MARC RATING METHODOLOGY

CORPORATE CREDIT: RATING OUTCOMES GRID

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INTRODUCTION

This report supplements the previously published corporate finance rating methodology by providing greater clarity and transparency on the interaction of the business and financial risk dimensions in a typical corporate rating. Intended to facilitate fair and consistent implementation of MARC's corporate rating methodology, the Rating Outcomes Grid captures the interrelationship between the two risk dimensions. It also provides further insight into the thought process behind a rating, in particular how positive or negative changes occurring along one risk dimension can affect the other with the potential to moderate or amplify overall credit risk.

BUSINESS AND FINANCIAL RISK MATRIX

MARC's corporate rating methodology scores two components: business risk and financial risk. Credit factors for each of the two components are scored to produce a composite risk score for the corporate as a whole; the weights for each credit factor reflect MARC's view of the relative importance of each credit factor in determining the overall creditworthiness of the entity and level of seven rating bands, AAA, AA, A, BBB, BB, B and C, to ensure risk levels are adequately differentiated. The use of consistent, standardised qualitative and quantitative factors applicable to most industries in the corporate sector promotes comparability of business risks across industries. The business risk profile score is the weighted average of the individual credit factor risk scores. An identical approach is taken to calculate the weighted average financial risk for the entity.

The resulting business and financial risk profile scores can be placed along a quality continuum from 'excellent' to 'very weak'. With the exception of 'very weak' which could either map to the 'B' or 'C'

rating band, each of the other five classes broadly correspond to the rating categories from 'AAA' through 'BB'. 'Excellent' corresponds to a 'AAA' business or financial risk profile, 'very strong' corresponds to a 'AA' business or financial risk profile, 'strong' to 'A', 'adequate' to 'BBB' and 'weak' to 'BB'.

MARC's 6x6 Rating Outcomes Grid provides an indication of the likely corporate credit rating outcomes that would result from particular combinations of business and financial risk profiles, specified in terms of rating band.

The final rating assigned may be higher or lower than indicated by the Rating Outcomes Grid after incorporating MARC's qualitative assessment of the entity's management strategy, financial policy, corporate structure and ownership. In some instances, the final rating may also incorporate government support-driven uplift where MARC's assessment indicates that the government is likely to extend extraordinary support to prevent an adverse outcome for any creditor of the rated entity. When the subject of a rating is a corporate that is not domiciled in Malaysia, a sovereign or transfer and convertibility assessment is undertaken to establish the degree of country risk sensitivity of that particular corporate.

The analytical underpinnings of the grid, most of which are supported by observations from MARC's rating universe, are as follows:

- A company's business risk profile is the primary driver of the evolution of a company's financial metrics and the sustainability of its earnings and cash flow generation. For this reason, MARC believes that there is a need to place slightly more weight on the business risk profile in the case of companies with 'strong' and 'very strong' financial profiles to assign more forward-looking ratings.

- MARC's assessment of credit quality strives to capture business cycle peak-to-trough expectations for the rated entity's credit profile to convey a more accurate picture of prospective creditworthiness. MARC aims to assign ratings that can be maintained for three years or more for companies rated in the single 'A' rating band and above.

- A company can have a business profile that is significantly better than its rating as a result of aggressive debt use and/or continued shareholder-friendly financial policies. That said, some business and financial risk profile combinations are unusual – for example, the company is assessed to have an excellent business risk profile but a weak or very weak financial risk profile, as business and financial risks generally overlap. There are well-established relationships between profitability and general industry characteristics (industry concentration, competitive intensity and regulation) as well as company-specific characteristics (breadth and depth of product line/service offerings, differentiating capabilities, asset utilisation, product/service breadth with profitability, strategic coherence, etc.), which are taken into MARC's evaluation of the company's business risk profile. The approach taken in the development of the business and

financial risk matrix is to leave the matrix cells for yet-to-be observed combinations blank.

Exhibit 1: MARC's Rating Outcomes Grid

Business Risk Profile	Financial Risk Profile					
	Excellent (AAA)	Very Strong (AA)	Strong (A)	Adequate (BBB)	Weak (BB)	Very Weak (B/C)
Excellent (AAA)	AAA	AAA/AA	AA	A	-	-
Very Strong (AA)	AA	AA	AA	A	BBB	-
Strong (A)	AA/A	AA/A	A	BBB	BB	-
Adequate (BBB)	-	A/BBB	A /BBB	BBB	BB	B
Weak (BB)	-	-	-	BB	BB	B/C
Very Weak (B/C)	-	-	-	B	B	B /C

Based on the above Rating Outcomes Grid, a company whose business risk profile is assessed as 'excellent' (AAA category) will likely attain a rating within the range of A to AAA depending on where the assessment of its financial risk profile is placed along the 'adequate' to 'excellent' range of the continuum.

If the company's business risk profile is assessed as 'very strong' but its financial metrics are more consistent with an 'adequate' assessment, MARC would likely assign a final rating that is within the 'A' range. A company with a 'strong' business risk profile may in some instances attain a rating within the AA range on account of an 'excellent' or 'very strong' financial risk profile but this would occur less frequently than would instances in which an issuer in the investment-grade category attains a higher final rating than implied by its financial metrics on the strength of its business profile.

For certain combinations where the likely corporate credit rating outcomes encompass two rating bands, a rating at the lower end of the higher rating category or a rating within the lower rating category may be assigned depending on the specific circumstances. For instance, companies whose business risk and financial risk profiles are assessed as 'excellent' and 'very strong' respectively may still attain a final rating of AAA if their financial risk profiles are solidly positioned in the AA category.

The rating of a company with an 'adequate' business risk profile will be typically capped in the 'A' range if its financial risk profile is assessed to be 'strong' at minimum.

Financially weak companies are inherently more vulnerable to default and for this reason, MARC attaches greater weight to the current state of the financial health of companies with 'weak' and 'very weak' financial profiles as compared to their business risk profile. In such circumstances, the final rating on the company would be invariably capped by its financial risk profile assessment due to near-term concerns over liquidity, cash flow generation and, in some cases, increased uncertainty as to the company's ability to satisfy upcoming debt service obligations.

BUSINESS RISK PROFILE

MARC's assessment of a company's business risk profile is based on a fundamental analysis of each company's products/services and business segments, and addresses:

- Industry business and credit risk characteristics
- Market position
- Operating efficiency
- Diversification

The purpose of MARC's industry analysis is to understand the company's operating environment: its exposure to cyclical volatility and seasonal variations and market characteristics such as industry concentration, barriers to entry, competitive intensity, demand growth and capacity additions. MARC also considers the predictability of the regulatory environment and the extent to which regulation influences the competitive environment of the company and provides support for return on investments for existing players and new entrants. The business risk of individual companies in an industry can vary significantly depending on the market segments in which they participate. Accordingly, MARC focuses on business-specific market characteristics in its fundamental analysis. Diversification can be a positive for some companies, which explains the generally higher ratings of large, diversified companies with businesses that have different business cycles, provided they have achieved meaningful market positions in most of its businesses. In a similar vein, geographic diversification may help to mitigate the effect of domestic economic weakness.

Weak industry fundamentals may make it difficult for a company to achieve and maintain high credit ratings. The length and severity of past market downturns are examined in MARC's industry analysis to the extent that they help produce a realistic picture of creditworthiness at the low end of the cycle. Commodity products are particularly prone to price and margin fluctuations resulting from the balance of supply and demand, the price of raw materials, and the level of general economic activity. For instance, MARC assesses the industry risk for the domestic steel sector as high on account of its inherent cyclicality, the wide swings in operating margins and earnings from peak to trough and the intense price competition domestic steel products face from steel imports. Such market characteristics have a negative effect to varying degrees on the strength of a business profile, as would the company's size, product composition, geographical diversity, vertical integration, and operating efficiencies/inefficiencies in manufacturing and distribution. Additionally, the quality and stability of management have a significant impact on a company's ability to take advantage of opportunities and react to market changes, as well as the coherence of its strategy and execution capacity.

In general, the greater the business risk, the higher will be MARC's expectations for average debt protection metrics, liquidity and prudent capitalisation throughout the cycle.

Exhibit 2: Illustrative Rating Factors Underlying Business and Competitive Profile Assessments of Non-Financial Corporates

Business Risk Factors by Broad Rating Category						
	Growth Opportunities	Industry Profitability	Industry Cyclicality	Market Position and Size	Revenue Diversity	Cost Profile
Excellent (AAA)	Solid revenue growth of 15% or higher annually	Robust EBITDA margins of >30%	Generally not sensitive to economic cycles	Dominant position within industry	Highly diversified business/ product mix	Excellent relative to peers and industry
Very Strong (AA)	Sustained revenue growth of over 10%-15% annually	High EBITDA margins of 25%-30%	Low sensitivity to economic cycles	Leading position within industry	Well-diversified business/ product mix	Very good relative to peers and industry
Strong (A)	Moderate revenue growth of 5%-10% annually	Generally healthy EBITDA margins of 15%-25%	Somewhat sensitive to economic cycles	Defensible position within industry	Fairly diversified business/ product mix	Good relative to peers and industry
Adequate (BBB)	Slow to moderate revenue growth of 3%-5% annually	Relatively slim EBITDA margins of 10%-15%	Fairly sensitive to economic cycles	Defensible niche positions in industry	Relatively limited diversity in business/ product mix	Average relative to peers and industry
Weak (BB)	Stalled or slow revenue growth of 0%-3% annually	Thin to slim EBITDA margins of 5%-10%	Highly sensitive to economic cycles	Small market share relative to rivals	Limited diversity in business/ product mix	Below average relative to peers and industry
Very Weak (B/C)	Revenue trends point to long-term decline	Negative to thin EBITDA margins of <5%	Extremely sensitive to economic cycles	Overall weak market position	Narrow business/ product mix	Poor relative to peers and industry

EBITDA: Earnings before Interest, Taxes, Depreciation, and Amortisation

The illustrative rating factors in Exhibit 2 provide an indication of a number of areas covered in a business risk analysis by MARC, which are generally applicable to non-financial corporates. The specific criteria that MARC has published on industry sectors represented in its rating universe will examine an entity's business risks at a much more granular level. The aforementioned specific criteria are available on MARC's corporate website.

FINANCIAL RISK PROFILE

MARC's assessment of a company's financial risk profile covers the following elements:

- Profitability
- Cash flow/debt service capacity
- Debt leverage/financial policies
- Financial flexibility

The financial performance of a company and its financial metrics are key elements in MARC's financial risk assessment. They provide a measure of the company's performance, position and financial health relative to those of both its peer group and MARC's universe of non-financial corporates.

A company's profitability metrics provide useful insights into a company's future earnings potential, management's effectiveness and its standing relative to competition and industry norms. Undertaken concurrently with trend and industry analyses, a company's profitability analysis allows meaningful conclusions to be drawn about the company's competitiveness and its internal capacity to generate capital as well as to attract capital (as measured by return on assets and equity measures).

Exhibit 3: Illustrative Financial Benchmarks for Non-Financial Corporates

Illustrative Financial Benchmarks by Broad Rating Category						
	CFO/Debt (%)	Adjusted Cash/Debt (%)	Debt/ EBITDA (x)	Leverage (x)	ROA (%)	ROE (%)
Excellent (AAA)	>75	>75	<1.5	<0.3	>10	>15
Very Strong (AA)	50-75	60-70	1.5-2.5	0.3-0.5	7.5-10	12-15
Strong (A)	40-50	45-60	2.5-3.5	0.5-0.75	5.0-7.5	8-12
Adequate (BBB)	25-40	35-45	3.5-4.5	0.75-1.25	3.5-5.0	5-8
Weak (BB)	10-25	20-35	4.5-5.5	1.25-1.50	2.0-3.5	0-5
Very Weak (B/C)	<10	<20	>5.5	>1.5	<2.0	<0

Definition of Financial Metrics:
CFO/Debt: Cash Flow from Operations/Total Debt
Adjusted Cash/Debt: Adjusted cash & cash equivalents/Total Debt
Debt/EBITDA: Debt/Earnings before Interest, Taxes, Depreciation, and Amortisation
Leverage: Debt/Total Equity
ROA: Net Profit (or Net income after taxes)/Average Assets
ROE: Net Profit Unadjusted for Special Charges/Average Shareholders' Equity

Cash flow coverage is an important ratings consideration. MARC's cash flow analysis focuses on the company's cash and cash flow coverage of debt to assess the company's liquidity relative to debt and to determine whether cash flow from operations is likely to be sufficient to support its debt servicing obligations. The debt/EBITDA ratio supplements a traditional measure of leverage, the debt-to-equity ratio, in providing an indication of how well a company can handle its debt burden within the context of its earnings power.

The illustrative financial benchmarks in Exhibit 3 suggest that high debt leverage and weak coverage metrics will constrain a company's rating notwithstanding a business risk profile that is indicative of a higher rating. A company's business risk profile could be assessed to be 'strong', supported by its scale and leading market position, geographic diversification and a strong product portfolio. At the same time, it could be operating at higher-than-prudent debt leverage levels at just under 5.0 times debt/EBITDA and posting sustained negative free cash flow as a result of an aggressive pursuit of growth opportunities. If the company's financial risk profile is assessed to be 'adequate' overall, the expected rating outcome should be within the 'BBB' category.

If the company makes progress in reducing its debt leverage metrics to under 4.0x debt/EBITDA while maintaining adequate profitability, its ratings headroom could improve but upward rating pressure would be unlikely. However, if the company could reduce debt levels sufficiently to support debt/EBITDA below 3.5x, including through the weaker points in its industry cycle, it might be possible for the company to be upgraded to the 'A' category.

MARC attaches great importance to the future strategic and financial risk tolerance of the company. Management's strategy to grow its top line may include acquisitions, capacity additions and joint ventures, the impact of which will be evaluated by MARC with regard to the company's business risk profile as well as its financial risk profile. Free operating cash flows may be directed toward acquisitions, geographical expansion and capacity additions, keeping cash flow protection measures weak. Difficulty integrating acquisitions and debt-financed acquisition activity can bring about erosion in credit quality measures. Historically, MARC has found that debt reduction is unlikely to be a priority for much of its rated universe when an industry is at the top of the cycle.

Financial flexibility and liquidity can drive the assessment of a company's financial risk profile, especially in the case of cyclical businesses. A company's access to capital markets, committed bank facilities and other sources of liquid assets are evaluated. When a company's leverage rises to a point of constraining the company's financial flexibility, this stress will be reflected in the company's financial flexibility score. MARC carefully scrutinises the company's sources and uses of liquidity and working capital movements. An extended trough, unusually weak business conditions, unexpected operational events or large unanticipated acquisitions can exert stress on the company's financial resources. When shortfalls in cash flow and limited financial flexibility suggest a high likelihood of default, this will drive MARC's overall assessment of a company's financial risk profile.

For a more comprehensive understanding of MARC's approach to analysing financial risks, please refer to MARC's Corporate Rating Methodology, which is available on the rating agency's corporate website.

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