# MacKay Shields Fixed Income Quarterly Outlooks

September 2023

New York Life Investments

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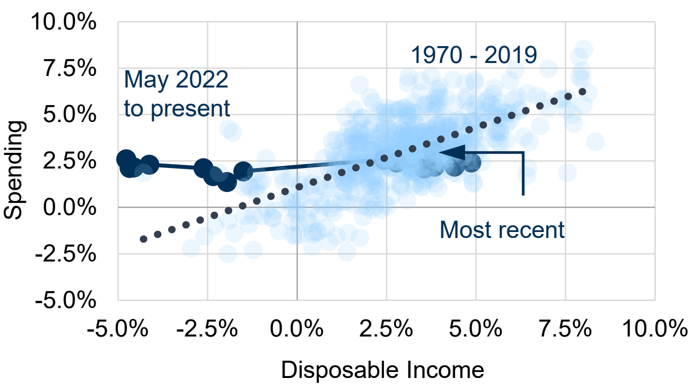
# Macroeconomic 4Q2023

Steven Friedman, Senior Macroeconomist, Head of the Macro and Quantitative Solutions Team, Portfolio Manager

## Implications of a “Higher-for-longer” Fed

The trend of economic resilience that we highlighted in our last quarterly commentary continues to play out, with the economy tracking well above its potential rate of growth in the third quarter. The labor market continues to move into better balance, with an improvement in labor supply accompanying a gradual cooling in demand. In addition, while the bulk of excess household savings have now been drawn down, real income growth is helping to sustain spending. On the corporate side, the earnings recession of the past year is beginning to recede, and S&P500 earnings are forecast to return to modest growth over the next twelve months.[1]

**Figure 1: Real Income and Spending | YoY Change**




Source: Bureau of Economic Analysis, MacKay Shields

News on the inflation front has also been positive. Over the past three months, the core Consumer Price Index (which excludes food and energy) has risen at just a 2.4 percent annualized rate, down from 5.1 and 4.1 percent at the end of the first and second quarters, respectively. The healing of the supply side of the global economy has tamped down on core goods inflation this year, while core services inflation has also moderated. Importantly from the Fed’s perspective, service price disinflation has been evident not just in housing, but in a number of discretionary service categories including airfare, recreation and dining out.

Despite progress on the inflation side of its mandate, policy makers have signaled that strength in the economy runs the risk of delaying the return of inflation to their two percent objective. Hence in the latest economic projections, the median FOMC participant not only still anticipates an additional rate hike before year end, but now sees just 50 basis points of rate cuts next year, down from 100 in the previous projection round in June. At the time of writing, this “higher for longer” signaling has resulted in tighter of financial conditions, with long-term Treasury yields rising sharply, the dollar strengthening, and the S&P500 returning to levels last seen in June.

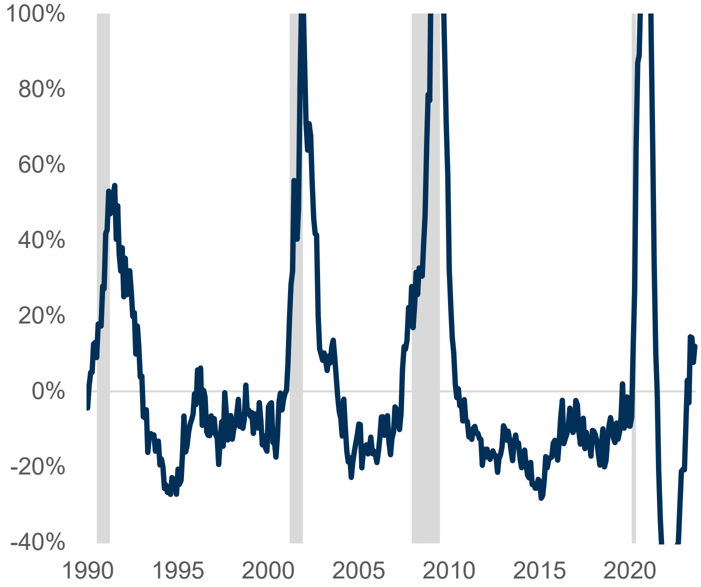
These developments illustrate the dilemma facing policy makers. Inflation has clearly moderated but continued strength in the economy could jeopardize further progress, forestalling a pivot to less restrictive policy. Keeping policy tight for an extended period in turn risks a more significant economic slowdown and too-sharp an increase in unemployment.

This dilemma will play out against a backdrop of growing economic challenges. First, the cooling of the labor market is not occurring without some pain. Permanent job losses have been growing at a rate typically encountered before economic contractions. Bank lending standards remain tight, and not surprisingly, so does loan growth. And while many businesses and households locked in low interest rates in 2020 and 2021, today’s high rates will increasingly bite as debt comes due, eroding balance sheet health. It also remains to be seen if the rise in real wage growth can continue. Corporate margins are already under pressure as top-line revenue growth remains tepid and labor and non-labor costs are moderating only slowly. These developments could result in a more meaningful slowing in labor demand if businesses seek to defend margins. Finally, a number of unique circumstances will weigh on growth in the near term. The resumption of student loan payments along with higher gasoline prices will serve as a restraint on spending for many households. And a prolonged United Auto Workers strike, as well as a potential government shutdown, also pose slight headwinds to the economy’s momentum.

[1] Bloomberg.

# Macroeconomic 4Q2023 (cont'd)

**Figure 2: Unemployment due to Permanent Job Loss | YoY Change**




Source: Bureau of Labor Statistics, MacKay Shields. Shading represents NBER recessions

The end of interest rate cycles always pose challenges, requiring agility from both policy-makers and investors. The current cycle has at least two additional challenges, and how they evolve has a direct bearing on the economic outlook and the performance of financial assets. First, it remains an open point of debate whether the inflation surge of recent years was driven primarily by supply- or demand-side effects. If supply-side effects dominated, then inflation should gradually moderate on its own, with monetary policy playing a supporting role through its impact on inflation expectations. If instead demand-side factors were the primary driver, then it will take further weakening in the labor market to re-anchor inflation at the central bank's target. This debate is clouded by a second factor, potential structural changes in the US and global economy in the wake of COVID. It is quite possible that reshoring and the energy transition, and the fiscal policies that promote them, could serve as new sources of inflation pressure for the foreseeable future. If so, the Federal Reserve may need to push harder on the brakes if it chooses to defend its inflation objective.

# Active Fixed Income 4Q2023

## De-Risking with Fixed Income

Michael DePalma, Co-Head of Global Fixed Income Team, Senior Portfolio Manager
Neil Moriarty, Co-Head of the Global Fixed Income Team, Senior Portfolio Manager
Thomas Musmanno, CFA, Senior Managing Director

*Falling inflation and slowing economic growth should limit further increases in long-term interest rates*

*Higher yields provide a cushion against an uncertain macroeconomic environment*

*Up-in-quality is a key component to managing risk for late cycle investing*

### Looking Back

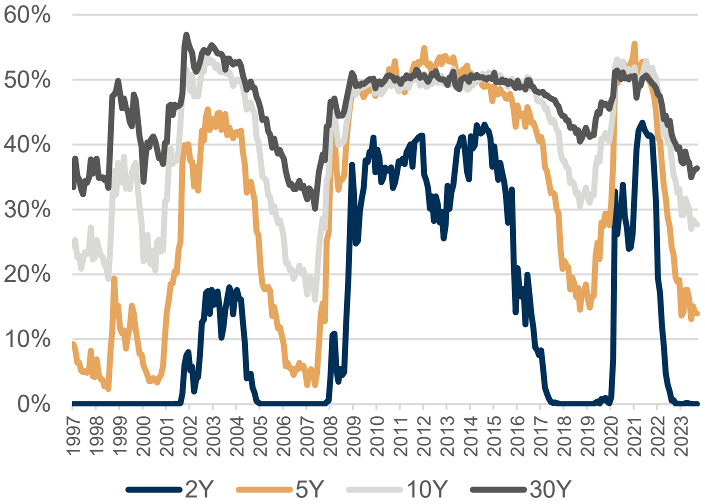
During the summer months, the US yield curve bear steepened by 40 bps, pushing long-dated bond yields near post-pandemic highs. The move higher in rates was generally attributed to the following factors: 1) the downgrade of US Treasury debt by Fitch, 2) higher Treasury issuance to fund the fiscal deficit, 3) economic data that surprised to the upside, and 4) reduced demand from foreign buyers.

### Looking Ahead

Following a quarter of surprisingly robust growth, we see a number of challenges, such as tight labor markets and sticky wages which may apply additional inflationary pressure forcing the Fed to keep rates higher for longer. Additionally, the resumption of student loan payments and higher gas prices could hinder the strength of the consumer. Over the coming months that may result in fading optimism over a soft landing. With these challenges and the current global economic backdrop, including Fed policy and economic uncertainty, we believe the opportunity set for fixed income is becoming more compelling today. Higher bond yields mean higher return expectations across the board.
As discussed in the third quarter outlook, initial conditions matter.

History has shown that the current yield has a very high correlation with the future return one receives on most fixed income investments. Another benefit of today's high yields is the downside cushion they provide if interest rates were to rise further. Figure 1 displays the market implied probability of losses over the next 12 months for US Treasury bonds of varying maturities.*

**Figure 1: Market Implied Probability of Negative Return USD/12M Horizon**




* Calculated using the forward 1-year Treasury curve as the mean of the future rate distribution and 1-year volatility as the standard deviation of the future rate distribution. Probabilities of negative returns were then calculated using the future rate of distribution from the mean.
It is not possible to invest directly in an index. Please see disclosures for information related to comparisons to an index and index descriptions.
**Past performance is not indicative of future results.**
Source: Bloomberg and MacKay Shields. Data from January 1, 1997 to September 10, 2023

Based on today's yield levels, even with elevated volatility, we maintain that the probability of a mark-to-market loss on short and intermediate maturity bonds is considerably lower than when yields where at post-pandemic lows, and lower than what we have been subject to for most of the past decade.**

** Not intended nor should be construed as an assurance of profit or a guarantee against loss. There are inherent risks in any investment.

# Active Fixed Income 4Q2023 (cont'd)

## De-Risking with Fixed Income

### Approach: Guidance

**Duration**
Modest long duration bias as we believe interest rates are at or near cycle peaks

**Yield Curve**
Inverted yield curve = favor short - intermediate maturities

**Spreads**
Up in quality

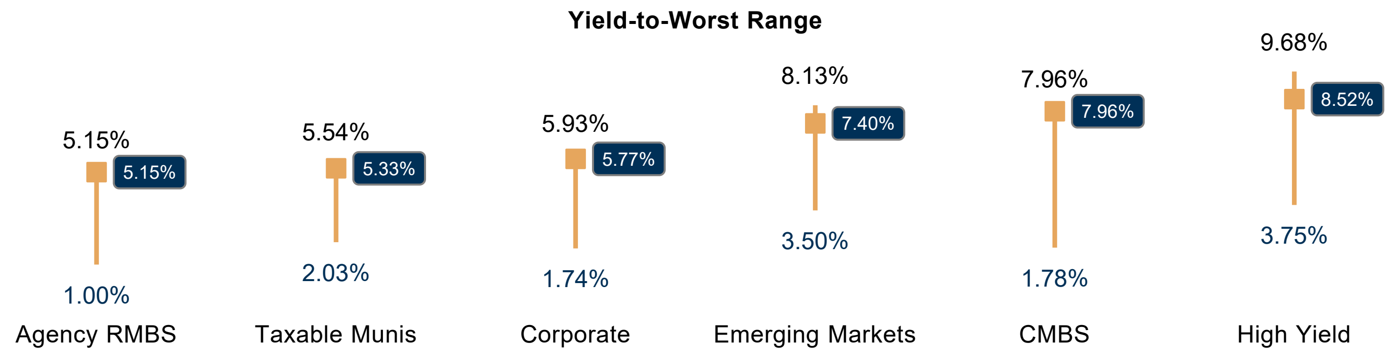
**Volatility**
Rates volatility to gradually normalize

**Asset Allocation**
Favor agency mortgages, and select portions of the commercial mortgage-backed securities (CMBS) market

Periods of elevated bond market volatility create pockets of dislocation across segments of the market. Looking at the current fixed income landscape, while yields are very high today (Figure 2), valuations, as represented by spreads over risk-free US Treasuries are at or near historical averages. However, there are some exceptions. In particular, AAA-rated agency mortgage-backed securities are at their highest yields and widest spreads in more than a decade. The reasons: lack of new supply as housing has become much less affordable, Quantitative Tightening by the Federal Reserve has removed a major source of demand for mortgage-backed securities and forced selling by the FDIC as they liquidate the portfolios of seized banks (e.g., Silicon Valley Bank). These events have converged to form a perfect storm that has driven spreads much wider and in our view has created today's opportunity for patient investors.

Looking ahead, in the US and in Europe, attention will increasingly shift from how high central banks will take interest rates to how long rates will remain at elevated levels. With growth still strong in the US, it is premature to expect a shift in policy from the FOMC.  Chair Powell made clear in his Jackson Hole speech that the Fed is resolute about getting to its 2% target. The latest Fed meeting served to reinforce the "higher for longer" narrative when they published the latest forecasts where they appear to be extrapolating stronger than expected growth and that the neutral rate of interest is higher than previously thought, and will decline more gradually. The ECB faces a more delicate balance as growth is already weak in Europe and inflation remains stubbornly high, albeit well off its peaks. While further hikes can't be ruled out, we may begin to see greater focus on growth from the ECB so long as disinflationary trends continue.

**Figure 2: Bond Yields Near 10-Year Highs Across Credit Markets**




Yield-to-worst is a measure of the lowest possible yield that can be received on a bond that fully operates within the terms of its contract without defaulting. Corporates = Bloomberg US Corporate Bond Index; High Yield = Bloomberg US Corporate High Yield Bond Index; Agency RMBS = Bloomberg US Mortgage Backed Securities (MBS) Index; CMBS = ICE US Fixed Rate Non-Agency CMBS Index; Taxable Municipal = Bloomberg Taxable Municipal Index Index; Emerging Markets = ICE BofA US Emerging Markets External Debt Sovereign & Corporate Plus Index.
Source: Bloomberg, ICE Data.

# US High Yield 4Q2023

Andrew Susser, Executive Managing Director,
Head of High Yield

Joseph Maietta, CFA, Client Portfolio Manager

Many of the fears that gripped investors just months ago seem to have vanished. Inflation in the US has showed signs of cooling, leading many to conclude that the Fed will cut interest rates next year. The US economy has shown remarkable resilience to higher interest rates; the recession and accompanying plunge in corporate profits that many were forecasting have not occurred. The widely held view of a "hard landing" has given way to a consensus of "soft landing" and, more recently, "no landing".

CCC bonds have outperformed in this environment. Through September 14, 2023, the CCC segment of the ICE BofA US High Yield Index has returned 14.6%, outpacing the broader high yield market return of 7.2%. CCC-rated bonds are on pace for their best year since 2016.

That CCC bonds have outperformed in a strong market is expected. What is surprising, though, is the extent of their outperformance in a non-stressed environment.

As seen in the chart below, CCC bonds are on pace for their best performance relative to BBs in an environment where US High Yield market spreads already began the year less than 500bps:

**Figure 1: Calendar Year CCC-BB Return Differences (%) When Starting ICE Bofa US HY Index Spread-to-Worst Less Than 500bps**

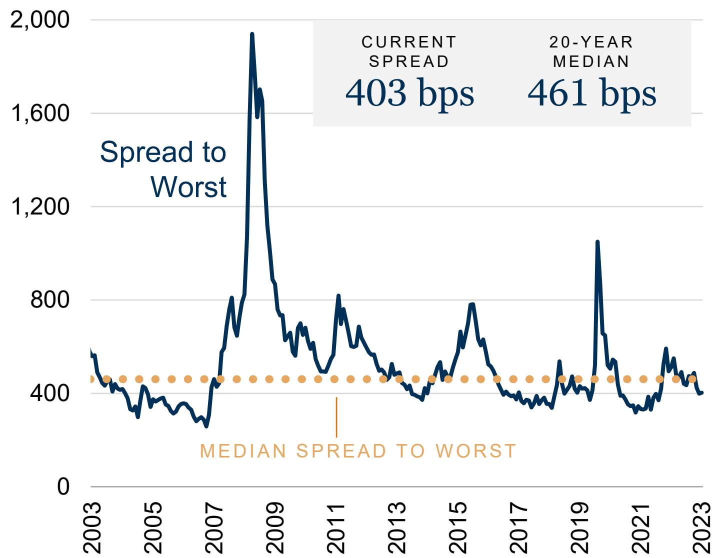
| Year | Starting Spread-to-Worst (bps) | CCC Return (%) | BB Return (%) | CCC-BB Return Difference (%) |
|---|---|---|---|---|
| 2023 | 488 | 15% | 5% | 10% |
| 2021 | 390 | 10% | 5% | 6% |
| 2017 | 438 | 11% | 7% | 4% |
| 2018 | 369 | -4% | -2% | -2% |
| 2022 | 330 | -16% | -11% | -5% |
| 2020 | 372 | 3% | 9% | -6% |
| 2014 | 418 | -3% | 5% | -8% |

Source: ICE BofA US HY Index. ICE BofA US HY BB Index, ICE BofA US HY CCC & Lower Index
As of September 14, 2023

In our view, the credit outlook for high yield remains strong. The quality of high yield bonds has improved significantly in the past decade. The ICE BofA US High Yield Index is now comprised of 51% BBs (on a par value basis) at the end of 2022, up from 43% at the end of 2011. At the same time, CCCs have declined to 11%. High yield issuers today are generally publicly traded companies - 69%, according to JP Morgan. Even if the US economy heads into a recession, we believe it is unlikely that default rates spike far above historical norms.

However, high yield valuations are less compelling after the strong 2023 rally. The current spread of 403bps is below the historical average of 461bps and toward the middle of the non-panic range of 350-550 (see chart below).

**Figure 2: US High Yield Market Spreads**




Source: ICE Data
Index: ICE BofA US High Yield Index
As of August 31, 2023
Spread to worst = the dispersion of returns between the best and worst performing security in a market.

There are many risks in financial markets today. However, we maintain stable fundamentals and reasonable valuations suggest that US high yield continues to represent a reasonable, lower duration fixed income investment option.

# Investment Grade Credit 4Q2023

Shu-Yang Tan, CFA, Senior Portfolio Manager
Lesya Paisley, CFA, Portfolio Manager

## Summary

Given our late cycle view of the economy, we do not believe there is room for spreads to tighten, but little risks that could drive spreads wider. Our view is that the US economy is at its late stages of the economic cycle. US economic growth continues to slow, given the impact of the most rapid increase in short term interest rates in history. The impact of this increase can be seen in weakening credit fundamentals. Slower consumer spending, higher energy costs and higher labor costs are impacting margins. Furthermore, given higher yields, companies are experiencing a large increase in interest costs upon refinancing. These factors point to declining fundamentals and inhibits any spread tightening. However, the US Fed has signaled that we are near "peak rates".

Higher rates have kept demand for investment grade (IG) credit up. As the economy slows there is a possibility for the Fed to begin easing, which is usually bullish for credit, a scenario that has likely been delayed to 2024 or later. This, and a healthy demand for corporate bonds provide a positive technical picture that keeps spreads from materially widening.

Therefore, for the 4th quarter of 2023, we feel spreads will remain range bound, and we expect most of the returns to come from carry (coupon income) rather than price appreciation (spread tightening). Given the steeply inverted yield curve, we favor the shorter end of the curve for its higher carry and lower volatility given a possible "higher for longer" interest rate scenario. Our favored sectors include Electric Utilities, Communications and Consumer Staples. We remain cautious on the Banking sector, not because of fundamentals (US Banks are very solid fundamentally in our view) but because of the supply of new issues from having to raise additional capital due to new regulations.

## Growth Continues to Slow

The following charts show the 12 month growth in revenues for the universe of IG companies as well as their profit and EBITDA margins. 12 month growth in revenue has fallen to less than 5% from a high of about 15% in 2022, with narrowing margins (albeit from healthy levels). Fundamentals have stopped improving.

**Figure 1: 12m Growth in Revenue**

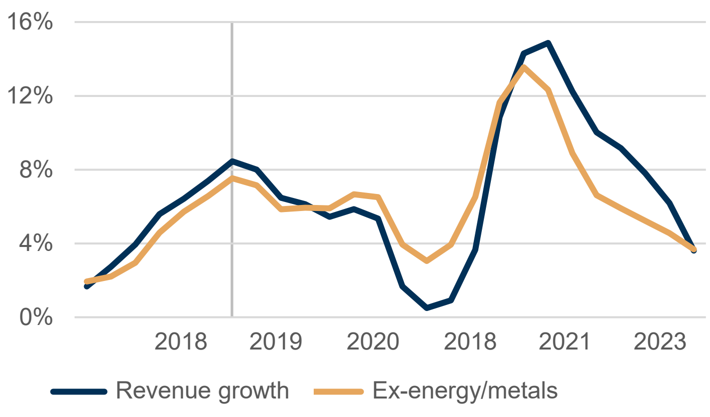
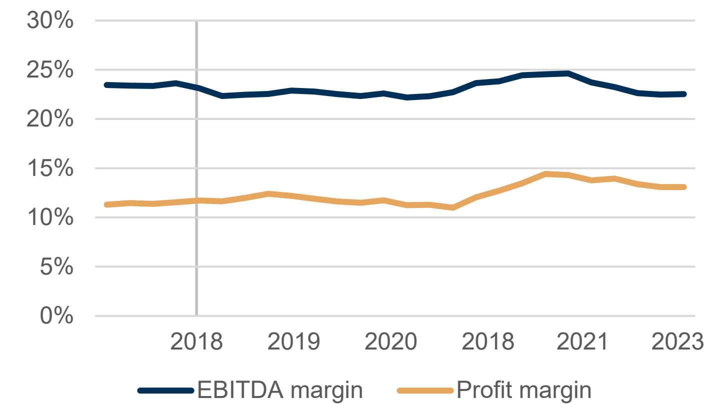



**Figure 2: Profit Margin, EBITDA Margin**




Source: Citigroup
EBITDA – earnings before interest, taxes, depreciation, and amortization

# Investment Grade Credit 4Q2023 (cont'd)

We see further risks to revenue and margins. Higher energy prices and a resumption of student loan payments will crimp consumer spending. Capex growth too has slowed significantly, confirming our late cycle view.

## But demand is still strong, higher yields cushion a slowdown

Year-to-date, the average monthly inflow for IG funds and ETFs has averaged $20 billion (according to data from EPFR). Investors are favoring the higher yield environment with investment grade bonds providing a yield of 5.85%, highest since 2009. This is a very attractive yield for investors despite a slowing economy.

If the economy were to materially slow, given higher treasury yields, there is room for yields to fall when the Fed begins easing. Lower treasury rates will likely cushion any negative impacts from spread widening due to weaker fundamentals.

## Carry over Price

We think it makes sense for investors to take advantage of the inverted yield curve (where long-term interest rates are less than short-term interest rates) to earn extra carry from the front end of the yield curve with lower volatility. This benefits investors in a low spread volatility environment as we think spreads will remain rangebound and there is limited room for price movement. At the other end of the curve, there are strong technical factors supporting the long end. These bonds tend to be issued by very high quality companies, but year to date, less than 15% of new issues have a tenor longer than 20 years*. Asset-liability management buyers need long dated corporates to immunize their portfolios, so there is a strong demand supply imbalance, keeping spreads from widening significantly. We think that when the Fed starts to ease monetary policy, the front and the long ends of the curve will be beneficiaries.

*Source: Jefferies and Bloomberg

# Securitized 4Q2023

Michael DePalma, Co-Head of Global Fixed Income Team, Senior Portfolio Manager

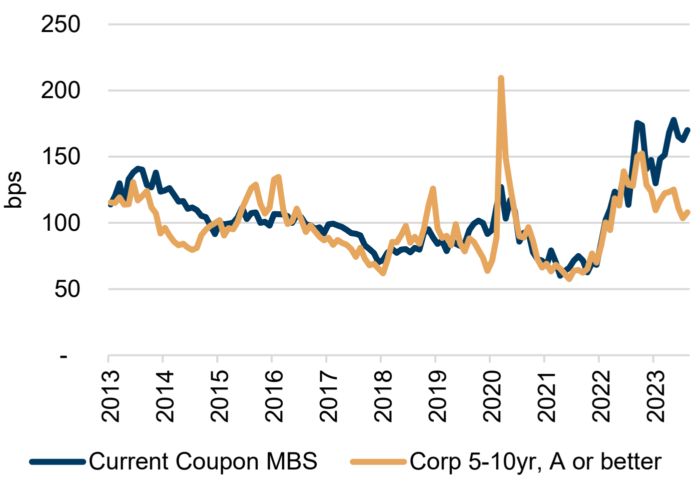
Neil Moriarty, Co-Head of the Global Fixed Income Team, Senior Portfolio Manager

Zachary Aronson, Structured Products Credit Analyst, Portfolio Manager

*Agency Mortgage backed securities remain historically compelling but it's a tale of two markets*

As we've noted previously, due to the combined factors of reduced bank buying, sustained higher interest rate volatility, poor technicals associated with ongoing FDIC sales and the historic inversion of the treasury yield curve, agency mortgages offer valuations not seen in many years. Mortgages also offer particular value relative to investment grade (IG) credit. Indeed, this relative value has only grown more compelling as investment grade credit spreads tightened over the past quarter.

**Figure 1: MBS Spreads against Investment Grade Corporates**




Sources: Bloomberg and MacKay Shields. Past performance is not indicative of future results.

Importantly, opportunity within the mortgage sector is specific to recently issued bonds created at current interest rates rather than those produced at very low rates during the pandemic era of Federal Reserve dominance of the mortgage market. The enormous production at very low rates and the rapid rise in rates over the last year has created two distinct markets. Bonds 2-4.5% coupons produced during the period of low interest rates and active Federal Reserve buying. This segment of the market represents more than 75% of the mortgage bonds included in the Bloomberg Aggregate Index and trade at yield spreads ranging from 58 – 107 basis points over treasuries. Meanwhile, recent production coupons between 5 - 6.5% trade at yield spreads to treasuries ranging from 126-180 basis points.

**Figure 2: Agency Mortgage Passthroughs – Value in Higher Coupon**

| Coupon | Price | WAC | Yield | OAD | Spread |
|---|---|---|---|---|---|
| 2.00 | 77.09 | 2.94 | 5.07 | 8.35 | 58 |
| 2.50 | 88.2 | 3.35 | 5.15 | 8.01 | 66 |
| 3.00 | 83.28 | 3.78 | 5.22 | 7.62 | 73 |
| 3.50 | 87.03 | 4.25 | 5.31 | 7.17 | 82 |
| 4.00 | 90.01 | 4.85 | 5.44 | 6.61 | 96 |
| 4.50 | 92.23 | 5.47 | 5.55 | 5.98 | 107 |
| 5.00 | 95.03 | 5.97 | 5.74 | 5.20 | 126 |
| 5.50 | 97.09 | 6.47 | 5.95 | 4.40 | 144 |
| 6.00 | 99.03 | 6.91 | 6.16 | 3.76 | 162 |
| 6.50 | 100.2 | 7.32 | 6.38 | 3.28 | 180 |

**Lower coupon securities are trading at tight spreads and low yields**

- US Fed has been the primary buyer during QE, but has stepped away under QT
- Very low risk of prepayment

**Higher coupon securities are trading at wider spreads and high yields**

- Wider spreads are required to attract buyers in lieu of Fed
- Higher prepayment risk

As of September 20, 2023
WAC = weighted average coupon; OAD = option-adjusted duration
Source: Bloomberg Fannie Mae Agency mortgage backed securities
**Past performance is not indicative of future performance.**

We view more recently issued bonds as a unique and significant opportunity to reduce credit risk while increasing income potential and liquidity in portfolios.

# Convertibles 4Q2023

Edward Silverstein, CFA, Senior Managing Director, Head of Convertibles

## Performance

Year-to-date performance has made it evident that the convertible market is more closely linked to the performance of equities than traditional bonds. Through the first 9 ½ months of 2023, the U.S, convertible market advanced more than 7.5% while the Bloomberg U.S. Aggregate Index is up a mere 26 basis points - the former benefitting from the advance of stocks, while the latter is hampered by the rise in interest rates.

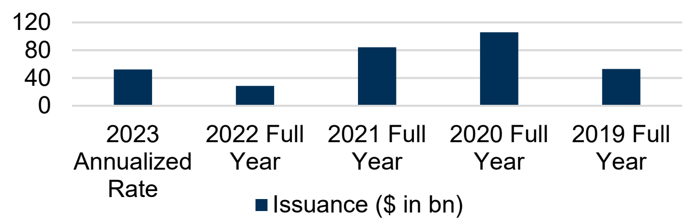
While convertibles have performed far better than traditional straight bonds, compared to the S&P 500 and NASDAQ indices, convertibles have fallen short of their typical 60-80% upside participation. Much of this shortfall is due to the absence of the best performing S&P and NASDAQ issues from the convertible market. With valuations on smaller cap companies far lower than their larger cap peers, our expectation is that, in the absence of a recession, equity advances will broaden out to include a greater number of small and mid-cap companies, allowing convertibles to make up ground with the large cap indices.

## Issuance

Year-to-date, new issuance of convertible securities is well ahead of last year's pace but still below the pace we saw in 2020 and 2021. At the current rate, we expect this year's totals to approximate $50-55 billion which is within the range of historical norms. Higher interest rates should continue to incent companies to raise capital in the convertible market as they can issue debt with a much lower coupon by providing investors the potential for upside appreciation tied to the issuer's stock price through the bond's conversion feature.

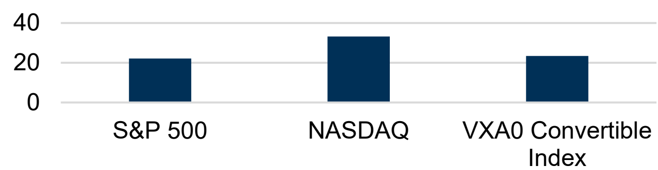
For investors, more than 20% of the new issuance this year has been investment grade, which was incredibly scarce for the past decade as investment grade companies could sell non-convertible debt with coupons below 3%. In addition, higher rates have forced issuers to attach larger coupons to their convertible offerings. While convertible coupons remain well below those of high-yield debt, they are significantly higher than they were just one year ago. Lastly, the conversion premiums for most new issues – the amount that the common stock price needs to rise before it becomes advantageous to convert – have returned to more historical norms of 25-35% following 2021's premiums of 50-70% for many large technology and media new issues. These features – lower conversion premiums and higher coupons - should allow investors to capture a greater portion of the underlying equity's upside move and garner an enhanced income stream versus what might have been earned in recent years past.

**Figure 1: Annual New Issuance**




Source: MacKay Shields LLC, S&P 500, NASDAQ, and Bloomberg U.S. Aggregate Bond Index.

**Figure 2: Index Price-Earnings Ratio**




Source: MacKay Shields LLC, S&P 500, NASDAQ, and ICE BofA All U.S. Convertibles (VXA0) Index.

## Outlook

Apart from being confident that prices will fluctuate, we are agnostic in our view of market returns in the coming six to nine months. We believe our bottom up process which focuses on companies with a strong fundamental business, free cash flow, and a solid balance sheet should perform well in most market environments. In addition, by utilizing the asymmetric return profile inherent in most balanced convertible bonds, whereby an investor can expect to participate in a greater percentage of the issuer's equity upside than downside, our convertible strategy is one you may want to consider.

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**About Risk:** High yield securities (junk bonds) have speculative characteristics and present a greater risk of loss than higher quality debt securities. These securities can also be subject to greater price volatility. The principal risk of mortgage-related and asset-backed securities is that the underlying debt may be prepaid ahead of schedule, if interest rates fall, thereby reducing the value of the fund's investment. If interest rates rise, less of the debt may be prepaid and the fund may lose money. Convertible securities are subject to a risk of loss. Convertible securities may be subordinate to other securities. The total return for a convertible security depends, in part, upon the performance of the underlying stock into which it can be converted. Additionally, an issuer may encounter financial difficulties which could affect its ability to make interest and principal payments. If an issuer stops making interest and/or principal payments, an investor could lose its entire investment.

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ICE BofA utilizes its own composite scale, similar to those of Moody's, S&P and Fitch, when publishing a composite rating on an index constituent (eg. BBB3, BBB2, BBB1). Index constituent composite ratings are the simple averages of numerical equivalent values of the ratings from Moody's, S&P and Fitch. If only two of the designated agencies rate a bond, the composite rating is based on an average of the two. Likewise, if only one of the designated agencies rates a bond, the composite rating is based on that one rating.

### COMPARISONS TO AN INDEX

Comparisons to a financial index are provided for illustrative purposes only. Comparisons to an index are subject to limitations because portfolio holdings, volatility and other portfolio characteristics may differ materially from the index. Unlike an index, individual portfolios are actively managed and may also include derivatives. There is no guarantee that any of the securities in an index are contained in any managed portfolio. The performance of an index may assume reinvestment of dividends and income, or follow other index-specific methodologies and criteria, but does not reflect the impact of fees, applicable taxes or trading costs which, unlike an index, may reduce the returns of a managed portfolio. Investors cannot invest in an index. Because of these differences, the performance of an index should not be relied upon as an accurate measure of comparison.

### INDEX DESCRIPTIONS

The following indices may be referred to in this document:

#### BLOOMBERG BAA US CORPORATE INDEX

The Bloomberg Baa Corporate Index measures the Baa-rated, fixed-rate, taxable corporate bond market. It includes USD denominated securities publicly issued by US and non-US industrial, utility and financial issuers.

#### BLOOMBERG NON-AGENCY INVESTMENT GRADE CMBS INDEX

The Bloomberg Non-Agency Investment Grade CMBS Index measures the market of conduit and fusion CMBS deals with a minimum current deal size of $300 million that are rated investment grade or higher using the middle rating of Moody's, S&P, and Fitch after dropping the highest and lowest available ratings.

#### BLOOMBERG PAN-EUROPEAN AGGREGATE INDEX

Covers eligible investment grade securities from the entire European continent. The primary component is the Bloomberg Euro-Aggregate Index. In addition, the Bloomberg Pan-European Aggregate Index includes eligible securities denominated in British pounds (GBP), Swedish krona (SEK), Danish krone (DKK), Norwegian krone (NOK), Czech koruna (CZK), Hungarian forint (HUF), Polish zloty (PLN), Slovenian Tolar (SIT), Slovakian koruna (SKK), and Swiss franc (CHF). Apart from the currency constraint, the inclusion rules for the Pan-European Index are identical to those of the Bloomberg Euro-Aggregate Index.

# IMPORTANT DISCLOSURE

### BLOOMBERG US AGGREGATE BOND INDEX

The Bloomberg U.S. Aggregate Index represents securities that are SEC-registered, taxable, and dollar denominated. Must have at least one year to final maturity regardless of call features. Must have at least $300 million par amount outstanding. Must be rated investment-grade (Baa3/BBB- or higher) by at least two of the following ratings agencies: Moody's, S&P, Fitch. Must be dollar-denominated and non-convertible.

### BLOOMBERG US CORPORATE HIGH YIELD TOTAL RETURN INDEX VALUE UNHEDGED USD

A component of the US Corp High Yield Index that is designed to track a more liquid component of the USD-denominated, high yield, fixed-rate corporate bond market. The US High Yield VLI uses the same eligibility criteria as the US Corp High Yield Index, but includes only bonds that have a minimum amount outstanding of USD500mn and less than five years from issue date.

### BLOOMBERG US CORPORATE TOTAL RETURN VALUE UNHEDGED USD

The Bloomberg US Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD denominated securities publicly issued by US and non-US industrial, utility and financial issuers.

### BLOOMBERG US CREDIT 5-10 YEAR INDEX

The Bloomberg U.S. Credit 5-10 Year Index measures the performance of the U.S. corporate and a non-corporate component with maturities of 5-10 years that includes foreign agencies, sovereigns, supranationals, and local authorities. It is a subset of the U.S. Government/Credit Index and the U.S. Aggregate Index.

### BLOOMBERG US TAXABLE MUNICIPAL BOND INDEX

The Bloomberg U.S. Taxable Municipal Bond Index is a rules-based, market-value-weighted index engineered for the long-term taxable bond market. To be included in the index, bonds must be rated investment-grade (Baa3/BBB- or higher) by at least two of the following ratings agencies if all three rate the bond: Moody's, S&P, and Fitch. If only two of the three agencies rate the security, the lower rating is used to determine index eligibility. If only one of the three agencies rates a security, the rating must be investment-grade. They must have an outstanding par value of at least $7 million and be issued as part of a transaction of at least $75 million. The bonds must be fixed rate and must be at least one year from their maturity date. Remarketed issues (unless converted to fixed rate), bonds with floating rates, and derivatives, are excluded from the benchmark.

### ICE BOFA ALL US CONVERTIBLES (VXA0) INDEX

The ICE BofA All U.S. Convertibles (VXA0) Index is an unmanaged index that consists of convertible bonds traded in the U.S. dollar denominated investment grade and non-investment grade convertible securities sold into the U.S. market and publicly traded in the United States. The Index constituents are market value weighted based on the convertible securities prices and outstanding shares, and the underlying index is rebalanced daily.

### ICE BOFA HIGH YIELD CCC & LOWER INDEX

The ICE BofA High Yield CCC & Lower Index is a subset of the ICE BofA US High Yield Index including all securities rated CCC1 or lower.

### ICE BOFA US HIGH YIELD BB INDEX

The ICE BofA High Yield BB Index is a subset of the ICE BofA US High Yield Index including all securities rated between BB1 and BB3.

### ICE BOFA US HIGH YIELD INDEX

The ICE BofA US High Yield Index tracks the performance of U.S. dollar denominated below investment grade corporate debt publicly issued in the U.S. domestic market. Qualifying securities must have a below investment grade rating (based on an average of Moody's, S&P and Fitch) and an investment grade rated country of risk (based on an average of Moody's, S&P and Fitch foreign currency long term sovereign debt ratings). In addition, qualifying securities must have at least one year remaining term to final maturity, a fixed coupon schedule and a minimum amount outstanding of $100 million. Original issue zero coupon bonds, "global" securities (debt issued simultaneously in the eurobond and U. S. domestic bond markets), 144a securities and pay-in-kind securities, including toggle notes, qualify for inclusion in the Index. Callable perpetual securities qualify provided they are at least one year from the first call date. Fixed-to-floating rate securities also qualify provided they are callable within the fixed rate period and are at least one year from the last call prior to the date the bond transitions from a fixed to a floating rate security. DRD-eligible and defaulted securities are excluded from the Index.

### J.P. MORGAN CEMBI BROAD DIVERSIFIED CORE INDEX

The J.P. Morgan CEMBI Broad Diversified Core Index (CEMBI CORE) tracks the performance of US dollar-denominated bonds issued by emerging market corporate entities.

### J.P. MORGAN EMBI GLOBAL DIVERSIFIED INDEX

The J.P. Morgan EMBI Global Diversified Index (EMBIG) tracks liquid, US Dollar emerging market fixed and floating-rate debt instruments issued by sovereign and quasi-sovereign entities.

### NASDAQ COMPOSITE INDEX

The NASDAQ Composite Index is a broad-based capitalization-weighted index of stocks in all three NASDAQ tiers: Global Select, Global Market and Capital Market.

### S&P 500 INDEX

The S&P 500 Index is an unmanaged index that is widely regarded as the standard for measuring large-cap U.S. stock market performance.



### DEFINITIONS

**Active Management:** Active management is the use of a human element, such as a single manager, co-managers or a team of managers, to actively manage a fund's portfolio. Active management strategies typically have higher fees than passive management.

**Duration:** Duration can measure how long it takes, in years, for an investor to be repaid a bond's price by the bond's total cash flows.

**Spreads:** The difference of gap that exists between two prices, rates, or yields.

**Yield Curve:** A line that plots yields of bonds having equal credit quality but different maturity dates.

INVESTMENTS



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