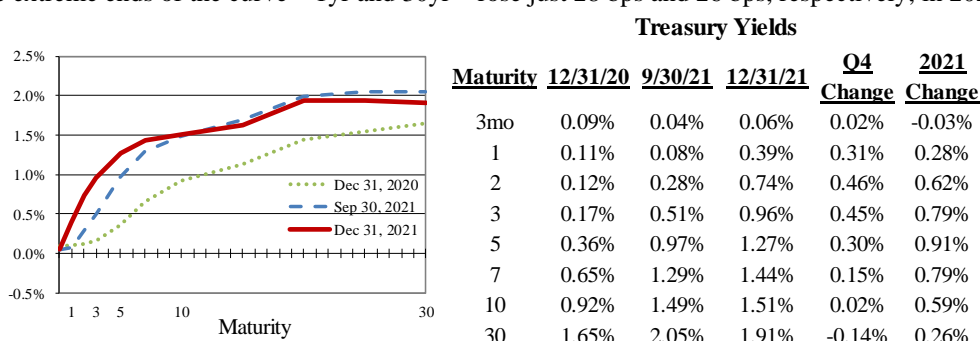


Baird Advisors Fixed Income Market Commentary 2021 - Year in Review

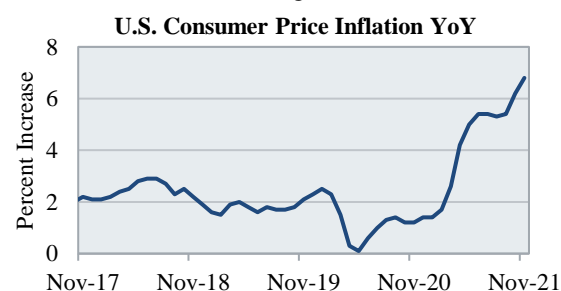
Pandemic Persists Yet Yields and Inflation Rise on Strong Growth in 2021

The Treasury curve shifted higher in 2021 on what will likely turn out to be the strongest pace of economic growth and inflation since the 1980s, easily exceeding what the Fed and most investors had expected at the start of the year. The benchmark 10yr Treasury rose from 0.92% in January to the high mark for the year of 1.74% on March 31st. It nearly reached that point again in October before rallying into year-end. It ended December at 1.51%, 59 bps higher on the year. Shifts along the Treasury curve reflected both the changing sentiment of investors and the Fed's response. In Q1, as the market grew concerned with the Fed's willingness to accept strong growth and their view that the rising inflation pressures were "transitory," the curve steepened; the spread between 2- and 10-yr Treasury yields nearly doubled from +80 bps to +158 bps at the end of March. Fed Chair Jay Powell responded in Q3 by signaling first that the Fed was "talking about tapering" asset purchases. This forward guidance was followed by the announcement that the Fed would begin tapering \$15B of purchases per month in November, which was ultimately accelerated to a \$30B monthly pace in December to begin in January 2022. The tapering response and conveyance of possible post-taper rate hikes via the Fed's quarterly "Dot Plot" of forecasted rate moves lifted short to intermediate yields sharply in Q4 with longer yields moving lower, flattening the curve. In fact, the largest rate move for the year was in the 5yr maturity which rose 91 bps. At the same time, the yield on the extreme ends of the curve – 1yr and 30yr – rose just 28 bps and 26 bps, respectively, in 2021.



Fed Policy Pivot Driven by Labor and Supply Chain

While a massive rollout of vaccines to begin 2021 offered hope of a return to normalcy, the Delta and Omicron variants of the Covid-19 virus surfaced and disrupted those plans. The economic impact was most notable in the labor market and in supply chains. The massive monetary and fiscal stimulus provided to combat the economic effects of the pandemic, stimulus that easily exceeded that of the Global Financial Crisis in 2008, accomplished the objective of boosting demand. A strong Q4 GDP report is expected to confirm growth in 2021 of approximately 6%. Not foreseen by the policymakers, however, were the challenges that would occur in restoring and ramping up supply to meet the recovery in demand. Disruptions in supply of both labor and goods put additional upward pressure on wages and consumer prices that surprised even the Fed. Covid-related factors, most notably within schools and daycares, kept many parents and caregivers out of the job market. An estimated 2.4 million "excess" retirements above forecasted demographic trends also curbed the available pool of workers. With labor scarce, wages rose, particularly among entry level workers, as employers sought to entice people back into the workforce. Consumer prices also moved sharply higher as supply chain bottlenecks created shortages of goods resulting in the CPI spiking to 6.8% YoY, with expectations that it may remain elevated into 2022 before declining as supply chains begin to normalize. The above factors led to a policy pivot by the Fed, with the now newly renominated Chair Jay Powell at the helm. The Fed's policy position moved closer to consensus market views which at year end were pricing in three 25 bps rate hikes in 2022 with the first one expected by the June FOMC meeting. This was a notable shift given that 2021 began with the Fed forecasting no hikes until 2024. In Q4, Congress was able to pass the long-awaited physical infrastructure plan with bipartisan support. The \$1.2T Infrastructure Investment and Jobs Act (IIJA), which includes \$550B of new spending, begins to address the many deferred needs across the nation; the spending is spread over several years. President Biden's other major legislative goal, the \$1.75T Build Back Better social spending plan, was unable to gain key Senate support before year end and its fate remains uncertain with the midterm elections looming in 2022.



Record and Resilient Bond Fund Inflows

Despite strong economic growth and surging inflation, a record amount of money (\$583B) flowed into fixed income funds and ETFs, exceeding the previous record of 2019 (\$459B). Despite the low yields at the start of the year and ensuing rate volatility (particularly in Q1), demand was broad based, with both domestic and global interest. Strong demographic demand provided consistent support for the market from aging individual investors. Institutional demand was also strong, driven by abundant cash on corporate balance sheets and strong equity market returns that led to a rebalancing across asset classes. In addition, U.S. fixed income yields were attractive for foreign investors both nominally and after accounting for hedging costs.

Option-Adjusted Spreads (in bps)

Modestly Tighter Spreads for the Year

After grinding tighter through most of the year, Investment Grade credit spreads widened in Q4 as the Omicron variant spread across the globe affecting most industries and reducing the appetite for risk. Still, spreads ended moderately tighter for the year across most market sectors. Investment Grade Corporates tightened 4 bps in 2021, thanks to strong demand and a net issuance decline of 47% YoY. The strong economy and solid earnings backdrop provided fundamental support throughout the year. High Yield spreads tightened the most (-77 bps) in 2021 while Emerging Market credit spreads went the other direction, widening 78 bps. While index data shows Agency RMBS spreads tighter on the year, the headline data does not recognize the impact from large prepayment model revisions in the year to better align with faster than expected prepayments. Agency RMBS actually underperformed equal duration Treasuries for the year. Non-Agency CMBS spreads narrowed the most (-14 bps) in 2021 aided by a strong recovery in the lowest-rated securities which had underperformed in 2020. ABS spreads widened for the year (+5 bps) in large part due to heavy supply in Q4 and in sympathy with wider spreads for short corporate debt in November.

	12/31/20	9/30/21	12/31/21	Q4 Chg	2021 Chg
U.S. Aggregate Index	42	33	36	3	-6
U.S. Agency (non-mortgage)	10	3	8	5	-2
Mortgage and ABS Sectors					
U.S. Agency RMBS (Pass-throughs)	39	27	31	4	-8
U.S. Agency CMBS	44	29	34	5	-10
U.S. Non-Agency CMBS	109	85	95	10	-14
Asset-Backed Securities	33	29	38	9	5
Corporate Sectors					
U.S. Investment Grade	96	84	92	8	-4
Industrial	101	88	95	7	-6
Utility	106	96	107	11	1
Financial Institutions	83	75	83	8	0
Non-Corporate Credit	66	52	55	3	-11
U.S. High Yield Corporates	360	289	283	-6	-77
Emerging Market Debt	503	581	581	0	78

Source: Bloomberg Indices

Treasury Price Declines Result in Negative Returns; Spread Tightening Leads to Excess Returns for Credit Sectors

After very strong returns in both 2019 and 2020, the bond market succumbed to the upward pressure on rates and delivered negative returns in 2021. Credit risk was rewarded in 2021 more than interest rate risk. While U.S. Investment Grade Corporate debt returned -1.04% for the year it provided +1.61% of excess return relative to Treasuries aided by additional carry and spread tightening. Conversely, U.S. Agency RMBS also returned -1.04% but unlike Corporates, the RMBS sector lagged Treasuries with -0.68% of excess return. Early principal repayments on premium priced RMBS coupled with an extension of the sector's duration as rates rose both contributed to negative sector returns relative to Treasuries. RMBS also lagged both CMBS and ABS on an excess return basis as those sectors outperformed Treasuries by 1.05% and 0.31%, respectively, despite negative returns (CMBS -1.16%, ABS -0.34%). Like 2020, TIPS were the top-performing sector in 2021 (+5.96%). While their longer duration would seem to be a headwind in 2021, it was more than offset by increased investor demand for inflation protection. U.S. High Yield Corporates (+5.28%) provided the largest excess returns for the year while Emerging Market Debt (-3.07%) provided the smallest excess returns.

Total Returns of Selected Bloomberg Barclays Indices and Subsectors

	December	Q4	2021	2020	Effective Duration (years)
U.S. Aggregate Index	-0.26%	0.01%	-1.54%	7.51%	6.78
U.S. Gov't/Credit Index	-0.32%	0.18%	-1.75%	8.93%	7.63
U.S. Intermediate Gov't/Credit Index	-0.13%	-0.57%	-1.44%	6.43%	4.13
U.S. 1-3 Yr. Gov't/Credit Index	-0.15%	-0.56%	-0.47%	3.33%	1.92
U.S. Treasury	-0.51%	0.18%	-2.32%	8.00%	7.14
U.S. Agency (Non-Mortgage)	-0.31%	-0.58%	-1.32%	5.48%	3.88
U.S. Agency RMBS (Pass-throughs)	-0.09%	-0.37%	-1.04%	3.87%	4.76
CMBS (Commercial Mortgage Backed Securities)	-0.16%	-0.64%	-1.16%	8.11%	5.09
ABS (Asset-Backed Securities)	-0.16%	-0.57%	-0.34%	4.52%	2.33
U.S. Corporate Investment Grade	-0.08%	0.23%	-1.04%	9.89%	8.70
U.S. High Yield Corporates	1.87%	0.71%	5.28%	7.11%	3.83
Emerging Market Debt	1.59%	-2.24%	-3.07%	4.26%	5.50
Municipal Bond Index	0.16%	0.72%	1.52%	5.21%	5.05
TIPS (Treasury Inflation Protected Securities)	0.32%	2.36%	5.96%	10.99%	4.40

2022 Outlook

We expect economic growth to moderate in 2022 to the 3-4% range, still above its long-term trend. Supply bottlenecks should ease as demand for goods, which was pulled forward in early 2021 as both the vaccines and unprecedented stimulus were deployed, softens and demand for services rises. Normalization of supply and demand should validate recent inflation trends to be more one-time in nature (created by the stop/start of the pandemic) rather than long-term secular. Monetary and fiscal support will transition from tailwinds to modest headwinds further moderating growth. We expect the Fed to complete its accelerated tapering by March and then determine if conditions warrant a move on rates. Historically there has been a pause between the two policy actions but if inflation stays stubbornly high the Fed may choose to shorten the "pause." On the fiscal side, even if a version of the Build Back Better plan is passed, YoY fiscal stimulus will decline from significant pandemic relief in 2021. We continue to see opportunities in Investment Grade Corporates, although current spreads remain relatively tight. An underweight to Agency RMBS is appropriate as the sector is susceptible to weakness as the Fed tapers purchases and net supply increases. We will continue to look to optimize our exposure along the yield curve, capturing the roll-down benefits along its steeper segments.

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 U.S. 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 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 Intermediate U.S. Government/Credit Bond 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 1-3 Year U.S. Government/Credit Bond 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 zero and three years.

The Bloomberg 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 CMBS ERISA-Eligible Index is the ERISA-eligible component of the Bloomberg 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 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 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 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.

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