Tortoise

Market Insight:
The Storm Surrounding BBB-Rated Corporate Credit

September 2018

Executive summary

- The U.S. corporate bond market has ballooned to $6.7 trillion today from $2.4 trillion prior to the 2008 financial crisis; over $5 trillion of the current market is rated investment grade.
- The BBB segment has grown significantly faster than the overall market. Currently, nearly 50% of today's investment grade corporate bond market is rated BBB, versus 35% in 2006 and 28% in 1997.
- Growth in the BBB-rated corporate bond market has been driven primarily by:
  - Changes in credit rating methodologies
  - Rising stars
  - Deteriorating credit fundamentals resulting from aggressive corporate leveraging to fund dividends, share repurchases and M&A.
- Leverage at non-financial companies is elevated and, if one excludes the volatile commodity industries, leverage represents a post-crisis high. The increase in leverage occurred across various investment grade ratings categories (i.e., in both the BBB and A categories) as ratings agencies appear to have relaxed standards in a number of instances in various industries and for a variety of reasons.
- Leverage stress varies from industry to industry with a large portion of the increase in issuers leveraged more than 4.0x EBITDA emanating from the food and beverage, cable, media, and utilities industries.
- The catalysts for future credit deterioration and subsequent ratings downgrades could result from a number of factors:
  - Macroeconomic phenomena (e.g., a GDP growth slowdown, trade war, or inflation)
  - Geopolitical events
  - Central bank policies
  - Industry-specific developments (e.g., regulatory changes or increased competition from disruptive technologies)
  - Company-specific circumstances
  - Funding challenges
- When the credit cycle turns, a number of issuers currently rated BBB will likely become subject to ratings downgrades. Given the relatively larger size of the BBB segment compared to prior periods, this may inhibit the orderly transition of downgraded bonds from investment grade investors to high yield investors, thereby contributing to mark-to-market losses. In addition, we note several other structural market shifts that could contribute to losses, including the relative sizes of the investment grade and high yield corporate bond markets, historical ratings transition percentages, bond market liquidity, and relative valuations.
- We believe that active fixed income management, disciplined risk management, strong fundamental analysis, and robust industry and issuer selection can not only help weather this coming storm, but perhaps uncover future investment opportunities.

Corporate bond market growth and the ballooning BBB market

Corporate America has been on a borrowing binge over the past ten years with the amount of outstanding U.S. corporate bonds[1] increasing to roughly $6.7 trillion today versus $2.4 trillion in December 2006. As the size of the market grew, so too did the proportion of debt rated BBB, the lowest investment grade ratings category. Today, BBB-rated bonds comprise 49% of investment grade corporate debt, versus 35% in December 2006 and only 28% in February 1997. Currently, $5.4 trillion in corporate bonds carry an investment grade rating and of that, almost $2.5 trillion is rated BBB. To further put this into perspective, the market value of currently outstanding BBB corporate bonds now exceeds the GDP of all but five countries worldwide.

[1]As measured by the market values of the Bloomberg-Barclays U.S. Corporate Bond Index and the Bloomberg-Barclays U.S. High Yield Corporate Bond Index

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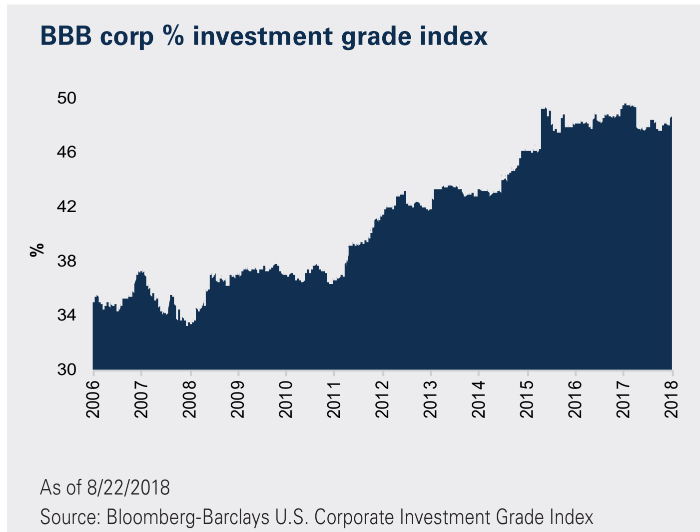
A portion of this growth is due to changes in rating methodology within financials, increasingly permissive rating agencies in several other industries, as well as rating migration following the wave of commodity company downgrades in 2015 and 2016 and some rising stars (i.e., companies previously rated high yield). Other factors include easing borrowing conditions, lower borrowing costs as a result of declining interest rates, as well as aggressive corporate share buybacks and increasing M&A activity.



BBB corp % investment grade index

As of 8/22/2018

Source: Bloomberg-Barclays U.S. Corporate Investment Grade Index

Corporate bond market growth (investment grade and high yield)

As of 8/22/2018 Source: Bloomberg-Barclays Short Term Corporate Index, Bloomberg-Barclays U.S. Corporate Investment Grade Index, Bloomberg-Barclays U.S. Corporate High Yield Index

Deteriorating investment grade credit metrics and seemingly permissive ratings agencies

The deterioration in overall average investment grade corporate credit metrics is partially a result of the increase in the proportion of BBB-rated bonds over the last ten years. In addition, after 2008, ratings agencies appear to have loosened standards somewhat within some industries, allowing certain companies to attain a higher credit rating than one would otherwise assume based on the issuer's leverage metrics.

Currently, non-financial investment grade gross leverage (measured as total debt/EBITDA) currently resides near a post-crisis high of nearly 3.0x. The trend of increasing leverage slowed in mid-2016, as commodity companies (i.e., those in the metals and mining, and energy industries) delevered as a result of earnings improvements fueled by the rebound in the price of oil and other commodities, and concerted efforts to reduce debt by several issuers in those industries. Other factors also have influenced the overall leverage decline in commodity related companies, most notably a survivorship bias (i.e., as ratings agencies downgraded some highly levered commodity companies to below investment grade, the average credit profile of the remaining constituents improved).

If one excludes commodity companies from the investment grade corporate bond universe, gross leverage has reached a post-crisis high. Indeed, one has to look back to the 2001-2002 period (i.e., during the bankruptcies of telecommunications and utility companies such as WorldCom, Adelphia, Global Crossing, Enron, and Pacific Gas & Electric) to find non-financial investment grade leverage equivalent to today's level. Regardless, we believe the broad trend of increasing leverage continues among the balance of investment grade companies, especially those rated BBB.

While leverage remains a reliable indicator of creditworthiness, other measures such as interest coverage (i.e., EBITDA/interest expense) also contribute to any non-financial issuer's credit profile mosaic. In general, the declining interest rate environment that prevailed over the past ten years theoretically should allow companies to operate with higher leverage, all else remaining constant. Unfortunately, debt and interest expense grew at a faster pace than the decline in interest rates. Consequently, interest coverage in investment grade credit and BBB-rated credit remains near their lowest post-crisis levels, although it still exceeds that registered during the high interest rate environment that prevailed in the 1980s and 1990s.

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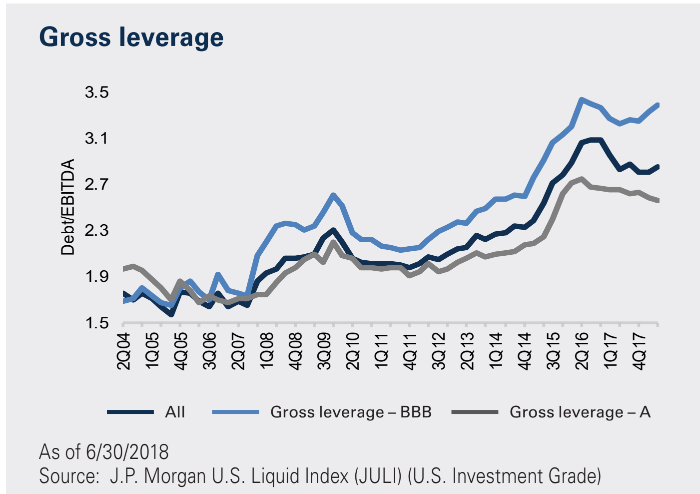
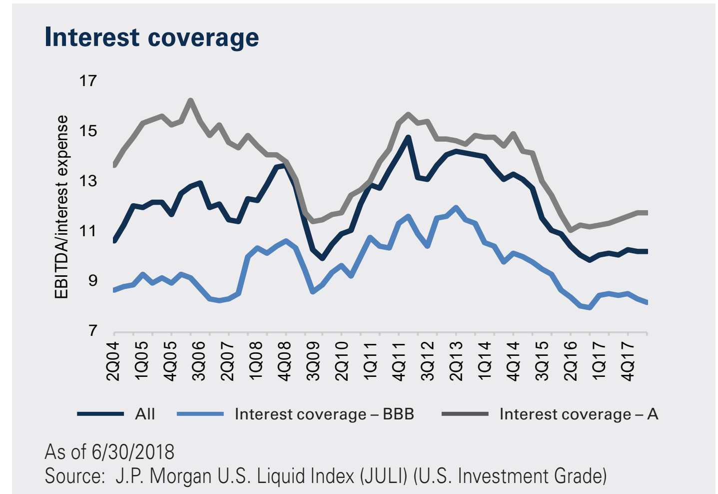


As of 6/30/2018
Source: J.P. Morgan U.S. Liquid Index (JULI) (U.S. Investment Grade)



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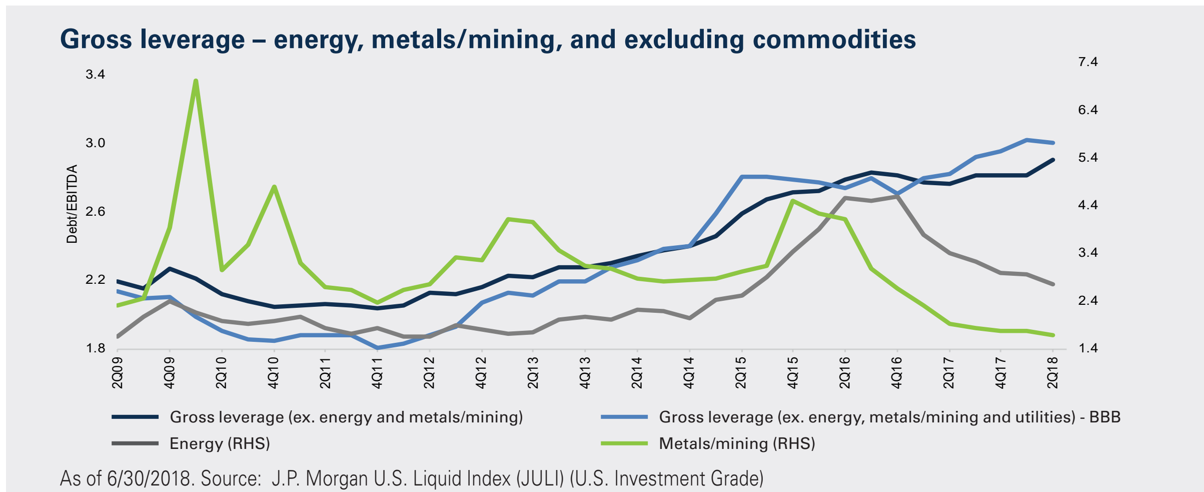

As of 6/30/2018. Source: J.P. Morgan U.S. Liquid Index (JULI) (U.S. Investment Grade)

Further investigation reveals weakening investment grade credit metrics in both the A and BBB ratings categories. The average leverage for the A-rated corporate bond market increased to 2.6x today from 1.75x prior to the financial crisis, while BBB-rated issuer leverage increased to 3.3x today from 2.0x pre-crisis.

Certain trends affect the analysis of leverage within the A and BBB categories, including methodology changes regarding the rating of banks, ratings migration following the wave of commodity company downgrades in 2015 and 2016, and the movement of rising stars into the investment grade category. Ratings agency methodology changes acted to increase the number of bank related bonds rated BBB, largely as a result of the removal of assumptions regarding government support and the concept of "too big to fail." We note that bank credit quality has improved significantly since the pre-crisis period, as most if not all banks now carry significantly greater capital reserves as a result of a strengthened regulatory environment.

Nevertheless, in the past few years, we believe that ratings agencies have become somewhat more permissive and allowed certain issuers to retain an investment grade rating by recognizing the scale of an issuer's business, allowing pro forma cost savings and revenue synergy adjustments from M&A, layering secured debt ahead of existing obligations, and verbal promises by management to deleverage in the future. We view these instances as a worrying trend and believe that the credit and downgrade risk within the investment grade corporate bond market has meaningfully increased over the past ten years and will be tested during the next downturn.

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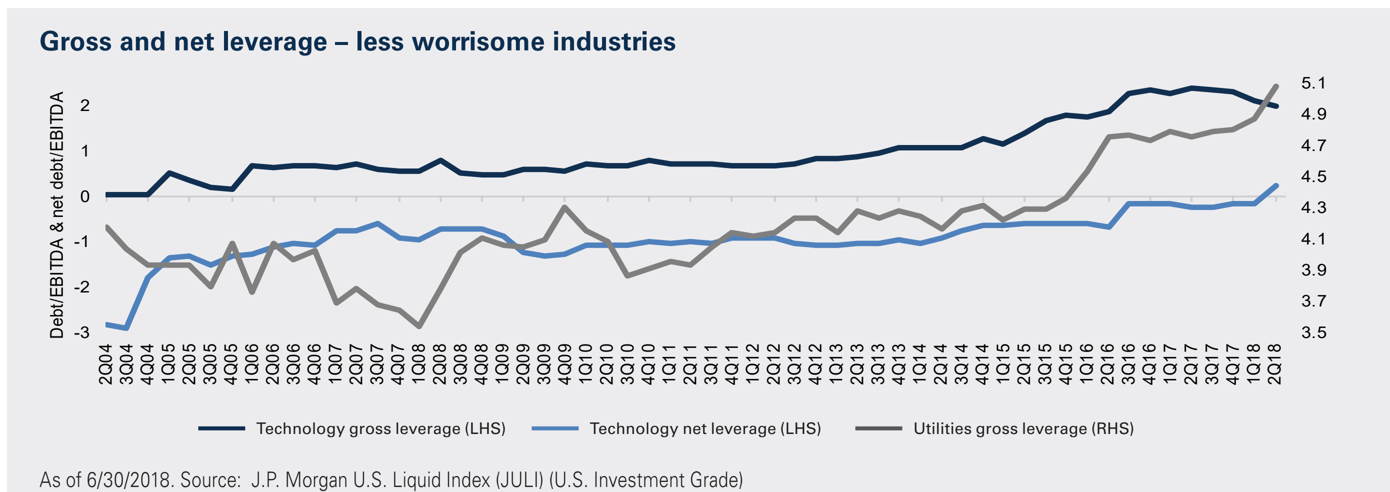
Industries and companies showing the most leverage stress and greatest BBB- concentration

The increase in leverage and increase in the percentage of BBB rated companies can be alarming, however, not all BBB-rated bonds are created or rated equally and not all industries exhibit the same degree of leverage risk. The increase in leverage over the last several years has been driven primarily by M&A activity, has been hiding primarily within non-cyclical industries and has been most pervasive in pharmaceuticals, healthcare, food and beverage, telecommunications, media, cable, utilities, and technology.

Some of the increased leverage is less worrisome, such as that in the technology industry, where some issuers increased debt/EBITDA to a manageable 2.0x from an extremely low 0.75x. Further, net leverage (leverage net of cash on the balance sheet) remains extremely low within the cash rich technology industry. The increase in gross leverage within the utilities sector to 5.0x from 4.0x also appears manageable, given the regulated nature of the industry and its stable earnings stream.

Gross and net leverage – less worrisome industries



As of 6/30/2018. Source: J.P. Morgan U.S. Liquid Index (JULI) (U.S. Investment Grade)

We focus our concern on companies in a handful of industries where high levels of leverage for the ratings category (i.e., 4.0x or more) has become a norm and largely resulted from M&A. Currently, approximately 9% of non-financial investment grade debt emanates from companies leveraged between 4.0x and 5.0x, and 14% relates to companies leveraged more than 5.0x. In total, companies leveraged 4.0x and higher today comprise 23% of outstanding investment grade corporate bonds, a combined increase of almost 10 percentage points over the last several years. A large amount of the increase in companies leveraged 4.0x or more occurred within the food and beverage, cable, and media industries. The average leverage in the food and beverage industry increased to 3.5x currently, from 2.0x in 2010. Similarly, the telecommunications and media industries now register relatively high average levels of leverage for the investment grade category at 2.9x and 3.0x, respectively.

Noteworthy examples of issuers in the food and beverage industry that appear to pushing the threshold of investment grade ratings include Campbell Soup, General Mill's, Bacardi, and Keurig Green Mountain. Specifically, Campbell Soup recently increased leverage to 4.75x to fund its acquisition of Snyder's-Lance, General Mills increased leverage to approximately 4.5x due to its acquisition of Blue Buffalo Pet Products, Bacardi increased its leverage to roughly 5.0x as it borrowed to fund the purchase of the remaining portion of Patron Spirits International, and Keurig Green Mountain increased leverage to almost 6.0x due to its acquisition of Dr. Pepper Snapple Group. While all of these companies anticipated significant synergies and committed to rapid deleveraging, any management misstep, increase in competition, or macro-economic downturn could derail deleveraging plans. For example, a lack of innovation by General Mills could slow revenue growth. Alternatively, Amazon.com's planned move into pet food could present problems for General Mills newly acquired pet food business. Fickle consumer tastes and the rising popularity of alternative tequila brands, such as Casamigos, may affect profitability or hamper growth in Bacardi's tequila segment and slow its plans to rapidly pay down debt. Notably, Campbell Soup Company has already faced higher input costs, executive turnover, and shareholder pressure following its acquisition of Synder's-Lance.

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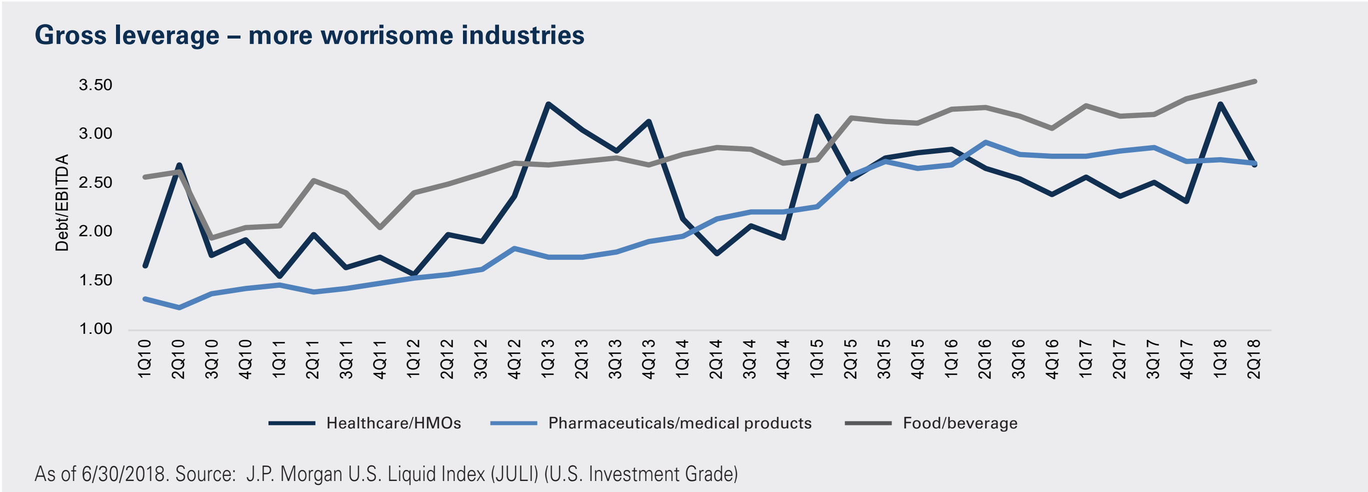
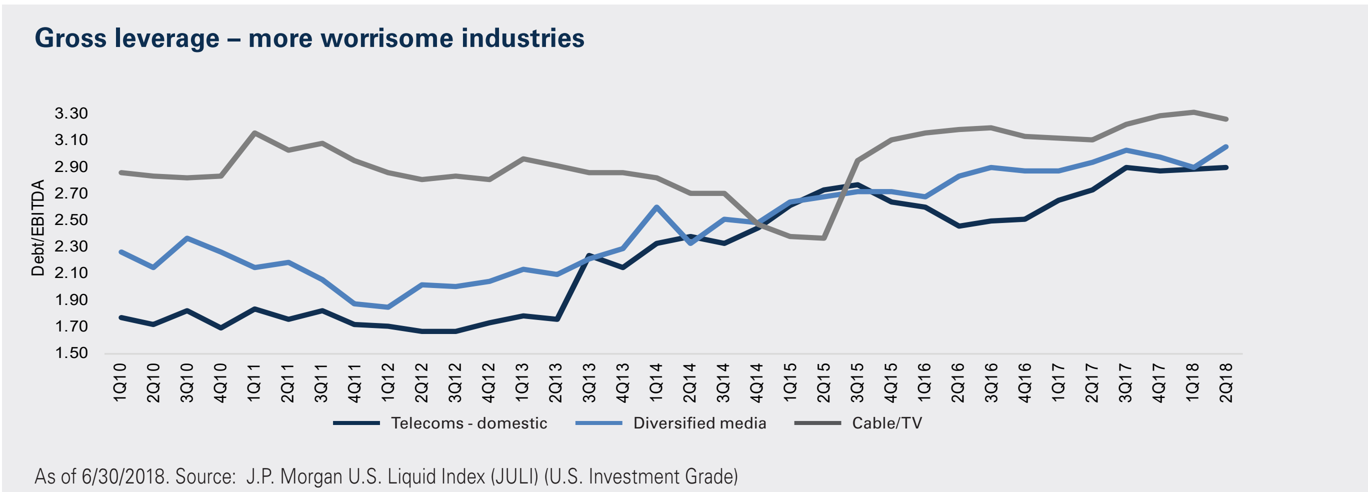


Noteworthy examples within the cable and media industries include Charter Communications and Discovery Communications. In May 2016, Charter Communications, which then carried a high yield rating, purchased Time Warner Cable driving total leverage to 4.5x. Charter Communications obtained an investment grade rating on some of the debt by collateralizing certain components of its debt structure, resulting in 3.5x secured leverage and 4.5x total leverage. In March 2018, Discovery Communications completed its acquisition of Scripps Networks Interactive, resulting in leverage of roughly 4.5x; management targeted reducing leverage to 3.5x in the near term.



The energy and healthcare industries represent the bulk of the increase in bonds rated low-BBB. The growth in healthcare industry bonds rated low-BBB primarily results from increased M&A activity and shareholder remuneration (i.e., share buybacks and dividends). Within the energy industry, the bulk of the growth was due to the volatility in energy prices in 2015 and 2016 which has since improved and, combined with a general management focus on corporate balance sheets, has resulted in an improvement in credit fundamentals as can be seen in the chart entitled “Gross leverage – energy, metals/mining, and excluding commodities”.

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How the BBB balloon could pop

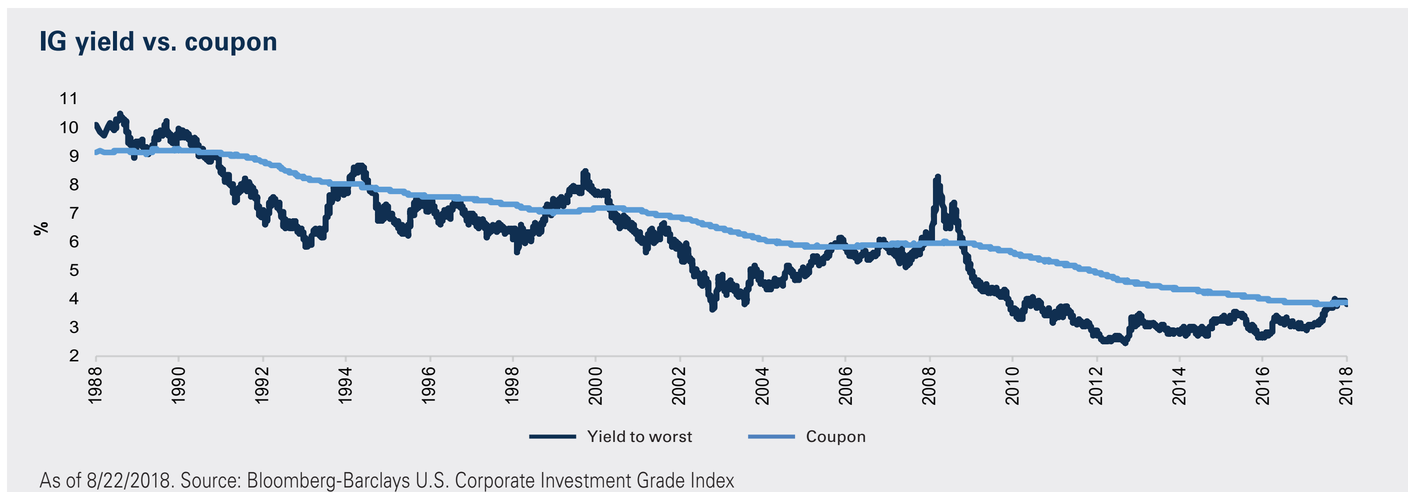
A variety of factors including eroding business fundamentals due to company specific as well as macro factors and funding pressures can contribute to a deterioration in corporate credit fundamentals and trigger ratings downgrades to high yield, or even defaults.

Corporate revenue and input cost pressures could occur for many reasons both within and outside of managements control. Various earnings headwinds could include a general economic downturn, increased competition from fierce competitors such as Amazon.com, an inability to achieve estimated revenue or cost synergies, increased input costs (such as energy), and trade wars with accompanying tariffs reducing sales or increasing input costs.

Funding pressures resulting from increasing interest rates combined with substantial near-term debt maturities represent another pressure point that could lead to ratings downgrade pressure. In the past few decades, the secular decline in interest rates and strong investor demand for fixed income product allowed many companies to increase debt and simultaneously reduce the average interest rate paid on that debt.

The average coupon (prior financing cost) on the IG credit market has steadily declined over the last 30 years as the market yield (current financing cost) has often been lower than the average coupon. This has allowed companies to, on average, incur more debt per unit of interest expense. Conversely, during periods of tighter credit and higher borrowing costs, such as the late 1990s and mid-2000s, corporate bond yields rose and exceeded the average coupon for the market. In turn, this forced companies to pay higher borrowing costs on new net debt and on maturing debt that needed to be refinanced. This increase in borrowing costs weighed on corporate fundamentals and ultimately caused a downturn in the credit cycle.

While the average market yield in the investment grade corporate bond market (i.e., the refinancing rate) is currently nearly the same as the average coupon, a further increase in corporate bond yields caused by a continued removal of accommodative monetary policy, an increase in inflation, or increased credit risk spreads could cause average corporate bond market yields to exceed the average coupon. This would force companies to refinance existing debt at higher interest rates which, absent deleveraging, will weaken credit fundamentals.



As of 8/22/2018. Source: Bloomberg-Barclays U.S. Corporate Investment Grade Index

Further adding fuel to the fire, between now and the end of 2022, investment grade companies have roughly $2.5 trillion of debt maturing, which equates to half of the size of the entire investment grade corporate bond market. As such, companies that require considerable funding to refinance debt maturities over the next few years at potentially higher funding costs than the debt maturing will likely face pressure in their credit metrics. While the BBB percentage of the investment grade corporate market is near 50%, only roughly 34% of the $2.5 trillion maturing by 2022 is rated BBB. However, that still represents roughly $860 billion of BBB-rated debt that either must be refinanced or repaid by 2022.

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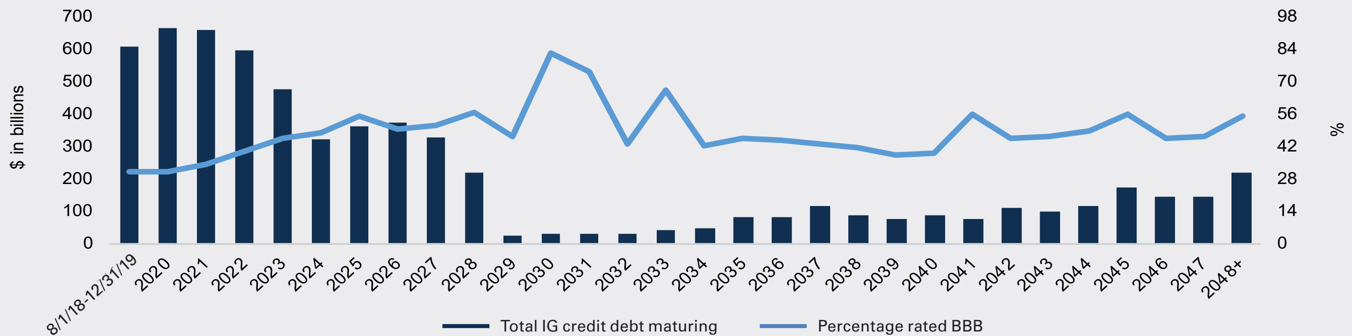
IG credit debt maturing and percentage rated BBB



As of 8/1/2018. Source: Bloomberg-Barclays Short Term Corporate Index (all data inside one year); Bloomberg-Barclays U.S. Corporate Investment Grade Index

Who takes the hit when the levee breaks

The size of the BBB corporate bond market currently exceeds $2.5 trillion. In comparison, the market value of the entire high yield bond market totals approximately $1.3 trillion, and the portion of the high yield market rated BB (i.e., the highest high yield category) totals roughly $550 billion. Approximately 26%, or $650 billion of the BBB corporate bond market is rated low BBB.

The relative size of these markets is highly relevant, as a credit downturn could cause a significant amount of debt to transition from the BBB category to high yield. The relatively smaller high yield market could hamper this transition and cause downgraded bonds to experience precipitous price declines, if high yield investors are unable or unwilling to immediately purchase downgraded bonds (a/k/a, "fallen angels") as they are sold out of investment grade portfolios. That market liquidity constraint is amplified by the fact that some investment grade investors seek to quickly sell bonds when ratings decline to below investment grade and some investment grade investors operate under mandates requiring that they rapidly divest of fallen angels.

In addition, overall bond market liquidity declined significantly since the 2008 credit crisis, as regulatory changes reduced the ability of large Wall Street banks to act as substantial intermediaries or significant buyers of last resort. The larger size of today's investment grade and high yield corporate bond markets further exacerbates the market liquidity restriction or mismatch imparted by the new bank regulations. The high yield bond market typically comprises securities maturing in 10 years or less with durations of typically less than five years. As such, the buyer base for fallen angels with maturities beyond 10 years may be limited. The reduced market liquidity, combined with the amplified price movements as spreads widen for longer maturity bonds and the limited high yield buyer base, could result in outsized mark-to-market losses for long maturity fallen angel bonds.

According to Moody's, BBB corporate issuers overall have on average experienced a 4.82% probability of downgrade to high yield over a one-year period. More specifically, the probability of downgrade for issuers rated low-BBB and high-BBB is on average 9.96% and 1.87%, respectively. Using those probabilities, one could estimate that, on an average per annum basis, $120 billion of BBB-rated corporate bonds could be downgraded to high yield with over half of those downgrades coming from the low-BBB category. That would equate to a 20% per annum average increase in BB-rated debt, or roughly a 10% per annum average increase in the size of the overall high yield corporate bond market.

Moreover, in an economic downturn such as those that occurred in 2001-2002 or 2008-2009, these ratings transitions drastically increase in probability. Between 2001 and 2002, ratings agencies downgraded 7.3% of the overall investment grade corporate bond market to high yield. In today's market of roughly $5.4 trillion in investment grade corporate debt, that implies that roughly $400 billion of investment grade corporate bonds could transition to high yield over a two-year period, suggesting that the high yield bond market could be forced to digest a supply increase of more than 30%. It is possible that in today's market environment the dollar value of fallen angels could exceed $400 billion over a two-year period in a severe downturn, given that only 31% of investment grade corporate bonds were rated BBB at the beginning of 2001, versus 48% today, and that, on average, BBB-rated corporate bonds have a higher probability of getting downgraded.

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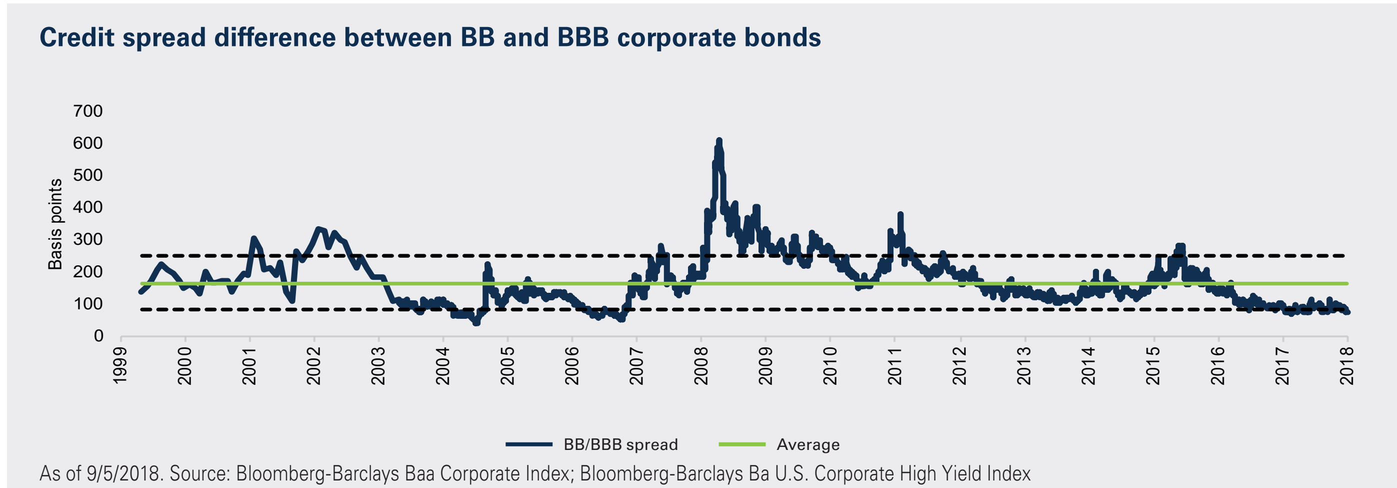
Currently, the average credit spread on both the Bloomberg-Barclays Baa Corporate Index and the Bloomberg-Barclays Ba U.S. Corporate High Yield Index, as well as the spread difference between the two indices, are approximately one standard deviation tighter than the average since 2000. During an economic downturn or significant event which causes an increase in fallen angels, credit spreads in general will widen and the credit spread differential between the BB and BBB-rated market will also widen as seen in the chart in the 2001-2002 and 2008-2009 downturns, thereby exacerbating the price decline for those fallen angels. Additionally, equity investors also often take a hit from a downgrade, given the increased business risk and increased financing cost associated with having a lower credit rating.

Credit spread difference between BB and BBB corporate bonds



As of 9/5/2018. Source: Bloomberg-Barclays Baa Corporate Index; Bloomberg-Barclays Ba U.S. Corporate High Yield Index

Concluding remarks

We currently don’t forecast a recession in the near term. Nevertheless, we believe that the economic and credit cycles are in their final innings, as evidenced by both the extended period of U.S. GDP growth and the current state of corporate balance sheets. We continue to forecast increasing borrowing costs as a result of rising interest rates and sustained competitive activity in numerous industries. Within that environment, corporate bond issuers must refinance approximately two-thirds of all currently outstanding corporate debt in the next five years, most of which is rated investment grade with a significant concentration in bonds rated BBB.

Some of the catalysts that could spark the storm are slow-burn issues that take time to form and unfold gradually (e.g. funding pressures) while an economic downturn or industry or issuer specific catalysts could occur much more rapidly. There are many ways to slice and dice the data within the BBB market, the drivers of growth of the BBB market, and the industries and companies at risk of becoming fallen angels. Some of the companies pushing the BBB rated leverage threshold will be successful in their efforts to deleverage, although many will not, thereby creating significant market disruption, as well as future opportunities. At Tortoise, we believe that active fixed income management, strong fundamental analysis, and sound industry and issuer selection can help weather the coming storm and uncover future investment opportunities.

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