns abated, commodities recovered, and demand from yield-starved investors remained strong. MBS returns (+1.39%) lagged due to rate volatility and heightened prepayment concerns. In contrast, high quality mortgage and asset-backed sectors with more cashflow timing certainty such as CMBS and ABS outperformed for the year (+3.32% and +2.03% respectively).

Total Returns of Selected Barclays Indices and Subsectors

Barclays Index/Sector	December	4th Quarter	2016
U.S. Aggregate Index	0.14%	-2.98%	2.65%
U.S. Gov't/Credit Index	0.21%	-3.39%	3.05%
U.S. Intermediate Gov't/Credit Index	0.07%	-2.07%	2.08%
U.S. 1-3 Yr. Gov't/Credit Index	0.06%	-0.39%	1.28%
U.S. Treasury	-0.11%	-3.84%	1.04%
U.S. Agency	-0.13%	-1.96%	1.39%
MBS (Mortgage Backed Securities)	0.00%	-1.97%	1.67%
CMBS (Commercial Mortgage Backed Securities)	-0.41%	-3.03%	3.32%
ABS (Asset Backed Securities)	-0.15%	-0.70%	2.03%
U.S. Corporate - Investment Grade	0.67%	-2.83%	6.11%
Corporate High Yield	1.85%	1.75%	17.13%
Municipal Bond Index	1.17%	-3.62%	0.25%
TIPS (Treasury Inflation Protected Securities)	-0.10%	-2.41%	4.68%

Outlook

We expect the U.S. economy to continue to grow at a moderate pace in 2017 with better near-term prospects post-election given Trump's pro-growth agenda though headwinds remain. Consumer inflation is likely to move modestly higher and reach the Fed's 2% target with wage inflation continuing its slow uptick. That being our base-case forecast, we believe the range of possible outcomes over the next 1-2 years is as wide as we have ever seen for a couple reasons. First, a global policy shift is underway from exhausted unconventional central bank easing toward fiscal stimulus that clearly presents "execution risk". Second, while the immediate implications of a growing trend toward populism point to the potential for anti-free trade and anti-immigration policies, the ramifications of a broader resurgence of nationalism and less global cooperation remain to be seen. We believe these uncertainties should keep the risk environment quite elevated for some time. The pace of additional Fed moves will likely accelerate but be limited by the lower potential growth rate for the U.S. economy which continues to be impacted by secular trends including aging populations and stubbornly low productivity growth. Additionally, low interest rates abroad will continue to hold down yields in the U.S. as foreign capital flows into U.S. markets; however, the magnitude of such flows may be smaller than in previous years. We see potential for modest additional spread tightening in 2017 and anticipate non-government sectors including investment grade corporates will outperform modestly by earning their yield advantage over time. We remain cautious on agency MBS as the Fed will likely discontinue MBS reinvestment once policy normalization is "well underway" and anticipate wider spreads may be required in this sector to absorb any material increase in supply. We see better relative value in the mortgage and asset-backed sectors in securities with more certain cashflow timing, including senior CMBS structures with superior credit enhancement and select short-duration asset-backed sectors (e.g. cards, autos, equipment). Non-agency RMBS continue to offer attractive relative value as new issuance is very limited and housing fundamentals continue to improve. We remain cautious of high yield corporates, finding value only selectively as spreads have compressed significantly. Municipal market valuations have become more compelling this year and will likely continue to offer select pockets of opportunity from both taxable and tax-free issuers.

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.