FOUR TRENDS IN FIXED INCOME

Introduction

In most portfolios, a fixed income allocation is meant to provide stability, income, and liquidity to investors. However, fixed income markets are continually evolving, and that evolution may either increase or decrease their ability to deliver on those objectives over time. In many cases, this is a result of some fixed income exposures pursuing as an equal objective higher returns. As such, it is important for investors to monitor the trends that govern their fixed income investments, and to continually evaluate whether their fixed income allocation is fulfilling their objective for it.

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The conclusion of 2018 offers an opportunity to reflect on several major, ongoing changes to US fixed income markets and offers some insights for 2019

and beyond. Last year marked both the ten-year anniversary of the global financial crisis and the five-year anniversary of the "taper tantrum" that occurred when the Federal Reserve announced that it would begin slowing its accommodative monetary policies. Both events have profoundly affected the characteristics of today's fixed income landscape, meaningfully altering the investment profile of this asset class in several ways.

We believe the four trends highlighted below and on the following pages represent some of the most significant shifts in the market cycle which institutional investors have operated within since the Great Financial Crisis. The first two trends demonstrate a significant shift in the interest rate risk implied by most fixed income portfolios. The third and fourth trends highlight the shifting landscape of credit markets. We believe that each of these trends has the potential to significantly alter the future relationship between risk and return experienced by a "typical" fixed income investor. As such, each is worth considering carefully, as investors take steps to evaluate their fixed income portfolios over the course of 2019.

Trend #1 - Yield Curve Flattening

The Treasury yield curve is typically the first tool that most investors use to delineate the risk and return potential of their fixed income securities. However, "curve" may seem like the wrong term to describe something that today appears to be nearly a flat line (see **Exhibit 1**). As this traditional naming convention indicates, the curve is not normally as flat as it is today, and the flattening of the Treasury yield curve over the past five years has, in fact, profoundly affected the choices faced by institutional investors in constructing their fixed income portfolios.

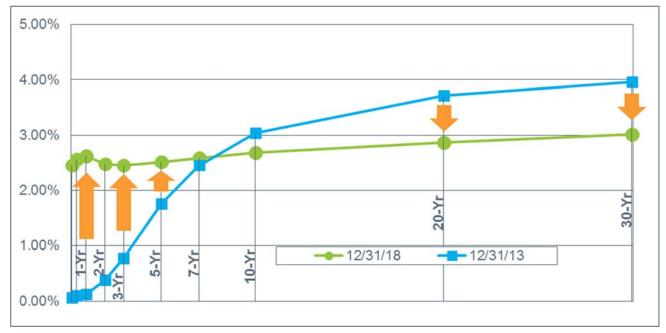


Exhibit 1: Treasury Yield Curve

Source: US Treasury

Fixed income investors must continually monitor the level of yields and the shape of the yield curve since – setting aside credit risk and any attempt to formally match maturities to liabilities for the moment – it is the chief determinant of the tradeoff between interest rate driven risk and return that is available to them at any given time. Thus, the shape and level of the yield curve are key metrics for investors to monitor in order to ensure they are taking levels of risk consistent with their investment objectives. When the yield curve is steep and fixed income investors face higher rewards for accepting greater duration, many fixed income allocations are structured with longer duration profiles, often targeting the end of the steepest segment of the yield curve to the extent their policy tolerance for interest rate risk permits it. In contrast, given today's relatively flat curve, many fixed income investors (excluding those attempting to match longer duration liabilities with fixed income maturities) have found better risk-adjusted value in shorter-term securities. In environments characterized by flatter yield curves, where relatively little pick-up in yield is available in exchange for taking on more duration risk, short-term securities often offer an attractive risk-adjusted yield relative to that of longer-term bonds. Of course, there is no free lunch here, as a shift to shorter duration exposure trades interest rate risk for re-investment risk. Whatever the objectives an institutional investor targets for their fixed income allocation, the shape of the yield curve cannot be ignored. And a relatively flat yield curve is the reality of the moment.

Since an "inverted" Treasury yield curve - where the yields of long term bonds are actually lower than the yields of short term bonds of the same credit quality - has often been a precursor to economic recession, the atypical state of today's yield curve - relatively flat with a modest inverted "kink" in the two to five year maturity range - has also become a point of focus well beyond fixed income markets. Specifically, the difference between 10-year and 2-year Treasury bonds is often cited as an indicator of how close the yield curve has come to inversion. At the end of 2013, 10-year Treasuries offered a 2.66% yield premium over 2-year Treasuries, but that yield advantage narrowed to just 0.21% by the end of 2018 (see **Exhibit 2**). That unusually small spread has persisted into 2019 and continues to stand at 0.21% as of the end of February. Unsurprisingly, speculation about when and how a recession might arrive has increased as these yields have converged, and some investors have even taken steps to reduce the equity market risk of their portfolios.



Exhibit 2: Difference between 10-Year and 2-Year Treasury Yields

Source: US Treasury

While the Treasury yield curve can provide valuable information for making investment decisions, there will always be a level of uncertainty about the outcome of the markets. Maintaining a diversified and resilient portfolio is crucial to weathering unpredictable investment periods.

Trend #2 - Duration Migration

Based on most major bond market indices, the interest rate sensitivity of the US bond market in total has meaningfully increased over the past ten years, potentially exposing bond market investors to a steadily growing level of interest rate risk. Periodic measurement of the effective duration of a bond portfolio is a useful tool to showcase this increase in rate sensitivity. For example, the Bloomberg Barclays US Aggregate Bond Index has long been the flagship benchmark for investment grade bonds for many institutional investors. At the time of the 2008 financial crisis, the effective duration of the Index hovered around 4.0 years. Ten years later, however, the duration of the index has climbed to 6.0 (see **Exhibit 3**). This is a highly significant change in our view, and any institutional investor relying on "duration neutral" fixed income strategies needs to be aware that their interest rate risk has risen over time.

Effective duration calculates the approximate percentage change in a bond's price that would be caused by a 1% change in yield. Therefore, such a change in duration means that the index is roughly 1.5x more sensitive to changes in interest rates. With interest rates likely to rise over the near to intermediate term, a roughly 50% rise in the interest rate risk of many untended or passively managed bond allocations is a significant development, and one fixed income investors should not ignore.



Exhibit 3: Effective Duration of the Bloomberg Barclays US Aggregate Bond Index

Source: Bloomberg

Accommodative fiscal and monetary policy has been the catalyst for this change. Over the past ten years, the US Treasury has increased its issuance of long-term debt to fund an increase in government spending, which in turn has increased the average maturity, as well as average interest rate sensitivity, of the US government bond market. As the Federal Reserve pushed interest rates to historic lows, corporate borrowers took advantage of the opportunity to lock in low borrowing costs and issued an unprecedented amount of longer-term debt as well, collectively extending the average maturity of the US corporate bond market.

As noted briefly above, the marked increase in interest rate risk that has taken place over the past ten years in the total bond market is of particular importance to passive investors, who are by design exposed to the same level of interest rate risk as their underlying fixed income benchmarks. There are many advantages to passive investments structured around indices such as the Bloomberg Barclays US Aggregate Index, including lower tracking error and lower fees than those of actively managed fixed income strategies. However, it should be noted that the characteristics of such passive investments will also arbitrarily change over time in response to changes in the fixed income market. Active core fixed income managers, in contrast, have the ability to continually adjust the interest rate risk of their portfolios independently of the profile of the broader bond market. Many of these active managers have been demonstrably successful in outperforming the index due in part to this ability to invest in securities outside of the benchmark and optimize their portfolios' around ongoing changes in the profile of the yield curve. However, even an active core fixed income strategy that is neutral to the duration of the benchmark will show rising interest rate risk as the duration in the benchmark rises.

In response to the increase in duration in the fixed income market, some fixed income investors have chosen to shift to a less benchmark-constrained approach. The asset management industry has responded with many proposed unconstrained fixed income products seeking capital preservation and yield. Investors with the flexibility to take a less traditional approach and the willingness to take on the additional active risk associated with this approach may be able, with good product and manager selection and thoughtful fixed income asset class composite construction, to more precisely tailor the yield and risk characteristics of their fixed income portfolios to their specific investment goals and level of risk tolerance.

Trend #3 – Growth of the BBB-rated Corporate Market

Another important trend that has occurred in the US fixed income market over the past ten years is an overall migration of investment grade corporate bonds toward lower credit quality. At the end of 2008, BBB rated bonds, which are the lowest quality category of investment grade bonds, represented approximately one-third of the investment grade corporate bond market (see **Exhibit 4**). Over the past ten years, however, BBB rated bonds have grown to represent over half of the market. Just as the bond market's increase in duration has exposed many investors to rising levels of interest rate risk, this gradual decrease in average credit quality has likewise exposed many bond market investors to a higher potential risk of downgrades to less than investment grade status, defaults (in extreme cases) and overall price volatility in an asset class where low volatility is a prized attribute.

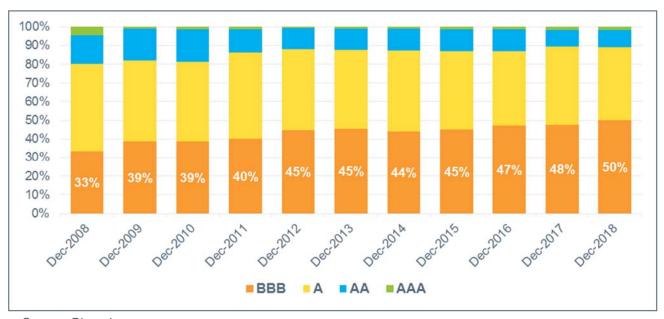


Exhibit 4: Investment Grade Corporate Bond Market - Allocation by Credit Rating

Source: Bloomberg

Investment grade corporate bonds are broadly viewed as relatively safe investments, while high yield corporate bonds have been traditionally perceived as incurring a meaningful risk of default. However, the formal difference between the two markets for the purposes of most market indices is a somewhat arbitrary dividing line that is placed between BBB and BB rated bonds, based on Standard & Poor's rating scale. While some investors can seamlessly invest in both markets, regulatory guidelines and investment restrictions have in practice caused investment grade bondholders and high yield bondholders to operate as two distinct investor bases within the corporate bond market. When a bond loses its investment grade rating, it must find a home among investors that are both willing and able to hold high yield bonds. This narrow universe of buyers and, of course, the lower perceived credit quality typically results in a decline in the bond's value, often a material one. While we don't expect this to occur, if a large percentage of the BBB rated bond market were to migrate into the high yield bond market within a short period of time due to a wave of widespread credit downgrades, it is likely that most mainstream corporate bond indices and passive corporate bond allocations would experience abrupt and significant price-driven losses. Consider this a tail risk in fixed income investing — of low probability but potentially significant impact, should it take place.

The relative size of the rapidly growing BBB corporate bond market compared to the high yield corporate bond market has likewise reached unprecedented levels. BBB-rated issuance has rapidly accelerated over the past ten years alongside relatively stable levels of high yield bond issuance, and the size of the BBB segment of the bond market now exceeds the size of the high yield market by over two and a half times (see **Exhibit 5**).

The disproportionate growth of the BBB market has gained increased attention from many market participants, as there is widespread uncertainty about how well the high yield market would be able to absorb a large wave of downgrades from the BBB-rated portion of the investment grade market. If high yield investors are unwilling or unable to absorb newly downgraded bonds at this larger scale, such an event could cause the downgraded bonds to incur larger price declines than those experienced in past periods. For example, if a downgrade of the roughly 10%+ scale experienced in 2002, 2005, or 2009 were to impact the BBB bond market at its current size, the high yield market could be forced to absorb over \$320 billion in "fallen angel" bonds¹. A shift of that scale has never taken place, leading to uncertainty as to how it might impact the pricing and liquidity of the downgraded bonds. That said, we note that in these past instances the US economy was facing considerable stress, and was thus not comparable with the economic conditions observed at the moment.

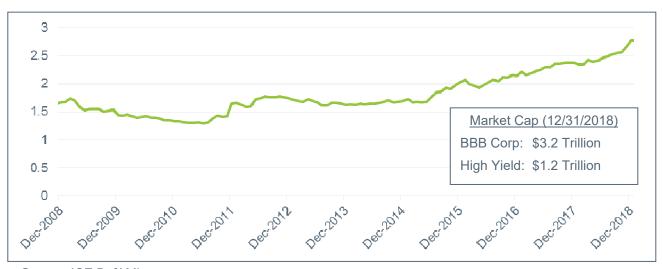


Exhibit 5: BBB Corporates as a Multiple of High Yield Corporates

Source: ICE BofAML

Given this market backdrop, we recommend that fixed income investors remain aware of the general scale of their BBB rated corporate bond exposure. Similarly, investors should be aware of the guidelines that govern their bond portfolios, and conscious of whether those guidelines could put them at risk of being a forced seller in the event of a widespread series of credit rating downgrades. And finally, those institutional investors with material fixed income allocations who routinely apply stress tests to their total portfolios – usually focused on significant equity market declines – might consider adding interest rate and BBB exposure credit risk to those analyses.

¹ BBB-Rated Corporate Bonds. Marathon Asset Management. (January 2019)

Trend #4 – Evolution of Leveraged Loans

Leveraged loans, also called bank loans, offer a unique investment profile for debt investors. Unlike fixed-rate bonds, leveraged loans offer protection against rising interest rates by pegging their coupon payments to an underlying reference rate such as the London Interbank Offered Rate (LIBOR - soon to be replaced by a successor rate such as the Secured Overnight Financing Rate), and "floating," or shifting in parallel to the movements of this reference rate. Interest rates have risen modestly over the past 14 months, increasing demand for floating rate debt exposure, and should the US enter a more sustained rising interest rate regime, we would expect investor interest in floating-rate debt to increase further as investors take more comprehensive steps to protect themselves from rate-driven capital losses in their fixed income allocations. Already, this rising investor demand has led to a large increase in leveraged loan issuance. Specifically, in the five years between the end of 2013 and the end of 2018, the US leveraged loan market grew by 52%, surpassing the size of the US high yield bond market by the end of 2018 (see Exhibit 6).



Exhibit 6: Leveraged Loan and High Yield Market Cap

Source: Credit Suisse

Leveraged loans are typically issued with a BB or B credit rating. Despite their relatively low credit quality, their seniority in the capital structure of their borrowers and the protections embedded in their terms often raises the probability that in the case of default, the investors in a loan will be able to recoup at least a substantial percentage of their investment. Covenants, one such type of embedded protection, are provisions within the loan documents that allow lenders to exert greater influence on a borrower if the borrower's credit quality or financial stability weakens. Maintenance covenants, which require the borrower to maintain specified financial benchmarks, have historically been an especially important protection for senior lenders. Unfortunately for institutional investors, loans that lack maintenance covenants, also known as "covenant-lite" loans, have shifted from being a rarity in the leveraged loan market to becoming the industry norm. At the end of 2018, fully 79% of leveraged loans lacked maintenance covenants (see Exhibit 7). Because the trend of covenant-lite loans strips investors of a key protection, this trend has likely increased the risk borne by leveraged loan investors, and may cause defaulted loans to incur greater realized losses going forward than they have during past periods.

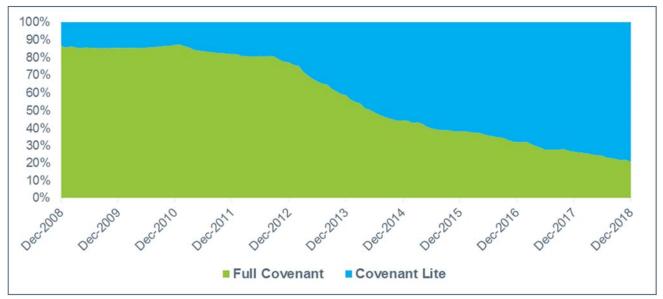


Exhibit 7: Full Covenant vs. Covenant-Lite Loans Outstanding

Source: Credit Suisse

The changing characteristics of the leveraged loan market have not gone unnoticed. In the fourth quarter of 2018, former Federal Reserve Chairman Janet Yellen expressed concerns about a "huge deterioration" in lending standards². Alarmists have also drawn attention to the fact that nearly two-thirds of all leveraged loans issued are placed into collateralized loan obligations (CLOs), or securitized pools of bank loans that, while they diversify investor exposure to individual credits, also have the potential to obscure their underlying levels of risk. Several market participants have even drawn comparisons between the current CLO market and the complexity of packaged sub-prime mortgages and collateralized debt obligations in 2005-2007, which created risks to investors that were not fully appreciated prior to the 2008 financial crisis. The takeaway for investors seeking the benefits of floating rate fixed income exposure is that high manager quality and a good sense of the credits securitized within a CLO are prerequisites for successful investing.

While the declining lending standards endemic in the current leveraged loan market could be a sign of late-cycle market exuberance or a broader increase in the level of risk across all credit markets, we believe these changes are more likely due to an ongoing transfer of risk between leveraged loans and high yield bonds. Historically, the leveraged loan and high yield bond markets have operated as parallel markets - that is, loans and bonds were typically issued in tandem, creating a tiered capital structure with high yield bonds subordinate to loans. In recent years, however, leveraged loan and high yield bond markets have increasingly become competing markets, and it has become common for many corporate issuers to forgo the bond market entirely, seeking out funding in the loan market alone. Of importance to institutional investors, loan-only issuances tend to be lower in quality, because they lack the subordinate bondholders that would otherwise absorb any initial losses. To reflect this changing risk profile, there has been a material migration from BB to B rated loan issuance in the leveraged loan market (see Exhibit 8).

² Janet Yellen sounds alarm over plunging loan standards. Financial Times. (October 2018)

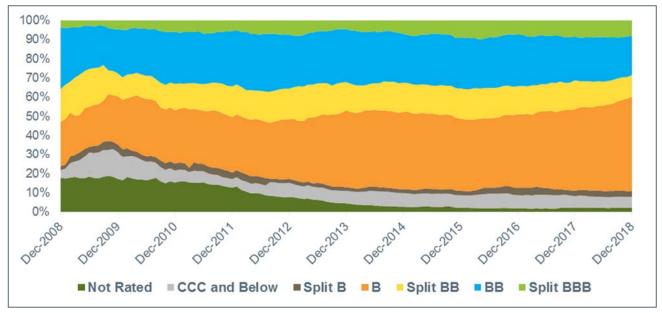


Exhibit 8: Leveraged Loan Market by Credit Quality

Source: Credit Suisse

In summary, leveraged loans have not only taken market share from high yield bonds over the past several years, but by becoming increasingly covenant-lite, their features and overall risk profiles are also converging with those of high yield bonds, which often lack the protection provided by the existence of junior creditors and do not typically impose maintenance covenants. Given this shift in risk profile, we encourage investors with significant leveraged loan allocations to revisit the expectations for volatility and loss that they apply to this asset class, and ensure that their loan allocations are sized appropriately for their risk tolerance and investment goals. Similarly, bank loan investors with actively managed allocations may wish to discuss the managers' allocation to, and treatment of, covenant-lite loans in more detail.

Importantly, we do not believe the shifting features of the leveraged loan market indicate that leveraged loans or collateralized loan obligations have ceased to become worthwhile investments. Quite the contrary: these assets continue to serve an important purpose for many investors, and can strengthen a diversified fixed income portfolio in many ways. However, the evolution of the market does require investors to update their assumptions about how leveraged loans will perform in the future. Specifically, it should be understood that the recovery rate on defaulted loans may be less than that experienced in prior years.

Conclusion

The trends mentioned above do not represent all of the changes that fixed income markets have experienced over the past ten years, but they all underscore a key point: fixed income markets continually evolve, and with this evolution comes new risks and opportunities.

Investors caught unaware by the full extent of recent fixed income market evolution may be surprised to find that their portfolios no longer perform in line with their original expectations, or as they have behaved in past periods. As such, we recommend that investors who have not recently revisited their fixed income investments should consider the themes raised in this analysis during their next review of the composition of their fixed income allocation.

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