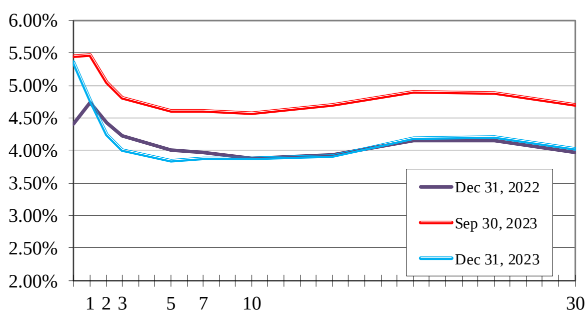
**Baird Advisors**
**Fixed Income Market Commentary**
**2023 Review and 2024 Outlook**

## 2023 Bond Market Review

The Fed slowed and likely ended its most aggressive tightening campaign since the early 1980s in its fight against inflation. Since the last rate hike in July, which brought the top end of the federal funds target range to the highest level since 2000 (5.50%), inflation slowed at a steady pace even as economic growth remained strong. The Fed's preferred inflation measure, the Core PCE Index, fell to 3.2% YoY in November from 4.9% to start 2023. In a show of support, investors returned to the bond market in 2023 as fixed income fund/ETF flows were a positive $159B, reversing the record outflows of -$345B in 2022. Despite the favorable inflation backdrop and the Fed pause after July, the 2s-10s curve remained inverted throughout the year. After starting the year at -55 bps, the inversion deepened to -107 bps in March amid regional bank concerns, the deepest inversion since 1980, before ending the year -37 bps. Yet, the overarching theme for 2023 was rate volatility. After beginning the year at 3.88%, the 10yr yield fell more than 50 bps to 3.31% in April as Silicon Valley and Signature Bank both failed, each taken into FDIC receivership; the sharp rise in rates since 2021 ultimately exposed poor internal risk management practices at each institution. And while some expected the Fed to cut rates in response, they instead utilized targeted liquidity measures to address banking needs.

From there, resilient economic data and heavy Treasury issuance led to a significant move up in rates. "Who will buy all the debt?" was a common question as rates were rising into October, as foreign demand waned and the Fed's ongoing QT efforts leaves them as net sellers; the Fed balance sheet declined by $840B in 2023 (including both Treasury and MBS debt). The 10yr yield rose 168 bps, peaking in mid-October at 4.99%, the highest level since 2007. But the elevated rates were short-lived as one of the strongest year-end market rallies in decades ensued over the final two months. The 10yr yield fell 111 bps to end the year at 3.88%, the same yield at which it began the year, completing the round trip! Supporting the November/December rally, in addition to the improving inflation data and the Fed signaling a more balanced outlook, the market also responded favorably to a Treasury decision to shift issuance in the quarterly refunding toward bills rather than bonds, easing auction anxiety. Despite the market rally, the favorable Treasury funding adjustment was likely a temporary reprieve as ongoing fiscal deficits are expected to remain unusually high (est. 6.6% of GDP in FY24), which is abnormal during times of economic expansion. Fitch lowered the rating on US government debt to AA+ (the same rating as S&P) in August over deficit and governance concerns while Moody's opted to maintain the US rating at Aaa but revised the outlook to Negative in November.

**Treasury Yields**




| Maturity | 12/31/22 | 9/30/23 | 12/31/23 | Q4 Chg | YTD Chg |
|---|---|---|---|---|---|
| 3 Mo | 4.41% | 5.46% | 5.36% | -0.10% | 0.95% |
| 1 | 4.73% | 5.48% | 4.78% | -0.70% | 0.05% |
| 2 | 4.43% | 5.05% | 4.25% | -0.80% | -0.18% |
| 3 | 4.23% | 4.81% | 4.01% | -0.80% | -0.22% |
| 5 | 4.01% | 4.61% | 3.85% | -0.76% | -0.16% |
| 7 | 3.97% | 4.62% | 3.88% | -0.74% | -0.09% |
| 10 | 3.88% | 4.57% | 3.88% | -0.69% | 0.00% |
| 20 | 4.15% | 4.90% | 4.20% | -0.70% | 0.05% |
| 30 | 3.97% | 4.70% | 4.03% | -0.67% | 0.06% |

## Notable Tightening in Corporate and Agency RMBS Spreads in Q4 Result in Spreads Tighter for 2023

Corporate spreads ended 2023 at +99, tighter by 31 bps, driven in large part by notable tightening in Q4 (-22 bps), particularly among the Financials subsector (-28 bps Q4). IG Corporate spreads did exhibit intra-year volatility and reached as high as +163 in the wake of Signature and Silicon Valley Bank's failures in mid-March before entering a downward trend through year-end as issues for those banks proved to be isolated to a handful of regional banks and not systemic. Spread volatility also remained elevated in the Agency RMBS market. While spreads ended the year at +47 bps, just -4 bps below where they began the year, interim months featured spread tights of +35 bps and a wide of +82 bps in October before embarking on an outsized rally into year-end. Fed balance sheet runoff (QT) and diminished bank buying fostered demand imbalances and spread volatility. Non-Agency CMBS widened for the year by +24 bps (from +179 start to +203 at year-end) driven primarily by subordinate segments of the market amid concerns regarding office demand post-Covid. The fundamental concerns were particularly acute among floating-rate issuers with securities facing the need to refinance. AAA-rated Non-Agency CMBS

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

| | 12/31/22 | 9/30/23 | 12/31/23 | Q4 Chg | YTD Chg |
|---|---|---|---|---|---|
| U.S. Aggregate Index | 51 | 52 | 42 | -10 | -9 |
| U.S. Agency (non-mortgage) | 26 | 16 | 17 | 1 | -9 |
| Mortgage and ABS Sectors | | | | | |
| U.S. Agency RMBS (Pass-throughs) | 51 | 66 | 47 | -19 | -4 |
| U.S. Agency CMBS | 52 | 54 | 48 | -6 | -4 |
| U.S. Non-Agency CMBS | 179 | 203 | 203 | 0 | 24 |
| Asset-Backed Securities | 76 | 67 | 68 | 1 | -8 |
| Corporate Sectors | | | | | |
| U.S. Investment Grade | 130 | 121 | 99 | -22 | -31 |
| Industrial | 125 | 110 | 90 | -20 | -35 |
| Utility | 129 | 122 | 105 | -17 | -24 |
| Financial Institutions | 140 | 140 | 112 | -28 | -28 |
| Non-Corporate Credit | 66 | 56 | 55 | -1 | -11 |
| U.S. High Yield Corporates | 469 | 394 | 323 | -71 | -146 |
| Emerging Market Debt | 687 | 648 | 598 | -50 | -89 |

*Source: Bloomberg Indices*

performed better, just +8 bps wider on the year. Spread tightening in 2023 was greatest for High Yield Corporates (-146 bps) and Emerging Market Debt (-89 bps) on hopes for an economic soft landing.

**Robust Income and Massive Q4 Returns Propel Positive Aggregate Results in 2023**

A strong Q4 rally of 6.82%, primarily in November/December, helped to produce solid results of 5.53% in 2023 following a challenging 2022 for the Agg Index. Income was a driving factor in total returns given that the 10yr Treasury finished the year exactly where it began, at 3.88%. The Agg Index began 2023 with a yield of 4.68% and ended the year at 4.53%, a function of spread tightening. Excess returns were positive for both the quarter and year across fixed income subsectors. Agency RMBS produced an outsized 1.33% of Q4 excess returns and 0.68% of annual excess returns amid above-average volatility. CMBS also provided positive excess returns for Q4 (+0.67%) and year (+1.14%). IG Corporate returns were particularly strong in Q4 at 8.50% and nearly matched the annual return figure of 8.52%. Its excess return of 4.55% for the calendar year was second to only Taxable Municipals (+5.20% excess returns) among investment grade subsectors. The strong rally in lower quality market segments in Q4 on market hopes for Fed easing and an economic soft landing also propelled HY Corporates and EM debt, which had excess returns of 3.31% and 5.31%, respectively, in the final 3 months of the year.

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

| | Dec Total Return | Dec Excess Return | Q4 Total Return | Q4 Excess Return | 2023 Total Return | 2023 Excess Return | Effective Duration (years) |
|---|---|---|---|---|---|---|---|
| U.S. Aggregate Index | 3.83% | 0.26% | 6.82% | 0.88% | 5.53% | 1.40% | 6.24 |
| U.S. Gov't/Credit Index | 3.68% | 0.11% | 6.63% | 0.72% | 5.72% | 1.69% | 6.44 |
| U.S. Intermediate Gov't/Credit Index | 2.32% | 0.17% | 4.56% | 0.49% | 5.24% | 0.96% | 3.78 |
| U.S. 1-3 Yr. Gov't/Credit Index | 1.19% | 0.07% | 2.69% | 0.17% | 4.61% | 0.28% | 1.83 |
| U.S. Treasury | 3.36% | 0.00% | 5.66% | 0.00% | 4.05% | 0.00% | 6.18 |
| U.S. Agency (Non-Mortgage) | 1.90% | 0.06% | 3.68% | 0.14% | 5.13% | 0.64% | 3.21 |
| U.S. Agency RMBS (Pass-Throughs) | 4.31% | 0.64% | 7.48% | 1.33% | 5.05% | 0.68% | 5.89 |
| CMBS (Commercial Mortgage Backed Securities) | 3.03% | 0.53% | 5.25% | 0.67% | 5.42% | 1.14% | 4.42 |
| ABS (Asset-Backed Securities) | 1.91% | 0.35% | 3.48% | 0.37% | 5.54% | 1.24% | 2.70 |
| U.S. Corporate Investment Grade | 4.34% | 0.30% | 8.50% | 2.03% | 8.52% | 4.55% | 7.09 |
| U.S. High Yield Corporates | 3.73% | 1.79% | 7.16% | 3.31% | 13.44% | 8.86% | 3.15 |
| Emerging Market Debt | 4.38% | 1.56% | 9.71% | 5.31% | 13.10% | 9.52% | 4.92 |
| Municipal Bond Index | 2.32% | N/A | 7.89% | N/A | 6.40% | N/A | 6.05 |
| Taxable Municipal Bond: Agg Eligible | 5.82% | 0.32% | 8.98% | 0.57% | 8.85% | 5.20% | 9.55 |
| TIPS (Treasury Inflation Protected Securities) | 2.69% | 0.00% | 4.71% | 0.00% | 3.90% | 0.00% | 6.58 |

*Excess return represents the return of a spread sector versus a like-duration U.S. Treasury.

**2024 Outlook**

Despite the strong returns in Q4 2023, which may have pulled forward returns from 2024, the outlook for the fixed income markets in 2024 is favorable. This view is supported by an inflationary trend that is moving closer to the Fed's 2% target and an acknowledgement, by both the Fed and the market, that the odds have shifted in favor of rate cuts over further rate increases. Investors should be encouraged that inflation has slowed even as economic growth, and particularly the labor market, have been relatively firm. That said, signs of slowing are emerging. Monthly nonfarm payroll growth has slowed from a peak of +472k in January of 2023 to a monthly average of less than +200k in the second half of the year. At the same time, the US unemployment rate has risen from the mid- to the high-3% range. Yet, it is noteworthy that the economy grew at more than a 2% pace in each quarter of 2023. Growth, coupled with rising stock and bond prices all seem to align with the Fed's hope for a soft landing in 2024. Outside of the US, geopolitical risks are elevated. The war between Ukraine and Russia is approaching its 2$^{nd}$ anniversary as the US continues to debate further aid to Ukraine in its upcoming budget negotiations. The October 7 attack by Hamas in Israel only added to global tensions as Israel responded with an aggressive campaign inside Gaza to defeat Hamas. Finally, relations between China and the US remain strained. Chinese economic growth post-Covid has been sluggish and trade relations continue to be impacted by intellectual property disputes, national security concerns on technology and the impacts of near-sourcing for manufacturers. Efforts by President Biden to ease tensions with China's President Xi were likely only a temporary reprieve to larger, long-term challenges between the two global superpowers.

From a market perspective, we expect there to be a gradual re-shaping of the yield curve to its normal upwardly sloped posture in 2024 as the health of economic data dictates the pace and magnitude of change. If short-term rates fall, as is expected, it is also likely that a portion of the massive stockpile of investor cash currently parked in high-yielding money market funds or other short-term instruments would seek income out along the curve. This would point to a continuation of positive fund flows in the New Year. At 3.88%, the 10yr Treasury yield is still more than 300 bps above the lows of 2020 and above the roughly 3.25% average yield on this market benchmark since the turn of the century. The same favorable comparisons can be said for broad market indices. Spreads on investment grade segments of the bond market such as corporate credit and mortgage-backed securities remain fair following the tightening in Q4 2023 and provide investors reasonable additional income with a solid fundamental foundation. However, spread volatility was visible in 2023 and may continue into 2024, benefitting the patient, active investor. Finally, 2024 is an election year, certain to add to market uncertainty as the year progresses; another key benefit of the income bonds currently offer to help insulate investors from ongoing price volatility.

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.

RB2021-0805

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