

# Credit Migration: Worse Than You Think, Not as Bad as You Fear

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#### **KEY TAKEAWAY**

 Key questions investors should ask regarding credit migration include: Are investors being adequately compensated for the increased credit risk from downward ratings migration? Why is credit quality so downwardly biased? In my 30 years as a credit investor—analyst, portfolio manager and now director of credit research, the chart below ranks as one of my all-time favorites.

The story it tells is clear and undeniable in its depiction of the lava-like, downhill flow and deterioration of investment grade (IG) corporate credit quality over the past 40-plus years.

As the title of this paper suggests, credit migration is probably worse than you think, but then not as bad as you fear. So how concerned should investors be about this phenomenon? Where should their focus lie?



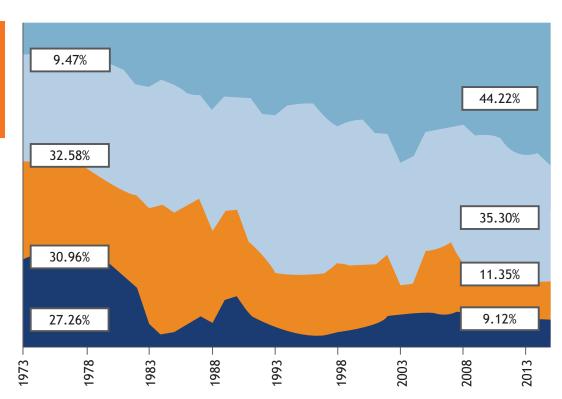
Source: Barclays Risk Analytics and Index Solutions, Barclays Research as of 12/31/2015.











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#### Some Key Questions Investors Should Consider

Key questions investors should ask regarding credit migration include: Are investors being adequately compensated for the increased credit risk from downward ratings migration? Why is credit quality so downwardly biased? (See page 9.) How should they think about the structural trend and factor it into their investment strategies?

Credit quality migration can also have important implications for institutional investors in terms of how they think about portfolio construction and bond benchmarks.

The thoughts that follow highlight what we believe is driving credit migration, how likely it is to continue, and what investors can do about it.

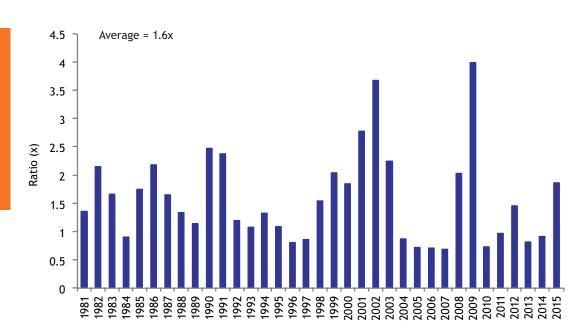
#### Credit Cycles and Credit Quality Migration

Like economic cycles, there are credit cycles, and the two are often closely linked. We can observe this in terms of default rates, ratings upgrades and downgrades, and credit spreads.

The chart below shows the ratio of ratings downgrades to upgrades in the Barclays Global Credit Universe over the past 34 years. One can observe credit cycles coinciding with economic cycles, e.g., the early 1990s, the early 2000s (tech bubble burst), and the Global Financial Crisis of 2008/2009. Note that in the 34 years of data presented, the average ratio of downgrades to upgrades was 1.6x, and in only 11 of 34 years did the ratio fall below one (that is, fewer downgrades than upgrades).

#### DOWNGRADE/ UPGRADE RATIO OF GLOBAL CREDIT UNIVERSE

Source: Standard and Poor's Ratings Services, McGraw Hill Financial as of 12/31/2014. Barclays Risk Analytics and Index Solutions, Barclays Research; chart compiled by Loomis Sayles as of 12/31/2015.



However, in addition to these credit cycles, there has been a strong and structural credit migration—and that direction, as we've seen, is downward. This is the case for both individual issuers, as well as in the composition of the overall corporate debt market. Regarding the composition, new issuers with lower credit ratings can dilute the quality of the overall corporate debt market.



#### To Better Understand Credit Migration: A Closer Look at the Lava Chart

To get a better understanding of credit migration, let's take a closer look at the lava chart on page one. Compare the percentage of the index that was AA/AAA ("AA+") in the early 1970s relative to A/Baa. In the early 1970s, more than 58% of the index was rated AA+, while Baa was less than 10%; today, only AA+ is 20% while Baa is 44%!

And most of that AA+ is not corporate debt, but rather taxable municipal bonds such as those issued by universities, hospitals, and certain museums such as the Metropolitan Museum of Art, along with quasi-governmental entities. Of course, the size and composition of the index has changed substantially. The index used to be dominated by utilities and a number of "blue chip" industrial names, including autos and phone companies, plus additional sectors such as railroads and several banks.

Actually, the index may also understate the credit ratings migration, due to survivor bias. This is introduced when issuers downgraded to High Yield (Ba1/BB+ or lower) fall out of the index.

The table below presents yet another dramatic picture of the remarkable change—decline —in credit quality. In 1988, there were 114 US issuers rated AAA, including Exxon, Johnson & Johnson, IBM, GE, Pfizer and Morgan Guaranty. Today, in 2016, there are only 13 US issuers rated AAA, with only two of them—Exxon and J&J—holdovers from 1988. Microsoft is the only other corporate issuer rated AAA; the rest are the universities, hospitals and quasi-governmental entities previously referenced.

#### AND THEN THERE WERE ALMOST NONE

| SELECT 1988 ISSUERS*    | 2016 ISSUERS               |  |  |  |  |
|-------------------------|----------------------------|--|--|--|--|
| Exxon                   | Exxon                      |  |  |  |  |
| Johnson & Johnson       | Johnson & Johnson          |  |  |  |  |
| Amoco                   | Microsoft                  |  |  |  |  |
| Bristol Myers Co.       | Howard Hughes Medical      |  |  |  |  |
| Digital Equipment       | Metropolitan Museum of Art |  |  |  |  |
| General Electric        | Harvard University         |  |  |  |  |
| IBM                     | MIT                        |  |  |  |  |
| Morgan Guaranty Trust   | Northwestern University    |  |  |  |  |
| Pfizer                  | Princeton University       |  |  |  |  |
| Proctor & Gamble        | Stanford University        |  |  |  |  |
| Southern Bell Telephone | Notre Dame                 |  |  |  |  |
| Wisconsin Telephone     | Rice University            |  |  |  |  |
|                         | Yale University            |  |  |  |  |

Source: Barclays POINT, Loomis Sayles, as of 3/31/2016.
\*Due to space considerations, a selection of issuers are shown based on those companies expected by Loomis Sayles to have highest name brand recognition.

- 114 of US issuers in 1988 rated AAA
- 13 of US issuers in 2016 rated AAA



#### Credit Quality Volatility: A Fact of Life

As a proxy for credit quality volatility, we can use credit rating changes issued by the rating agencies. I believe while the rating agencies misrated subprime asset-backed securities (ABS) in the lead up to the Global Financial Crisis, they appear to have done a good job overall rating corporate credit, particularly as it relates to assessing risk of default. From an investment perspective, they tend to not do as well with less dramatic changes in credit quality, as the market often reprices credit well in advance of the rating agencies changing their ratings (both up and down).

The two ratings transition matrices below show the average credit rating migration rates, over three and ten years, for both global (developed markets—"DM"—and emerging markets—"EM") and US-only markets, using 30 years of data-specific cohorts. The grey shaded percentages on the diagonals show how many of the issuers with a given rating at the start had the same rating three and ten years later.

The matrices show that credit quality is quite volatile—and downwardly biased!

### AVERAGE 3-YEARS LONG RATINGS MIGRATION RATES FOR JANUARY 1, 1985 - DECEMBER 31, 2015

REGION: GLOBAL (DM & EM); WITHDRAWAL ADJUSTED

| RATING FROM: | Aaa/Aa | Α     | Baa  | Ва   | В    | Caa-C | DEFAULT |
|--------------|--------|-------|------|------|------|-------|---------|
| Aaa/Aa       | 80.5%  | 16.7% | 2.0% | 0.4% | 0.2% | 0.0%  | 0.1%    |
| Α            | 6.5    | 75.4  | 14.5 | 2.3  | 0.7  | 0.2   | 0.4     |
| Baa          | 0.9    | 11.6  | 74.5 | 8.7  | 2.7  | 0.6   | 1.0     |
| Ba           | 0.1    | 1.5   | 15.7 | 56.8 | 17.4 | 2.2   | 6.3     |
| В            | 0.2    | 0.3   | 1.8  | 11.0 | 57.8 | 10.4  | 18.4    |
| Caa-C        | 0.0    | 0.1   | 0.3  | 3.5  | 14.0 | 38.0  | 44.1    |

### AVERAGE 10-YEARS LONG RATINGS MIGRATION RATES FOR JANUARY 1, 1985 - DECEMBER 31, 2015

REGION: GLOBAL (DM & EM); WITHDRAWAL ADJUSTED

| RATING FROM: | Aaa/Aa | A     | Baa  | Ва   | В    | Caa-C | DEFAULT |
|--------------|--------|-------|------|------|------|-------|---------|
| Aaa/Aa       | 60.0%  | 29.1% | 8.1% | 1.6% | 0.4% | 0.1%  | 0.6%    |
| Α            | 12.2   | 51.8  | 26.0 | 4.7  | 2.0  | 0.5   | 2.9     |
| Baa          | 2.6    | 18.4  | 55.4 | 10.6 | 5.1  | 1.3   | 6.7     |
| Ba           | 0.8    | 4.5   | 22.7 | 20.5 | 16.2 | 2.7   | 32.5    |
| В            | 0.2    | 0.5   | 4.1  | 8.3  | 16.5 | 4.6   | 65.8    |
| Caa-C        | 0.0    | 0.0   | 0.5  | 1.4  | 6.6  | 1.3   | 90.2    |

Source: Moody's, Loomis Sayles, as of 12/31/2015.

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### AVERAGE 3-YEARS LONG RATINGS MIGRATION RATES FOR JANUARY 1, 1985 - DECEMBER 31, 2015

REGION: US ONLY; WITHDRAWAL ADJUSTED

| RATING FROM: | Aaa/Aa | A     | Baa  | Ва   | В    | Caa-C | DEFAULT |
|--------------|--------|-------|------|------|------|-------|---------|
| Aaa/Aa       | 76.7%  | 20.5% | 2.2% | 0.3% | 0.1% | 0.1%  | 0.1%    |
| Α            | 4.5    | 77.5  | 14.9 | 1.9  | 0.6  | 0.1   | 0.4     |
| Baa          | 0.9    | 10.4  | 75.8 | 8.3  | 2.8  | 0.7   | 1.0     |
| Ba           | 0.2    | 1.4   | 15.8 | 56.1 | 17.9 | 2.5   | 6.2     |
| В            | 0.2    | 0.4   | 1.8  | 10.0 | 58.8 | 10.7  | 18.1    |
| Caa-C        | 0.0    | 0.0   | 0.3  | 3.3  | 14.1 | 38.8  | 43.4    |

### AVERAGE 10-YEARS LONG RATINGS MIGRATION RATES FOR JANUARY 1, 1985 - DECEMBER 31, 2015

REGION: US ONLY; WITHDRAWAL ADJUSTED

| RATING FROM: | Aaa/Aa | A     | Baa   | Ва   | В    | Caa-C | DEFAULT |
|--------------|--------|-------|-------|------|------|-------|---------|
| Aaa/Aa       | 48.2%  | 38.0% | 10.8% | 1.8% | 0.2% | 0.1%  | 0.9%    |
| Α            | 8.5    | 53.0  | 28.6  | 4.6  | 2.1  | 0.5   | 2.8     |
| Baa          | 2.1    | 16.2  | 56.9  | 10.7 | 5.7  | 1.7   | 6.8     |
| Ba           | 0.8    | 3.2   | 22.5  | 20.7 | 17.6 | 3.0   | 32.2    |
| В            | 0.2    | 0.3   | 3.8   | 8.1  | 17.3 | 4.7   | 65.6    |
| Caa-C        | 0.0    | 0.0   | 0.6   | 1.5  | 6.7  | 1.2   | 90.0    |

Source: Moody's, Loomis Sayles, as of 12/31/2015.

#### Some key observations:

- The results for global and US-only ratings migration are very similar.
- There is really only one direction AA+ quality can go—and that's down.
- The lower the quality, the less stable the ratings.
- Ratings have been less stable through the passage of time, as shown by comparing the 10-year ratings transition to 3 years.
- Ratings migration is negatively asymmetric.
- Single B and, especially, CCC, show major credit deterioration, including bad outcomes such as default.



#### Why Credit Migration Isn't as Bad as You May Fear

Worrisome as credit ratings migration may appear, we believe it's really not as bad as you may fear. Let's see why. In the chart below, note the cyclicality of the default rates since 1981. Historically, the default rates spike during times of US recession, as shown by the grey bars. Also, due to recent commodity price declines, default rates could be higher than normal in 2016.

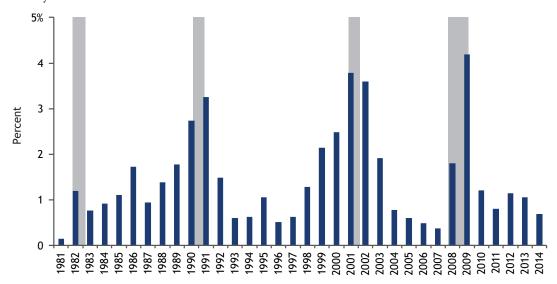
If credit migration were consistently downward, then this would be shown in a steadily rising default rate over time. Instead, we see that credit experiences cycles, and in the aggregate, the downward migration seems to slow down, or even stop, at BBB or BB. It's worth remembering that, despite negatively asymmetric ratings migration, default rates for IG and BB credits are still relatively modest over time. Similarly, high yield (HY) default rates are also cyclical.

### DEFAULT RATES REMAIN CYCLICAL

Annual Default Rate of Global Credit Market (%)

Source: Standard and Poor's Rating Services, McGraw Hill Financial as of 12/31/2014.

**US Recession** 



#### The Market May Reward Investors for Greater Expected Risk

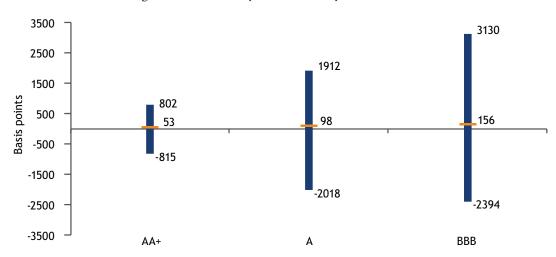
In general, the market reprices either in advance of, or coincident to, changes in credit quality. As shown in the candle chart of global investment grade credit below, historically market returns have adjusted for higher credit risk over time. That is, the market has rewarded investors for greater expected credit risk. The lower the credit quality, the higher the potential excess returns and the greater the volatility and variability of those returns.

ANNUAL EXCESS
RETURNS BY CREDIT
QUALITY OF THE
GLOBAL CREDIT
MARKET 1990-2015

Source: Barclays Risk Analytics and Index Solutions, Barclays Research, Loomis Sayles as of 12/31/2015.

Past performance is no guarantee of future results.

Median



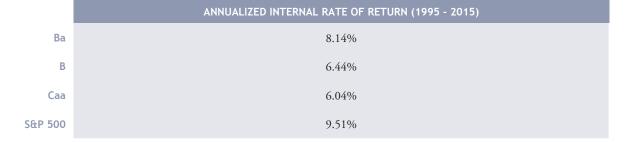


#### High Yield Returns: A Somewhat Mixed Story

High yield (HY) is a more mixed story, with lower-quality credit (single B and CCC) providing lower cumulative total returns relative to higher quality credit (BB) over the past 20-plus years. However, over time, all three HY quality ratings categories have shown positive cumulative returns despite the negative ratings migration.







It's worth noting that high yield tends to focus on total return, while investment grade focuses on excess return over default-risk-free government debt. This is because high yield can have a risk/return profile that is between equity and fixed income, while investment grade's profile is more similar to fixed income.



## As Credit Ratings March Inexorably Downward, What Can Investors Do?

So if credit quality can be expected to migrate downward in the future (see page 9), as has been the case in the past four decades, what can investors do about this, and how could it influence their investment strategies?

#### Some considerations:

- Remember that management works for shareholders, not the bondholders. Think about
  what level of debt and what credit ratings provide an optimal weighted average cost of
  capital (WACC) for the business.
- Diversify your holdings and exposure and avoid a rigid, rules-based approach, such as mandating average or minimum ratings, which can hurt returns from forced selling.
- Be wary of employing a "buy and hold" strategy for a period of five years or more, especially in the case of lower-quality bonds.
- Be careful with using "average" ratings due principally to the increasing non-linear risk inherent in moving down the credit spectrum.
- Rather than relying on benchmark quality, consider specifying investment percent by rating categories, consistent with your own risk tolerance and return objectives.
- Look for ratings outliers in a given industry. If, for example, all issuers in that industry are rated BBB except for one rated single A, ask yourself why and how likely it is that the single A rating could be sustained.

If it's any consolation, the market anticipates and prices for downward quality/ratings migration, (except for CCCs and maybe single Bs), and issuers' credit quality doesn't continue to decline until default. Historically, a selloff of fallen-angel securities is often sharp but short-lived, with the worst performance often taking place during the initial month of downgrade.

Overall, credit market investors should bear in mind that credit ratings are not static—whether corporate or sovereign—and that in making an investment or structuring a portfolio, credit quality migration—downward—should be expected and factored into one's investment outlook, strategy and return forecast.

#### CREDIT RATINGS

Overall, credit market investors should bear in mind that credit ratings are not static—whether corporate or sovereign—and that in making an investment or structuring a portfolio, credit quality migration—downward—should be expected and factored into one's investment outlook, strategy and return forecast.



### PERSISTENT AND SUSTAINED DOWNWARD CREDIT MIGRATION: SOME EXPLANATIONS

What are possible explanations for this persistent and sustained downward migration? Potential reasons include:

- Financial engineering, which can include leveraging-up via stock repurchases and/or special dividends
  to return money to shareholders, debt-funded M&As, leveraged buyouts (LBOs), collateralized debt
  and loan obligations (CDOs and CLOs) and some private equity, activist investors and hedge funds'
  financing practices, can compromise credit.
- Chief Financial Officers have tended to seek to optimize weighted average cost of capital (WACC) by
  adding more debt to their companies' respective capital structure. In corporate finance theory, debt
  is lower cost than equity—likely made more so by the tax deductibility of interest payments in most
  countries, including the US.
- A persistent low-rate environment has caused many investors to reach for more yield by going down in credit quality. Interest rates are appreciably lower than in the 1970s and much lower than in the 1980s.
- Central Bank policies, or so-called "Yield Oppression", aimed at reflating/stimulating their own and
  global economies by encouraging issuers to borrow more, thus risking the issuers' credit quality. These
  policies have likely served to encourage investors to take greater credit risk in an effort to boost returns.
- Changing industry characteristics and the general lifecycle of industries. Established but still fast-growing companies and industries usually generate internally enough cash to reinvest in their business. Investors often don't care about dividends and stock buybacks at this stage of high growth in a company's development. As industry and/or company growth slows, companies typically add more debt (and consequently get downgraded) to maintain or increase shareholder returns. Industry consolidation can also play a role in credit deterioration, with industry-specific corporate mergers often being heavily debt-financed.
- More benchmark-focused investors, including some passive index fund and ETF investors, who may
  not be concerned as much about the composition and quality of the benchmark (or issuers) as active
  investors—they just seek to match or beat it.
- Weaker covenants allow companies to add debt, leading to potential ratings downgrades. Furthermore, the maturation of credit markets, led by professional investors who are willing to take additional risk in pursuit of higher return potential, has also had an influence.

All of these factors, as well as globalization and the massive growth of global debt capital markets, have in one way or another contributed to, or help explain, why credit quality has been steadily deteriorating for many years. It is my belief that this course will most likely continue for some time to come.



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