MARC RATING METHODOLOGY

NON-FINANCIAL CORPORATES

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OVERVIEW

MARC's analytical framework for rating non-financial corporate credit risk assesses four areas:

- Business risks
- Financial risks
- Management, organisational structure and ownership
- Other considerations

MARC's business risk analysis addresses the non-financial corporate's macro environment, industry characteristics, competitive position and operations analysis. The agency's more quantitatively based financial risk analysis, meanwhile, focuses on the corporate's profitability, cash flow/debt service capacity, capitalisation/financial policies and financial flexibility. The business and financial risk factors, along with the management, organisational structure and ownership credit factor, are assigned weights reflecting their perceived relative importance to the corporate's overall credit profile and scored to provide a weighted average numeric score representing its base long-term rating. The weights attached to major rating factors may be changed at the discretion of the rating committee to reflect the presence of overriding positive and negative considerations.

MARC looks to its 6x6 Rating Outcomes Grid for guidance in deriving the corporate's intrinsic or standalone rating from its particular combination of business and financial risk profile scores. The corporate's 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'.

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

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

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

- MARC's assessment of credit quality strives to capture business cycle peak-to-trough expectations for the corporate'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 on account of its 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. 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.

Based on MARC's Rating Outcomes Grid, a corporate 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 corporate'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 corporate 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 corporate with an 'adequate' business risk profile will be typically capped in the 'A' range even if its financial risk profile is assessed to be 'strong'. Financially weak corporates are inherently more vulnerable to default and for this reason, MARC attaches greater weight to the current state of the financial health of corporates with 'weak' and 'very weak' financial profiles as compared to their business risk profile. In such circumstances, the final rating on the corporate 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 corporate's ability to satisfy upcoming debt service obligations.

The rating assigned to the non-financial corporate may be higher or lower than the grid outcome after incorporating MARC's qualitative assessment of the entity's management strategy, financial policy, corporate structure and ownership.

When assigning an issue-specific rating, MARC considers the structural features and terms of the individual debt instrument in question, including any external credit enhancement and the obligation's ranking in the event of the issuer's insolvency or winding-up. Where applicable, other considerations may be taken into account such as the credit support (or drag) stemming from parent or group linkages or government ownership. Government support-driven uplift will be incorporated where MARC's assessment indicates that the government is likely to extend extraordinary support to avert a potential default on an obligation. Finally, when MARC assigns a rating to a ringgit-denominated obligation of a non-domestic issuer or non-domestic ultimate borrower, MARC will consider the likely effect of its exposure to transfer and convertibility risk on the rated obligation's default risk.

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 structure and business environment
- Market or competitive position
- Diversification
- Operating efficiency

When a company participates in more than one business, a separate analysis is performed for each key segment. These assessments are combined using weights that correspond to the respective segment's share of consolidated revenues, earnings, or assets, as appropriate, (representing each segment's relative importance) to arrive at the company's weighted average business risk profile assessment.

Industry Analysis MARC's business risk analysis starts with a review of 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, supply and demand trends, 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.

Competitive intensity is affected by the level of industry concentration, the potential for product/service differentiation, switching costs and the ease of entry into and/or exit from the industry to which the company belongs.

MARC's assessment of the current and long-term industry fundamentals of the industry or key industry sectors in which the issuer operates include consideration of sensitivity to economic cycles, pricing power, product or service substitution in addition to barriers to entry and exit. Industries also exhibit distinct attributes over their life cycle which have implications for returns and sustainability of financial performance.

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 views the industry risk of the primary metals sectors as moderately high on account of its inherent cyclicality, the wide swings in operating margins and earnings from peak to trough and the intense price competition.

An industry with declining growth rates creates uncertainty about the reliability of earnings and cash flow. Issuers belonging to an industry or industries with less favourable industry characteristics will require more conservative financial profiles/policies to achieve the same rating level as firms operating in industries with more favourable industry characteristics. Meanwhile, relatively favourable industry characteristics will support comfortable earnings and cash flow generation even during the low points of the economic cycle.

Competitive Analysis MARC undertakes an analysis of the competitive dynamics of the space in which the issuer operates and its business model. The business risk of individual companies in an industry can vary significantly, depending on the market segments in which they participate.

MARC focuses on business-specific market characteristics in its fundamental analysis. The competitive analysis helps identify the issuer's key and emerging competitors, as well as strengths and weaknesses relative to these competitors. Key competitive advantages and/or shortcomings are assessed, including franchise strength/brand equity, quality of service and product offering, existing customer relationships and distribution capabilities.

To avoid the error of delineating market boundaries too narrowly, MARC considers the potential for competition from non-traditional competitors and their strategic intent. The competitive analysis aids an assessment of the issuer's market positioning and associated business strategies, in particular the extent to which these permit differentiation from competition or perpetuate poor or mediocre performance.

Other characteristics which affect the strength of a company's business profile include its size, product composition, geographical diversity, vertical integration, as well as operating efficiencies/inefficiencies in manufacturing and distribution. Additionally, the quality and stability of management has 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.

The size and scale of the issuer usually provides insight into its negotiating position with customers and suppliers, prior success or otherwise, and its ability to respond to adverse developments. Scale can be particularly significant in commodity-based industries where the ability to differentiate offerings from those of competitors is low. Size may indicate the presence of economies of scale, bargaining power and/or market leadership. Attempts to gain market share through broad-based price reductions are likely to be detrimental to profitability and difficult to sustain over the long run. The benefits of size may be partially offset by diseconomies of scale where the business encounters difficulties of coordination, a decrease in responsiveness to customers and higher business risks as a result of becoming larger.

Diversification can be a positive for some companies where it moderates revenue and earnings volatility and does not increase the issuer's financial risk profile. If the various lines of an issuer's business react similarly to economic cycles, limited credit will be given. Geographic diversity is usually viewed positively in that it may promote a balance between slower and higher growth markets and lessen the impact of downturns in a certain market. Similarly, an issuer with a diversified combination of activities serving diverse customer segments would be less impacted by weaker results from any single business segment.

Operations Analysis MARC looks to the operating track record and organisational history of an entity to gain insight into the company's execution capacity and the associated implications for cost efficiency, profitability and competitiveness. This aspect of MARC's analysis considers performance attributes such as technology, innovation, quality and reputation.

Peer comparisons of cost structure, operating margins, asset utilisation and appropriate measures of productivity provide the context for evaluating operating efficiency. The company's operating margins relative to its peers provide an indication of its efficiency at controlling costs while its return on assets provides an idea as to how effective is the company is at using its assets to generate profit.

Ongoing cost improvements are often critical to sustaining and maintaining margins in competitive environments in which real price increases are difficult to achieve. Where applicable, MARC also considers trends in product input costs, selling, general and administrative (SG&A) expenses and the nature of any operational initiatives employed to improve productivity, cost structure competitiveness, quality, execution, and service standards

Cost efficiencies can be achieved in marketing and production, and may be facilitated by specific skills, as well as operational and technology advantages. A manufacturer's favourable cost structure could derive from manufacturing efficiency which, in turn, is the result of R&D investments. The age of plant and equipment in use, together with the quality of systems and processes, will often be the more telling explanation for differences in performance vis-à-vis peers. Similarly, for companies operating in service industries, performance differentials are typically associated with the quality and execution of business strategies, making size a less significant consideration.

In fast changing, unpredictable markets, the ability to create new products or services would be more critical than it would be in slowly changing markets. In businesses where technological innovation advances rapidly, strong R&D capabilities would be critical to keep the company at the technological forefront and to defend its offerings against new and existing competitors. Other important capabilities would be production and marketing.

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 the 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 an issuer's financial risk profile covers the following elements:

- Profitability
- Cash flow adequacy/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. The primary sources of information used for financial analysis will be the entity's financial statements and financial projections. They provide a measure of the company's performance, position and financial health of the company relative to those of both its peer group and MARC's universe of non-financial corporates. MARC's financial risk analysis also takes into account the company's policies in relation to capex strategies, acquisitions and divestitures, leverage, dividend upstreaming, share repurchases and financial policy targets. The pursuit of high-risk financial policies typically limits the scope for any credit quality improvement.

MARC reviews the overall consistency of accounting policies from year to year or quarter to quarter and considers the degree of estimation or subjectivity in the reported numbers when assessing the reliability and quality of the issuer's financial reporting.

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

Profitability/Earnings Performance

MARC considers the degree to which earnings are cash or non-cash, recurring or non-recurring, and based on precise measurement or estimates that are subject to change in assessing the certainty of the issuer's current and future earnings. MARC considers the company's operational profitability, typically over a five-year period to assess the volatility of operating margins and its record of earnings generation. This allows us to incorporate the impact of cyclical demand on earnings and to be able to rate through the cycle as far as possible.

Exhibit 4: Profitability/Earnings Performance Quantitative Measures

	Key Metrics	Analytical Focus
Profitability trend analysis	• Revenue (RM mil) • Profit before tax (RM mil) • Profit after tax (RM mil) • Earnings on business segment assets • OPBIT or EBIT margin (%) • Net operating margin (%)	Trend analysis of the issuer's top-line and bottom-line, as well as operating margins shed light on patterns and trends in its performance, including revenue losses or gains and/or efficiency losses or gains. Factors underlying recent revenue and profit growth or decline are explored to assess the issuer's ability to maintain or improve its top-line and bottom-line performance. Peer analysis or margins helps reveal important distinctions in the credit profiles of industry peers and challenges faced.
Returns performance	• Return on equity (ROE) • Return on assets (ROA) • Return on permanent capital	The company's return measures are compared with the cost of its capital and the return measures of others within its industry to provide an indication of its ability to attract suppliers of funds and earn a satisfactory return on invested capital. ROE is usually a primary focus as a management objective but it is sensitive to dividend policy, share buybacks and debt levels. ROA, which takes into account the assets used to support business activities, avoids the distortions created by growing debt leverage and share buybacks that ROE can obscure.

Future performance expectations are just as important as past performance because our ratings are meant to be forward looking. For this reason, as part of its financial risk analysis, MARC will seek to identify the main drivers underpinning revenue and operating margin trends, as well as the implications for earnings resilience across the economic cycle and sustainable performance. 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). An inability to earn an adequate and timely return on invested capital would be a credit concern.

Issuers that are able to demonstrate consistent earnings generation typically have better access to capital, more financial flexibility and retained earnings to fund capital investments (future growth). Issuers facing weak demand and declining equity returns in their industry may look to earnings accretive acquisitions to bolster their performance. An inability to recover or earn a return on the acquisition premium or benefit from acquisition-related cost savings, however, could worsen the impact of rising debt in acquisition financing.

Cash Flow Generating Ability/Debt Servicing Capacity

In its financial analysis, MARC gives more weight to cash flow measures of interest and debt coverage than measures based on accounting earnings. Cash flow from operations (CFO) and free cash flow (FCF) are key metrics that MARC uses to assess a company's overall financial health. CFO is defined as pre-tax profit adjusted for items not involving movement of funds, principally depreciation, amortisation and other non-cash items, excluding interest and after movements in working capital. A company's CFO is a key indicator of the extent to which it can service debt and finance operations and capital expansion without having to rely on external funding sources. FCF, meanwhile, is the residual cash remaining after capital expenditures and cash dividends.

Cash flow can also arise from non-operating sources, namely investment and financing activities. Cash flow from financing activities include dividends, proceeds from equity issuance and borrowings. Cash flow from investing activities are normally derived from sales of long-term assets, which may include property or equipment, parts of or entire business units, or investments in affiliates. While these are not considered as recurring sources of funds, MARC is mindful that certain companies may have numerous non-core assets that could be sold to raise cash.

MARC seeks to identify the key drivers of a company's historical record of cash flow surpluses or deficits, the extent to which the organisation has been reliant on external funding in the past and is likely to be so in the future in its cash flow analysis. A company that is in an expansionary mode will likely have negative FCF, necessitating the issuance of additional debt or equity and/or lower dividends.

Exhibit 5: Cash Flow Generating Ability/Debt Servicing Capacity Quantitative Measures

	Key Metrics	Analytical Focus
Cash flow generating ability/Debt servicing capacity	• CFO and FCF • CFO Interest Coverage • CFO Debt Coverage • CFO/ Capital Expenditure (Capex) • Capex/Depreciation	Trends in CFO and FCF levels are viewed in light of the company's existing operating environment, its current earnings performance, non-recurring items and working capital management. Changes in reported CFO and FCF resulting from acquisitions, mergers or divestitures are identified, where applicable. The aim of such analysis is to evaluate the visibility and stability of cash flows from the company's major business lines. In its computation of interest coverage, MARC includes gross interest, defined as cash and capitalised interest and any other mandatory cash payments made on financing instruments. Debt coverage measures are examined on both a gross and net debt basis. Capex ordinarily represents a significant cash outflow for capital intensive companies. The ratio of capex to depreciation provides insight into a company's growth-related spending demands and capex flexibility. CFO/Capex offers an indication as to whether the investment needs required to grow and maintain the issuer's business are matched by operating cash flows from operations.

Cash flow surpluses or deficits are quite often heavily influenced by extrinsic factors such as business cycles, unplanned working capital changes caused by fluctuating raw material prices and opportunistic transactions. At the same time, MARC is mindful that cutbacks in capex and other spending crucial to maintaining or improving the company's competitiveness may increase short-term cash flow at the expense of long-run value and financial health. Capex is thus examined to distinguish between maintenance amounts necessary to support a company's competitive position, regulatory requirements and growth-related discretionary expenditures.

Cash deficits are of much greater concern for companies with constrained liquidity, weak balance sheets or unsustainable capital structures, impaired access to external funding and significant debt refinancing risk. Persistent negative FCF arising from the pursuit of an acquisition driven growth strategy, aggressive dividend practices, and substantial inter-company loans to and investments in affiliates with weaker credit profile will amplify financial risk. MARC generally takes a dim view of treasury share purchases and share buybacks funded by additional debt.

A pronounced lag between earnings and heavy capex-driven investments will weigh on the credit profile of the issuer, notably its free cash flow and interest coverage, leaving it more vulnerable to a challenging business environment or any particular event (such as lower demand, high competition, local currency volatility and tight funding availability). MARC's liquidity analysis considers the issuer's capex flexibility and past behaviour with regard to managing its liquidity profile.

MARC gauges the reasonableness of the company's cash flow financial projections (where this is made available to the rating agency) in light of management's track record of delivering on past projections or maintaining previously articulated strategies, underpinning assumptions and the outlook for the industry as well as the overall economy. MARC may use stress analysis to test the sensitivity of management's cash flow forecast against the effects of the changed assumption(s).

Capital Structure

This area of the analysis focuses on the issuer's capital structure, its debt maturity profile, financial covenant headroom, liquidity buffer, as well as refinancing and short-term debt rollover risk. The capital structure of a company is assessed within the context of:

- its business environment, industry leverage norms and debt affordability;
- its overall financial condition and risk profile;
- management's ability to address emerging needs for growth including access to additional capital and dividend policy;
- balance sheet composition including intangibles; and
- off-balance sheet items.

Industry leverage norms differ significantly from one industry to another owing to variations in risk bearing and borrowing capacity levels as well as capital intensity. Apart from industry leverage norms, MARC's capital structure analysis also considers the off-balance-sheet borrowings of jointly controlled companies or unconsolidated subsidiaries that could potentially give rise to claims on the issuer and hybrid securities with equity-like features in the analytical adjustments made to key ratios it uses to analyse capital structure. MARC also evaluates the company's ability to raise new equity or hybrid capital where rapid debt-funded organic or acquisitive growth is pressuring the issuer's credit quality.

Exhibit 6: Debt Leverage Quantitative Measures

	Key Metrics	Analytical Focus
Debt leverage	• Total debt/equity • Total debt/tangible equity • Long-term debt/equity • Short-term debt/equity	The company's reliance on external financing is assessed on the basis of industry leverage norms with analytical adjustments made to reflect the economic reality over form where needed. To the extent that goodwill and intangible assets are susceptible to impermanence and uncertainty, MARC also examines tangible debt leverage. The issuer's long-term and short-term debt/financing mix should be tailored to the timing of financed assets' income generation. A high short-term debt to total debt stock ratio could indicate potential vulnerability to rollover risk on short-term debt unless the short-term debt is mostly composed of self-liquidating trade credits.
Refinancing risk exposure	• Debt maturity profile	Exposure to bullet maturities could leave the issuer vulnerable to refinancing risk and increases in market interest rates. Issuers demonstrating weak operating trends and facing significant debt maturities are particularly vulnerable to high refinancing risk during periods of tight market liquidity and adverse investor sentiment.

MARC is mindful of the limitation of equity values reported on the corporate balance sheet as a measure of the company's intrinsic value, and the implication of differences between the book and market values of tangible and intangible assets. While public listed companies are obliged to report certain assets and liabilities using the fair value basis following the mandatory adoption of International Financial Reporting Standards (IFRS), the majority of measurements in accounts for most businesses are still at historical cost. Developments affecting the economy and financial markets may create uncertainty around the valuation and impairment of certain assets.

The primarily principle-based standards require substantial subjective judgement on the part of financial statement preparers because of the high level of flexibility offered in the application of the standards. MARC is mindful of the high degree of judgement needed to estimate assets and liabilities and the corresponding implications when evaluating an issuer's capital structure relative to others in its peer group.

Determining reliable fair values for complex and lightly traded assets and liabilities remains a fundamental difficulty with the IFRS. A company reporting under IFRS is also required to undertake a testing of goodwill and intangible assets with indefinite lives for impairment at least annually or if a triggering event occurs that would likely reduce the fair value of a reporting unit below its carrying amount. The recognition of impairment losses on long-term assets, goodwill and intangible assets, in particular, has significant implications for capital structure analysis.

As goodwill and intangible assets are frequently a significant portion of the values assigned and recognised in any business combination, the accounting treatment of goodwill could potentially introduce an element of volatility into reported earnings, book value-based leverage and debt covenant compliance. Debt covenant violations caused by goodwill impairment losses could also detrimentally affect access to external finance in the case of highly leveraged companies.

Financial Flexibility and Liquidity

MARC forms its view on a company's financial flexibility by assessing its available liquidity in the form of unrestricted cash reserves and liquid investments as well as access to other sources of finance. MARC considers the level of a company's current assets and the extent to which current assets exceed current liabilities as key factors in a company's liquidity position. The more conservative a company's working capital policy is, the more solvent or liquid a company is likely to be and the higher the probability of timely and full payment.

Exhibit 7: Financial Flexibility and Liquidity Quantitative Measures

	Key Metrics	Analytical Focus
Financial flexibility and liquidity	• Cash ratio (cash and cash equivalents/current liabilities) • Quick assets ratio (cash and cash equivalents plus trade receivables/current liabilities) • Current ratio (current assets/current liabilities) • Working capital/total assets • Unencumbered assets • Undrawn banking lines as committed by banks and standby liquidity facilities	MARC evaluates the adequacy of working capital maintained by the company to mitigate revenue shortfalls and unanticipated cash outflows, as well as any working capital targets. In making such assessment, MARC considers the strength of the company's accounts receivable collection practices, the nature of cash cycles experienced, if any, the presence of any customer concentration, the volatility/stability of income and expenses, and policies (or lack thereof) relating to holding cash for operational and capital needs. Receivables and inventory turnover ratios provide an indication of the level of funds tied up in these activities. MARC pays close attention to declining liquidity, indicated perhaps by more than one of the following: deteriorating inventory days and trade receivables days' ratios, increasing trade payables days, falling quick ratios and decreasing amounts of cash and liquid investments or a rapidly increasing overdraft. The company's working capital metrics are compared with peer group and/or industry averages.

MARC also looks at the adequacy of other liquidity sources (free cash flow and committed credit facilities) to cover scheduled debt maturities and interest payment obligations. A high reliance on short-term financing from banks as opposed to long term exposes the company to a higher risk that such financing may not be renewed or may be renewed on less favourable terms. In a weak economic environment, companies are more susceptible to withdrawals of credit facilities, cutbacks on unused facilities and higher collateral requirements by banks. Trade financing lines, meanwhile, do not provide liquidity against contingencies because their use is tied to trade transactions.

In reviewing companies facing high liquidity risk from significant debt maturities, MARC will consider the nature of risk mitigating measures taken by the issuer to avoid an outright default. MARC considers the composition of the company's debt structure in terms of unsecured and secured debt, and its potential untapped secured debt raising capacity, as implied by its level of unencumbered tangible assets. A company's untapped secured debt raising capacity is especially meaningful under tightened credit conditions. In such periods, the company will still be able to access new funding by pledging unencumbered assets. MARC's assessment of financial flexibility also extends to restrictive covenants on debt issuance or total leverage.

A company's access to external debt finance can be adversely affected following a secular or cyclical retreat of banks and/or investors from lending and/or investing in its sector. Whether this is the result of new regulations on bank capital and liquidity to reduce risk and/or deteriorating market conditions, the end result could be scarcer and dearer bank and bond market financing. Where the retrenchment process is too swift, refinancing and rollover risks could place the company at risk of default. A company's rating downgrade could also be detrimental for its finances. Where there are lawsuits filed against the rated company of potential credit significance, MARC will rely upon the external legal counsel's view on the likely outcome of litigation in its credit analysis to the extent this is made available.

MANAGEMENT, ORGANISATIONAL STRUCTURE AND OWNERSHIP

MARC's assessment of management quality encompasses the track record of management, in particular its performance through different phases of the economic cycle and relative to industry peers as well as execution of its long-term and short-term strategic plans. Where material differences exist between the current and historical risk profiles of the company, MARC will rely on discussions with management to gain insights into its prospective risk profile.

A corporate's standalone credit profile can be strongly influenced by management's responsiveness and ability to adjust strategies in response to changing economic, industry and market conditions, as well as regulatory change, technological advances and competition. A sound risk and control management framework that is linked and integrated with the company's business strategy and operations will be viewed positively. Evidence of management quality would be provided by the company's past financial performance, as well as its past performance in entering new businesses, product lines or new markets and offering new products or services.

The company's financial strategy and financial policies, meanwhile, provide a guide as to its prospective financial risk profile. Key issues addressed include management's policy on leverage and sourcing funds, willingness to support the company's share price through share repurchases and its commitment to maintaining a sound credit profile.

Well-run organisations are generally characterised by a deep and stable management structure, a self-policing culture and smooth succession planning as well as transition. MARC considers good strategy and good strategy execution as the most reliable signs of good management. Management's growth ambitions, its appetite for risk, and its ability to assimilate acquisitions successfully where the company has a history of M&A transactions will be assessed in the agency's analysis.

The management evaluation also considers the influence of significant shareholders and the likelihood that shareholders' interests may be pursued at the expense of other stakeholders such as bondholders and creditors. On a related note, a 'stakeholder' model of corporate governance which promotes the alignment of interests of management, shareholders and other stakeholders (bondholders included) is viewed positively by MARC. The coherence and consistency of goals espoused by management to the rating agency with that of the controlling shareholder will be taken into account.

Corporate governance represents an important analytic element of management quality. We believe that good corporate governance has positive implications for franchise value and lessens the risk of adverse regulatory intervention. Corporate governance variables that are usually of rating significance include established processes and internal controls of the entity, risk management policies, quality of financial reporting, integrity and accountability to other stakeholders, quality of board oversight, management's independence, and adherence to corporate governance codes.

ISSUE STRUCTURE AND TERMS

Where an issue-specific rating is undertaken, MARC undertakes an evaluation of the issue's principal terms and conditions. Analysis in this area will largely focus on the proposed utilisation of the proceeds from debt to be issued and implications of the proposed issue on the company's debt maturity profile, debt servicing burden, covenant headroom and the nature of any intercreditor collateral sharing. Short-term liquidity and rollover risk are important considerations for commercial paper ratings, particularly if there is heavy reliance on short-term debt to fund longer-term assets.

A bond or sukuk's structural features can often influence the probability of default and/or post-default recovery. These include repayment priority in a liquidation, rollover provisions, security, the assignment of revenues for debt service, its maturity profile, guarantees and other support mechanisms (where applicable) and the covenant package.

MARC takes the view that collateral generally provides incentives for the issuer to avoid default, failing which, it usually lowers the amount of loss expected when default occurs. Anecdotal evidence suggests that collateralised bank loans are associated with higher default experience, a possible explanation for which is more collateral is required by lenders for a credit which is perceived to be higher risk. Depending on the particular situation of the company involved, debt investors could still experience losses even where the whole value of the debt is secured by the collateral as a result of the delay typically encountered in post-default security enforcement. MARC's collateral analysis also considers the respective rights of multiple classes of creditors in respect of enforcement actions against shared collateral.

In assessing whether collateral is likely to affect the company's incentives to make timely payment on its obligations, MARC considers the priority of the security interests granted, the importance, adequacy and liquidity of the collateral securing the debt. At lower rating levels, in particular for issuers who are near default or are currently in default ("B+" and below), MARC will perform a bespoke recovery assessment that incorporates collateral analysis in estimating the issuer's post-default going concern or liquidation value.

MARC's approach to rating corporate subordinated debt and hybrids is to notch down the issue rating from the issuer rating of the company to reflect the particular risk characteristics of these instruments. This is addressed separately in MARC's methodology "Equity Credit and Notching Approach for Corporate Subordinated Debt and Hybrid Securities". To assign equity credit to a particular subordinated debt or hybrid security, MARC places the instrument on a debt-equity continuum consisting of five classes, beginning with Class A (100% debt and 0% equity credit) through E (100% equity and 0% debt).

Structural enhancements such as pre-funded debt service reserve funds, dedicated irrevocable backup bank facilities, deficiency (in cash flow for debt service) guarantees from a parent entity can be used to augment the company's current ability to meet debt service requirements. This adds confidence that funds will be available for obligations falling due on a timely basis. The aforementioned structural enhancements can be used proactively to cover intermittent cash flow shortfalls on the part of the company. To prevent a payment event of default, the trustee must be able to preemptively activate the backup bank facilities or deficiency guarantees ahead of the scheduled payment date. MARC's approach to assessing third-party credit guarantees is outlined in its methodology "Rating Approach for Issuances Supported by Third-Party Credit Guarantees".

MARC considers the strength of the rated obligation's covenant package to ascertain the extent of protection offered to debt investors against aggressive corporate strategies and negative event risk. Common protective covenants incorporated in bond/sukuk trust deeds include change of control covenants, restrictions on asset sales without bondholder approval or application of asset

sale proceeds, restrictions on share buy-backs and mergers, limitations on additional and/or secured debt raising, and financial metrics maintenance covenants, amongst others. MARC monitors the headroom or cushion in the issuer's leverage ratios, covenant breaches as well as waivers of technical default obtained under the trust deeds and associated amendments of provisions, if any.

MARC would view covenants that are drawn too tightly with the same level of concern or perhaps more, as it would view lax covenants. Covenants that are too restrictive can cause technical defaults which, if not waived, can increase the likelihood of a payment event of default occurring. Rating triggers compelling the issuer to maintain its own credit rating above a certain rating threshold to avoid an acceleration of the rated obligation had, prior to 2010, played a role in certain bond defaults in MARC's rating universe.

When a company defaults on one obligation, it usually defaults on all its debt because a payment event of default under that obligation triggers cross-default clauses for other obligations. For this reason, MARC monitors issuers in the lower end of the credit spectrum with significantly greater vigilance than for investment-grade issuers, especially with respect to covenant compliance, liquidity, scheduled debt repayments and refinancing risk.

OTHER CONSIDERATIONS

Parent-Subsidiary and Group Linkages

This area of the analysis focuses on the degree to which a company's relationship with its parent and/or affiliates including issuance vehicles can either positively or negatively impact its creditworthiness.

MARC's credit analysis recognises that the creditworthiness of a group member entity can be influenced by financial and business-related interdependencies among group members.

The affiliate relationships are evaluated in terms of:

- ownership and management control;
- parent financial strength and financial flexibility;
- upstream dividend requirements and the availability of parent capital contributions;
- the potential need to divert capital to support under-performing affiliates
- integration with the parent or affiliate, strategic importance and respective domiciles;
- strengths and weaknesses of subsidiary companies;
- formal guarantees or support agreements and stated posture on support; track record of affiliate support; and
- the nature of any ring-fencing, regulatory or otherwise.

The greater the degree of integration of a group member into the overall group and the quality and size of its related party transactions, the more the creditworthiness of that entity will be interlinked with the creditworthiness of other group companies. In addition to the usual operational and strategic ties that link the credit profiles of group members, MARC also considers the rating interdependencies between the group members that are created as a result of intercompany loans, financial guarantees, as well as cross-default and cross-acceleration provisions under financing documents.

MARC assesses the extent of any rating uplift or drag respectively arising from the issuer's exposure to stronger or weaker group members, whichever applicable, in order to determine its adjusted rating consistent with its methodology "Group Rating Methodology".

Extraordinary Government Support

Government support is a separate factor that is introduced into the credit analysis of non-financial corporates that MARC identifies as government-related entities (GRE), as outlined in MARC's methodology "Rating of Government-Related Entities". Government-linked companies (GLC) involved in commercial activity with or without public policy functions are also recognised as GREs under MARC's methodology for assigning ratings to GREs. The GLCs can be distinguished generally by majority government ownership or effective control.

MARC's GRE methodology is structured around a five-factor government support (GS) assessment framework which is highly skewed towards qualitative considerations. MARC's government support assessment is essentially an analysis of the following context factors that will drive or constrain the government's propensity to support the GRE:

- the GRE's economic and strategic importance to the country and government;
- the GRE's legal ties with the government;
- the government's track record of providing support or tendency towards intervening;
- the GRE's operating and financial linkages with the government; and
- the potential consequences of the GRE's default.

The "propensity to support" assessment on the GRE is rated on a scale that runs from "very high propensity to support" (GS 1) to "none to low propensity to support" (GS 5). The GS assessment determines whether MARC will employ a "top-down" or "bottom-up" approach to arrive at the GRE's rating. The "top-down" approach anchors the rating of the GRE to the rating of the government while the "bottom-up" rating approach notches up the GRE's standalone rating for government support, if warranted. The methodology is designed such that a more conservative view of support will be taken where MARC observes a significant degree of arbitrariness surrounding the government's decisions to extend extraordinary support to GREs.

Country Ceiling Considerations

A non-domestic corporate's issue rating will typically be constrained by the MARC's foreign currency sovereign rating in light of its potential exposure to transfer and convertibility (T&C) risk. In any case, MARC considers sovereign risk and country risk to be highly correlated, and incorporates country-specific fundamentals in its assessment of the business and financial profiles of corporates with substantial foreign operations. However, in addition to country-specific fundamentals, MARC's sovereign ratings also acknowledge the role of other sovereign credit risk drivers such as global market factors, risk premiums, and investment flows.

T&C risk is the risk of the government of the country in question imposing capital or exchange controls that prevent an entity from converting local currency into foreign currency and/or making monetary transfers abroad for the purpose of meeting its foreign currency liabilities. A country grappling with balance of payment difficulties may seek to conserve foreign exchange to pay for essential goods and services by restricting monetary transfers abroad by private borrowers. It may also prevent or impede the convertibility of local currency into foreign currency by imposing controls on the exchange and use of currency. T&C risks predominantly occur together and do not tend to occur independently.

MARC's foreign currency sovereign rating will ordinarily be the highest possible rating for ringgit-denominated debt by an issuer domiciled in that given country (the "foreign currency ceiling" or FCC for short). MARC determines whether a given country's FCC should be higher than the relevant sovereign foreign currency rating by assessing the likelihood of a generalised foreign currency payments moratorium in the event of the sovereign's default. A country's FCC could be set higher than its foreign currency sovereign rating where the government in question is judged to have significant incentives to avoid transfer risk events. In assessing the motivation of sovereigns to avoid transfer risk events, MARC considers the potential trade and investment effects of such events in addition to the implications for future access to international capital markets.

A non-domestic corporate's meaningful diversification outside its domestic economy may also allow unimpeded access to foreign exchange to make its scheduled payments, in which case, would justify an issue rating that pierces the country ceiling. MARC's rating committee may allow the issue rating to pierce the country ceiling in instances where the non-domestic issuer has been granted an exemption from capital controls.

MARC's approach to assigning ratings to sovereign governments is outlined in MARC's methodology "Sovereign Ratings".

APPENDIX 1: Long-Term and Short-Term Rating Relationships

Exhibit 8: Long-Term and Short-Term Rating Mapping Table

Credit Quality	Long-Term	Short-Term			
Strongest	AAA	MARC-1			
Very Strong	AA+	MARC-1			
	AA	MARC-1			
	AA-	MARC-1			
Strong	A+	MARC-1	MARC-2		
	A	MARC-1	MARC-2		
	A-		MARC-2		
Adequate	BBB+		MARC-2	MARC-3	
	BBB			MARC-3	
	BBB-			MARC-3	
Speculative	BB+				MARC-4
	BB				MARC-4
	BB-				MARC-4
Highly Speculative	B+				MARC-4
	B				MARC-4
	B-				MARC-4
	C				MARC-4

Exception or non-standard mapping

MARC's short-term ratings reflect the rating agency's assessment of likelihood of timely payment of short-term obligations with an original maturity of less than one year. MARC's short-term ratings apply to commercial paper or other short-term financial commitments, and where specified, counterparty contractual obligations.

MARC holds the view that a rated entity's short-term credit profile cannot be divorced from its intermediate- to long-term credit strength. Commercial paper, for instance, are usually issued under programmes with longer tenures, and the issuer's ability to refinance or roll over short-term instruments would be largely influenced by its longer-term credit profile. MARC uses the non-financial corporate's corporate credit rating or its implied long-term senior unsecured debt rating as the anchor for mapping.

The relationship between long-term and short-term rating categories is indicated in the above exhibit. MARC avoids a mechanistic approach to mapping, as indicated by its standard and exception mappings. The exception mappings apply to circumstances in which the entity has stronger or weaker liquidity than typically observed for rated entities with similar long-term ratings. The reason for this is that balance sheet liquidity, cash flow generation and the ability to access short-term funding from the financial markets may vary significantly from one issuer to another and may be influenced by the issuer's business and/or industry. As is the case with MARC's long-term ratings, the short-term ratings capture the relative repayment ability of the issuer.

MARC-1 repayment likelihood will often be evidenced by high liquidity, favourable internal cash generation and well-established access to financial markets on the part of the issuer. MARC-2 and MARC-3 repayment likelihood will normally be evidenced by lower margins of safety with respect to liquidity, cash flow stability, debt protection measures and refinancing risk.

MARC has refined its Corporate Debt Ratings methodology which is published on its website at www.marc.com.my. This methodology amends and supersedes MARC's "Corporate Debt Ratings" published in 2015.

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