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MALAYSIAN RATING CORPORATION BERHAD (364803-V)

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2013 Annual Corporate Default And Rating Transitions Study

Update on Long-term Corporate Rating Migrations from 1996 – 2013

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List of Exhibits:

Executive Summary

Ringgit Bond Market Review and Outlook

- ***Lower Malaysian government bond issuance amid efforts by the government to gradually reduce budget deficits.*** Assuming budget deficits of RM37.1 billion and RM46.9 billion worth of Malaysian Government Securities (MGS)/Government Investment Issues (GII) projected to mature in 2014, we expect the Malaysian government bond issuance to come in at between RM85 billion and RM90 billion.
- ***We maintain our view of an upside bias for MGS yields and expect the yield curve to steepen further.*** This is premised on further improvements in the United States (US) economy and labour market which would warrant the US Federal Reserve (Fed) to continue its tapering plan at a measured pace in 2014. Stronger Consumer Price Index (CPI) growth, especially in 2H2014, on the back of the resumption of the subsidy rationalisation plan and the rollout of the Goods and Services Tax (GST) in April 2015 will result in higher bond yields.
- ***Total issuance of corporate bonds to moderate slightly in 2014.*** The expectations of a moderation in the overall domestic economy as well as uncertainties over the speed of the US Fed tapering of bond purchases will likely cause gross corporate bond issuance to moderate slightly to between RM65 billion and RM75 billion in 2014.
- ***We also maintain an upside bias for private debt securities (PDS) yields.*** We expect the magnitude of increases in corporate bond yields to be smaller than those of MGS, thus narrowing the corporate yield spread as corporate bonds are less sensitive to external shocks amid low foreign holdings.

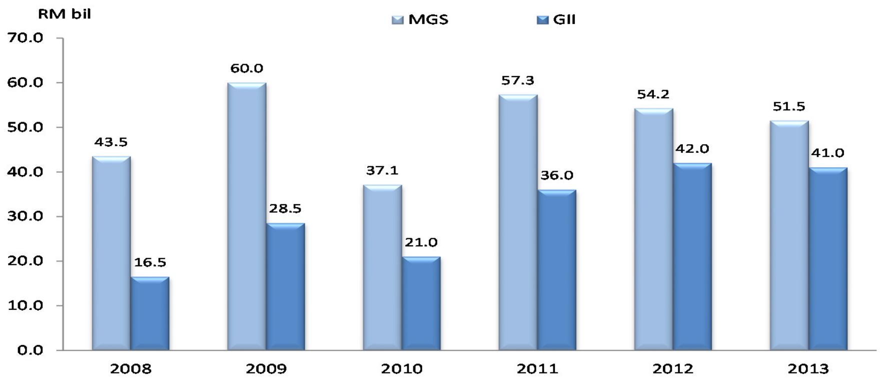
MARC's Corporate Default and Rating Transitions Study 2013

- ***Only one corporate default in 2013.*** Similar to 2012, MARC recorded only one credit default in 2013, increasing the overall corporate default rate slightly to 1.6% from 1.3% in the previous year due to a decreased sample size of 64 issuers in the beginning of 2013 compared with 75 issuers in the beginning of 2012. It is worth noting that one issuer was downgraded from AAA to AA+, marking the second rating downgrade in the AAA cohort on MARC's records.
- ***Rating stability improved to 90.6% or ratings of 58 out of 64 issuers remained unchanged.*** This is the highest level since 2002 vis-à-vis an average of 85.1% since 2001, on the back of lower rating downgrades and upgrades compared with the previous year's rating activity. Notably, the 2013 rating activity showed that high-yield issuers demonstrated more stability than high-grade issuers with the former and latter having stability rates of 100% and 89.1% respectively. Nonetheless, examining the long-term annual data, the higher rating issuers continued to demonstrate more stability than high-yield issuers with stability averaging 99.6% for AAA, 87.2% for AA, 81.6% for A, 68.8% for BBB, 69.9% for BB and 52.6% for B.
- ***Negative rating actions continue to skew towards the industrial sector.*** MARC's long-run corporate rating shows the industrial products sector continuing to suffer a higher downgrade-to-upgrade ratio of 6.0x. The industrial products sector also has the highest likelihood of default with an annual default rate of 6.8%. Meanwhile, the finance sector shows the highest rating upside potential with a downgrade-to-upgrade ratio of 0.1x.
- ***Strong negative relationship between corporate ratings and default rates.*** The one-year cumulative rating transition matrix tables shows that the higher the credit rating, the lower the default rate observed and vice versa. There are no corporate defaults in the AAA and AA+ rating cohorts in MARC's rating history, attesting to the strong credibility of top-notch credit ratings assigned by MARC.

Ringgit Bond Market Review 2013

For the year 2013, the government raised a total of RM92.5 billion from 27 debt auctions, matching our earlier projection of RM90 – RM95 billion, 56% of which were offered via the MGS market while the remaining were from the GII market. The government also issued two Sukuk Perumahan Kerajaan (SPK) during the year, raising funds worth RM4.4 billion. In line with the government's efforts to gradually reduce the country's budget deficit to 3% of gross domestic product (GDP) by 2015, the funds raised in 2013 were lower compared to the previous year's RM96.2 billion. Assuming a budget deficit of RM37.1 billion in 2014 and RM46.9 billion worth of MGS/GII projected to mature in 2014, we expect MGS/GII bond issuance to come in at between RM85 billion and RM90 billion.

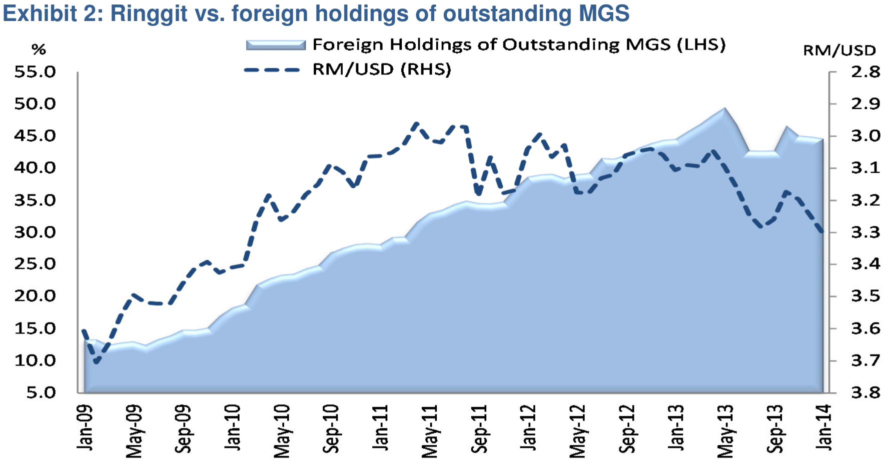
Exhibit 1: MGS and GII bonds issuance trends



Source: BPAM, FAST, MARC Fixed Income Research

Following former US Fed Chairman Ben Bernanke's tapering talks in mid-May 2013, we saw some emerging market economies – Malaysia included – experiencing notable reversal of capital flows, followed by sizable currency depreciation. Foreign holdings of MGS dropped for four consecutive months from May to August 2013, the longest stretch since April 2009. As of end-September, foreign investor holdings dropped to RM128.12 billion, equivalent to 42.8% of total outstanding MGS compared to the peak of RM144.98 billion in April 2013. However, some foreign funds were back in the local market after the US Fed surprised the market by deciding to maintain its monthly bond purchases programme at USD85 billion during the Federal Open Market Committee (FOMC) meeting in late October, increasing the percentage of foreign holdings of MGS to 45.1% of total outstanding in November 2013. By December, however, the Fed finally announced its tapering plan to cut back USD10 billion from its monthly purchases starting January 2014. As of January 2014, foreign holdings of MGS stood at RM137.93 billion, 44.3% of its total outstanding. In contrast to the initial response where the benchmark 10-year MGS yield surged by as high as 103 basis points (bps) in July from 3.10% in mid-May 2013, investors reacted rather calmly when the Fed actually announced its tapering decision on 18 December 2013. The same reaction was seen when the Fed decided to trim another USD20 billion from its monthly bond purchases after its FOMC meetings on 29 January and 19 March 2014, evidenced by a 6 bps decrease in yield since the first tapering was announced, suggesting that the market had already factored in the tapering effects.

Exhibit 2: Ringgit vs. foreign holdings of outstanding MGS

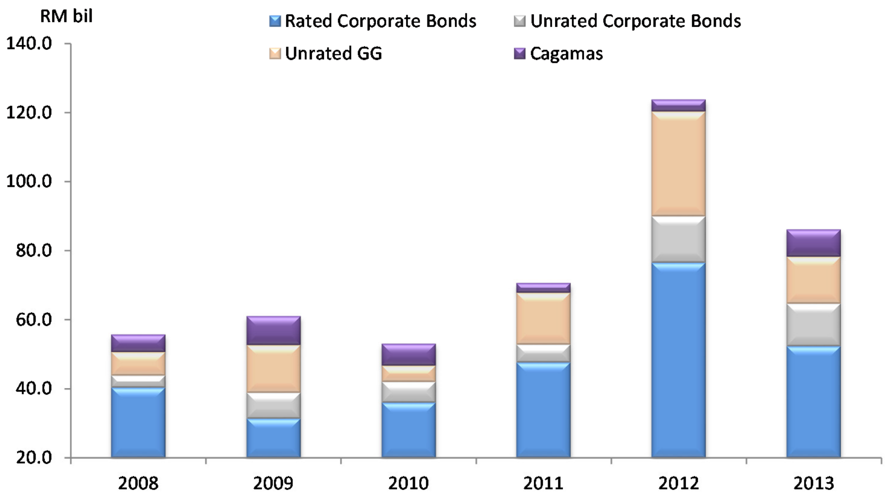


Source: Bank Negara Malaysia, CEIC, MARC Fixed Income Research

In the corporate bonds market, primary activities for the year 2013 were relatively quiet compared to the bumper year of 2012 even after excluding the RM30.6 billion issued by PLUS Berhad in 2012 (RM19.6 billion and RM11.0 billion for the AAA-rated and government guaranteed (GG)-unrated segments respectively). For the year 2013, gross corporate bond issuances (after excluding short-term papers) fell by 30% to RM86.2 billion compared to RM123.8 billion issued in the preceding year. On a year-on-year basis, lower bond issuances were mainly dragged down by smaller issuances from the unrated quasi-government sector and rated corporate bonds which fell by RM16.9 billion and RM24.2 billion respectively although Cagamas increased its issuance by RM4.5 billion.

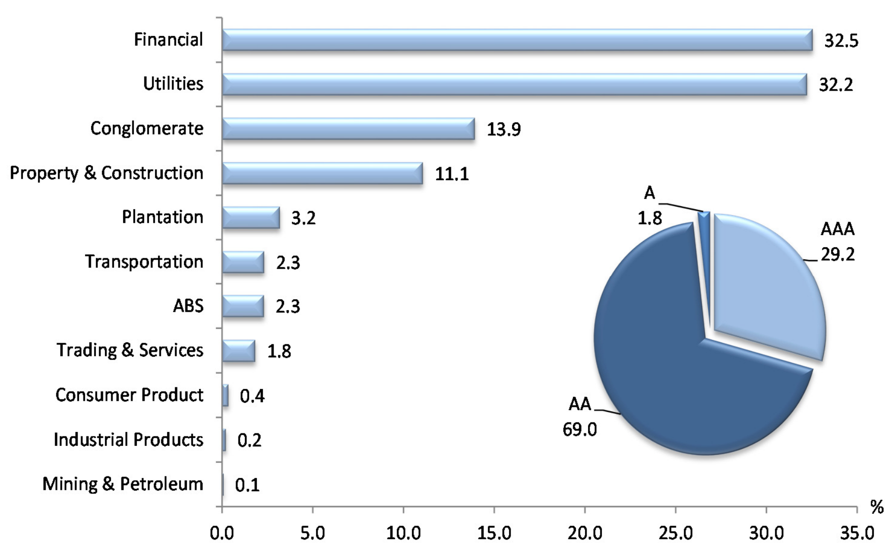
By sector, utilities dominated primary market activities in 2013 with a total RM27.7 billion raised. The AA-rated Malakoff Power issuance alone amounted to RM10.98 billion, followed by the Cagamas issuance of RM7.9 billion. Activities in the primary market were dominated by investment grade bonds while the market remained inaccessible for those rated BBB and below, implying that high-risk borrowers will continue to face difficulties in raising capital in this market.

Exhibit 3: Corporate bond issuance trends



Source: BPAM, MARC Fixed Income Research

Exhibit 4: Corporate bond issuance: Industry and rating distribution



Source: BPAM, MARC Fixed Income Research

Outlook for Ringgit Bond Market in 2014

We maintain an upside bias view for MGS yields

We maintain our view of an upside bias for MGS yields and expect the yield curve to steepen further from the current level in the wake of an improving US economy and labour market which would warrant the US Fed continuing its tapering plan at a measured pace in 2014. Domestically, stronger CPI growth, especially in 2H2014, on the back of the resumption of the subsidy rationalisation plan and the rollout of the GST planned for April 2015 will further exert upward pressure on bond yields. Our economics team believes that Bank Negara Malaysia (BNM) will raise the benchmark Overnight Policy Rate (OPR) by 25 bps this year in order to be ahead of the curve.

Stable demand from foreign and domestic institutional investors for local govvies

Notwithstanding the rising yields, we are of the view that MGS will be sufficiently supported by demand from institutional investors. We continue to believe that foreign investors will not totally abandon local govvies as long-term investors such as sovereign wealth funds, insurance companies and other institutional investors are less influenced by changes in the US Fed's monetary policy and tend to focus more on Malaysia's long-term economic fundamentals. Furthermore, the Malaysian bond market has consistently been supported by large domestic institutional investors such as Retirement Fund Incorporated (KWAP), the Employees Provident Fund (EPF) and insurance companies. This is evidenced by the growing investible fund size of institutions such as the EPF, KWAP, unit trusts, insurance and Takaful companies.

We also expect corporate bond yields to increase

As with the trend in the sovereign bond market, we maintain an upside bias for corporate bond yields on the back of a steepening government bond yield curve. Nonetheless, we expect the magnitude of increases in corporate bond yields to be smaller than those of MGS, thus narrowing the corporate yield spread as corporate bonds are less sensitive to external shocks amid low foreign holdings. At the same time, the corporate bond market is not expected to be as volatile as the local govvies market and shrinking transaction volumes are expected as investors continue to stay on the sidelines in response to uncertainties over the speed of the tapering by the US Fed, and the global economic landscape.

Gross corporate issuance to moderate on expectations of moderation in domestic economy

We expect gross corporate issuance to moderate slightly in 2014, i.e. between RM65 billion and RM75 billion due to the expectations of a moderation in the overall domestic economy as well as uncertainties over the speed of the US Fed tapering of bond purchases. We also believe that Islamic PDS issuances will increase this year, in line with the government's efforts to promote the Islamic capital market. With stricter Shariah-compliant rules by Securities Commission which took effect from 29 November 2013, we expect to see some companies to convert their conventional debt to Islamic debt, further raising the Islamic-to-conventional debt ratio.

In the primary market, investment grade bonds will likely continue to dominate the local bond origination market while the market will remain lackluster for those rated BBB and below. We attribute the relatively wide yield spread of this rating segment compared to higher rated bonds as the main deterrent to issuers rated A and below from entering the primary market.

We observe lower profit margin but no worrying signs

We are of the view the lower corporate profit margin is mainly due to uncertainties in the external environment and slowdown in regional economic growth. Judging by the weighted average profit margin of constituents in the FTSE Emas Index, the profitability of Malaysian companies has slightly moderated to 13.3% at end-December 2013 compared to 13.8% in 2012. In addition, the leverage levels of companies under coverage have increased, evidenced by their increasing total debt-to-total asset ratio to 19.1% as of December 27, 2013 (2012: 18.2%). However, we think that corporate earnings have generally remained stable and that there are no serious concerns on the overall credit quality. We do not see broad-based credit deterioration in 2014 due to respectable headline economic growth of circa 5%, supported by the relatively strong private investment and resilient private consumption growth, albeit slower than in 2013. Our view is that any negative rating will mainly be issuer or sector-related.

Introduction to MARC's Corporate Default Study

This report presents updates on default statistics and rating transition experience of corporate bond issuers in 2013 as well as historical findings since 1996. This ninth annual update of the MARC corporate default study which was initially published in 2006 encapsulates the history of corporate ratings assigned from inception in 1996 to December 31, 2013. As in the past studies, in order to address the problem of shrinking sample size which became more apparent post-global financial crisis due to the concentration of issuance in a smaller number of individual issues and issuers, we have included in our rating universe implied senior unsecured debt ratings or public information ratings of corporates and financial institutions acting in the capacity of credit enhancement provider, and standalone ratings of underlying issuers with a Danajamin Nasional Berhad (Danajamin) credit wrap. To dispel any doubts, MARC maintains full rating surveillance on all these unpublished issuers. The structured finance universe and short-term ratings, on the other hand, remain excluded.

The assessment of corporate credit risk and default probability is captured by an entity's individual credit rating. Default rates are expected to be lower for higher-rated debt, and should increase as we move lower down the credit rating scale. Similarly, higher credit ratings stability is expected at higher rating bands.

An element of statistical bias may occur as a result of sample size limitations owing to the small number of issuers studied in our corporate bond ratings universe. Therefore, some of the statistics reported may be inconclusive. Furthermore, data enhancement efforts which are being continuously carried out to ensure a certain degree of transparency and integrity may limit comparability with earlier default and rating transition studies. The study is self-contained and the current study supersedes previous studies.

To summarise rating migrations for the year 2013, there were 5 rating downgrades, 1 default and no upgrade against the 10 downgrades, 1 default and 1 upgrade recorded in 2012. Among the downgrades, industrial products and infrastructure & utilities each experienced 2 rating downgrades respectively. The remaining 1 downgrade was from consumer products. Meanwhile, the only default for 2013 stemmed from the industrial products sector.

Exhibit 5: Distribution of outstanding issuers by rating band - Majority of outstanding issuers belong to the high-grade rating category in MARC's corporate rating universe

Rating Band	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
AAA	17.4%	11.9%	12.0%	10.5%	10.3%	11.0%	10.2%	12.2%	14.3%	18.3%	23.1%	26.7%	31.3%
AA	26.1%	16.7%	18.0%	15.8%	17.9%	18.7%	21.4%	21.4%	28.6%	29.3%	29.5%	28.0%	32.8%
A	47.8%	61.9%	62.0%	59.6%	64.1%	64.8%	62.2%	58.2%	48.0%	41.5%	37.2%	26.7%	21.9%
BBB	4.3%	7.1%	6.0%	10.5%	6.4%	3.3%	3.1%	4.1%	3.1%	3.7%	5.1%	12.0%	6.3%
BB	4.3%	2.4%	2.0%	1.8%	0.0%	1.1%	1.0%	3.1%	4.1%	3.7%	1.3%	4.0%	3.1%
B	0.0%	0.0%	0.0%	1.8%	1.3%	1.1%	2.0%	1.0%	2.0%	3.7%	3.8%	2.7%	4.7%
C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
High Grade	91.3%	90.5%	92.0%	86.0%	92.3%	94.5%	93.9%	91.8%	90.8%	89.0%	89.7%	81.3%	85.9%
High Yield	8.7%	9.5%	8.0%	14.0%	7.7%	5.5%	6.1%	8.2%	9.2%	11.0%	10.3%	18.7%	14.1%

Source: MARC Fixed Income Research

Summary of 2013 Experience

Only one credit default, five credit downgrades and no upgrades in 2013

Similar to 2012, MARC recorded only one credit default in 2013, increasing the overall corporate default rate slightly to 1.6% from 1.3% in the previous year due to the decreased sample size of 64 issuers in the beginning of 2013 compared with 75 issuers in the beginning of 2012. Although the downgrade rate fell to 7.8% in 2013 from 13.3% in 2012 as the number of downgrades halved to five issuers, the slower economic growth locally and regionally as well as lingering effects of the global financial crisis continued to weigh on the business operating environment, resulting in downgrades outpacing upgrades for a fourth consecutive year. It is worth noting that one issuer was downgraded from AAA to AA+, marking the second rating downgrade in the AAA cohort on MARC's records.

Improved rating stability to 90.6%

MARC rating stability improved to 90.6%, with the ratings of 58 out of 64 issuers remaining unchanged during the year from 84.0% in 2012, the highest level since 2002, vis-à-vis an average of 85.1% since 2001, on the back of lower rating downgrades and upgrades compared with previous year's rating activity. Notably, the 2013 rating activity showed that high-yield issuers demonstrated more stability than high-grade issuers with the former and latter having stability rates of 100% and 89.1% respectively. Nonetheless, examining the long-term annual data, the higher rating issuers continued to demonstrate more stability than high-yield issuers with stability averaging 99.6% for AAA, 87.2% for AA, 81.6% for A, 68.8% for BBB, 69.9% for BB and 52.6% for B.

Negative rating actions continued to skew towards the industrial products sector

MARC's long-run corporate rating experience for the 2001-2013 period shows that rating downgrades have historically outnumbered upgrades at a ratio of 1.3x, with the industrial products sector continuing to suffer the highest downgrade-to-upgrade ratio of 6.0x, followed by the infrastructure & utilities and property sectors at 2.0x and 1.4x respectively. Of all the sectors, the finance sector showed the highest rating upside potential, with a downgrade-to-upgrade ratio of 1 in 10.

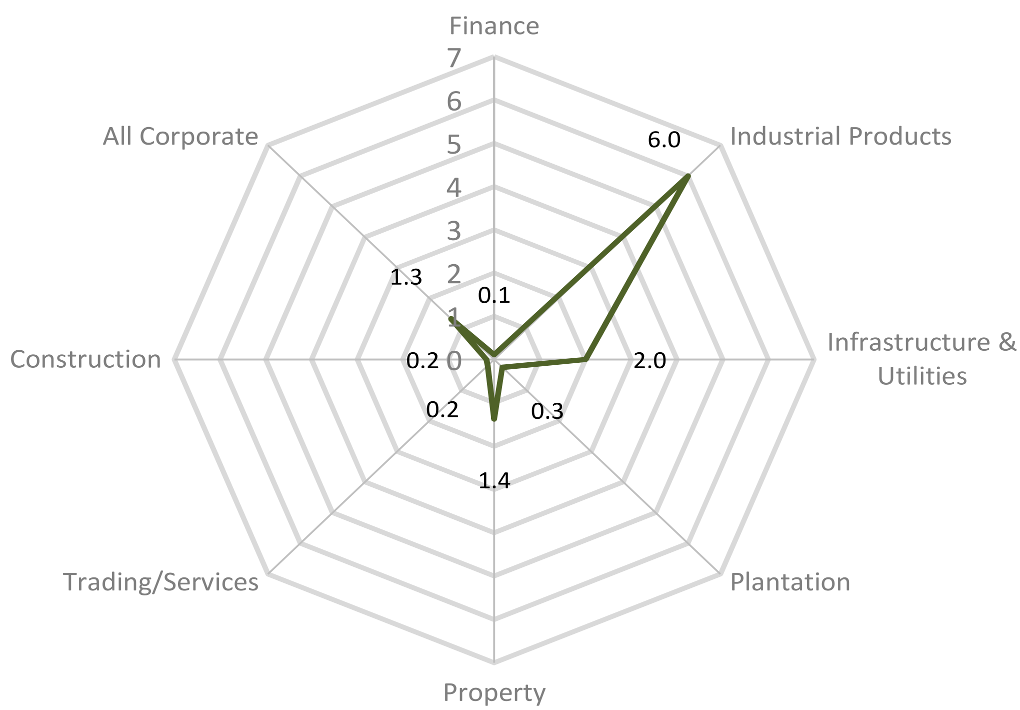
At the beginning of the year, 64 issuers were in MARC's corporate rating universe with 55 issuers rated in the high-grade segment (A & above rating bands) while the remaining 9 issuers were categorised in the high-yield spectrum (BBB & lower rating bands). At the end of December 2013, MARC's long-term annual corporate default rate stood at 1.9% with the high-grade and high-yield default rates coming in at 1.5% and 5.8% respectively. Meanwhile, the annual default rate of 1.6% in 2013 was higher than the 1.3% reported in the previous year. Examining the annual corporate default rate across industries, industry products also exhibited the highest likelihood of default at 6.8%, followed by the property (2.4%) and trading & services (2.2%) sectors.

Exhibit 6: Summary of annual rating actions

Year	Issuers as of 1st January	Upgrades	Downgrades	Default	Withdrawn	Migrating	Stable	Downgrade to Upgrade (x)
2001	23	0.0%	0.0%	4.3%	4.3%	4.3%	95.7%	n.a
2002	42	7.1%	7.1%	0.0%	2.4%	14.3%	85.7%	1.0
2003	50	8.0%	4.0%	0.0%	10.0%	12.0%	88.0%	0.5
2004	57	19.3%	0.0%	0.0%	10.5%	19.3%	80.7%	0.0
2005	78	9.0%	2.6%	2.6%	9.0%	14.1%	85.9%	0.3
2006	91	8.8%	11.0%	1.1%	9.9%	20.9%	79.1%	1.3
2007	98	5.1%	11.2%	4.1%	11.2%	20.4%	79.6%	2.2
2008	98	8.2%	7.1%	1.0%	8.2%	16.3%	83.7%	0.9
2009	98	1.0%	5.1%	5.1%	23.5%	11.2%	88.8%	5.0
2010	82	6.1%	12.2%	1.2%	24.4%	19.5%	80.5%	2.0
2011	78	2.6%	10.3%	2.6%	20.5%	15.4%	84.6%	4.0
2012	75	1.3%	13.3%	1.3%	21.3%	16.0%	84.0%	10.0
2013	64	0.0%	7.8%	1.6%	15.6%	9.4%	90.6%	n.a
Arithmetic Mean	**n.a**	**5.9%**	**7.1%**	**1.9%**	**13.1%**	**14.9%**	**85.1%**	**1.3**

Source: MARC Fixed Income Research

Exhibit 7: Historical downgrade-to-upgrade ratios (x) across major industries (2001-2013)



Source: MARC Fixed Income Research

Exhibit 8: Corporate default summary by number of issuers

Year	Issuers as of 1st January	Default count (High Grade)	Default count (High Yield)	High Grade Default Rate	High Yield Default Rate	All Corporate Default Rate
2001	23	1	0	4.8%	0.0%	4.3%
2002	42	0	0	0.0%	0.0%	0.0%
2003	50	0	0	0.0%	0.0%	0.0%
2004	57	0	0	0.0%	0.0%	0.0%
2005	78	2	0	2.8%	0.0%	2.6%
2006	91	1	0	1.2%	0.0%	1.1%
2007	98	2	2	2.2%	33.3%	4.1%
2008	98	1	0	1.1%	0.0%	1.0%
2009	98	3	2	3.4%	22.2%	5.1%
2010	82	1	0	1.4%	0.0%	1.2%
2011	78	1	1	1.4%	12.5%	2.6%
2012	75	0	1	0.0%	7.1%	1.3%
2013	64	1	0	1.8%	0.0%	1.6%
Arithmetic Mean	**n.a.**	**n.a.**	**n.a.**	**1.5%**	**5.8%**	**1.9%**

Source: MARC Fixed Income Research

Exhibit 9: 2013 defaulting pool

Issuer	Industry	Amount Rated (MYR m)	Default Announced	Date of First Rating	Initial Rating	Date of Last Review	Rating 1-year Prior to Default	Last Rating Prior to Default	Years to Default
Perwaja Steel Sdn Bhd	Industrial Products	400	Sep-13	Sep-06	A	Sep-13	A-	C	7.0

Source: MARC Fixed Income Research

Exhibit 10: Annual corporate default rates by rating band

Year	AAA	AA	A	BBB	BB	B	C	High Grade	High Yield	All Corporate
1999	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2000	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%	33.3%	10.0%
2001	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	4.8%	0.0%	4.3%
2002	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2003	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2004	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2005	0.0%	0.0%	4.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	2.6%
2006	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	1.1%
2007	0.0%	0.0%	3.3%	33.3%	0.0%	50.0%	0.0%	2.2%	33.3%	4.1%
2008	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	1.0%
2009	0.0%	0.0%	6.4%	33.3%	0.0%	50.0%	0.0%	3.4%	22.2%	5.1%
2010	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	1.2%
2011	0.0%	0.0%	3.4%	0.0%	0.0%	33.3%	0.0%	1.4%	12.5%	2.6%
2012	0.0%	0.0%	0.0%	11.1%	0.0%	0.0%	0.0%	0.0%	7.1%	1.3%
2013	0.0%	0.0%	7.1%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	1.6%
Arithmetic Mean	0.0%	1.3%	2.4%	6.0%	0.0%	10.3%	0.0%	1.5%	5.8%	1.9%
Standard Deviation	0.0%	4.6%	2.5%	12.5%	0.0%	19.9%	0.0%	1.5%	10.7%	1.7%
Coefficient of Variation	0.0%	360.6%	104.5%	209.2%	0.0%	193.9%	0.0%	95.1%	185.2%	89.2%

Source: MARC Fixed Income Research

Exhibit 11: Annual corporate default rates by industry

Sector	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Wtd. Average
Construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Consumer Products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finance	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Hotels	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Industrial Products	0.0%	0.0%	0.0%	0.0%	10.5%	0.0%	8.0%	4.3%	14.3%	0.0%	7.7%	11.1%	25.0%	6.8%
Infrastructure & Utilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%	0.9%
Insurance Company	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Plantation	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Property	20.0%	0.0%	0.0%	0.0%	0.0%	8.3%	7.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%
Technology	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Trading/Services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	7.1%	8.3%	0.0%	0.0%	2.2%
Quasi Sovereign	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
All Corporate	**4.3%**	**0.0%**	**0.0%**	**0.0%**	**2.6%**	**1.1%**	**4.1%**	**1.0%**	**5.1%**	**1.2%**	**2.6%**	**1.3%**	**1.6%**	**2.1%**

Source: MARC Fixed Income Research

Exhibit 12: History of issuers downgraded to D excluding bank-guaranteed issuers

Year Announced	Issuers	First Rating	Rating one year prior to default	Last Rating prior to default
2000	MOCCIS Trading Sdn Bhd	BBB	BBB	BBB
2001	Johor City Development Sdn Bhd	AA-	AA-	AA-
2005	ABI Malaysia Sdn Bhd	A	A	A-
2005	Pesaka Astana (M) Sdn Bhd	A+	A+	A+
2006	Maxisegar Sdn Bhd	A	A	BB
2007	Paradym Resources Industries Sdn Bhd	A-	A	BB
2007	Sistem-Lingkaran Lebuhraya Kajang Sdn Bhd	A	B-	B-
2007	ACE Polymers (M) Sdn Bhd	A	A-	BBB-
2007	Peremba Jaya Holdings Sdn Bhd	A	BBB-	C
2008	Evermaster Group Bhd	A	A-	BB-
2009	Tracoma Holdings Bhd	A	B	C
2009	Englotechs Holdings Bhd	A	BBB-	BB
2009	Ingress Sukuk Bhd	A+	A	C
2009	Oilcorp Bhd	A	A-	C
2009	Malaysia International Tuna Port Sdn Bhd	A+	A	C
2010	Malaysia Merchant Marine Bhd	A+	A+	BB+
2011	Daw ama Sdn Bhd	A	A-	C
2011	Mithrill Bhd	BBB	B+	B
2012	Maxtral Industry Bhd	A	BBB-	BB
2013	Perw aja Steel Sdn Bhd	A	A-	C

Source: MARC Fixed Income Research

Exhibit 13: Corporate upgrade rates by rating band

Year	AAA	AA	A	BBB	BB	B	C	High Grade	High Yield	All Corporate
1999	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2000	0.0%	33.3%	0.0%	66.7%	0.0%	0.0%	0.0%	14.3%	66.7%	30.0%
2001	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2002	0.0%	0.0%	7.7%	33.3%	0.0%	0.0%	0.0%	5.3%	25.0%	7.1%
2003	0.0%	0.0%	12.9%	0.0%	0.0%	0.0%	0.0%	8.7%	0.0%	8.0%
2004	0.0%	22.2%	23.5%	16.7%	0.0%	0.0%	0.0%	20.4%	12.5%	19.3%
2005	0.0%	7.1%	10.0%	20.0%	0.0%	0.0%	0.0%	8.3%	16.7%	9.0%
2006	0.0%	11.8%	10.2%	0.0%	0.0%	0.0%	0.0%	9.3%	0.0%	8.8%
2007	0.0%	9.5%	4.9%	0.0%	0.0%	0.0%	0.0%	5.4%	0.0%	5.1%
2008	0.0%	9.5%	8.8%	0.0%	0.0%	100.0%	0.0%	7.8%	12.5%	8.2%
2009	0.0%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	1.0%
2010	0.0%	12.5%	5.9%	0.0%	0.0%	0.0%	0.0%	6.8%	0.0%	6.1%
2011	0.0%	4.3%	0.0%	25.0%	0.0%	0.0%	0.0%	1.4%	12.5%	2.6%
2012	0.0%	0.0%	0.0%	11.1%	0.0%	0.0%	0.0%	0.0%	7.1%	1.3%
2013	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Arithmetic Mean	0.0%	5.9%	6.6%	8.2%	0.0%	7.7%	0.0%	5.7%	6.6%	5.9%
Standard Deviation	0.0%	7.0%	6.8%	11.8%	0.0%	27.7%	0.0%	5.7%	8.4%	5.3%
Coefficient of Variation	0.0%	117.7%	102.7%	144.6%	0.0%	360.6%	0.0%	99.0%	126.7%	89.7%

Source: MARC Fixed Income Research

Exhibit 14: Corporate upgrade rates by industry

Sector	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Wtd. Average
Construction	0.0%	0.0%	20.0%	40.0%	20.0%	0.0%	25.0%	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%	13.0%
Consumer Products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finance	0.0%	16.7%	28.6%	25.0%	12.5%	50.0%	12.5%	50.0%	0.0%	21.4%	0.0%	0.0%	0.0%	14.3%
Hotels	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Industrial Products	0.0%	0.0%	0.0%	0.0%	5.3%	4.5%	0.0%	0.0%	0.0%	6.7%	7.7%	0.0%	0.0%	2.5%
Infrastructure & Utilities	0.0%	0.0%	0.0%	15.4%	14.3%	11.1%	9.1%	0.0%	0.0%	0.0%	4.8%	0.0%	0.0%	4.0%
Insurance Company	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	n.a.
Plantation	0.0%	0.0%	0.0%	16.7%	16.7%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%
Property	0.0%	12.5%	11.1%	22.2%	0.0%	8.3%	7.7%	9.1%	0.0%	0.0%	0.0%	10.0%	0.0%	6.5%
Technology	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Trading/Services	0.0%	33.3%	0.0%	14.3%	9.1%	0.0%	0.0%	0.0%	5.6%	7.1%	0.0%	0.0%	0.0%	3.6%
Quasi Sovereign	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.3%
All Corporate	**0.0%**	**7.1%**	**8.0%**	**19.3%**	**9.0%**	**8.8%**	**5.1%**	**8.2%**	**1.0%**	**6.1%**	**2.6%**	**1.3%**	**0.0%**	**5.9%**

Source: MARC Fixed Income Research

Exhibit 15: Corporate downgrade rates by rating band

Year	AAA	AA	A	BBB	BB	B	C	High Grade	High Yield	All Corporate
2001	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2002	0.0%	14.3%	3.8%	0.0%	100.0%	0.0%	0.0%	5.3%	25.0%	7.1%
2003	0.0%	0.0%	6.5%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	4.0%
2004	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2005	0.0%	0.0%	4.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	2.6%
2006	0.0%	5.9%	11.9%	33.3%	100.0%	0.0%	0.0%	9.3%	40.0%	11.0%
2007	0.0%	9.5%	13.1%	33.3%	0.0%	0.0%	0.0%	10.9%	16.7%	11.2%
2008	0.0%	0.0%	5.3%	100.0%	0.0%	0.0%	0.0%	3.3%	50.0%	7.1%
2009	0.0%	3.6%	4.3%	33.3%	25.0%	0.0%	0.0%	3.4%	22.2%	5.1%
2010	0.0%	12.5%	14.7%	0.0%	33.3%	33.3%	0.0%	11.0%	22.2%	12.2%
2011	0.0%	13.0%	17.2%	0.0%	0.0%	0.0%	0.0%	11.4%	0.0%	10.3%
2012	0.0%	9.5%	20.0%	22.2%	33.3%	50.0%	0.0%	9.8%	28.6%	13.3%
2013	5.0%	4.8%	21.4%	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%	7.8%
Arithmetic Mean	0.4%	5.6%	9.4%	17.1%	22.4%	6.4%	0.0%	6.2%	15.7%	7.1%
Standard Deviation	1.4%	5.6%	7.4%	28.9%	36.9%	16.0%	0.0%	4.2%	17.3%	4.5%
Coefficient of Variation	360.6%	98.9%	78.6%	169.1%	164.3%	249.8%	0.0%	67.8%	109.8%	63.7%

Source: MARC Fixed Income Research

Exhibit 16: Corporate downgrade rates by industry

Sector	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Wtd. Average
Construction	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%
Consumer Products	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	33.3%	0.0%	33.3%	0.0%	0.0%	0.0%	100.0%	12.5%
Finance	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	0.0%	7.1%	0.0%	0.0%	1.6%
Hotels	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%
Industrial Products	0.0%	50.0%	0.0%	0.0%	5.3%	18.2%	20.0%	17.4%	9.5%	6.7%	7.7%	33.3%	50.0%	13.6%
Infrastructure & Utilities	0.0%	0.0%	7.7%	0.0%	7.1%	5.6%	0.0%	0.0%	0.0%	25.0%	23.8%	14.3%	11.1%	7.2%
Insurance Company	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	n.a.
Plantation	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	0.0%	0.0%	1.7%
Property	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	15.4%	18.2%	11.1%	0.0%	0.0%	30.0%	0.0%	8.9%
Technology	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Trading/Services	0.0%	0.0%	20.0%	0.0%	0.0%	6.7%	20.0%	5.6%	0.0%	21.4%	8.3%	10.0%	0.0%	7.9%
Quasi Sovereign	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
All Corporate	**0.0%**	**7.1%**	**4.0%**	**0.0%**	**2.6%**	**11.0%**	**11.2%**	**7.1%**	**5.1%**	**12.2%**	**10.3%**	**13.3%**	**7.8%**	**7.3%**

Source: MARC Fixed Income Research

Rating Transition: Over the long term, high-grade issuers continued to display higher rating stability than high-yield issuers

MARC assigns the ratings based on a default probability model which is a combination of both qualitative and quantitative assessments. The rating summarises the ability of issuers to meet the obligation, both in terms of interest payments and principal repayments. In addition, MARC also factors in the rating through a cyclical element in its rating when assessing the credit profile of issuers, and relevant industry risks are also analysed from both short-term and long-term perspectives. However, rating movement may also be impacted by other structural developments, which most of the time are due to idiosyncratic developments affecting a specific issuer.

Like the methodology used to calculate the annual default rates, the calculation of rating transition rates also compares the ratings of issuers at the beginning of the time period (1st January) with ratings at the end of the time period (31st December); therefore, multiple rating migrations within this period will not be taken into consideration. Multiple counts of an issuer, however, are possible, i.e. an issuer that stays in the rating universe for more than one year will continue to be captured year-in, year-out as long as it has not been withdrawn from the rating universe. For example, if MARC began rating one issuer in 1997 and if its issue had not been withdrawn from the universe until 2013, then this issuer would appear in the 16 consecutive 1-year transition tables from 1998 to 2013.

Rating transition rates are comparable to cumulative default rates. However, due to significant sample constraints in the MARC rating universe, caution should be exercised in interpreting the statistics. At the beginning of 2013, there were only 64 outstanding issuers in MARC's corporate universe, of which only 9 were in the high-yield segment.

An examination of the one-year rating transition as depicted in Exhibit 17 to 19 was done at the broad rating category, i.e. from AA to A, as opposed to the transitions at the modifier level, i.e. AA+ to AA. The vertical axis shows the ratings at the beginning of the year and the horizontal axis summarises the 1-year migration behavior. Nevertheless, for transparency purposes, MARC has also computed the transition matrices at the modifier level which are attached in Appendix III.

The following outcomes are observed in MARC's corporate rating universe:

- Over the long term, the cumulative 1-year stability rate shows that a strong positive relationship between credit ratings and rating stability continues to hold for high-grade issuers. On the other hand, high-yield issuers exhibit an anomaly with increasing rating stability as credit rating deteriorates. Such an outcome can be attributed to the small sample size in the high-yield group, resulting in a higher likelihood of distorted results. Based on the average cumulative 1-year rating stability after adjusting for withdrawn issuers, high-grade category continues to show higher stability than the high-yield category (93.0% versus 78.2%) with rating stability for AAA, AA and A standing at 98.6%, 91.4% and 88.9% while BBB, BB and B coming in at 75.6%, 78.9% and 80.0% respectively.

- In terms of default probability, the 1-year cumulative rating transition matrix tables also indicate a strong negative relationship between MARC's corporate ratings and default rates, where higher credit ratings are associated with lower default rates and vice versa. There are no corporate defaults in the AAA and AA+ rating cohorts in MARC's rating history. This attests to the strong credibility of top-notch credit ratings assigned by MARC.

Exhibit 17: 1-year cumulative rating transition matrix: 1998 – 2013

1998-2013	AAA	AA	A	BBB	BB	B	C	NR	Default
AAA	**92.9%**	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	5.8%	0.0%
AA	2.2%	**84.5%**	5.3%	0.0%	0.0%	0.0%	0.0%	7.5%	0.4%
A	0.0%	2.7%	**76.9%**	3.6%	0.6%	0.0%	0.2%	13.4%	2.5%
BBB	0.0%	0.0%	7.1%	**60.7%**	5.4%	1.8%	0.0%	17.9%	7.1%
BB	0.0%	0.0%	0.0%	0.0%	**68.2%**	18.2%	0.0%	13.6%	0.0%
B	0.0%	0.0%	0.0%	0.0%	0.0%	**63.2%**	0.0%	21.1%	15.8%
C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%

Source: MARC Fixed Income Research

Exhibit 18: 1-year cumulative rating transition matrix: 1998 – 2013 (NR Adjusted)

1998-2013	AAA	AA	A	BBB	BB	B	C	Default
AAA	**98.6%**	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
AA	2.4%	**91.4%**	5.7%	0.0%	0.0%	0.0%	0.0%	0.5%
A	0.0%	3.1%	**88.9%**	4.1%	0.7%	0.0%	0.2%	2.9%
BBB	0.0%	0.0%	8.9%	**75.6%**	6.7%	2.2%	0.0%	6.7%
BB	0.0%	0.0%	0.0%	0.0%	**78.9%**	21.1%	0.0%	0.0%
B	0.0%	0.0%	0.0%	0.0%	0.0%	**80.0%**	0.0%	20.0%
C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%

Source: MARC Fixed Income Research

Exhibit 19: 1-year rating transition matrix: 2008 – 2013

2008	AAA	AA	A	BBB	BB	B	C	NR	Default
AAA	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
AA	0.0%	**95.2%**	0.0%	0.0%	0.0%	0.0%	0.0%	4.8%	0.0%
A	0.0%	8.8%	**80.7%**	1.8%	0.0%	0.0%	0.0%	7.0%	1.8%
BBB	0.0%	0.0%	0.0%	**50.0%**	25.0%	25.0%	0.0%	0.0%	0.0%
BB	0.0%	0.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%
B	0.0%	0.0%	0.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%
C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%

2009	AAA	AA	A	BBB	BB	B	C	NR	Default
AAA	**85.7%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.3%	0.0%
AA	0.0%	**82.1%**	0.0%	0.0%	0.0%	0.0%	0.0%	17.9%	0.0%
A	0.0%	0.0%	**70.2%**	4.3%	0.0%	0.0%	0.0%	19.1%	6.4%
BBB	0.0%	0.0%	0.0%	**33.3%**	0.0%	0.0%	0.0%	33.3%	33.3%
BB	0.0%	0.0%	0.0%	0.0%	**75.0%**	25.0%	0.0%	0.0%	0.0%
B	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	50.0%	50.0%
C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%

2010	AAA	AA	A	BBB	BB	B	C	NR	Default
AAA	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
AA	8.3%	**70.8%**	12.5%	0.0%	0.0%	0.0%	0.0%	8.3%	0.0%
A	0.0%	2.9%	**70.6%**	0.0%	0.0%	0.0%	0.0%	23.5%	2.9%
BBB	0.0%	0.0%	0.0%	**66.7%**	0.0%	0.0%	0.0%	33.3%	0.0%
BB	0.0%	0.0%	0.0%	0.0%	**33.3%**	33.3%	0.0%	33.3%	0.0%
B	0.0%	0.0%	0.0%	0.0%	0.0%	**66.7%**	0.0%	33.3%	0.0%
C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%

2011	AAA	AA	A	BBB	BB	B	C	NR	Default
AAA	**94.4%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	0.0%
AA	4.3%	**73.9%**	13.0%	0.0%	0.0%	0.0%	0.0%	8.7%	0.0%
A	0.0%	0.0%	**48.3%**	13.8%	3.4%	0.0%	0.0%	31.0%	3.4%
BBB	0.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%
BB	0.0%	0.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%
B	0.0%	0.0%	0.0%	0.0%	0.0%	**66.7%**	0.0%	0.0%	33.3%
C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%

2012	AAA	AA	A	BBB	BB	B	C	NR	Default
AAA	**95.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%
AA	0.0%	**85.7%**	9.5%	0.0%	0.0%	0.0%	0.0%	4.8%	0.0%
A	0.0%	0.0%	**55.0%**	5.0%	0.0%	0.0%	0.0%	40.0%	0.0%
BBB	0.0%	0.0%	0.0%	**22.2%**	11.1%	0.0%	0.0%	55.6%	11.1%
BB	0.0%	0.0%	0.0%	0.0%	**33.3%**	33.3%	0.0%	33.3%	0.0%
B	0.0%	0.0%	0.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%
C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%

2013	AAA	AA	A	BBB	BB	B	C	NR	Default
AAA	**80.0%**	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.0%	0.0%
AA	0.0%	**95.2%**	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
A	0.0%	0.0%	**42.9%**	7.1%	7.1%	0.0%	7.1%	28.6%	7.1%
BBB	0.0%	0.0%	0.0%	**75.0%**	0.0%	0.0%	0.0%	25.0%	0.0%
BB	0.0%	0.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%
B	0.0%	0.0%	0.0%	0.0%	0.0%	**33.3%**	0.0%	66.7%	0.0%
C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%

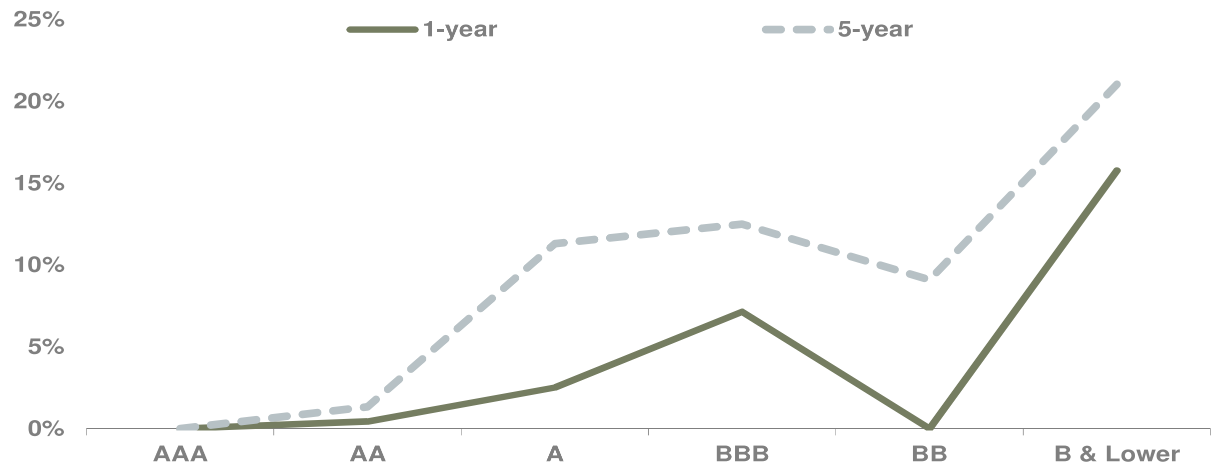
Source: MARC Fixed Income Research

Exhibit 20: Cumulative default rate by rating band

Rating band	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
AAA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
AA	0.4%	0.4%	0.4%	0.9%	1.3%	1.8%	2.2%	2.2%
A	2.5%	5.2%	8.0%	9.6%	11.3%	11.9%	12.2%	12.2%
BBB	7.1%	10.7%	10.7%	12.5%	12.5%	16.1%	17.9%	17.9%
BB	0.0%	4.5%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%
B & Low er	15.8%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%
High Grade	1.5%	3.0%	4.6%	5.6%	6.7%	7.1%	7.4%	7.4%
High Yield	7.2%	11.3%	12.4%	13.4%	13.4%	15.5%	16.5%	16.5%
All Corporate	2.1%	3.9%	5.3%	6.4%	7.3%	8.0%	8.3%	8.3%

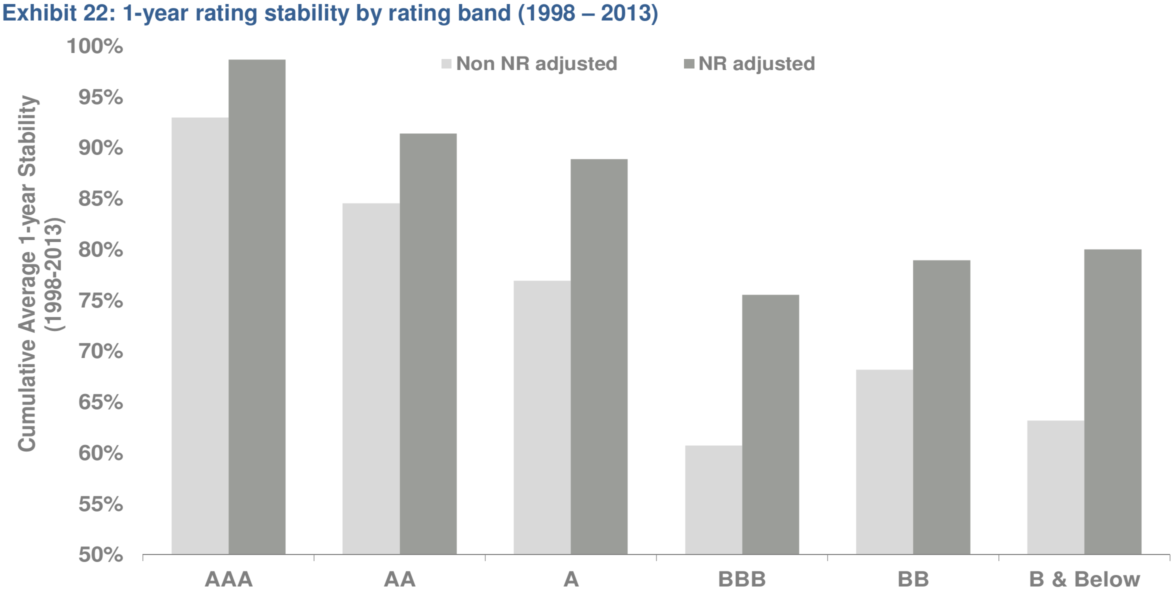
Source: MARC Fixed Income Research

Exhibit 21: Effectiveness of MARC's corporate ratings as default predictor (1998 – 2013)



Source: MARC Fixed Income Research

Exhibit 22: 1-year rating stability by rating band (1998 – 2013)



Source: MARC Fixed Income Research

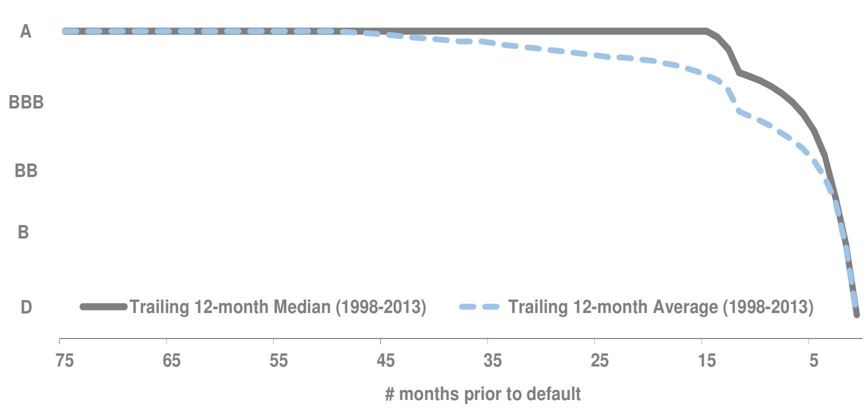
Path to default from original rating and last rating

MARC observes an unusual phenomenon of high-grade issuers recording shorter time to default when compared with high-yield issuers since year 2000. We attribute this anomaly to the small defaulter pool in our study, e.g. there were only two issuers which defaulted from initial ratings of AA and BBB respectively, causing outliers to distort the average data. Notwithstanding this, when we look at the average time to default from prior rating bands, we observe a longer time frame for issuers with high-grade ratings to default – about an average of 1.8 years – vis-à-vis issuers with high-yield ratings which took an average of 0.3 years to default.

Exhibit 23: Average time to default and default rating path (number of months)

Original Band	Defaulted Issuers	Average Months from Original Rating	Median Months from Original Rating
AAA	0	n.a	n.a
AA	2	48	48
A	16	46	40
BBB	2	51	51
BB	0	n.a	n.a
B	0	n.a	n.a
C	0	n.a	n.a
High Grade	18	47	41
High Yield	2	51	51
All Corporate	20	47	42

Band Prior to Default	Defaulted Issuers	Average Months from Last Rating	Median Months from Last Rating
AAA	0	n.a	n.a
AA	1	18	18
A	2	23	23
BBB	3	6	6
BB	5	2	2
B	2	9	9
C	7	2	1
High Grade	**3**	21	21
High Yield	**17**	3	3
All Corporate	**20**	6	6

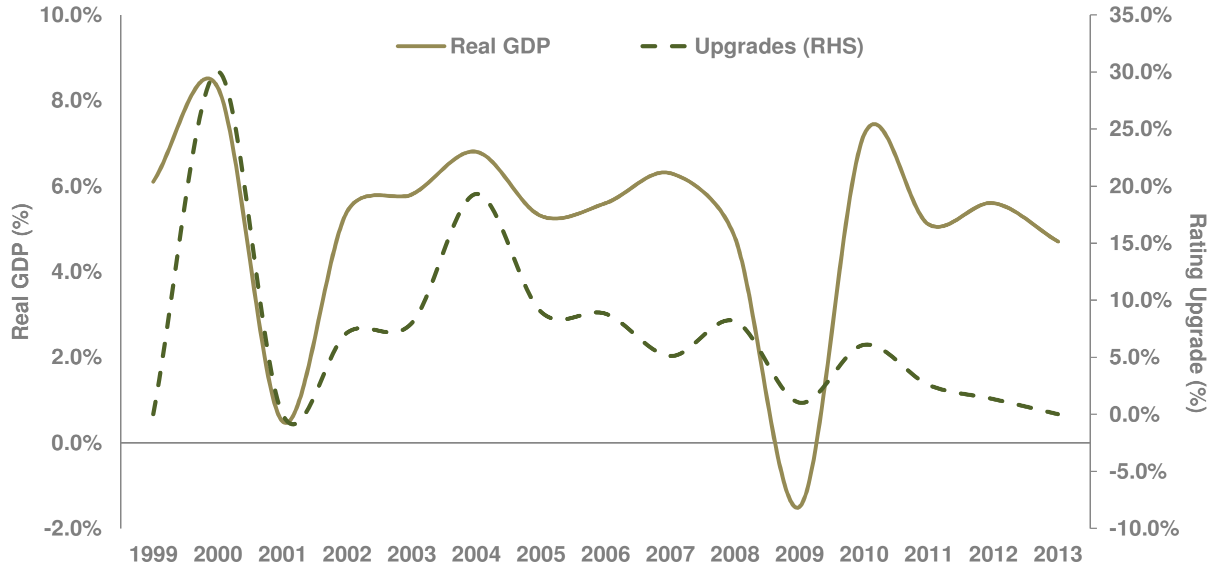


Source: MARC Fixed Income Research

Credit conditions are a reflection of real economic activity

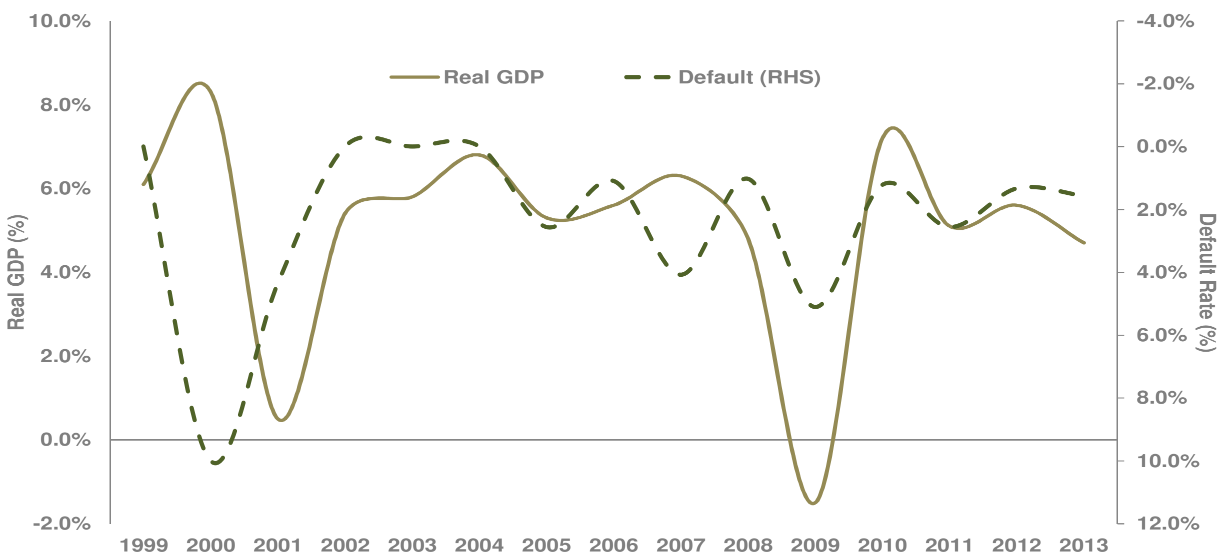
As shown in Exhibits 24 and 25, a strong correlation was observed between real economic growth and rating migration i.e. when the economy is on uptrend growth, there is less likelihood of rating downgrades and defaults while rating upgrades tend to increase. As mentioned in the 2012 MARC Corporate Default Study report, the correlation coefficient between real economic growth and rating upgrades continued to stay above 50%. Notably, the correlation coefficient of close to -75% between real economic growth and rating downgrades indicated a strong negative relationship between the two variables.

Exhibit 24: Corporate rating upgrades (%) vs. real GDP growth (%)



Source: MARC Fixed Income Research

Exhibit 25: MARC credit default rates (%) vs. real GDP growth (%)



Source: MARC Fixed Income Research

Appendix I: Data and Methodologies

This long-term corporate default and rating transition study uses MARC's database of local currency issuer credit ratings which reflect MARC's independent opinion of an issuer's ability to meet its debt obligations. The likelihood of default is indicated by the rating migration assigned to the affected issuers, the rating outlook attached as well as the watchlist assigned. To truly reflect an issuer's standalone credit rating, issuing subsidiaries and affiliates were removed where their ratings have a direct relation to their parent company ratings and are being rated on par with the parent's. Issuers with multiple debt lines were consolidated to only one rating; moreover, senior unsecured long-term ratings or, in the absence of this, the highest-rated security lines were used. This study excludes short-term ratings and all structured finance issuers. Meanwhile, issuers which are domiciled in foreign countries are also eliminated in our study due to the constraints of using a local rating scale. In addition, issuers with bank or corporate guarantees are also excluded as this study aims to analyse the standalone corporate default risk.

This study analyses the rating histories of 233 corporate issuers that were rated by MARC between 1996 and 2013. In the previous default studies, MARC conducted its annual default study based on the number of issuers in line with international practice. Due to sample size constraints, each study reported all statistics beginning December 1997, hence ensuring consistency in the statistical reporting. Data enhancement efforts which are being continuously carried out to ensure a certain degree of transparency and integrity may lead to different outcomes from one report to another. This study is self-contained and should supersede previous ones. A major challenge to this study is the extremely small sample size, particularly in high-yield ratings; as a result, some of the statistics could not be divided for high-grade and high-yield analysis as the small number of observations would be statistically inconclusive.

MARC's long-term rating scale has a single 'C' rating level between 'B-' and 'D', compared to global rating agencies which typically have three intermediate categories i.e. 'CCC', 'CC' and 'C'. Also, within the three categories, the practice is to append modifiers (+/-) or 1, 2, and 3 to each generic rating.

Default Definition

(Specifically prescribed for MARC's Default and Rating Transition Study: 1996-2013)

- Issuers will be rated 'D' upon default. Distressed obligations typically are rated along the continuum of 'B' to 'C' rating categories. In situations where analysis indicates that an instrument is irrevocably impaired where the issuer is not expected to meet payments of interest and/or principal in full in accordance with the terms of the obligation's documentation during the life of the transaction, but where no payment default in accordance with the terms of the documentation is imminent, the obligation may be rated in the 'B' or 'C' categories.

- MARC will assign default ratings where it has reasonably determined that payment has not been made on a material obligation in accordance with the requirements of the obligation's documentation, or where it believes that a default rating consistent with MARC's published definition of default is the most appropriate rating to assign.

- Default is defined as one of the following:
  - ✓ Failure of an issuer/obligor to make timely payment of principal and/or interest under the contractual terms of the rated financial obligation (first dollar missed payment basis);
  - ✓ Bankruptcy filings, administration, receivership, liquidation, winding-up or cessation of business of an issuer/obligor; or
  - ✓ Distressed or other coercive exchange of a rated financial obligation, where creditors were offered securities with diminished structural or economic terms compared with the existing financial obligation of the issuer/obligor.

Default Rate Calculation

- The default rate calculation used in MARC's Corporate Default Study is given by the following formula:

$$d_t = x_t / (n_{t-1} - w_{t-1})$$

Where x_t is the number of defaulted issuers in year t, w_{t-1} is the number of rating withdrawals in the preceding year and n_{t-1} is the number of outstanding ratings at the end of preceding year and adjusted for previous defaults.

- The denominator reflects issuers whose ratings were withdrawn and therefore not at risk of default over the measurement period. Hence, there are three possible scenarios that need to be modeled to predict the default rate under the scope of MARC's Corporate Default Study: survival to the next time period, rating withdrawal and defaulted issuer.

Appendix II: Details on 2013 rating migrations

Issuer	Main Sector	Date Announced	Action	Outlook	Last Rating	New Rating
Alam Maritim Resources Bhd	Infrastructure & Utilities	19-Mar-13	DOWNGRADED	STA	AA-	A+
Kinsteel Bhd	Industrial Products	15-May-13	DOWNGRADED	NEG	A-	BBB
Kinsteel Bhd	Industrial Products	15-Jul-13	DOWNGRADED		BBB	BB+
Kinsteel Bhd	Industrial Products	29-Aug-13	DOWNGRADED		BB+	C
Perwaja Steel Sdn Bhd	Industrial Products	17-Apr-13	DOWNGRADED		A-	BBB-
Perwaja Steel Sdn Bhd	Industrial Products	05-Jul-13	DOWNGRADED		BBB-	BB
Perwaja Steel Sdn Bhd	Industrial Products	13-Sep-13	DOWNGRADED		BB	C
Perwaja Steel Sdn Bhd	Industrial Products	27-Sep-13	DOWNGRADED		C	D
Perwaja Steel Sdn Bhd	Industrial Products	27-Sep-13	DEFAULT		C	D
Press Metal Berhad	Industrial Products	03-Jul-13	DOWNGRADED		A-	BBB
Senai-Desaru Expressway Berhad	Infrastructure & Utilities	15-Feb-13	DOWNGRADED	NEG	A+	BBB+
Senai-Desaru Expressway Berhad	Infrastructure & Utilities	21-Jun-13	DOWNGRADED	NEG	BBB+	BB
UMW Holdings Bhd	Consumer Products	30-Aug-13	DOWNGRADED	STA	AAA	AA+

The rating migration of MARC's unpublished ratings are excluded
Source: MARC Fixed Income Research

Appendix III: 1-year rating migrations at modifier level

2012	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	C	NR	Default
AAA	**95.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%
AA+	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
AA	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
AA-	0.0%	0.0%	0.0%	**78.6%**	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.1%	0.0%
A+	0.0%	0.0%	0.0%	0.0%	**25.0%**	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	62.5%	0.0%
A	0.0%	0.0%	0.0%	0.0%	0.0%	**42.9%**	28.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.6%	0.0%
A-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**60.0%**	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%
BBB+	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	80.0%	0.0%
BBB-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	33.3%
BB+	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
BB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BB-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
B+	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	0.0%	0.0%	0.0%
B	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%
B-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%
C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%

2013	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	C	NR	Default
AAA	**80.0%**	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.0%	0.0%
AA+	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
AA	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
AA-	0.0%	0.0%	0.0%	**92.9%**	7.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
A+	0.0%	0.0%	0.0%	0.0%	**25.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%
A	0.0%	0.0%	0.0%	0.0%	0.0%	**50.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%
A-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**50.0%**	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	16.7%
BBB+	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**50.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%
BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBB-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BB+	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BB-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
B+	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	100.0%	0.0%
B	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	100.0%	0.0%
B-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%
C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%

1998-2013	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	C	NR	Default
AAA	**92.9%**	0.6%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.8%	0.0%
AA+	9.6%	**84.6%**	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	0.0%
AA	0.0%	6.3%	**72.9%**	4.2%	2.1%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%
AA-	0.0%	0.0%	4.8%	**79.4%**	6.3%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.1%	0.8%
A+	0.0%	0.0%	0.6%	6.9%	**66.3%**	5.6%	2.5%	0.6%	1.3%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	14.4%	1.3%
A	0.0%	0.0%	0.0%	0.5%	6.8%	**71.8%**	4.5%	0.9%	0.0%	1.8%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	10.9%	2.3%
A-	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	**58.8%**	5.2%	1.0%	2.1%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	17.5%	5.2%
BBB+	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.2%	**50.0%**	9.1%	4.5%	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%	0.0%	13.6%	0.0%
BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.1%	**42.9%**	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.6%	7.1%
BBB-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	5.0%	**45.0%**	10.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.0%	15.0%
BB+	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**66.7%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%
BB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**60.0%**	20.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BB-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**63.6%**	9.1%	9.1%	9.1%	0.0%	9.1%	0.0%
B+	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**40.0%**	20.0%	20.0%	0.0%	20.0%	0.0%
B	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**28.6%**	0.0%	0.0%	42.9%	28.6%
B-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.3%	**71.4%**	0.0%	0.0%	14.3%
C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%

Source: MARC Fixed Income Research

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