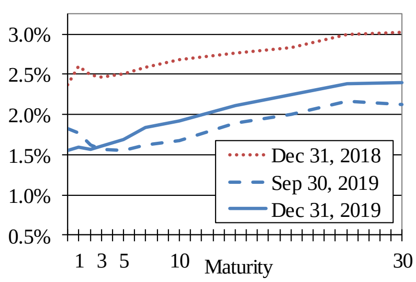
**Baird Advisors**
**Fixed Income Market Commentary**
**2019 - Year in Review**

### 2019: U.S. and Global Growth Worries Lead to Accommodative Fed Pivot; Trade Tensions and Politics Create Uncertainty

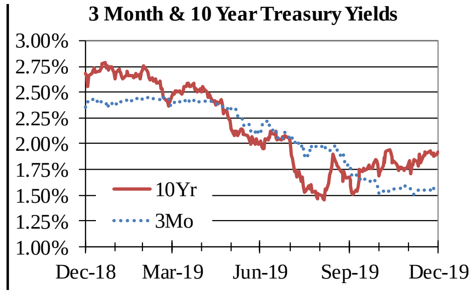
Treasury yields fell in 2019 as growing recession fears compelled the Fed to pivot to a more accommodative policy stance which included three rate cuts and a renewed expansion of its balance sheet in the second half of the year. The 10yr fell to a low of 1.46% on September 4th before trending higher to end the year at 1.92%. In January, Chairman Powell said that the Fed would be "patient" signaling a prolonged pause to further rate hikes. As global growth slowed and US/China trade tensions rose, the Fed made the first "insurance" rate cut in July and ultimately cut the fed funds rate two more times, bringing the target range to 1.50%-1.75% by the end of October. In a worrisome signal to investors looking for signs of recession, the yield spread between the 3mo Treasury bill and 10yr Treasury note inverted on multiple occasions in 2019, reaching its most negative level of -52 bps on August 28. Seeing disruption in short-term lending markets, the Fed began to provide additional Repo funding to the market in September. The Fed went even further in October, committing to buy $60B per month of Treasury Bills into Q2 2020 to rebuild excess reserve levels and to ensure ample liquidity and short-term funding market stability. The pivot to accommodation by the Fed, along with easing measures by other global central banks, calmed the market's recession concerns. The curve steepened and the 3mo to 10yr yield spread "de-inverted", closing the year at positive 37 bps. De-escalation in US/China trade tensions provided additional market support as the two countries agreed to a "phase one deal", preventing new tariffs on December 15th, and halving the tariffs that had been implemented on September 1. Furthermore, China committed over two years to a $200B increase in purchases of U.S. goods, primarily agricultural products. Partisan politics weighed on market sentiment throughout the year, culminating in the House of Representatives voting to impeach President Trump; a Senate trial is expected to begin in January. In the UK, markets got clarity on Brexit, as Boris Johnson and the Conservative party won a historically large majority in Parliament this month, paving the way for Britain to approve the separation agreement with the European Union by the January 31, 2020 deadline.




**Treasury Yields**

| Maturity | 12/31/18 | 9/30/19 | 12/31/19 | Q4 Change | 2019 Change |
|---|---|---|---|---|---|
| 3mo | 2.37% | 1.82% | 1.55% | -0.27% | -0.82% |
| 1 | 2.60% | 1.77% | 1.60% | -0.17% | -1.00% |
| 2 | 2.49% | 1.62% | 1.57% | -0.05% | -0.92% |
| 3 | 2.46% | 1.56% | 1.61% | 0.05% | -0.85% |
| 5 | 2.51% | 1.55% | 1.69% | 0.14% | -0.82% |
| 7 | 2.59% | 1.62% | 1.83% | 0.21% | -0.76% |
| 10 | 2.68% | 1.68% | 1.92% | 0.24% | -0.76% |
| 30 | 3.02% | 2.12% | 2.39% | 0.27% | -0.63% |

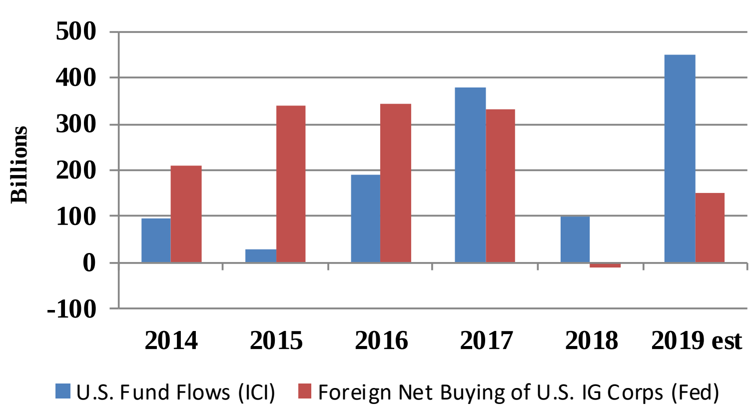
**3 Month & 10 Year Treasury Yields**




### Strong Domestic and International Fixed-Income Flows in 2019, Setting New Domestic Record

Fixed income fund inflows occurred at a record pace in 2019 after experiencing $70B of outflows in the last three months of 2018. Flows into fixed income funds and ETFs for 2019 entering the last week reached $450B, breaking the previous record set in 2017 (see chart). The ICI data doesn't fully capture demand from all market participants – such as insurance companies, pensions, and foreign investors. However, data from the Fed showed a strong appetite from foreign buyers, as net buying of investment grade corporate bonds in the first nine months of the year reached nearly $115B (or a $152B annualized pace), absorbing over a third of the $355B U.S. corporate net supply during that period. Global investors have been drawn to the positive yields on U.S. debt, as over $11 Trillion in global bonds were priced at negative yields at year end, according to Bloomberg, down from a peak of $17 Trillion in late August.

**Strong Domestic and Foreign Demand**




**Option-Adjusted Spreads (in bps)**

| | 12/31/18 | 9/30/19 | 12/31/19 | Q4 Chg | YTD Chg |
|---|---|---|---|---|---|
| U.S. Aggregate Index | 54 | 46 | 39 | -7 | -15 |
| U.S. Agency (non-mortgage) | 16 | 11 | 10 | -1 | -6 |
| Mortgage and ABS Sectors | | | | | |
| U.S. Agency Pass-throughs | 35 | 46 | 39 | -7 | 4 |
| U.S. Agency CMBS | 55 | 52 | 53 | 1 | -2 |
| U.S. Non-Agency CMBS | 107 | 82 | 85 | 3 | -22 |
| Asset-Backed Securities | 53 | 37 | 44 | 7 | -9 |
| Corporate Sectors | | | | | |
| U.S. Investment Grade | 153 | 115 | 93 | -22 | -60 |
| Industrial | 157 | 121 | 99 | -22 | -58 |
| Utility | 144 | 113 | 97 | -16 | -47 |
| Financial Institutions | 147 | 103 | 80 | -23 | -67 |
| Other Govt. Related | 90 | 78 | 72 | -6 | -18 |
| U.S. High Yield Corporates | 526 | 373 | 336 | -37 | -190 |
| Emerging Market Debt | 560 | 612 | 573 | -39 | 13 |

*Source: Bloomberg Barclays Indices*

**Corporate Spreads Meaningfully Tighter in 2019**

Fixed income industry outflows and fears of a central bank policy mistake tipping the U.S. economy into recession contributed to wider spreads at the end of 2018, setting the stage for a rebound in 2019. Accommodative monetary policy from global central banks, including a pivot away from additional rate hikes by the U.S. Fed, allayed global recessionary fears while strong domestic and foreign demand helped drive corporate spreads tighter. U.S. Investment Grade Corporates ended the year 60 bps tighter at 93 bps while High Yield Corporates tightened a remarkable 190 bps to end the year at 336 bps. U.S. Agency Pass-throughs were an outlier, widening 4 bps this year to 39 bps, as prepayment risks remained elevated and the Fed no longer supported the sector with additional purchases, instead allowing its MBS holdings to continue to run off, and only reinvesting in Treasuries. Emerging Market Debt also widened 13 bps in 2019 to 573 bps, primarily driven by country-specific news such as Argentina's currency crisis and debt default.

**Phenomenal Market Returns, Credit Outperformed in 2019**

The returns in the U.S. fixed income market were truly phenomenal considering the 10-year Treasury yield began the year at 2.68%. Both credit risk and duration risk were rewarded in 2019. U.S. Investment Grade Corporates posted the strongest overall returns in 2019 (+14.54%), and returns on longer maturities (U.S. Gov't/Credit + 9.71%) were substantially greater than those on shorter maturities (U.S. 1-3 Yr. Gov't/Credit Index +4.03%).

**Total Returns of Selected Barclays Indices and Subsectors**

| Bloomberg Barclays Index/Sector | December | Q4 | 2019 | Effective Duration (yrs) |
|---|---|---|---|---|
| U.S. Aggregate Index | -0.07% | 0.18% | 8.72% | 5.87 |
| U.S. Gov't/Credit Index | -0.20% | -0.01% | 9.71% | 6.93 |
| U.S. Intermediate Gov't/Credit Index | 0.13% | 0.37% | 6.80% | 3.91 |
| U.S. 1-3 Yr. Gov't/Credit Index | 0.24% | 0.59% | 4.03% | 1.87 |
| U.S. Treasury | -0.56% | -0.79% | 6.86% | 6.48 |
| U.S. Agency (Non-Mortgage) | -0.21% | -0.09% | 5.89% | 4.08 |
| U.S. Agency Pass-Throughs | 0.28% | 0.71% | 6.35% | 3.21 |
| CMBS (Commercial Mortgage Backed Securities) | -0.25% | -0.33% | 8.29% | 5.31 |
| ABS (Asset-Backed Securities) | 0.11% | 0.39% | 4.53% | 2.13 |
| U.S. Corporate Investment Grade | 0.32% | 1.18% | 14.54% | 7.89 |
| U.S. High Yield Corporates | 2.00% | 2.61% | 14.32% | 3.05 |
| Emerging Market Debt | 2.99% | 3.50% | 10.90% | 4.63 |
| Municipal Bond Index | 0.31% | 0.74% | 7.54% | 5.34 |
| TIPS (Treasury Inflation Protected Securities) | 0.38% | 0.79% | 8.43% | 4.67 |

**2020 Outlook**

As we ring in 2020, we see the year as likely a "continuation of gradual", in terms of growth and inflation, but with bouts of higher volatility. The outlook for Fed policy and short-term interest rates is a holding pattern - patiently waiting to see if the three rate cuts in 2019 are sufficient to sustain growth around 2%. Global growth quite likely bottomed in 2019 and the risk of global recession has diminished. On the inflation front, the Fed will likely adopt a new approach to meeting their 2% inflation objective sometime in the first half of 2020 in response to inflation remaining persistently below their 2% target for most of this cycle. The new approach will effectively be a "make-up strategy" that would allow inflation to run above 2% for a period of time if inflation has been below 2% for prior periods to achieve an average inflation rate of 2% over the long term. Given that inflation has persistently run below 2% in the last several years, the Fed would signal that no policy action would be required if inflation would run modestly above 2% for an extended period of time under this new approach. We expect U.S. real growth of 1.5%-2.5% in 2020, extending the longest post-WWII expansion further with only a modest increase in inflation.

While bouts of higher volatility may well persist, modest economic growth, moderate inflation, and the Fed's evolving approach to inflation targeting lead us to expect a low, accommodative fed funds rate target with potential for the yield curve to steepen. The new federal budget deal boosts federal spending, creating a larger deficit which must be funded through additional federal borrowing. While few policymakers are currently focused on the growing federal debt, there is risk this could ultimately put upward pressure on Treasury rates, but not meaningfully so in 2020. Positive consumer confidence should benefit retail spending as many households have benefited from the strong equity and fixed income market returns. In addition, a de-escalation of trade tensions may help support business confidence, translating into improved growth in business capital expenditures.

Our outlook for corporate credit is mixed – we continue to see value in BBB rated credit where business models are strong and management teams are committed to deleveraging. However, A rated credit appears to be more fully-valued as the year end spread of 70 bps is only a few basis points away from the tightest levels since the financial crisis. The probability of a near-term recession remains relatively low and we expect corporate earnings growth to be positive, though at a moderate pace. We remain cautious on the prospects for Agency Pass-through securities, as the Fed continues its balance sheet reduction but find value in select collateral that offers better prepayment protections. We are optimistic on the outlook for other securitized sectors, such as Non-Agency RMBS, CMBS and ABS, which we believe offer value versus higher-rated credit and expect to outperform equivalent-duration Treasuries in 2020.

Disclosures

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.

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.

Emerging Market: Bloomberg uses a fixed list of countries defined as emerging markets countries for index inclusion purposes that is based on World Bank Income group definitions (Low/Middle), IMF country classifications (Non-Advanced Economies), and other advanced economies that may be less accessible or investable for global debt investors.

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.