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HAPPY ANNIVERSARY HIGH YIELD & OIL

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Valentine’s Day is an apt reminder of the up-and-down relationship between high yield and oil over the past two years. It’s been all roses for the last 12 months as the asset class has rallied with oil since they both bottomed on February 11, 2016. Although we expect stability from high yield in 2017, its success over the last year limits potential future returns and makes a repeat of 2016 very unlikely.

THE ODD COUPLE

Oil has rallied 105.8% since February 2016, powering high yield to a 25.9% return over the same period, based on the Bloomberg Barclays High-Yield Index, outperforming the broad Bloomberg Barclays Aggregate Bond Index by over 25%. On February 11, 2016, the price of oil bottomed at $26/barrel, leading the average spread of high yield over comparable Treasuries to increase to 8.4%, the widest level since 2011. That spread has decreased over the last year to 3.8% as of February 10, 2017, as defaults in the energy sector have largely come and gone. The current spread level is approaching the post-recession low of 3.2% hit during late-June 2014, when oil was trading at over $105/barrel [Figure 1].

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HIGH-YIELD SPREAD HAS DECLINED STEADILY SINCE A YEAR AGO TO NEAR POST-RECESSION LOW

![Graph showing high-yield spread and 20-year average](source: LPL Research, Bloomberg)
An average spread of high-yield bonds to Treasuries below 4% has only been maintained for nine months post-financial crisis. This was essentially the first nine months of 2014, when oil traded at more than $90/barrel for all of that period and higher than $100/barrel for the majority of that time. Tighter spreads result in lower returns, as yield becomes the dominant driver of return (as we envision for 2017) and capital appreciation by way of spread tightening becomes less feasible. Spread levels have proven to be a useful indicator when forecasting future returns. The spread of high yield over comparable Treasuries is very correlated with the one-year future return of the asset class [Figure 2]. This matches intuition: spreads at high levels do not historically stay elevated for long, leading to spread tightening and capital appreciation, in addition to yield. Although we expect a modest return for high yield in 2017 (mid- to upper-single digits)*, a repeat of 2016 performance is almost impossible, given how tight spreads currently are.

**IMPROVING DEFAULT PICTURE**

High-yield default rates declined steadily over the latter months of 2016, and the outlook for 2017 is even more encouraging. After ending 2016 at a 4.4% global high-yield default rate, rating agency forecasts for 2017 are near 3%. Continually improving prospects for the energy sector, signs of a pickup in economic activity, and a dearth of maturing bonds are all contributing factors. Other indicators also seem to support that optimism. The Federal Reserve Senior Loan Officer Survey (FSLO) has historically been a good leading indicator of defaults. The survey indicates whether banks are tightening or loosening lending standards.

*We expect the 10-year Treasury yield to end 2017 in its current range of 2.25–2.75%, with a potential for 3%. Scenario analysis based on this potential interest rate range and the duration of the index indicates low- to mid-single-digit returns for the Bloomberg Barclays Aggregate Bond Index.
for medium- and large-sized companies. This stands to reason: if companies can get a loan, they generally will not default. As the modified adage goes, “a rolling loan gathers no loss.” Although banks are still tightening their lending standards, they are barely doing so, and that net tightening has been decelerating to a near neutral reading of 1.4% as of January 31, 2017 [Figure 3]. This data point is solid confirmation of the default picture improving into 2017.

WHAT’S FAIR VALUE?

While we are cautiously optimistic on the outlook for high yield in 2017, given our expectation for stable to modestly improving spreads, much of the good news is likely priced into the market. Assuming the optimistic lower range of default forecasts for the coming year, in addition to the recent 35% average recovery rate for defaulted bonds, we would estimate the fair value of high-yield spread to be in the low- to mid-4% range, above the current 3.8% level as of February 10, 2017 [Figure 4].

The recovery rate is the percentage of par that a defaulted bond pays back to investors. The historical average is around 40%, but we are using a more conservative 35% rate here to account for lower than historical recovery rates over the last two years. This includes a 2.2% liquidity premium, which reflects the risk that a bond cannot be traded quickly without materially impacting the market price. A 2.2% liquidity premium reflects the long-term average yield in excess of the default rate that high-yield investors have demanded due to the lesser liquidity of the bonds.

CREDIT QUALITY

Two important metrics when looking at credit quality for high-yield issuers are leverage and interest coverage. Leverage is the amount of debt the corporations have relative to assets, whereas

STEADY CREDIT STANDARDS SHOULD HELP KEEP DEFAULTS LOW

![Graph showing Moody's Default Rate and FSLO, Net % Tightening/Loosening Lending Standards](image-url)

Source: LPL Research, Bloomberg, Moody's, Federal Reserve 02/10/17

Moody’s is an independent, unaffiliated research company that rates fixed income securities. Moody’s assigns ratings on the basis of risk and the borrower’s ability to make interest payments.
interest coverage shows how many times a company can pay for its interest expense with its available earnings. Leverage is important because it gives investors a sense of the relative amount of debt corporations have, while interest coverage is important because it shows how big of a burden the interest payments of that debt are, especially important if financial hardships arise.

In today’s landscape, the two metrics are sending mixed messages to investors. Corporate leverage is certainly at high levels, as companies have taken advantage of historically low interest rates by increasing their debt significantly. Interest coverage has deteriorated somewhat but remains decent, due to the low interest rate environment in which many corporations have issued debt. In other words, corporations have high levels of debt relative to assets, but the interest expense is still manageable because the debt was issued at very low interest rates. Despite elevated corporate leverage, decent interest coverage ratios mean that the high debt levels will likely not be a problem for high-yield in 2017.

CONCLUSION

There are signs of marginal improvements in store for high yield in 2017: declining default forecasts, decent interest coverage, and improving business prospects amid an anticipated deregulatory and pro-business policy backdrop. These factors are largely priced into current spread levels already, however, the market may be on thin ice if equity markets become volatile. Bank loans have slowly become an increasingly attractive alternative as they now yield more than high yield and may benefit more in an environment of rising short-term interest rates. While both investment vehicles can be good income-producing options, we maintain our position of cautious optimism with high yield, and believe it can be used as a small complement to high-quality fixed income for suitable investors.

FORECASTED DECLINE IN DEFAULTS ALREADY PRICED INTO MARKET

<table>
<thead>
<tr>
<th>Forecasted Default Rate</th>
<th>×</th>
<th>Estimated Default Loss</th>
<th>=</th>
<th>Total Default Loss</th>
<th>+</th>
<th>Liquidity Premium**</th>
<th>=</th>
<th>Fair Value Spread</th>
<th>VS.</th>
<th>Current Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>3%</td>
<td></td>
<td>65%*</td>
<td></td>
<td>1.95%</td>
<td></td>
<td>2.20%</td>
<td></td>
<td>4.15%</td>
<td>VS.</td>
<td>3.80%</td>
</tr>
</tbody>
</table>

Source: LPL Research, Moody’s, Barclays, Bloomberg 02/10/17

*Par value minus 35% estimated recovery rate.

**High-yield spreads compensate investors not only for default risks but for liquidity risk, which can be termed the "liquidity premium." Liquidity risk is the risk that a bond cannot be traded quickly without materially impacting the market price.

Par value is the nominal value of a bond, share of stock, or a coupon as indicated in writing on the document or specified by charter.
IMPORTANT DISCLOSURES

The opinions voiced in this material are for general information only and are not intended to provide specific advice or recommendations for any individual. To determine which investment(s) may be appropriate for you, consult your financial advisor prior to investing. All performance reference is historical and is no guarantee of future results. All indexes are unmanaged and cannot be invested into directly.

The economic forecasts set forth in the presentation may not develop as predicted and there can be no guarantee that strategies promoted will be successful.

Because of their narrow focus, specialty sector investing, such as healthcare, financials, or energy, will be subject to greater volatility than investing more broadly across many sectors and companies.

Bonds are subject to market and interest rate risk if sold prior to maturity. Bond values and yields will decline as interest rates rise, and bonds are subject to availability and change in price.

High-yield/junk bonds are not investment-grade securities, involve substantial risks, and generally should be part of the diversified portfolio of sophisticated investors.

Government bonds and Treasury bills are guaranteed by the U.S. government as to the timely payment of principal and interest and, if held to maturity, offer a fixed rate of return and fixed principal value. However, the value of fund shares is not guaranteed and will fluctuate.

Corporate bonds are considered higher risk than government bonds but normally offer a higher yield and are subject to market, interest rate, and credit risk as well as additional risks based on the quality of issuer coupon rate, price, yield, maturity, and redemption features.

Bank loans are loans issued by below investment-grade companies for short-term funding purposes with higher yield than short-term debt and involve risk.

Commodity-linked investments may be more volatile and less liquid than the underlying instruments or measures, and their value may be affected by the performance of the overall commodities baskets as well as weather, geopolitical events, and regulatory developments.

Credit Quality is one of the principal criteria for judging the investment quality of a bond or bond mutual fund. As the term implies, credit quality informs investors of a bond or bond portfolio’s credit worthiness, or risk of default.

Leverage is the degree to which a company uses fixed-income securities such as debt and preferred equity. The more debt financing a company uses, the higher its financial leverage.

Yield spread is the difference between yields on differing debt instruments, calculated by deducting the yield of one instrument from another. The higher the yield spread, the greater the difference between the yields offered by each instrument. The spread can be measured between debt instruments of differing maturities, credit ratings, and risk.

INDEX DEFINITIONS

The Bloomberg Barclays U.S. High-Yield Loan Index tracks the market for dollar-denominated floating-rate leveraged loans. Instead of individual securities, the U.S. High-Yield Loan Index is composed of loan tranches that may contain multiple contracts at the borrower level.

The Bloomberg Barclays U.S. Aggregate Bond Index is a broad-based flagship benchmark that measures the investment-grade, U.S. dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS, and CMBS (agency and non-agency).

This research material has been prepared by LPL Financial LLC.

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