

CORPORATE CREDIT RATING METHODOLOGY

July 2021



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This rating methodology describes ICRA's approach to assessing the credit risk of corporate sector entities (non-financial sector), and supersedes ICRA's earlier methodology document on this subject, published in July 2019. This revised version incorporates certain presentation and editorial-related changes. Also, a section has been added to provide a broad perspective on how environmental, social and governance (ESG) risks are incorporated by ICRA in its credit assessments.

This document aims to help issuers, investors and other market participants understand ICRA's approach to analysing risks that are likely to affect rating outcomes of corporate sector entities. This document does not include an exhaustive discussion of all the rating factors that our analysis considers but provides an overall perspective on the considerations that are usually the most important. While it provides a general overview of the salient rating considerations, for more details, readers may refer to the various sector-specific and other cross-sector methodologies¹ available on ICRA's website.

Overview

Fundamental premise of ICRA's ratings

ICRA's credit ratings are symbolic representations of its opinion on the relative credit risk associated with timely debt servicing by an entity. The rating approach involves taking a forward-looking view and evaluating the rated entity's ability to generate cash from operations, their predictability and adequacy to meet the debt servicing obligations. Additionally, the rating approach involves assessing other forms of cash flow support available to an entity that supplement its operational cash flows. Such support may be in the form of cash balances, liquid marketable securities, external sources of financing, or some manner of third-party support, implicit or explicit.

Credit risk differentiation: What forms the basis, what does not?

ICRA's ratings, being ordinal measures of credit risk, aim to rank debt instruments in terms of their relative probability of default. The rating assessment does not explicitly consider the loss expected to be borne by an investor or a lender in the event of an actual default or subsequent bankruptcy/ liquidation. Because of this approach, ICRA's ratings do not differentiate among debt instruments in terms of their secured or unsecured nature. This, however, does not preclude differentiating for credit risk among rated instruments based on their seniority (in terms of the cash flows available to support debt servicing) and other contractual features.

¹ In various instances, our analysis is guided by considerations that are not specific to a given sector but find relevance across sectors. Examples of such considerations include how parent or group support impact an entity's rating, the assessment of an entity's liquidity position, approach to consolidation, the impact of structural features or explicit third-party support on an entity's rating and so on. Methodology documents that describe our approach towards such cross-sector analytical considerations are available on ICRA's website www.icra.in.

Sources of credit risk

The credit rating of an entity is governed by the degree of its exposure to industry risk, business risk, financial risk and management risk. The relative impact of each of these broad risk categories on an entity's credit risk may vary from case-to-case and is assessed by ICRA based on both quantitative considerations as well as qualitative judgments. As an example, an entity may have a strong competitive position within its business, but it may be operating in an industry that is highly cyclical or is exposed to a high degree of uncertainty. The final rating of such an entity, which otherwise would have been supported by a strong competitive position, would likely get constrained because of the vulnerability to high industry risk. In such a case, industry risk would tend to have a more pronounced impact on the final rating outcome than it would have been otherwise.

Credit Risk Assessment Framework

For analytical convenience, this document explains ICRA's methodology for rating corporate sector entities under four sections viz., Industry Risk Assessment, Business Risk Assessment, Financial Risk Assessment and Management Quality Assessment. In addition to these considerations, an entity's credit rating may also be influenced by its ownership, the nature of linkages with its parent or group entities, the corporate legal structure², degree of financial flexibility, track record of debt servicing, vulnerability (if any) to discrete event risks, besides governance risks.

Credit Risk Categorisation

Industry Risk	Business Risk	Financial Risk	Management Risk	Other Factors
» Growth Prospects	» Competitive Position	» Profitability	» Quality of Management	» Project Risks
» Cyclicity	» Diversification	» Leverage	» Financial Policies	» Loan Tenure Mismatches
» Competitive Intensity	» Quality of Assets	» Coverage		» Financial Flexibility
» Regulatory Risk		» Liquidity		» Currency Risk
		» Cash Flows		» Contingent Liabilities
				» Parentage
				» ESG Risks

Industry Risk Assessment

The industry in which an entity operates provides an overarching context to its riskiness. Two entities may have different credit ratings if they operate in industries that have dissimilar risk characteristics, despite having similar risk profiles in all other respects. As an example, a road (annuity) asset is less prone to demand volatility, tough competition and intrusive regulations compared with a sugar mill, implying that the former would generally have the benefit of relatively more favourable circumstances to service an equivalent volume of debt in time, other things being similar. The riskiness of an industry is largely governed by the following sub-factors:

Growth Prospects

Entities that operate in industries experiencing high growth, benefit from an expansion in their earnings and returns at a rate faster than entities operating in industries that may be in a low growth phase or on a declining curve. Return-seeking equity capital also tends to lean more towards high growth industries, which, however, is not a promise of low credit risk. While an emerging industry like e-commerce has attributes of high growth, it also carries threats relating to consumer acceptability, intense price-based competition and increasing regulatory oversight. In comparison, road annuity projects or power transmission utilities are low growth industries, yet they have low credit-risk attributes, given the greater earnings certainty over a longer time horizon. While ICRA favourably considers the presence of an entity in a high growth industry, the virtues of

² Example: If an entity is constituted as a partnership term, its exposure to keyman risk could be relatively higher.

growth are not assessed in isolation but are assessed against the backdrop of other aspects, including the sustainability of long-term growth and the possible disruptors.

Cyclicality

Cyclical industries can be divided under two categories — one, fortunes of which depend on how well the economy is doing (real estate, shipping or automobiles); and two, performance of which is linked to the level of volatility in commodity prices (oil or agro-commodities). For entities in the cyclical industries, a shift in economic and/or commodity price cycles can significantly impact their debt-servicing ability. Compared with stable industries, cyclical industries have lower tolerance for financial and operating leverage as adverse swings in revenues and profits heighten the probability of default. The adverse impact of demand cyclicalities is even more prominent for industries that have a long gestation period for setting up a new capacity. This is because of the difficulty in predicting the timing, severity and duration of a cyclical downturn. It may happen that by the time the new capacity is set to become operational (*the capital expenditure having been initiated at the peak of the cycle*), after a long execution period, the up-cycle may well be at the verge of a reversal. All other things being equal, ICRA favourably considers entities operating in industries that have stable demand and net realisation patterns, as opposed to entities operating in cyclical industries.

Competitive Intensity

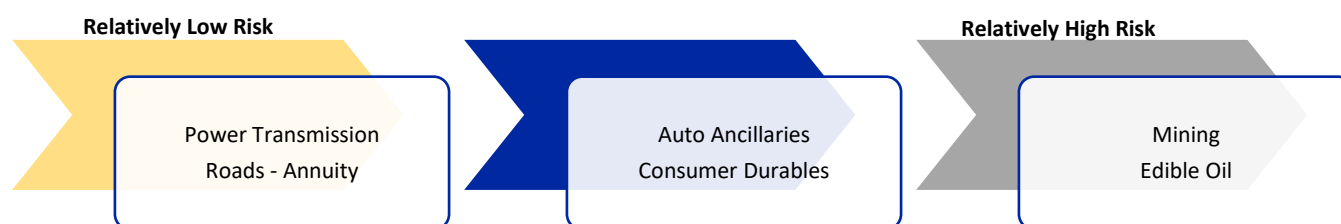
In an intensely competitive market, industry participants find it difficult to grow their revenues and profits. Even if such an industry has strong growth prospects, the industry players may be unable to retain the profits with themselves but be constrained to fully pass on or share the benefits with the consumers, in a bid to retain or grow their market shares. Competition in an industry would generally be high if a combination of the following factors is at work: high industry fragmentation, similarity in the market share of prominent players, low entry barriers, high exit barriers, commoditised nature of products or services, low customer switching costs, or excess production capacity. Competitive intensity in an industry may also change over time if the market players demonstrate collective change in product pricing strategies. Regulatory action can also alter the level of competition in an industry. The above attributes and the expectations around how the competitive landscape in an industry could be expected to change over time, inform ICRA's assessment of competitive intensity in an industry.

Regulatory Risk

Regulatory intervention in various industries manifests in multiple forms, including the level of taxation, duties and subsidies, price controls, supply controls, import/ export restrictions or outright bans. The intention of regulatory interventions has ranged from ensuring better consumer protection (*price control of essential drugs*), improving the industry structure (*cable digitisation*), controlling systemic risks (*restricting gold imports*), protecting the environment (*banning the use of industrial fuels, except piped natural gas, in Delhi*), protecting the domestic industry (*anti-dumping duty on steel*), to meeting socio-political objectives (*ban on liquor/ tobacco sales in various states*).

While analysing the exposure of an industry to regulatory risks, ICRA evaluates whether the Government's role is restricted to that of a facilitator or does the Government exercise control over many facets of the industry. ICRA further assesses the extent of susceptibility of an industry's competitiveness to the Government's policies regarding subsidies, taxation and import-export restrictions and duties. In addition to local or national regulations, changes in international regulations and policies are also assessed that could have ramifications for the participants of an industry.

Indicative Continuum of Industry Risk



Business Risk Assessment

The presence of an entity in a low risk industry can support its credit profile, but its own business position remains one of the primary drivers of credit risk as it determines the sustainability or fragility of its business model. The key factors that ICRA evaluates, while assessing the business risk of the rated entities is their competitive position, their diversification on multiple axes including customers, geographies, products, and suppliers, besides the quality of their assets. A strong business position leads to superior profitability and higher cash flows, thus lowering credit risks. How ICRA evaluates each of these factors is described below:

Competitive Position

One of the economic principles is that entities cannot earn excess profits in perfect markets and tend to compete it away. The primary challenge then for entities, whether long-established or new entrants, is to find ways to exclude, or at least impede, competition for as long as possible. In most cases, sustainable competitive advantages are built over time, and reflect in, say a large scale or a strong brand. In other cases, these could arise from a control over scarce resources (*like a steel plant leasing a coal mine in close proximity*), contracts (*like the right to toll a high-traffic road stretch*), specific patented knowledge, a wide distribution network, a favourable location, established relationships with customers, or any other differentiating factor.

In case competitive advantage draws from compelling products and services, ICRA assesses whether the entity concerned runs the risk of losing its position over time as competitors duplicate its methods or develop better propositions. In determining the competitive position of an entity in a commodity business, ICRA focuses on the comparative cost structure and other possible differentiating factors like distribution network and relationships with customers. Even as the cost leadership holds greater importance than branding in commodity businesses, bigger players in such businesses are increasingly seen to be making efforts towards creating brands, particularly in the Business-to-Consumer (B2C) space. From a credit perspective, such strategies are viewed favourably only if these are expected to build a durable competitive advantage and not run the risk of being ably imitated by key competitors, obviating the case to differentiate.

There could be several measures of competitive position, some universal while others unique to entities in a sector. The table below outlines the broad drivers that ICRA considers while assessing the competitive position of the rated entities in various sectors. This is followed-up with an explanation of select measures and how these inform ICRA's assessment of the competitive position.

Drivers of competitive position

Broad Drivers	Sector	Select Measures (<i>a mix of qualitative and quantitative</i>)
Brand	Consumer Durables	<i>Pricing position, market share in addressable segment</i>
	Retail	<i>Scale and same-store-sales-growth</i>
	Hospitality	<i>Revenue per occupied room (RevPAR) premium</i>
	Education Institutes	<i>Age of the institute</i>
Technology/Design	Automobiles/ Pharmaceuticals	<i>R&D expenditure, product launch track record and pipeline, access to technology (royalty arrangements), regulatory approvals</i>

Broad Drivers	Sector	Select Measures (a mix of qualitative and quantitative)
Affiliation	Auto Ancillaries	Revenue derived from the market leading Original Equipment Manufacturers (OEMs)
Distribution	FMCG	Count and spatial distribution of wholesalers and retailers
	Ports	Connectivity of the asset with road, rail, pipeline (for bulk cargo)
Cost efficiency	Ferrous Metals	Level of backward integration, OPBITDA per tonne
	Oil Exploration	Reserve quality
	Road Logistics	Average age of fleet
Location	Real Estate (Commercial)	Location of the assets, whether in central business districts
	Toll Road	Importance of the route in attracting traffic, competition with alternative routes

Scale and Market Share

Scale is one of the unique parameters that not only drives the competitive position but is also its measure. A larger scale generally reflects several successful executions of an act and is a proxy to the experience and the track record of operations. An entity's scale in relation to its competitors can determine its ability to influence business trends and pricing within the industry. A large scale is often a reflection of a strong market position, operating and financial flexibility and staying power, and is also a driver of operational efficiency. There could be various measures of an entity's scale, including revenues, asset base, or production volumes. While assessing an entity on the scale parameter, ICRA evaluates the same in relation to its peers in the industry in which it operates.

ICRA does not form an unfavourable view of an entity merely because it has a small scale. If such an entity has a healthy share of business in its addressable market by being a product or service provider of choice for its customers or, it has the ability to stay ahead on the technology curve, a low scale need not invariably constrain the rating. Nevertheless, such an entity may remain exposed to the risks arising out of a structural lack of diversification because of its presence in a niche or a limited-sized market.

Assessment of Scale

[Relative assessment from the perspective of the applicable industry in which the rated entity operates]



Assessment of Market Share

[Relative assessment from the perspective of the addressable sub-segments within the industry in which the rated entity operates]



Pricing Power

Another measure of competitive position is the pricing power that an entity enjoys with its customers. It refers to an entity's ability to raise prices without affecting demand, technically referred to as the price elasticity of demand. Different businesses have different pricing dynamics. At one extreme are the Veblen goods whose demand tends to increase as the price tag rises because of their exclusivity and signalling value (*e.g. artwork or designer jewellery*); at the other extreme are commodity goods that tend to have little pricing power as their substitutes are readily available. Between these two extremes, entities have different levels of pricing power, depending on the demand-supply dynamics (*hotel and flight bookings*), the contractual terms (*degree of pass-through of the rise in raw material costs to customers*), and the pricing of substitutes (*pricing of piped natural gas influenced by the pricing of alternative fuels*).

Assessment of Pricing Power



Cost Leadership/ Operating Efficiency

A high-cost producer could be rendered uncompetitive and go out of business if demand falls or the supply turns surplus, because low-cost producers could be more price competitive. It is in this context that operating efficiency holds high relevance from a credit perspective. Entities that enjoy a lower per unit variable cost of production and have a lower fixed cost base are relatively better positioned to weather pricing pressure and demand slowdown. This parameter has greater significance in the commodity businesses, where low cost of production is among the key drivers of competitiveness. The variable cost of production of an entity can be influenced by the source of raw materials, pricing arrangements with suppliers, throughput ratios, rejection rates, energy consumption, location of operations etc. Likewise, the fixed cost base of an entity can be influenced by the type of technology used, vintage of machines, level of backward or forward integration, rental expenses and take-or-pay arrangements etc. ICRA assesses an entity's operating efficiency by undertaking an analysis of the above elements and comparing these metrics with the rated entity's peers.

Example to highlight the importance of operating efficiency

		Both entities have similar fixed costs, but dissimilar variable cost per unit			
		A	B	C	D
		Entity 1	Entity 2	Entity 1	Entity 2
		Base Case		When realizations or volumes decline	
Realisations per unit	Rs. per unit	15	15	11	11
Volumes	Units (Nos.)	100	100	100	100
Fixed costs	Rs. Crore	500	500	500	500
Variable cost per unit	Rs. per unit	6	7	6	7
Revenues	Rs. Crore	1,500	1,500	1,100	1,100
Variable costs	Rs. Crore	600	700	600	700
Fixed costs	Rs. Crore	500	500	500	500
Profits	Rs. Crore	400	300	0	(100)

Example: Consider two entities, operating in a market where the aggregate product demand is 200 units which is being met by Entity 1 and Entity 2 equally. Both entities have a fixed cost base of Rs. 500 crore each, while their variable cost of production per unit differ (Refer to the base case in Columns A and B in the Table above). In case there is a decline in realisations to Rs. 11

per unit (from Rs. 15 per unit earlier), Entity 1 will still be able to break-even if it is able to maintain its initial volumes, unlike Entity 2 that would be pushed into a loss-making situation (See Columns C and D). Given the entities' cost structure, Entity 2 would always be less cost competitive than Entity 1 and its limits would be tested in the event of volume or price decline. Put another way, Entity 1 will have more cushion to withstand a dip in realisations than Entity 2, given the general economic principle that a commodity does not get priced below the variable cost attributable to the highest cost producer, output of which is needed to satisfy total demand.

Diversification

Diversification is an effective antidote for businesses to deal with cash flow volatility or the risk of possible disruption. Apart from increasing the odds of survival, diversification also often acts as a strategic lever to spur business growth. However, diversification also has a downside as it could diffuse the management's focus or become a cause for below-par returns. In general, adequate diversification, whether in the form of customer diversification, geographical diversification, product diversification or asset diversification, imparts greater long-term stability to earnings and cash flows of an entity.

Customer Diversification: An adequate degree of customer diversification reduces an entity's vulnerability to (i) variability in demand associated with a select few customers, and (ii) disruption in business of a single customer. Entities engaged in B2C businesses, by structure, enjoy greater customer diversification. While this may not always be possible for entities involved in the Business-to-Business (B2B) space, this risk can be largely mitigated if the individual B2B customers are fundamentally strong and have resilient business ties with the entity. While evaluating an entity on the customer diversification parameter, ICRA does so in the context of the entity's business model—whether B2C or B2B—and factors in the interplay between customer diversification and customer quality.

Note: If an entity is dependent on a single or a limited number of counterparties and the nature of its operations constrains it from diversifying its customer base (because of the nature of the business model or otherwise), the unsupported/ base rating of the entity is significantly influenced by the customer(s)' credit profile. The final rating of the entity, however, could draw further support from a strong parent/ promoter group who could be expected to provide extraordinary financial support to the entity, should there be a need.

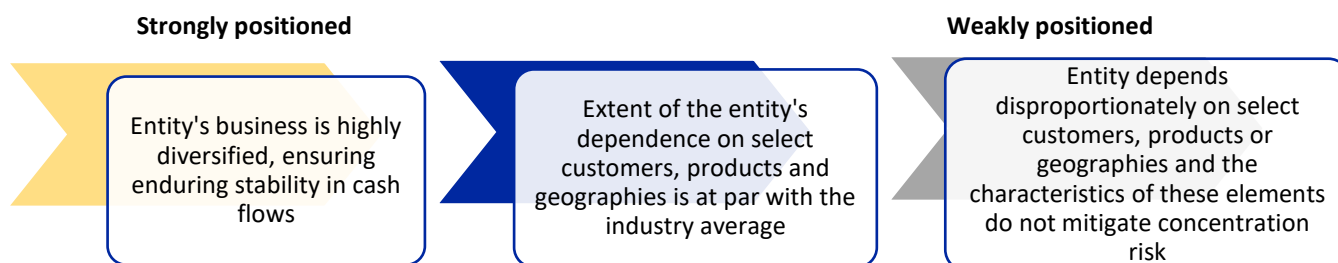
Geographical Diversification: An adequate degree of geographical diversification reduces an entity's vulnerability to (i) variability in demand in a single region, and (ii) demand disruptions caused by force majeure events or adverse regulatory actions in a single geography. One of the lesser emphasised merit of dealing with customers across multiple geographies, say domestic and overseas, is that it likely pushes entities to adopt the best practices in the areas of production, engineering, quality control and so on, and in the process improve their overall competitiveness. On the flip side though, a multiple country business profile exposes an entity to currency risks. It could be argued that an entity that is concentrated towards a high growth single geography is better off than an entity that is geographically well-diversified but faces demand weakness in select geographies. However, ICRA does not view the latter unfavourably as an entity which is diversified across geographies with healthy long-term demand potential, is more likely to demonstrate a balanced performance over a longer time horizon, even if there are intervening periods of lower average growth.

Product Diversification: Diversification of the product or service lines is often an essential part of an entity's growth and risk mitigation strategy. Such diversification could be aimed at selling a larger variety of products to the same set of customers (aimed at increasing the share of wallet) or towards expanding the breadth of products to target new customer segments, or towards extending the existing strong brand to enter new product segments. ICRA favourably considers entities that have a more comprehensive range of products or services among the peers and thereby derive revenues and profits from a broader set of offerings than the industry average. However, ICRA does not draw much comfort if only the array of products is wider with all or most of the products exhibiting a weak competitive position.

Supplier Concentration: In some cases, where the sources of raw materials or any factor of production are limited or concentrated among a few suppliers globally, supplier concentration risk becomes a prominent risk factor. An entity having

such dependence could face a disruption in its own business following any interruption in its supply chain. In such cases, ICRA endeavours to understand the fault lines in the supply chain and the risk mitigation that the rated entity puts in place (such as maintaining inventory cushions) to minimise business loss owing to crystallisation of such risks.

Assessment of Diversification



Quality of Assets

The ability of an entity to generate returns is strongly influenced by the quality of its assets. This section describes the key factors that ICRA looks at to evaluate business risk that emanates from asset risk. If the risk of the assets (like debtors, inventory and fixed assets) turning bad or generating sub-optimal returns is high, the entity concerned would face challenges in paying-off its debt and other creditors.

Debtors: For evaluating the quality of debtors, ICRA assesses the counterparty credit risk, debtor ageing, debtor concentration and correlation (if any) among the debtors such as when a substantial proportion of the debtors belong to the same promoter group. If the quality of debtors is assessed as weak, there would be a likelihood of write-offs, and the liquidity of the entity could be stretched. If debtor days of entities appear relatively high, ICRA appropriately factors in the reasons behind the same. For instance, if the reported debtor days appear relatively high because a large portion of the annual sales happen towards the end of the reporting period, it need not necessarily reflect a high business risk.

Inventory: The inventory reported by an entity is evaluated in relation to the nature of the business. For a cotton spinning mill, the volume of finished goods is generally the highest in March and the lowest in September. For an auto ancillary, the finished goods inventory is generally low as manufacturing is done as per the requirements of the Original Equipment Manufacturers (OEMs) while a sugar mill does not maintain much raw material stock. Likewise, a business might be structurally required to maintain high inventory, like it is generally the case with basmati rice mills. An entity that maintains high inventory compared to its peers might be exposed to inventory write-down risk because of either a correction in the prices of the finished inventory (unless the inventory is order-backed), or because of inventory obsolescence. Moreover, a trend in rising inventory levels for an entity could be a sign of weakening business position or a change in the business model, making it a reason to evaluate the causes therein.

Fixed Assets: ICRA evaluates whether an entity's fixed capital intensity is at a material variance compared with its peers and if so, the reasons thereof. The ratio of Operating Income to Gross Block is one of the metrics used to assess the same. From a rating perspective, the fixed assets are worth largely to the extent that they can generate cash flows. Inefficient project execution leading to time and cost overrun, invariably doesn't increase the potential cash flows that could be generated from such assets. This would tend to depress the Return on Capital Employed (RoCE) of such entities, compared with peers, and could weight on the rating.

Financial Risk Assessment

ICRA analyses the long period past financial performance trends and estimates future financial performance to assess the financial risk exposure of an entity. The financial metrics provide a useful reference not only to evaluate the performance trends of an entity over a given time horizon, but also enable a comparison with its peers. The financial risk assessment is not done in isolation but in conjunction with the business and the industry risks that the entity is exposed to. An entity with low exposure to business and industry risks would generally have stable cash flows and thus would have a higher tolerance to operate with a relatively modest financial risk profile. In contrast, entities that are exposed to high business and industry risks need to maintain a stronger financial risk profile to have adequate cushion to manage cash flow volatility. The various financial metrics assessed by ICRA could be divided into five categories viz., Profitability, Leverage, Coverage, Liquidity and Cash Flows. This document provides a summary of these ratios. For a more detailed description, readers may refer to the document titled, Financial Ratio Analysis published on ICRA's website. Depending on the uncertainty around how the various credit drivers could evolve in the future, ICRA also carries out sensitivity analysis to assess the impact of the key variables on the various financial metrics.

Profitability and Earnings Stability

Profitability is a measure of the earnings generated by an entity in a given time period in relation to the resources deployed or alternatively a measure of how efficiently an entity sweats/ utilises its assets. Profitability can be influenced by multiple factors, including those that are firm specific or are related to the industry, economy or regulations. From a rating perspective, both the level as well as the stability in profitability metrics matter. A consistent track record of higher profitability shown by an entity compared with its peers reflects a superior competitive position arising from one or more factors, including greater brand strength, better distribution reach, attractive product profile, technological superiority or higher cost efficiency (*operating or capital*). Entities with higher profitability than peers are likely to show stronger resilience against economic downturns and are more likely to generate relatively higher internal resources for re-investment and debt servicing, and also attract fresh capital.

The various ratios which are typically used by ICRA to analyse an entity's profitability are presented in the Table below. While ratios such as Operating Profit Margin and Net Profit Margin are assessed to compare an entity against its peers, these ratios are typically driven by the sector in which the entity operates. On the other hand, the RoCE is generally a sector-agnostic metric and useful for cross-sector comparisons.

Ratio	Computation
Operating Profit Margin	(Operating Profit) / (Operating Income)
Net Profit Margin	(Net Profit after Tax) / (Operating Income)
RoCE	(Profit before Interest and Tax) / (Average Capital Employed)

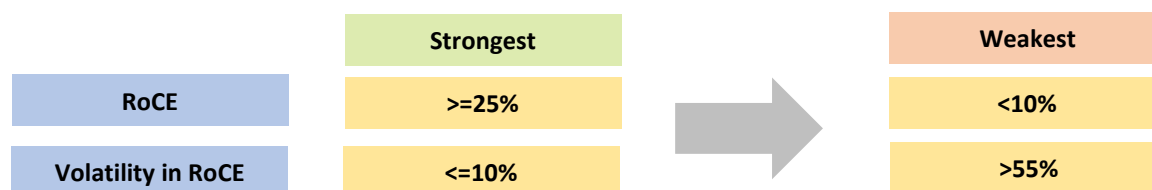
Operating Income = Revenues from Operations (net of indirect taxes)

Operating Profit = Profit before Depreciation, Amortization, Interest, Tax and Non-Operating or Non-Recurring Income and Expense

Capital Employed = Total Debt + Net Worth + Deferred Tax Liability – Capital Work in Progress – Capital Advances

Validation of Business Risk through Profitability Metrics

[Indicative Metrics³]



When ICRA undertakes a comparative analysis of the level of the RoCE demonstrated by entities, it is done against the backdrop of the fundamental business risk attributes of the entity, besides the track record of volatility in the RoCE shown over the years.

- » An entity may be commanding a relatively high RoCE, but that might be because it operates in a relatively high-risk business. This necessitates drawing out the meaning of RoCE on a business risk-adjusted basis.
- » A track record of a highly volatile RoCE shown over the years could reflect an infirm business position.

An entity's ability to consistently generate the RoCE over and above its cost of capital reflects well on its long-term business viability. However, the RoCE of an entity may slide in a given year if it undertakes a large capital expenditure (capex) programme or pursues an acquisition. ICRA does not necessarily perceive this as a negative, if in its assessment, the capex or the acquisition, is likely to generate adequate returns in the future.

Leverage

Financial leverage is a measure of an entity's dependence on borrowed funds. Lower the dependence on borrowings, the lower (better) the leverage. When an entity borrows, it is obliged to pay both interest as well as principal to the lenders as per a defined schedule. This increases the fixed cost burden on the borrowing entity and in the limiting case, increases the default risk. While high leverage may mean high risk from a credit perspective, it is an often-adopted course by shareholder-oriented managements, given that high leverage, in good times, leads to high returns on equity capital. An entity's financial leverage could thus be a function of its management's financial policy and risk tolerance, besides being a point-in-time reflection of an entity's business and financial choices. An entity with lower leverage is better equipped to withstand volatility in cash flow generation in situations of economic downturn, competitive challenges, unexpected costs, changing consumer preferences, or regulatory changes.

The various ratios which are typically used by ICRA to analyse an entity's financial leverage are:

Ratio	Computation
Gearing	(Total Debt) / (Tangible Net Worth)
Indebtedness Ratio	(Total Outside Liabilities) / (Tangible Net Worth) (Total Outside Liabilities) / (Market Capitalisation)
Debt to Profit Ratio	(Total Debt) / (Operating Profit)
Accruals to Debt Ratio	(Net Cash Accruals) / (Total Debt)

Total Debt = Long-Term and Short-Term Debt (including subordinated debt) + Off-Balance Sheet Liabilities (such as receivables discounted) + Debt component of hybrid instruments as assessed by ICRA based on the instruments' contractual terms

³ The indicative financial metrics mentioned here and elsewhere in the document are intended to provide a broad overview to the readers regarding what ICRA generally considers as 'relatively strong' or 'relatively weak' metrics. It is, however, possible that an entity has relatively weaker metrics on one or more financial parameters, but its credit risk is assessed to be low because of other mitigating factors, including (but not limited to) stronger metrics on other financial parameters, a healthy business risk profile, strong financial flexibility or a strong promoter group that is willing to extend distress support to it.

$\text{Shareholder's Funds or Tangible Net Worth} = \text{Net Worth} - \text{Revaluation Reserves} + \text{Minority Interest} + \text{Share Application Money} + \text{Equity component of hybrid instruments as assessed by ICRA based on the instruments' contractual terms}$
 $\text{Total Outside Liabilities} = \text{Total Debt} + \text{All Long-Term and Short-Term External Liabilities such as Deferred Tax Liability, Creditors and Other Liabilities}$

$\text{Net Cash Accruals} = \text{Net Profit after Tax} + \text{Depreciation} - \text{Dividend on Preference and Equity Shares}$

Assessment of Leverage

[Indicative Metrics]

	Strongest		Weakest
Indebtedness Ratio	$\leq 0.9x$		$> 3.0x$
Debt to Profit Ratio	$\leq 0.5x$		$> 5.0x$

Coverage

Coverage is a measure of an entity's debt-servicing ability and is calculated as the ratio of profits to the debt servicing obligations in a given time period. Higher the ratio, higher the cushion available with an entity to withstand variability in profits for making good its financial obligations. Coverage is a function of an entity's profits, leverage and debt characteristics (in terms of cost of debt and repayment schedule). Entities with higher profitability and lower leverage will generally have better coverage ratios and thereby healthier financial risk profiles. However, there may be exceptions to this such as in project funding structures for long-dated assets like road projects, power projects or hotel projects, where the loan tenures are typically long. In such cases, even though profits may be small in the initial years and leverage ratios may appear onerous, the fact that the long-term debt contracted may have a sufficiently long period of moratorium (and interest pay-out during the construction phase may also be funded through the project debt) along with a ballooning and a spread-out repayment schedule, the coverage ratios may be adequate.

The various ratios which are typically used to analyse an entity's coverage metrics are:

Ratio	Computation
Interest Coverage Ratio	$(\text{Operating Profit}) / (\text{Interest expense})$
Debt Service Coverage Ratio (DSCR)	$(\text{Net Profit After Tax} + \text{Interest} + \text{Depreciation}) / (\text{Gross Interest} + \text{Repayment} + \text{Dividend on Preference Shares})$

Assessment of Coverage

[Indicative Metrics]

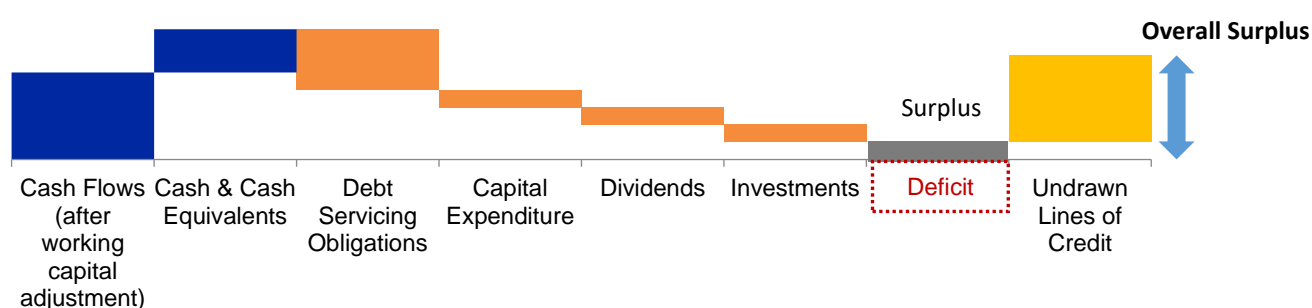
	Strongest		Weakest
Interest Coverage	$\geq 18.0x$		$< 2.0x$
DSCR	$\geq 4.0x$		$< 1.1x$

Liquidity

Liquidity is the measure of an entity's ability to meet its short-term cash obligations from various internal or external resources. Internal resources include cash flows from operations, unencumbered cash and cash equivalents on balance sheet and cash inflows expected from the monetisation of physical and financial assets. External resources include undrawn lines of credit or

equity capital. The short-term obligations include both the committed as well as the contingent claims on an entity's cash, including the debt servicing obligations, working capital requirements, capital expenditure and other investment outlays, dividend and share buyback-related outflows, besides the sudden demand arising from crystallisation of discrete events such as unfavourable outcome of an ongoing litigation. The higher the cushion available between the resources available (especially internal resources) and the obligations, better the liquidity profile of an entity. Liquidity is generally assessed in conjunction with the vulnerability of an entity to timely refinancing / renewal of short-term sources of funding. Depending upon the circumstances, an entity that has a relatively modest liquidity profile, but a strong refinancing ability may not be viewed too unfavourably. ICRA also notes that the liquidity available with an entity may be for a temporary period and hence an entity's overall policy towards maintaining adequate liquidity (given the trade-off between returns and liquidity) is accorded due importance in the analytical approach⁴.

Liquidity snapshot over any defined period



Some of the ratios that have linkages with liquidity analysis are:

Ratio	Computation
Current Ratio	(Current Assets) / (Current Liabilities)
Gross Cash Conversion Cycle	Debtor Days + Inventory Days
Working Capital Cycle	Debtor Days + Inventory Days – Payable Days
Working Capital Intensity	(Net Working Capital) / (Operating Income)

Current Assets = Cash + Inventory + Debtors + Other Current Assets

Current Liabilities = Current Portion of Long-Term Debt + Short-Term Debt (including Working Capital Debt) + Creditors + Other Liabilities

Net Working Capital = (Current Assets – Cash) – (Current Liabilities – Current Portion of Long-Term Debt – Short-Term Debt – Capital Creditors)

Cash Flows

It is cash that is required to service the obligations. A cash flow statement represents the sources from which cash is generated and its deployment. Analysed here are the trends in an entity's funds flow from operations, cash consumed to fund the working capital, the retained cash flows after paying out dividends or carrying out share buy-backs, and the free cash flows after meeting debt repayment obligations and capital expenditure needs. The cash flow analysis helps in understanding the external funding requirements that an entity has, to meet its maturing obligations.

⁴ For more details on how ICRA assesses liquidity, readers may refer to the document titled, "Liquidity Analysis of Entities in the Non-Financial Sector" published on ICRA's website

The various cash flow measures assessed by ICRA are:

Cash flow measures	Computation
Fund Flow from Operations (FFO)	Operating Cash Flows Less Interest Paid
Cash Flow from Operations (CFO)	FFO Less Cash Consumed to Fund the Working Capital Needs
Retained Cash Flows (RCF)	CFO Less Dividends Paid
Free Cash Flows (FCF)	RCF Less Capital Expenditure Less Debt Repayments
Cash Flow Ratios	Ratio of FFO to Total Debt, and Ratio of RCF to Total Debt

Other Elements of Credit Risk Assessment

Project Risks

A project entity or an entity undertaking a large-sized project capital expenditure (capex) is exposed to other risks, including cost and time over-runs. To ascertain project risks, ICRA endeavours to understand the entity's rationale for undertaking new investments. The risk profile could be different, depending on whether the new project is a case of related diversification or an unrelated diversification and the degree of its complexity. The other factors that are assessed include: (i) permitting risks, (ii) track record of the management in project implementation, (iii) experience and track record of the technology supplier/contractor executing the project, (iv) extent to which the capital cost is competitive, (v) financing arrangements in place, and (vi) raw material linkages etc. The impact of project risk on the rating is influenced by the scale of projects being undertaken or planned to be undertaken in relation to the size of assets and cash flows of the entity's existing operations.

Tenure mismatches and risks relating to refinancing and interest rates

Large dependence on short-term borrowings to fund long-term investments or other long-term funding requirements can expose an entity to significant re-financing risks, especially during periods of tight systemic liquidity. ICRA evaluates the extent of such mismatches and the mitigating factors therein. One source of mitigation could be the existence of adequate buffers of liquid assets/ committed bank lines to meet short-term obligations. Another source of mitigation could be the entity's strong financial flexibility to be able to garner fresh funds at a short notice or a potent ability to refinance. Further, ICRA evaluates the extent to which an entity might be impacted by movement in interest rates.

Financial Flexibility

An entity's financial flexibility (or the lack thereof) is reflected in its ability to access the capital or the money markets at short notice, attract diverse and marquee investors and enjoy the confidence of banks, financial institutions and intermediaries. A strong financial flexibility allows an entity to raise fresh borrowings or refinance existing ones in quick time and whenever required. Financial flexibility could emanate from factors such as an entity's large scale of operations with strong financials, large unencumbered cash flows (such as rental income, annuity payments in road projects), unencumbered assets and the flexibility to borrow against such assets, or strong parentage or linkages with a strong group.

In contrast, among the various measures of an entity's depleting financial flexibility, one relates to a high share of pledged promoter shareholding. A sign such as this may imply that the entity might be persuaded to distribute high dividends or support the promoter group through other means to the detriment of its own credit profile. If the promoters fail to repay their loans (availed by pledging of shares) or top up collateral when required, the lenders could sell the pledged shares. In some cases, this could trigger a change-of-control clause in the rated entity's bond indentures or loan documents and require it to redeem its debt ahead of schedule, creating a liquidity squeeze, besides affecting fresh capital-raising ability.

Foreign Currency-Related Risks

Such risks arise if an entity's primary costs and revenues are denominated in different currencies. Examples include entities selling in the domestic market but having large imports, or export-oriented units operating largely as per the domestic cost structure. ICRA assesses the degree to which such entities may be able to pass on the currency risk to their customers by adjusting their product/ service prices. This assessment is done by considering the materiality of the net foreign exchange earnings or expenditure in relation to the total revenues. Foreign currency risk for an entity is measured by considering its unhedged net liabilities [= foreign currency receivables – foreign currency payables – foreign currency debt]. ICRA's analytical focus is on assessing the magnitude of such exposure, relative to the entity's profits.

Accounting Quality

ICRA reviews the accounting policies, notes to accounts, auditors' comments and other disclosures that are parts of the Annual Report of a rated entity. Deviations, if any, from the accounting standards/ practices are assessed and the financial statements of the entity are adjusted to reflect the impact of such deviations.

Contingent Liabilities/ Off-Balance Sheet Exposures

The likelihood of devolvement of contingent liabilities/ off-balance sheet exposures and the financial implications of the same are evaluated for this.

Event Risks

ICRA recognises the possibility of events such as unrelated diversification, mergers and acquisitions, business restructuring, asset sales and spin-offs, litigations, equity infusion and refinancing, which could have a material impact on the credit profile of an entity. Incorporating the impact of such discrete events in the credit rating, from the beginning, is often difficult. Depending on whether and when such events occur, the rating opinion could be substantially different. To take rating decisions in such cases, ICRA applies its analytical judgment based on the rated entity's track record, the credibility of the management and the experience of having seen similar situations play out in other entities. However, given the nature of such events, it is possible that the rating may undergo a material change later, upon the occurrence of the event.

Parentage

While the credit rating of an entity is a function of its standalone credit profile, in certain cases, the entity's credit quality can also be driven by the relationship with its parent or the promoter group (henceforth referred to as the parent). If the parent's credit profile is relatively stronger than the rated entity, ICRA assesses the ability and the likelihood of the parent extending extraordinary support to the entity. Support here means financial support from the parent expected to be available to the entity in the form of loans, equity, extended credit period, advances etc in times of credit or liquidity stress on the entity. It does not signify operational support in the form of new business opportunities, technology sharing, distribution network sharing and so on as these aspects are factored in the standalone credit profile assessment itself. It may be noted that promoters in their individual capacity, or private equity firms/ other financial investors are generally not treated as parents for assessing the likelihood of extraordinary financial support coming in. If the parent's credit profile is relatively weaker than the rated entity, the entity's rating may be lower than what its standalone credit profile assessment would have merited. This is given the possibility that the entity may at some point of time be bound to extend financial support to its weaker parent, possibly to the detriment of its own credit profile⁵.

⁵ For more details, readers may refer to the documents titled, "Rating Approach–Implicit Parent or Group Support" and "Rating Approach–Explicit third-party support", available on ICRA's website.

Assessing the Likelihood of Support from the Parent to the Rated Entity

Parameter	Description		
Form of Support	Is there an explicit form of support, such as a Letter of Comfort or a guarantee for some of the debt instruments of the entity?		
	Is there a past track record of support ensuing from the parent to the rated entity?		
	Has the parent expressed its intent to extend support to the rated entity, if a need arises?		
Reputation Sensitivity	Does the parent have high reputation sensitivity that it would be willing to extend extraordinary support to the rated entity when the latter faces stress?		
Strategic Importance	Is the rated entity in a line of business that the parent considers to be a priority as it offers strong long-term strategic benefits in the form of business, product or geographical diversification?		
Business Linkages	Are the operations of the parent and the rated entity highly integrated, such that if there is a disruption in the operations of the rated entity, it would in turn lead to a disruption in the operations of the parent?		
LOW	MODERATE	HIGH	VERY HIGH

Management Quality Assessment

In addition to the industry, business and financial risk analysis, all credit ratings incorporate an assessment of the quality of the rated entity's management and its financial policies.

Quality of Management and Financial Policies

As a part of its process, ICRA undertakes discussions with the rated entity's management to understand its views on past performance as well as its future plans and strategies, besides the outlook on the industry. Some of the points assessed are:

- » Experience of the promoter/ management in the industry
- » Commitment of the promoter/ management to the rated entity
- » Risk appetite of the promoter/ management and risk mitigation plans
- » Policies on leveraging, managing interest rate and currency risks
- » Management's past success in introducing new projects and managing changes in the external environment
- » Management's plans on new projects, acquisitions and expansions
- » Track record of balancing the interests of shareholders, creditors and other stakeholders

Periodic interactions with the management help ascertain the shifts, if any, in their financial policies.

Assessment of Environmental, Social and Governance (ESG) Risks

The assessment of ESG risks by ICRA involves a broad range of considerations that pertain to the sustainability of an entity with focus on aspects that can have a material impact on its credit quality. While the E&S risks tend to be both sector-related as well as entity-specific and could be driven by external factors such as regulations or demographic changes, the G risks are largely entity-driven. The impact of the E&S risks on an entity's credit profile tends to be asymmetric. If the ESG risks are material but unmitigated, these generally translate into pulling down the rating, but generally the ratings are not pushed up even when the ESG context is favourable.

Environmental (E) and Social (S) Risks

As this methodology highlights, while undertaking credit assessment of entities, ICRA seeks to incorporate all relevant credit considerations into its rating decisions, while taking a forward-looking view on the risks and the mitigating elements. The

relevant credit considerations include (sometimes overtly, sometimes covertly) the E&S factors that could affect the rated entity/ transaction. While ICRA's analytical approach does not explicitly disaggregate these risks to assess their impact on the rating, these risks are often assessed broadly, if not precisely. Further, it is not always feasible to fully or precisely disaggregate the sub-components of E&S risks in credit analysis since these considerations often tend to overlap⁶.

That said, the materiality of the E&S risks and the time horizon over which they are expected to crystallise differs widely across sectors and entities. In some cases, while the E&S risks could be material, their effect on the credit profile may be muted because of other fundamental strengths of the entity. In other cases, the adverse impact of the E&S risks is expected to play out in the distant future, and hence these considerations do not necessarily weigh on the rating today—with the expectation that when these risks manifest in the distant future, the rated entity by then would possibly adapt itself by realigning its business model.

While evaluating the E&S risks, ICRA's objective is only to assess the direct and indirect risks that an entity faces and how it already is or is intending to mitigate the impact of such risks on its credit profile. As an example, ICRA only assesses whether an entity is exposed to physical climate risks (*e.g. a rice mill that is dependent on the paddy crop and hence faces direct climate risks*), or carbon transition risks such as those arising from changes in regulations (*e.g. an auto ancillary that makes parts for gasoline engines facing the risk of electrification of cars*) or other environmental and social risks; and seeks to understand the various mitigation and adaptation approaches that the entity is implementing to mollify these risks. Notwithstanding the above, as an example, it is possible that even if an entity A has a higher carbon footprint than entity B, it does not materially affect ICRA's credit opinion on entity A. This is because ICRA's credit opinion on an entity considers a wide gamut of credit-relevant factors and the E&S factors are only one among those.

Governance Risks

A sound corporate governance structure attempts to make clear the distinction of power and responsibilities between the Board of Directors and the management. The constitution of an entity's Board and the Board of Directors' participation in strategy formulation, besides the entity's adherence to legal and statutory compliance requirements are factored in during credit assessments. ICRA seeks to gain a qualitative understanding of an entity's commitment to following transparent and credible practices by the way its financial statements are reported, their level of disclosures, consistency in communication and the openness about sharing information during the credit rating exercise. Besides, the corporate group structure (whether simple or complex), the rated entity's related party transactions and instances of supporting group entities at the expense of debt holders are assessed.

Summing Up

ICRA's credit ratings are a symbolic representation of its opinion on the relative credit risk associated with the rated entity. This opinion is arrived at following a detailed evaluation of the rated entity's industry, business and financial risks, its likely cash flows and the adequacy of such cash flows vis-à-vis the debt servicing obligations and other funding requirements. ICRA's rating approach also involves an assessment of the entity's management quality and governance practices. In addition to these considerations, an entity's rating may also be influenced by its ownership, the nature of linkages with its parent or group entities, degree of financial flexibility, the corporate legal structure, track record of operations and that of debt servicing, and vulnerability (if any) to discrete event risks.

⁶ For example, carbon-reduction measures by an entity would have positive implications for the health and well-being of the community (an S factor) as well as for reducing greenhouse gas emissions (an E factor).

ANNEXURE

Summary of rating factors and an example to illustrate the key building blocks of a credit rating

		Strong			Comfortable			Adequate			Moderate			Weak		
Industry Risk	Industry Position															
	Scale and Market Share															
Business Risk	Pricing Position															
	Product Diversification															
	Customer Diversification															
	Geographic Diversification															
	Profitability and Earnings Stability															
Financial Risk	Leverage															
	Coverage															
		Enhance					Support/ Neutral					Hinder				
	Diversification															
Do these factors enhance or hinder the credit profile?	Refinancing Dependence, Liquidity and Financial Flexibility															
	Currency Risk															
	Financial Policy															
	Management, Governance & Reporting															
		Very High				High			Moderate				Low			
Parent Support	Likelihood of Parent Support															
	Rating of Parent	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B/ C category	
	Final Rating	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B/ C category	

The above graphic is only for illustration purpose and does not represent a rating output from a formulaic model. The ratings assigned by ICRA are determined by Rating Committees based on both quantitative and qualitative considerations.

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About ICRA Limited:

ICRA Limited was set up in 1991 by leading financial/investment institutions, commercial banks and financial services companies as an independent and professional investment Information and Credit Rating Agency.

Today, ICRA and its subsidiaries together form the ICRA Group of Companies (Group ICRA). ICRA is a Public Limited Company, with its shares listed on the Bombay Stock Exchange and the National Stock Exchange. The international Credit Rating Agency Moody's Investors Service is ICRA's largest shareholder.

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