The Nature of the BBBeast

A consistent rule of thumb that we live by when looking for problems in credit cycles: Follow the debt growth. BBB IG debt outstanding has grown to ~$2.5trn today, a 227% increase since 2009. Along these lines, we see elevated downgrade activity as a "stress point" when the cycle eventually turns.

What has driven the growth? The majority of the increase in BBB debt in this cycle stems from net issuance ($1.2 trillion), followed by downgraded debt ($745 billion). Notably, the growth in BBB debt outstanding is not being skewed by a single sector or a small part of the market. Yes, large issuers have grown significantly. For example, the top 25 non-financial BBB names have a total of $685 billion in index debt (up from $257 billion in 1Q09). But the number of BBB issuers has also increased by 60% since 2009, while all sectors have increased BBB debt, large and small companies alike.

High debt growth has translated to high leverage: BBBs not surprisingly make up the majority of the leverage "tail" in the IG market, with 31% of BBB debt in our universe now leveraged at or above 4.0x. Our implied ratings analysis tells a similar story, where ~55% of BBB debt would have a HY rating if rated based on leverage alone. Meanwhile, interest coverage has declined steadily since 2014, particularly for BBB issuers, vs. some recent improvement in interest coverage for the A-rated universe.

Sizing up downgrades: In the last three broad downgrade cycles (1989-91, 2000-03, and 2007-09) 7-15% of the starting IG index size was downgraded to HY over the full period. Based on the size of the market today, that would equate to roughly $350-750 billion of total downgrades this time over a multi-year period. But remember, half the market is already BBB rated, compared to just 27% before the 2000-03 downgrade cycle. Adjusting for the size of the BBB index over time, downgrade volumes in the next cycle could be even larger, moving the range to ~$550 billion-$1 trillion.

Downgrades lag the market: The good news is that this is not a story for today in that the big wave of downgrades will likely not come until credit spreads are much wider than they are right now, which will take time to play out. What matters today, in our view, is that valuations are pricing in very few long-term fundamental risks, with the BBB/A non-fin spread basis still near cycle tights. And lastly, when thinking about other markets that could feel the effect as these risks materialize down the line, remember that the BBB part of the IG index is now ~2.5x as large as the entire HY index, with this ratio near record highs.

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Introduction

BBB IG debt outstanding has grown significantly in this cycle, a story most IG credit investors know quite well. For example, at ~$2.5 trillion outstanding, BBB par has increased 227% since the beginning of 2009. The majority of the increase in BBB debt stems from net issuance ($1.2 trillion), followed by downgraded debt ($745 billion). Notably, the growth in BBB debt outstanding is not being skewed by a single sector or a small part of the market. Yes, large issuers have grown significantly. For example, the top 25 non-financial BBB names have a total of $685 billion in index debt (up from $257 billion in 1Q09). But the number of BBB issuers has also increased by 60% since 2009, while all sectors have increased BBB debt, large and small companies alike. In other words, the increase has been broad-based across the market.

So what does this mean big picture? Credit cycles are always different from one to the next. But a consistent rule of thumb over time that we live by when looking for problems down the line: Follow the debt growth. Very simply, applying to the current cycle, we think BBBS will be one (of a few) stress points when the cycle does turn. Downgrade activity will likely be meaningful. And when thinking about other markets that could feel the effect, remember the BBB part of the IG index is now ~2.5x as large as the entire HY index.

The good news is that this is not a story for today, in that ratings downgrades tend to lag the market. In other words, the big wave of downgrades will likely not come until credit spreads are much wider than they are right now, which will take time to play out. But more importantly, valuations are pricing in very few fundamental risks, in our view, with the BBB/A spread basis still near cycle tights. Hence we remain up-in-quality.

In the report that follows, we walk through the drivers of the growth in BBBS in this cycle and think about implications for credit markets when the cycle ultimately turns.

The Growth in BBBS

We start by walking through what has driven the increase in BBB debt in this cycle. First, after substantial growth for many years, BBBS now represent $2.5 trillion in par value (or just over 50% of the IG index). Downgrades in the Financial space have helped to propel this figure to all-time highs, a factor that we (and most investors) are not too concerned about, given very healthy Financial credit quality this time around. But Financials are only a small part of the story. Non-financial BBBS have also grown rapidly in this cycle (+181% since 2009), now totaling $1.84 trillion, or 52% of the total non-financial market (37% of the overall index).
Over the last few years, the growth in non-financial BBBs relative to the full index has been moderated by strong issuance from companies with trapped cash overseas – a cohort that tended towards highly rated names such as Apple, Microsoft, Cisco, and the like. In other words, BBB non-financial debt was growing rapidly over this period, but so was higher-rated non-financial debt. However, with these companies now issuing less debt on account of repatriation reform, BBBs are once again growing faster than their high-quality counterparts (Exhibit 2). For example, non-financial BBBs grew nearly 7% y/y vs. only 1% growth in higher-quality names. Looking ahead, we expect this trend to persist, with non-financial BBBs continuing to increase as a portion of the overall market.

Taking a step back, since the beginning of 2009, BBB par has more than tripled (3.3x), while the index has more than doubled (2.4x) – a shift in ratings composition that we can’t ignore. Breaking down this growth (Exhibit 5), we note that the majority of the increase stems from net issuance ($12 trillion), followed by downgraded debt ($745 billion). Rising stars brought in less than $300 billion of new index debt, offset by approximately $300 billion of fallen angels. For a full breakdown of this analysis by sector, see Appendix: BBB Debt Growth by Sector.
Exhibit 5: Downgrades and net issuance have added most to the BBB total

Evolution of the IG BBB Universe

Source: Morgan Stanley Research, FTSE Fixed Income LLC; Note: Downgrades / upgrades counted for debt outstanding in year of downgrade; issuance in subsequent years, less maturities, included in "net" BBB issuance.

Within the "net issuance" cohort, a large portion actually comes from previously downgraded issuers. In other words, after these companies get downgraded, in most cases, they continue growing index debt outstanding. In particular, we find the largest BBB capital structures in the market today, which have increased debt significantly in this cycle, in many cases used to be higher rated. For example, $991 billion of BBB debt in the index (40% of total BBB par) is associated with ~90 companies that were downgraded into BBB since 2009. As we show in Exhibit 6, after Financials, Telecom and Healthcare have the most BBB debt (which was previously higher rated), followed by a combination of Consumer sectors.

Exhibit 6: Outside of Financials, Telecom and Healthcare have largest BBB debt loads at companies that were previously "A" rated or higher

Current Non-Financial BBB Debt - Companies Previously "A" or Higher

Source: Morgan Stanley Research, FTSE Fixed Income LLC

Looking again at all issuers (not just the formerly high-rated ones), we note that the growth in BBB index debt is fairly widespread, not just coming from a handful of issuers. First, while the largest BBB issuers are much bigger today vs. earlier in this cycle, there is more BBB par in every debt-outstanding bucket (Exhibit 7).
Second, the number of BBB issuers in the IG index has risen by about 60% since 1Q09 (Exhibit 8). Third, Exhibit 9 shows significant growth in non-financial BBB debt from the Telecom, Healthcare, Tech, Consumer and Energy sectors, but all sectors have increased BBB debt outstanding in this cycle. Fourth, at the median, non-financial BBB issuers have seen their index debt load grow 56% since 1Q09, which would not be the case if only a handful of largest issuers accounted for the full increase.

Lastly, we also examined the top 25 non-financial BBB names in the index to help to gauge how the market has evolved over time. As Exhibit 10 shows, the top 25 names have a total of $685 billion in index debt (up from $257 billion in 1Q09) and median debt of $20 billion (up from $9 billion in 1Q09) – growth rates in line with the broader non-financial BBB universe. Additionally, the top 25 still represent about a third of the total non-fin BBB universe, the same level as in 2009. However, the composition has changed significantly. For example, only 6 of the top 25 issuers from 2009 are still in the top 25 today and 7 of the names in today’s list have resulted from downgrades. TMT and Healthcare are again well-represented at the top, totaling $351 billion, or 51% of the top 25 names, up from $104 billion in 1Q09. And we note that many of these issuers have seen debt loads grow as a result of M&A, as we previously discussed in detail (see Corporate Credit Research: M&Aking a Leveraged Balance Sheet, 2018.08.10).
Exhibit 10: The top 25 non-financial BBB capital structures – today vs. 2009

<table>
<thead>
<tr>
<th>Rank</th>
<th>Ticker</th>
<th>Sector</th>
<th>BBB Par not sig in Capital Structure</th>
<th>1Q09</th>
<th>1Q08</th>
<th>1Q07</th>
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<td>81,932 A</td>
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<td>H DIS Consumer Discretionary</td>
<td>19,655 BBB</td>
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Source: Morgan Stanley Research, FTSE Fixed Income LLC; Note: New entrants defined as those with no HY debt prior to joining the IG index.

BBB Fundamentals

The growth in BBB debt outstanding has naturally coincided with weaker fundamentals, as one would expect. For example, in our IG fundamental universe of non-financial US names, median BBB gross leverage is 2.55x, vs. 1.98x for As (Exhibit 12). Gross leverage has ticked modestly lower very recently, as strong earnings growth and slowing debt growth have helped at the margin, but absolute leverage levels remain quite elevated, especially compared to past late-cycle environments. Meanwhile, interest coverage has declined steadily since 2014, particularly for BBB issuers, vs. some recent improvement in interest coverage for the A-rated universe (Exhibit 13).

Additionally, BBBs not surprisingly make up the majority of the leverage "tail", with 31% of BBB debt in our universe now leveraged at or above 4.0x.
Our implied ratings analysis tells a similar story (for details of this analysis, see Corporate Credit Research: Making a Leveraged Balance Sheet, 2018.08.10), where ~55% of BBB debt would have a HY rating if rated based on leverage alone (Exhibit 16).

Breaking down the implied ratings of BBB companies only, we again see that Healthcare, Telecom, and Consumer Staples (along with Energy) account for a large portion of the debt with implied HY ratings (Exhibit 17).

Exhibit 14: 18% of IG debt has a BBB rating and is levered 4.0x or more

Exhibit 15: 31% of BBB debt, by par, has leverage of 4.0x or more

Exhibit 16: 55% of BBB debt would have a HY rating based on leverage alone

Exhibit 17: Healthcare, Telecom, and Staples have a lot of BBB debt with an "implied" HY rating

Source: Morgan Stanley Research, FTSE Fixed Income LLC, Bloomberg

Source: Morgan Stanley Research, Moody's, FTSE Fixed Income LLC

Downgrade Risks Down the Line

It is important to remember that credit cycles are always different from one to the next. But a consistent rule of thumb over time that we live by when looking for problems down the line: Follow the debt growth. Very simply, applying to the current cycle, we think BBBS will be one (of a few) stress points when the cycle does turn. Downgrade activity will likely be meaningful.

Looking at the past three cycles as a guide, we note that broad downgrade waves tend to last 2-4 years and tend to coincide with a recession at some point as well as with elevated high yield defaults. Credit markets have also experienced "mini" downgrade waves outside of recessions, but those have typically been narrower, concentrated around just one or two sectors, such as Autos in 2005 and Energy/Materials in 2016.
Sizing up the potential risk this time around, in the last three broad downgrade cycles (1989-91, 2000-03, and 2007-09) 7-15% of the IG index was downgraded to HY over the full period (see Corporate Credit Insights: Revenge of the Fallen, 2016.02.26). Based on the size of the market today, that would equate to roughly $350-750 billion of total downgrades this time over a multi-year period. But remember, half the market is already BBB rated, compared to just 27% before the 2000-03 downgrade wave. Taking from a prior analysis of ours (see Corporate Credit Research: Living the HY-Life, 2017.07.28) where we adjust for the size of the BBB index over time, downgrade volumes in the next cycle could be even larger, as we show in Exhibit 18.

**Exhibit 18:** Assuming the downgrade rate remains the same as in the past, downgrade volumes will be significant

<table>
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<tr>
<th>Start</th>
<th>End</th>
<th>Length (Qtrs)</th>
<th>Net Fallen Angel Volume ($Bn)</th>
<th>% of BBB Index</th>
<th>&quot;Implied&quot; Fallen Angels for this cycle* ($Bn)</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>850</td>
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<td>587</td>
</tr>
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</table>

Source: Morgan Stanley Research, Bloomberg, FTSE Fixed Income LLC, Moody’s. Note: For the 2007 downgrade cycle, we estimate net fallen angels using actual index data. For prior cycles, we use Moody’s data for fallen angels with a haircut for index-eligible debt relative to market size. *Implied fallen angels are calculated by multiplying the proportion of fallen angels seen in previous cycles as a percentage of the BBB index, times the current BBB index par.

What are the specific implications for markets? At the least, the liquidity issues experienced in early 2016, when Energy/Materials companies were getting downgraded at a rapid rate, will come back at some point – pushing credit markets (both IG and HY) to valuations that don’t make sense fundamentally for short periods of time, as we saw back then. In our view, those liquidity challenges come from four drivers: 1) Credit markets have grown significantly in this cycle. 2) A large volume of bonds will have to change hands at some point, discussed in the downgrade analysis above. As we show in Exhibit 19, the BBB par outstanding in the IG index is now ~2.5x as large as the full HY index. 3) The buyer base of US credit has shifted in this cycle, with a greater percentage of bonds now held by mutual funds/ETFs and by foreign investors, which may impact the stickiness of the flows into or out of US credit as spreads are widening (a topic for another time). And lastly 4) the capacity to absorb risk on the way down is modest, with dealer balance sheets much smaller than pre-crisis levels.
Exhibit 19: Supply from above when the cycle turns: BBB par outstanding now ~2.5x as large as the full HY index

The good news is that this is not a story for today in that ratings downgrades tend to lag the market. In other words, the big wave of downgrades will likely not come until credit spreads are much wider than they are today, which will take time to play out. Again, the mini downgrade cycle in 2016 provides a good example, where spreads began widening in the middle of 2014 and the big wave of Energy downgrades didn't peak until early 2016 almost two years later.

Exhibit 20: Downgrades lag the market – expect spreads to move first
Addressing the Pushback

Lastly, we finish by addressing two points of pushback that we often get to this analysis.

First, and most importantly, we hear that better earnings growth will drive lower leverage and help to alleviate these BBB risks. In our view, better earnings growth helps at the margin, without a doubt. And leverage has ticked modestly lower over the past two quarters along these lines. But as we have seen in past cycles, companies won’t delever in a big way until they are forced to through a credit cycle, especially when confidence is booming. More importantly, regardless of small changes in credit metrics at the margin, we believe the damage is already done. IG leverage is at unprecedented levels vs. past non-recessionary environments, and we now have ~$2.5 trillion of BBB rated IG debt, built up over nearly a decade. These dynamics won’t change dramatically on the back of a year of strong earnings growth.

Second, we often hear that the risk in IG is in higher-rated credits, which have more of an incentive to increase leverage. While we don’t disagree that the incentive to move from A to BBB may be higher than the desire to move from BBB to BB, leverage has risen across ratings buckets in this cycle. For example, we recently wrote about how M&A has driven big increases in leverage and BBB debt outstanding. And while these companies may pledge to delever over time, those promises often don’t materialize even in a healthy economy. In a downturn, when earnings roll over, the ability to maintain an IG rating for 3 and 4x+ levered companies will be even tougher, regardless of the desire to remain IG.

Fundamental risks aside, our preference for As over BBBs is more about what is in the price. In short, as we show in Exhibit 21, the basis between BBB and A industrials is basically at cycle tights. Hence the cost of moving up-in-quality is still quite low.

Exhibit 21: The market is still not paying investors appropriately to own beta

![Graph showing BBB-A Industrial Spread over time](https://example.com/graph)

Source: Morgan Stanley Research, FTSE Fixed Income LLC

Additionally, as we show in Exhibit 22 and Exhibit 23, even if one could make the case that downgrades from A to BBB will be larger in magnitude than the volume of
downgrades from BBB to BB, the cost of the former is much lower than the cost of the latter. As we show in Exhibit 22, leading up to and shortly after a downgrade within IG, spreads often widen by ~25bp. Leading up to a downgrade from IG to HY, on the other hand, spreads have historically widened by ~300bp. And as a sidenote, this chart also shows that most of the spread widening around a downgrade (especially a fallen angel) is done by the time the downgrade actually happens.

**Exhibit 22:** The cost of a downgrade from A to BBB is ~25bp at the median

![Graph showing cost of downgrade from A to BBB](chart1)

**Exhibit 23:** The cost of a downgrade from IG to HY is ~300bp at the median

![Graph showing cost of downgrade from IG to HY](chart2)

Source: Morgan Stanley Research, Bloomberg
Appendix: BBB Debt Growth by Sector

Exhibit 24: Financials (ex-Real Estate)

Exhibit 25: Energy

Exhibit 26: Healthcare

Exhibit 27: Telecommunication Services

Exhibit 28: Consumer Staples

Exhibit 29: Consumer Discretionary

Source: Morgan Stanley Research, FTSE Fixed Income LLC
Exhibit 30: Industrials

Evolution of the Industrials IG BBB Universe

Source: Morgan Stanley Research, FTSE Fixed Income LLC

Exhibit 31: Utilities

Evolution of the Utilities IG BBB Universe

Source: Morgan Stanley Research, FTSE Fixed Income LLC

Exhibit 32: Information Technology

Evolution of the Information Technology IG BBB Universe

Source: Morgan Stanley Research, FTSE Fixed Income LLC

Exhibit 33: Materials

Evolution of the Materials IG BBB Universe

Source: Morgan Stanley Research, FTSE Fixed Income LLC

Exhibit 34: Media

Evolution of the Media IG BBB Universe

Source: Morgan Stanley Research, FTSE Fixed Income LLC

Exhibit 35: Real Estate

Evolution of the Real Estate IG BBB Universe

Source: Morgan Stanley Research, FTSE Fixed Income LLC
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Global Stock Ratings Distribution

(as of September 30, 2018)

The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm. For disclosure purposes only (in accordance with NASD and NYSE requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover.

Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

<table>
<thead>
<tr>
<th>STOCK RATING CATEGORY</th>
<th>COVERAGE UNIVERSE COUNT</th>
<th>% OF TOTAL</th>
<th>INVESTMENT BANKING CLIENTS (IBC) COUNT</th>
<th>% OF TOTAL IBC</th>
<th>OTHER MATERIAL INVESTMENT SERVICES CLIENTS (MISC) COUNT</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overweight/Buy</td>
<td>1178</td>
<td>37%</td>
<td>308</td>
<td>42%</td>
<td>26%</td>
<td>562</td>
</tr>
<tr>
<td>Equal-weight/Hold</td>
<td>1378</td>
<td>44%</td>
<td>343</td>
<td>46%</td>
<td>25%</td>
<td>625</td>
</tr>
<tr>
<td>Not-Rated/Hold</td>
<td>49</td>
<td>2%</td>
<td>5</td>
<td>1%</td>
<td>10%</td>
<td>7</td>
</tr>
<tr>
<td>Underweight/Sell</td>
<td>554</td>
<td>18%</td>
<td>83</td>
<td>11%</td>
<td>15%</td>
<td>224</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3,159</td>
<td>100%</td>
<td>739</td>
<td>100%</td>
<td>1418</td>
<td></td>
</tr>
</tbody>
</table>

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.
Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst’s industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). The analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst’s industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

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