DDJ CAPITAL MANAGEMENT, LLC
SPECIALISTS IN HIGH YIELD AND LEVERAGED CREDIT INVESTMENTS

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Rising Rates: An Attractive Environment for the Lower-tier of the High Yield Market

> High yield bonds have performed relatively well in a rising rate environment.

> Investing in CCC rated bonds can offer an effective hedge against rising rates.

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Introduction

High yield bonds have traditionally provided a hedge against a rise in interest rates through spread tightening. As a result, high yield bonds have performed relatively well in a rising rate environment. However, not all high yield bonds are created equal and a deeper look at the market reveals that some bonds should perform better than others. In this paper, we discuss the relationship between high yield bond spreads and interest rates, and how a decrease in spreads can provide a natural hedge against an increase in yields in particular for investors in the lower-tier of the high yield market.

What the past tells us

During the first five weeks of 2018, several factors contributed to an increase in interest rates, including, but not limited to, a December interest rate hike from the Federal Reserve ("the Fed") as well as the potential inflationary effect of the recent tax reform legislation passed by Congress. Specifically, during these first five weeks to start 2018, the five-year U.S. Treasury yield increased by 40 basis points, or approximately 18% of the yield reported on December 31, 2017. In response, the high yield market absorbed this rate increase and, unlike many of its higher rated counterparts, produced positive returns during this period. Today, the forecast is set to include measured, but more frequent, rate hikes and thus, more likely than not, future increases in U.S. Treasury yields. As a result, we thought that it would be informative to examine how the high yield asset class has responded historically to similar rises in interest rates.

This paper focuses on increases in five-year U.S. Treasury yields ("the 5yr") since January 1, 2010. We selected this recent period to eliminate the wild gyrations that the capital markets experienced in 2008 and 2009, as well as to focus on the current interest rate regime rather than the one that existed prior to the financial crisis. Within this recent eight-plus year timeframe, we examined segments that met the criteria described in the previous paragraph, specifically, rolling five-week periods during which time the 5yr yield increased by 18% or more. As a result of this selection process, DDJ identified 56 such periods.

During these five-week periods, we observed that high yield spreads generally tightened and offset the rise in rates. However, the degree to which the individual quality tiers within the overall high yield universe contracted varied. For example, under the scenario described above, when rates rose, the high yield market produced positive performance about 59% of the time. However, as Exhibit 1 below demonstrates, the performance of the different high yield quality tiers produced varying results.

Exhibit 1: Positive Performance When Yields Rise: January 1, 2010 through March 31, 2018.

	HYM	BBs	Bs	CCCs
% of Periods with Postitive Performance	59%	50%	61%	70%

Source: BofA Merrill Lynch. Past performance does not guarantee future results.
Reflects the percentage of periods where performance was positive when the 5yr yield increased by at least 18% over a rolling five-week period from January 1, 2010 through March 31, 2018.

The key takeaway from Exhibit 1 is that during the period that we analyzed, the lower-tier, especially CCC rated bonds, drove the high yield market's resiliency to any increases in yields. Intuitively, given the characteristics of the lower-tier high yield market, this conclusion makes sense, as a shorter

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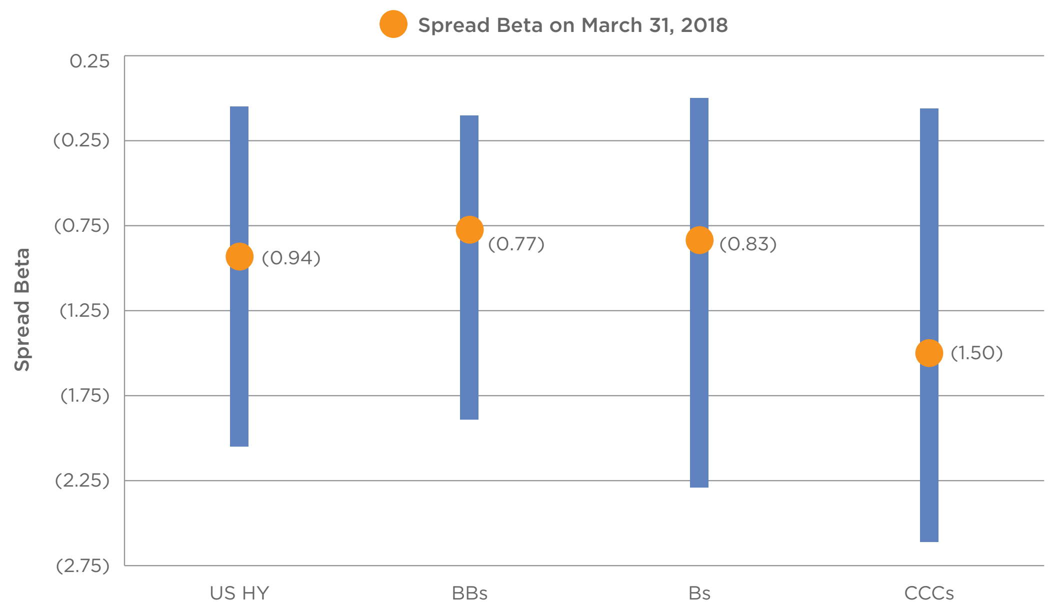
maturity coupled with a higher coupon necessarily results in a shorter duration (and, accordingly, less interest rate sensitivity for CCC rated bonds compared with more highly rated BB or B bonds). Furthermore, performance for BB rated bonds in such an environment is essentially a coin flip, and is just as likely to generate losses as it is to produce gains. The natural hedge offered by investing in high yield is a function of its negative correlation to changes in yields, though the effectiveness of the hedge varies throughout the quality tiers of the market. Rising rates typically reflect improving economic conditions, in particular benefitting the creditworthiness of CCC rated issuers, which oftentimes are the most credit sensitive within the high yield market. On the other hand, BB rated bonds tend be more interest rate sensitive as result of their higher quality, as they are "almost" investment grade and creditworthiness (and related concerns associated with potential default losses) is generally less of a factor.

The natural hedge highlighted here reflects high yield's negative spread beta to interest rates.[1] In this case, beta represents the sensitivity of the change in high yield bond market spreads to changes in yields. A positive beta would indicate that as rates rise, spreads should widen. However, given that the beta is negative, in fact the opposite has held true; when rates have risen, spreads have tightened. Exhibit 2 below shows the range of spread betas experienced since January 1, 2010 for the U.S. high yield bond market, as well as the individual quality tiers.[2]

Exhibit 2: Spread Beta Ranges: January 1, 2010 to March 31, 2018



Source: BofA Merrill Lynch

An interesting observation is that as spreads tighten, the spread beta increases on an absolute basis (i.e., becomes less negative). As a result, the effectiveness of the interest rate hedge diminishes as the credit cycle draws to an end and spreads are typically at or near their tightest levels. This conclusion holds especially true for BB rated bonds. Generally, the BB rated cohort comprises the bonds with the longest duration and lowest spreads in the high yield market. As a result, the cushion provided to this quality tier through spread tightening as a credit cycle

1. Spread beta is calculated using 52 weeks of weekly changes in option adjusted spreads relative to weekly changes in the yield of the five-year U.S. Treasury.

2. The indices used in this analysis are the ICE BofA Merrill Lynch U.S. High Yield Index ("US HY"), ICE BofA Merrill Lynch BB U.S. High Yield Index ("BBs") ICE BofA Merrill Lynch B U.S. High Yield Index ("Bs"), and the BofA Merrill Lynch CCC & Lower U.S. High Yield Index ("CCCs") indices. Each of quality tier indices are subsets of the BofA Merrill Lynch U.S. High Yield Index.

reaches its conclusion is reduced, with diminished ability to absorb yield increases relative to their lower quality counterparts. By comparison as it pertains to CCC rated bonds, rising rates generally signal improved or improving economic conditions, which justifies tighter spreads among those credits as the risk associated with default losses accordingly declines. As CCC rated bonds are more reliant on the pace of economic activity and its ensuing effect on their financial health, the signal provided by the Fed in rising rates is often more important than any actual movement in yields. Therefore, to the extent that the Fed continues to raise rates in connection with economic growth, spreads will tighten, with CCC rated bonds being one of the primary beneficiaries.

Conclusion

For the first time since the financial crisis of 2008-2009, the pace of Fed rate hikes, together with a corresponding increase in Treasury yields, is gathering momentum. The Fed's actions have resulted in a meaningful increase in the yields of shorter-dated maturities. However, the yields on longer-term maturities have also increased, albeit to a lesser extent, because of the potential inflationary pressures of fiscal stimulus, resulting in a flattening of the yield curve. We have seen from the data that in the high yield market, the lower-tier, specifically CCC rated bonds, can offer the best hedge against rising rates. However, the CCC rated segment of the high yield market requires careful analysis of each individual credit to avoid the historical default losses that this cohort experiences most typically at the end of the credit cycle. Discerning investors with the expertise and experience in identifying opportunities in the lower-tier of the high yield market can gain an additional benefit in the form of a natural interest rate hedge, thereby potentially mitigating interest rate risk in their fixed income portfolios.

Appendix

BPS: Stands for basis points. A basis point is one one-hundredth of one percent (0.0001).

Coupon: The stated interest rate paid on a bond. Coupon payments for high yield bonds are typically made semi-annually.

High Yield Bond: A high yield bond is a debt security issued by a corporate entity where the debt has lower than investment grade ratings. It is a major component – along with leveraged loans – of the leveraged credit market.

Investment Grade: investment grade are those securities rated Baa3/BBB-/BBB- or above by Moody's, S&P, and/or Fitch, respectively.

Spread: The yield of a bond minus the yield of the government bond that matches the maturity (or appropriate call date) of the bond.

5 yr. Treasury: Treasury yield is the return on investment, expressed as a percentage, on the U.S. government's debt obligations. Looked at another way, the Treasury yield is the interest rate that the U.S. government pays to borrow money for different lengths of time, in this case, 5 years.

Yield: The yield is the income return on an investment, such as the interest or dividends received from holding a particular security.

Disclosures

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Diversification does not guarantee against investment loss.

Past performance is no guarantee of future returns.

Investing involves risk, including potential loss of principal.

The ICE BofA Merrill Lynch US High Yield Index tracks the performance of US dollar denominated below investment grade corporate debt publicly issued in the US domestic market. Please note that one cannot invest in the index.

Moody's Investors Service and Standard and Poor's Financial Services use a different nomenclature for their ratings system. For example, the Moody's equivalent to a S&P rating of CCC+ is Caa1. For information on the rating agencies' methodology go to: https://www.moodys.com or www.standardandpoors.com.

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ABOUT DDJ CAPITAL MANAGEMENT

DDJ Capital Management's goal is to consistently produce attractive long-term investment returns, while minimizing downside risk for our investors, which include:

> Corporate pension accounts and public retirement plans
> Foundations
> Taft-Hartley Plans
> Other institutional clients

The underpinning of DDJ — a disciplined investment philosophy, coupled with a commitment to exhaustive credit research — has remained constant since our founding in 1996. Our highly skilled team is steadfast and focused on executing our strategy to identify strong risk-adjusted investment opportunities in the leveraged credit markets.

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