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GROWING RISKS IN U.S. HIGH YIELD CREDIT

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Interest coverage and default rates for U.S. high yield borrowers are currently at healthy levels, but a lack of compensation for risk and declining investor protections suggest investors in the space may want to exercise caution.

INSIDE:

KEY POINTS:

- The amount of **outstanding U.S. corporate debt has increased significantly since the Great Recession, particularly amongst the riskiest borrowers.**
- Deteriorations in credit quality and investor protections, along with the growing size of the U.S. high yield market, suggest that **losses for high yield investors could be more severe during the next economic downturn than they were in the past several U.S. recessions.**
- The ability of companies to service their debts is key. **Though interest coverage for U.S. corporations is currently healthy, even a mild U.S. recession would likely be enough to push interest coverage for high yield borrowers to more dangerous levels.**
- Given the increasing risks in the U.S. high yield space and declining investor protections and compensation, **investors may want to consider minimizing exposure to U.S. high yield credit until the risk-reward profile for long-term investors improves.**

EXECUTIVE SUMMARY

The persistence of low interest rates since the Great Recession has helped drive demand for high yield credit—high yield corporate bonds and leveraged loans—that offer higher interest rates in exchange for greater risk. Of particular concern for high yield bonds currently are low interest rate spreads for investors, meaning investors receive little additional return for taking on that extra risk. In the leveraged loan space, key threats include the growing influence of collateralized loan obligations and a large share of new "covenant-lite" loans that lack protective investor covenants.

Threats are also growing in the area of BBB-rated bonds, the lowest-rated and riskiest category of investment grade debt. Estimates suggest that the next U.S. economic downturn could lead to as much as one-fifth of the massive BBB market being downgraded to high yield status, which would likely create ripple effects throughout the high yield markets. In total, given the growing risks present in high yield space, losses for high yield investors during the next U.S. economic downturn could be more severe than they were during the past several recessions.

Going forward, the outlook for high yield credit depends on the ability of companies to service their debts, particularly to continue making necessary interest payments. The interest coverage ratio—one way to measure how able a company is to cover its interest payment obligations—is currently at healthy levels for U.S. high yield borrowers, but is also susceptible to a decline in future corporate earnings. Based on deteriorations in corporate earnings during past economic downturns, even a mild U.S. recession would likely be enough to push average interest coverage ratios for high yield borrowers into dangerous territory.

Despite the growing risks in the high yield space, low interest rates on government and investment grade bonds could continue to drive demand for high yield credit for some time. This additional demand will likely only continue to contribute to growing risks in the high yield space, however, which could worsen losses for investors when the next economic downturn does occur. As such, investors may want to consider maintaining a low exposure to U.S. high yield credit until the risk-reward profile for investors improves.

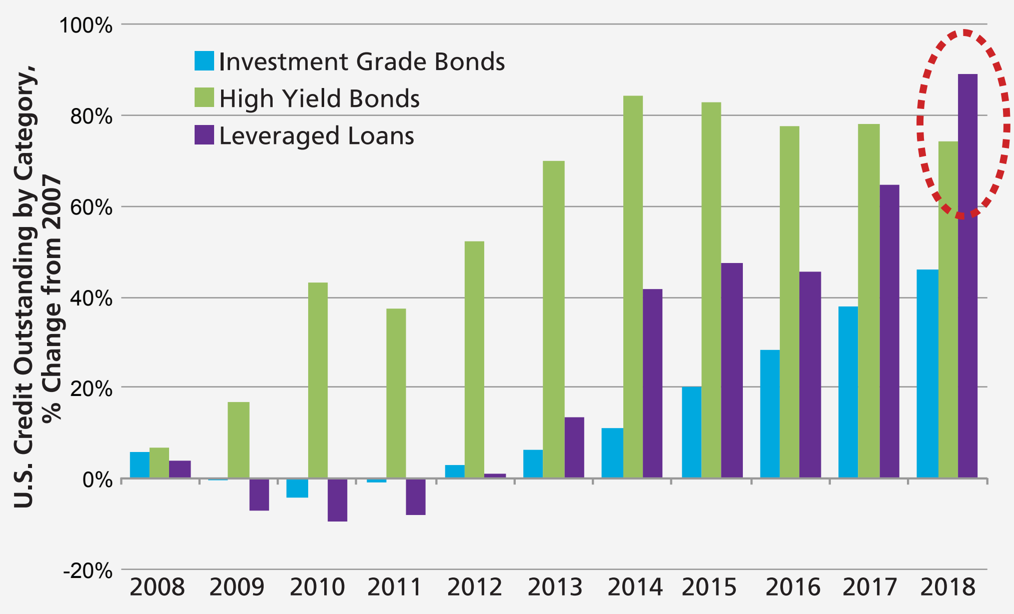
THE U.S. CREDIT MARKET IS GETTING RISKIER

In the years since the Great Recession, the amount of non-bank corporate credit outstanding in the United States has grown rapidly—by over $5 trillion, or more than half of the amount outstanding prior to the recession.[1] Buildups of corporate debt have been tied to an increased likelihood of financial crises in the past,[2] and in the United States the current situation is even more precarious as growth in credit since the Great Recession has been weighted heavily toward the high yield space.

High yield credit—also sometimes referred to as "junk" or "speculative grade" credit—is composed of high yield bonds and leveraged loans. High yield bonds are corporate debt instruments that have been rated below investment grade by one of the established credit ratings agencies,[3] indicating an elevated risk of default, and as a result generally offer higher interest rates to compensate for the additional risk. Leveraged loans are a type of bank loan offered to companies that are already highly indebted or have poor credit histories, and feature interest rates well above the rates offered on safer loans.

In general, these high yield credit instruments are issued by companies with risky credit profiles and/or unstable financial positions. And as **Figure 1** illustrates, the growth of

Figure 1: ***The growth in riskier types of credit—high yield bonds and leveraged loans—has significantly outpaced the growth in safer 'investment grade' debt since the Great Recession.***



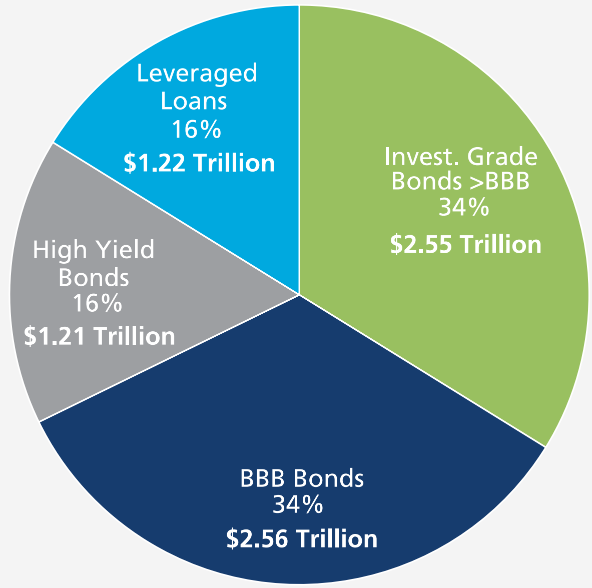
Source: AMG, Bank for International Settlements (BIS), International Monetary Fund (IMF). End of year values.

outstanding U.S. high yield bonds and leveraged loans has significantly outpaced the growth of safer "investment grade" credit in recent years.

In fact, by mid-2018 the total amount of U.S. high yield bonds and leveraged loans outstanding had surpassed $2.4 trillion, meaning high yield investments made up nearly a third of the entire U.S. credit market. BBB-rated bonds—the lowest-rated and riskiest tier of investment grade debt—have also grown rapidly in recent years and as of mid-2018 also made up a third of total U.S. credit outstanding **(Figure 2)**.

The size and growth of the high yield and BBB credit markets could be enough to raise concern in and of themselves, but there are additional risks in the high yield and BBB spaces that make the current outlook even more uncertain.

Figure 2: ***Leveraged loans and high yield bonds represented nearly a third of the total U.S. credit market in 2018, with the riskiest type of investment grade bonds—BBB-rated—making up another third.***



Source: Morgan Stanley data reported by Bloomberg.[4]

KEY CONCERNS WITH HIGH YIELD BONDS & LEVERAGED LOANS

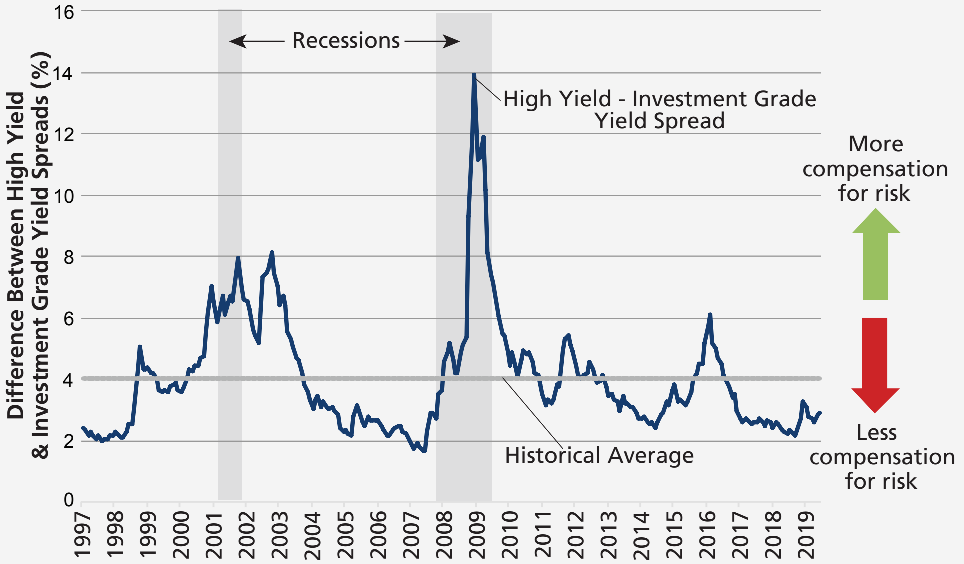
In the wake of the Great Recession, the U.S. Federal Reserve (Fed) enacted multiple unconventional policies to stabilize the economy and encourage economic growth, which had the effect of reducing interest rates throughout the economy. As a result, in the years following the crisis, investment grade corporate bond yields,[5] including yields for the riskiest investment grade borrowers, declined to levels that for many years had been reserved only for "risk free" U.S. Treasury bonds.

Seeking higher yields on their investments, fixed income investors flocked to the U.S. high yield bond market, which helped contribute to the roughly $550 billion increase in outstanding high yield bonds between 2008 and the end of 2018.[6] This relatively indiscriminate demand from investors made it possible for less-stable companies—many in the volatile energy sector—to acquire funding when otherwise they may not have been able to. High yield bond exchange traded funds (ETFs) and a risk-tolerant mentality among investors due to the Fed's easy money policies may have worsened the problem.

Bond yields—the effective return or compensation that bond investors receive—decline when demand is high and bond prices rise. As a result, **strong demand for high yield bonds since the Great Recession has pushed yields lower, reducing the compensation that high yield bond investors receive in exchange for taking on additional risk.** High demand has also contributed to a decline in the gap between the yields on high yield bonds and the yields on safer bonds. **As Figure 3** illustrates, the difference between the yield spread that high yield bonds offer in excess of "risk-free" government bonds and the yield spread that investment grade bonds offer in excess of government bonds has declined significantly since the financial crisis.

Leveraged loans have also benefitted from additional demand since the Great Recession due to their higher interest rates. However, leveraged loans are floating-rate instruments, meaning the rates they pay to investors grow as interest rates rise, so they have been particularly popular since the Fed ended its economic stimulus programs and began hiking interest

Figure 3: ***The compensation high yield bond investors receive in exchange for taking on additional risk has declined considerably since the Great Recession, and currently remains below the long-run average.***



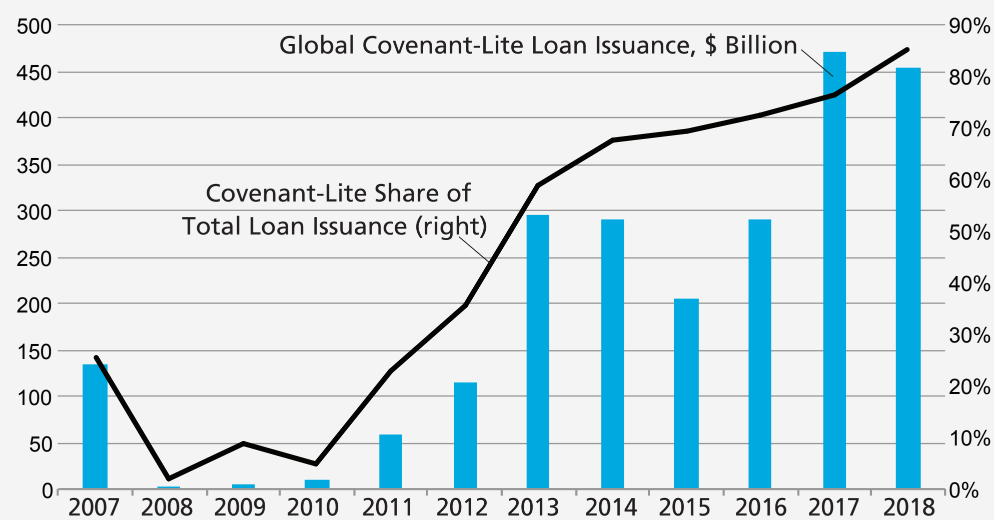
Source: AMG, ICE Benchmark Administration, recession dates from National Bureau of Economic Research (NBER). Historical average is average of monthly average values over the period shown.

rates in 2014-15 (discussed further in the 'Investment implications' section). Since 2014, growth in leveraged loans has far surpassed growth in investment grade and high yield bonds, with the total value of leveraged loans outstanding rising 80% in the past five years alone.[7]

Due to a lack of liquidity in their relatively small investor pools, however, leveraged loans can also be prone to large and abrupt price declines. **Another one of the primary concerns with leveraged loans is the growing prevalence of collateralized loan obligations (CLOs)—leveraged loans bundled into "less risky" packages in a manner similar to pre-2008 mortgage-backed securities.** As of early 2019, CLOs made up nearly 60% of the U.S. leveraged loan market.[8] While CLOs are often marketed as safer than un-bundled leveraged loans, the structure of the products can also help to conceal dangerous loans and deteriorations in the fundamentals of the underlying businesses.

In recent years, U.S. leveraged loan fundamentals have in fact deteriorated. Between 2007 and 2018, the share of new leveraged loans issued that were B-rated—in the lower tiers of credit quality even amongst leveraged loans—rose from less than 23% to 58%.[9] Over the same period, total debt to earnings for leveraged loan borrowers increased and the **share of new leveraged loan issuances that were "covenant-lite"—lacking in contractual stipulations to monitor the stability of borrowers and protect investors from losses—rose from under 30% to 85% (Figure 4)**.

Figure 4: ***The issuance of 'covenant-lite' leveraged loans that lack rules to monitor a company's financial stability and protect investors from losses has increased dramatically in recent years.***



Source: S&P Global Market Intelligence Leveraged Commentary & Data unit (S&P LCD) data reported by Business Insider.[10]

BBB BONDS & POTENTIAL LOSSES FOR INVESTORS

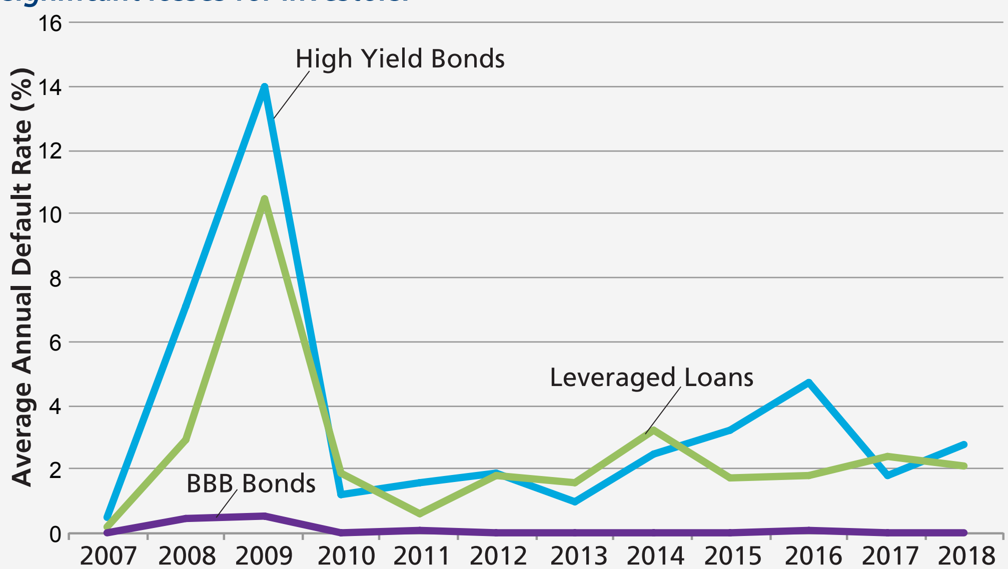
Another major concern for the U.S. credit market is growing risks from BBB-rated bonds, which in some ways have increased even more dramatically than risks in the high yield space. For example, **between 2007 and 2018, the value of U.S. BBB-rated bonds outstanding rose by more than 300%** (compared to roughly 75% for high yield bonds and 90%for leveraged loans), driving BBB's share of total U.S. investment grade credit outstanding from just over a third in 2007 to around half in 2018.[10]

Over the same period, average leverage for BBB companies—measured as the ratio of total debt to earnings before interest, taxes, depreciation, and amortization—rose steadily, with 31% of BBB borrowers recently leveraged at or above 4x, a level widely deemed to be high-risk.[11] In fact, estimates suggest that **if existing BBB bonds were rated only on their underlying leverage ratios, over half of all BBB bonds outstanding would actually be rated as high yield.**

Though defaults for BBB bonds are rare **(Figure 5)**, BBB bonds are also prone to being downgraded into the high yield category. In the last three broad downgrade cycles (1989-91, 2000-03, and 2007-09), between 7 and 15% of outstanding U.S. investment grade bonds were downgraded to high yield. Adjusting for the growth of the BBB market since, **the next recession or downturn could lead to downgrades of 11 to 22% of the U.S. investment grade market, equivalent to $550 billion to $1.1 trillion**.[13]

In this situation, a good portion of the investors in downgraded BBB bonds could be forced to sell because institutional investors (such as mutual funds) often have rules against holding high yield debt. This in turn could lead to price crashes on billions of dollars of downgraded bonds. Downgrades on such a large scale could create ripple effects throughout the high yield credit markets, drying up funding for companies that rely on refinancing, triggering stricter maintenance covenants for struggling businesses, and potentially pushing many high yield bonds and loans into default.

Figure 5: *Default rates for higher-risk credit categories remain at healthy levels, but downgrades and a meaningful rise in defaults could also lead to significant losses for investors.*



Source: AMG, Fitch Ratings, S&P Global Ratings. High yield bond and leveraged loan default rates from Fitch Ratings.[12] 2018 values for U.S. high yield bonds & leveraged loans are Oct. 2018 trailing twelve month values.[13] BBB values use averages for global BBB bonds from S&P.[14]

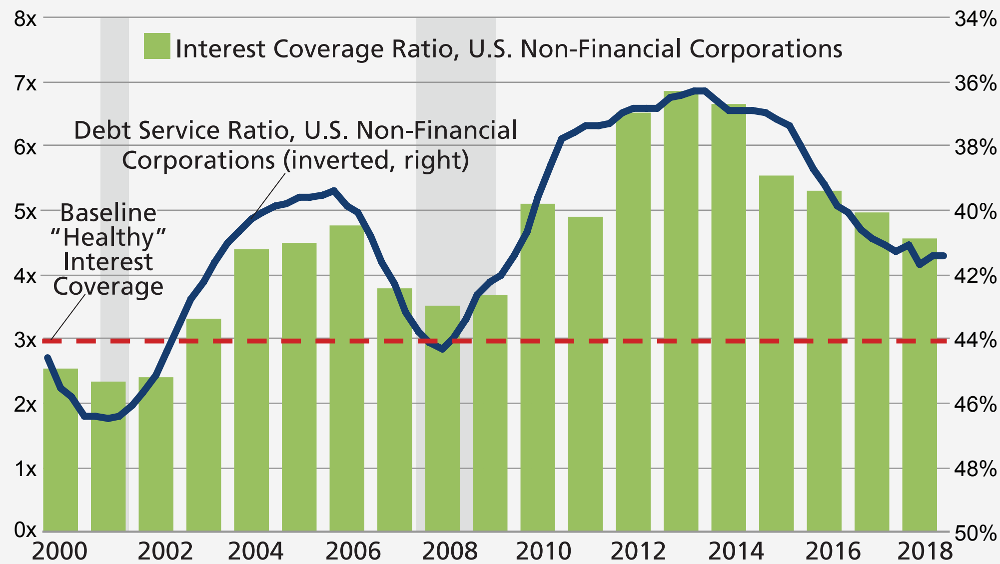
Collectively, the rising risks in the high yield credit arena suggest that losses for U.S. high yield credit investors may be more severe during the next economic downturn than they were during the previous three U.S. recessionary periods. A recent study from UBS Group estimated that declining fundamentals amongst leveraged loan borrowers could cause the leveraged loan default rate to spike to a record 13.8% during the next U.S. economic downturn.[15] Further, **due to a lack of protective covenants, investors in defaulted leveraged loans might recover as little as half of their original investments.** The study also warns that lower-rated tranches of CLOs could be wiped out entirely.

All told, **investors in U.S. high yield bonds and leveraged loans could lose $420 billion to $480 billion during the next economic downturn, equivalent to 2.2% of U.S. gross domestic product** (GDP), according to the study. This compares to losses of just 1.4% of GDP in the 2001-02 downturn and 1.9% of GDP during the Great Recession. Any large influx of downgraded BBB-rated debt during such a downturn would only make the situation worse.

TIPPING POINTS: DEBT SERVICE & INTEREST COVERAGE

The likelihood of another major downturn in U.S. credit depends primarily on the ability of U.S. corporate borrowers to service their debts, or to continue making the necessary interest and principal payments. One way to estimate this is the debt service ratio, which calculates how much interest and principal companies pay as a share of their income.[16] Another is the interest coverage ratio, which calculates the degree to which companies are able to cover their interest expenses with their pre-tax earnings[17] (for reference, analysts often look for an interest coverage ratio of 3x or higher for a "healthy" company). As shown in **Figure 6**, the interest coverage and debt service ratios for U.S. non-bank companies have worsened in recent years but remain above levels that have indicated dangerous financial stress in the past.

Figure 6: *Interest coverage and debt service ratios for U.S. corporations have worsened in recent years, but remain above levels that accompanied prior economic downturns.*



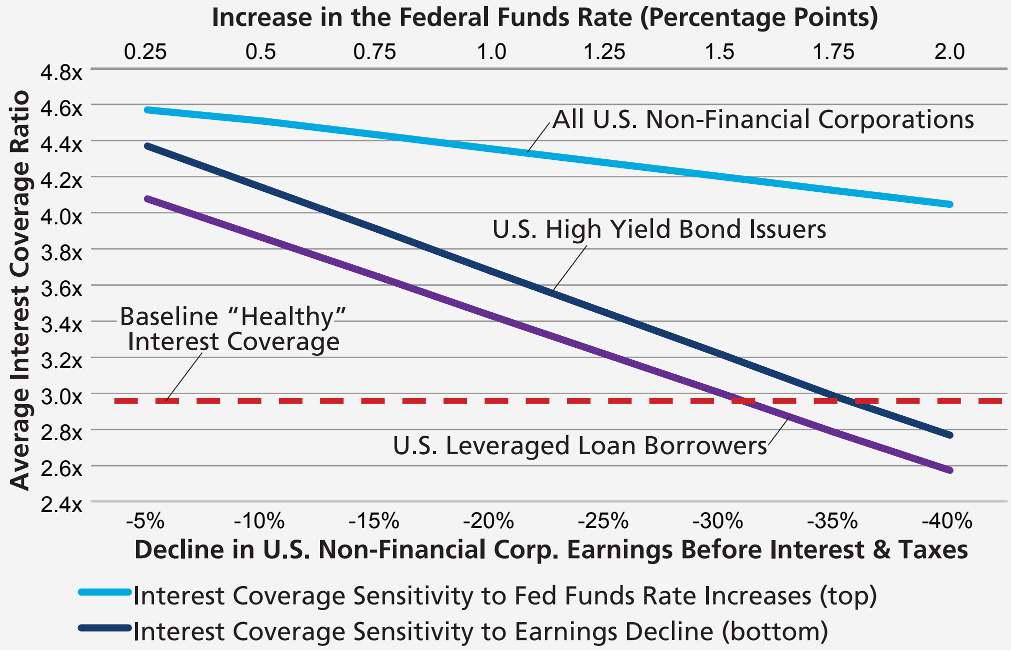
Source: AMG, Fed, BIS, NBER. 2017-18 interest coverage values based on Fed estimates.[18]

Going forward, interest coverage ratios for U.S. companies could weaken either as a result of an increase in interest rates or as a result of a decline in earnings. **Figure 7** provides the results of a sensitivity analysis that compares the average interest coverage ratio of U.S. non-bank companies to hypothetical increases in the Federal Funds Rate.[19] The figure also shows the sensitivity of the average interest coverage ratio for U.S. high yield bond and leveraged loan issuers to a hypothetical decline in corporate earnings.[20]

Although the sensitivity to the Federal Funds Rate in the analysis applies to all U.S. non-bank companies—and high yield borrowers generally would be expected to be somewhat more sensitive to interest rate increases—the results are enough to suggest that a decline in corporate earnings is the biggest threat to high yield interest coverage ratios. In fact, a decline in corporate earnings before interest and taxes of more than 35% would be enough to push interest coverage ratios for both high yield bond and leveraged loan borrowers below 3x, again the minimum value considered healthy by most analysts.

For comparison purposes, in the three most recent U.S. economic downturns (1989-91, 2000-01, and 2007-09), earnings for even stable U.S. companies in the S&P 500 index declined by 37, 54, and 92%, respectively.[21] Declines in earnings for

Figure 7: *A decline in corporate earnings for U.S. high yield borrowers is the biggest risk to average interest coverage ratios.*



Source: AMG, IMF, Fed, S&P LCD.

smaller, more leveraged high yield borrowers in those periods would likely have been even more severe. As such, going forward it is likely **even a mild economic downturn would be enough to push the average high yield interest coverage ratio below the healthy 3x level, and could even push it below 2x, the level often considered the " absolute minimum"** for companies with steady revenue.

INVESTMENT IMPLICATIONS

Despite the growing risks in the high yield space, low interest rates on government and investment grade bonds may continue to drive demand for U.S. high yield bonds for some time. If the Fed pauses future interest rate increases or continues lowering current interest rates, it may also be a relative positive for bonds. However, if the Fed resumes raising interest rates, both high yield bonds and investment grade bonds will likely suffer because nearly all corporate bonds pay fixed rates of interest.

Leveraged loans, in contrast, typically offer rates equal to a floating interest rate benchmark like LIBOR[22] plus a spread. Therefore, the interest that leveraged loans pay out to investors increases when interest rates rise, which can stoke investor demand and drive up loan values. This dynamic has driven a trade-off for investors between high yield bonds and leveraged loans in recent years, with investors dumping bonds and buying leveraged loans when interest rates rise and moving back to high yield bonds when rates are steady. This trade-off between U.S. high yield bonds and leveraged loans will likely continue as investors try to work out the future path of U.S. interest rates.

At the same time, concerns over a global economic slowdown have been on the rise since late 2018 and have led to greater recognition of some of the risks present in the U.S. high yield credit arena. The increasing wariness amongst investors is reflected both in a modest increase in high yield interest rate spreads since mid-2018,[23] as well as in a major decline in the issuance of new high yield credit. In just the first eight months of 2019, for example, issuance of U.S. leveraged loans fell by 45%.[24]

Going forward, any additional demand for U.S. high yield credit will likely only contribute to the growing risks in the space and may worsen losses for high yield investors when the next downturn does occur. Therefore, **given the increasing risks amongst high yield borrowers, unusually low levels of contractual protections, and inadequate interest rate compensation being offered investors, investors may want to consider minimizing exposure to U.S. high yield credit** until the overall risk-reward profile for long-term investors improves.

[1] Calculations based on quarterly values for credit to the U.S. non-financial sector for the period Q4 2007 to Q4 2018. Data sourced from Bank for International Settlements (BIS). https://www.bis.org/statistics/totcredit.htm.

[2] According to a study published by the Federal Reserve Bank of San Francisco, buildups of household and private corporate debt are the most common causes of financial crises. Source: Jordà, Oscar et al. *"Private Credit and Public Debt in Financial Crises."* Federal Reserve Bank of San Francisco, 10 Mar. 2014, www.frbsf.org/economic-research/publications/economic-letter/2014/march/private-credit-public-debt-financial-crisis/.

[3] The three established credit ratings services are Standard & Poor's (S&P), Fitch, and Moody's.

[4] DiMartino-Booth, Danielle. *Corporate Bonds Are Getting Junkier.* Bloomberg, 10 July 2018, www.bloomberg.com/opinion/articles/2018-07-10/corporate-bonds-are-getting-junkier.

[5] Bond yield = Interest on bond / Market price of bond. As a result, a bond's yield depends on the interest rate paid on the bond, but also decreases when the bond price rises and increases when the bond price falls.

[6] Calculations based on end-of-year values from the International Monetary Fund's (IMF) Apr. 2019 *Global Financial Stability Report*, pg. 20. https://www.imf.org/en/Publications/GFSR/Issues/2019/03/27/Global-Financial-Stability-Report-April-2019.

[7] Doherty, Katherine, and Lisa Lee. *A Leveraged Loan Collapses and Reveals Key Risk in Credit Market.* Bloomberg, 16 July 2019, www.bloomberg.com/news/articles/2019-07-16/a-leveraged-loan-collapses-and-reveals-key-risk-in-credit-market.

[8] IMF Apr. 2019 *Global Financial Stability Report*, pg. 12. URL in endnote #6.

[9] IMF Apr. 2019 *Global Financial Stability Report,* pg. 13. URL in endnote #6.

[10] Edwards, Jim. *The Risky 'Leveraged Loan' Market Just Sunk to a Whole New Low.* Business Insider, 17 Feb. 2019, www.businessinsider.com/leveraged-loan-record-87-percent-covenant-lite-2019-2.

[11] Richmond, Adam et al. *The Nature of the BBBeast.* Morgan Stanley Corporate Credit Research North America, 5 Oct. 2018, www.sec.gov/spotlight/fixed-income-advisory-committee/morgan-stanley-nature-of-the-bbbeast.pdf.

[12] *Bond & Loan Market Data.* Fitch Ratings, www.fitchratings.com/site/leveragedfinance/data.

[13] From *Fitch Ratings 2019 Outlook: U.S. Leveraged Finance.*

[14] Vazza, Diane et al. *Default, Transition, and Recovery: 2018 Annual Global Corporate Default And Rating Transition Study.* S&P Global Ratings, 9 Apr. 2019, www.spratings.com/documents/20184/774196/2018AnnualGlobalCorporateDefaultAndRatingTransitionStudy.pdf.

[15] Boston, Claire. *Credit Losses Could Reach 2.2% of GDP When Cycle Turns, UBS Says.* Bloomberg, 5 June 2019, www.bloomberg.com/news/articles/2019-06-05/credit-losses-could-reach-2-2-of-gdp-when-cycle-turns-ubs-says.

[16] Debt service ratio calculated as the ratio of interest payments plus amortized principal to income. Source: *BIS Database for Debt Service Ratios for the Private Non-Financial Sector.* Bank for International Settlements, 23 May 2017, www.bis.org/statistics/dsr/dsr_doc.pdf.

[17] Interest coverage ratio calculated as the ratio of earnings before interest and taxes to interest expense.

[18] Kumbhat, Ashish et al. *The Potential Increase in Corporate Debt Interest Rate Payments from Changes in the Federal Funds Rate.* Board of Governors of the Federal Reserve System, 15 Nov. 2017, www.federalreserve.gov/econres/notes/feds-notes/potential-increase-in-corporate-debt-interest-rate-payments-from-changes-in-the-federal-funds-rate-20171115.htm.

[19] Values derived from a second-degree polynomial regression of U.S. non-financial corporate interest coverage sensitivities to changes in the Federal Funds Rate as reported in the Fed study cited in endnote #18.

[20] Unadjusted interest coverage ratio for high yield bonds of 4.6x uses Apr. 2019 value for high yield bond issuers from IMF Apr. 2019 *Global Financial Stability Report,* pg. 14 (URL in endnote #6). Leveraged loan values are derived from S&P LCD-reported estimate that EBITDA for leveraged loan borrowers would have to decline by 30% from Jun. 2019 levels to breach 3x interest coverage level. Source: Kakouris, Rachelle. *Despite Aging Credit Cycle, Near-Term Spike in Leveraged Loan Defaults Unlikely.* S&P Global Market Intelligence Leveraged Commentary and Data Unit, 10 June 2019, www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/leveraged-loan-news/despite-aging-credit-cycle-near-term-spike-in-leveraged-loan-defaults-unlikely.

[21] Based on peak-to-trough change in end-of-quarter S&P 500 earnings values for the periods Jun. 89–Dec. 91, Sep. 00–Dec. 01, and Jun. 07–Mar. 09. S&P 500 earnings data sourced from Robert Shiller: http://www.econ.yale.edu/~shiller/data.htm.

[22] LIBOR stands for the London Interbank Offer Rate, an internationally-accepted floating interest rate benchmark that is used as the base for interest rates for the vast majority of U.S. leveraged loans.

[23] Based on values for the ICE BofAML US High Yield Master II Option-Adjusted Spread as reported by ICE Benchmark Administration Limited. Data sourced from Federal Reserve Bank of St. Louis: https://fred.stlouisfed.org/series/BAMLH0A0HYM2.

[24] Aug. 2019 data from Refinitiv, as reported by Axios.

DISCLOSURES

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6295 Greenwood Plaza Blvd.
Greenwood Village, CO 80111
800.999.2190
303.694.2190

Main Banking Office: Boulder
1155 Canyon Boulevard, Suite 310
Boulder, CO 80302
888.547.8877
303.447.8877

Cheyenne
Office hours by appointment only
1623 Central Avenue, Suite 106
Cheyenne, WY 82001
800.999.2190

Chicago
180 North LaSalle Street, Suite 2925
Chicago, IL 60601
877.662.8243
312.263.5235

Morristown
163 Madison Avenue, Suite 200
Morristown, NJ 07960
800.888.2777
973.455.0202

Virginia Beach
780 Lynnhaven Parkway, Suite 140
Virginia Beach, VA 23452
866.872.9578
757.368.4466

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