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This rating methodology updates and supersedes ICRA's earlier methodology document on this subject, published in March 2024. While this revised version incorporates a few additional clarifications and editorial changes, ICRA's overall approach to rating primary non-ferrous metal manufacturers remains materially similar.

**Overview**

Non-ferrous metals comprising aluminium, copper and zinc find wide applications in the electrical, construction, packaging, transport, consumer durable and renewable energy (wind turbines/solar modules) segments. The aggregated domestic consumption of the above metals recorded a compounded annual growth rate (CAGR) of ~6% over the past ten years and stood at ~8 million metric tonnes (MMT) in FY2025. On the supply side, the industry is dominated by a few large players, given the high capital intensity in the business. ICRA notes that in the recent fiscals, the domestic consumption has outpaced the domestic production, primary for zinc and aluminium. Hence, a sizeable portion of these metals is consumed domestically.

**Rating Methodology**

Given the cyclicity inherent in primary non-ferrous metal sectors, ICRA’s rating methodology for primary manufacturers focusses on the extent of the impact of the industry cycle on each manufacturer, which could vary depending on the cost structure, since individual players are price-takers in globally traded non-ferrous metals. An entity’s cost position, in turn, is a derivative of the following factors – cost of raw material and power, extent of integration in metal production and technology used.

In addition, the market position derived from scale of operation and product-market diversification, financial health as well as management depth are also key success factors. Moreover, raw material security is a key determinant of a player’s business performance. Consequently, access to good quality and reliable sources of ore mitigates the operating risks. Manufacturers are also exposed to regulatory risks in the form of applicable import and export duty structures in the industry.

This rating methodology aims to help issuers, investors and other market participants understand ICRA’s approach to analysing quantitative and qualitative risk characteristics risks that are likely to affect rating outcomes in the primary non-ferrous metal industry<sup>1</sup>.

<sup>1</sup> This methodology encompasses primary aluminium, copper and zinc manufacturers. Primary metal manufacturers are companies which extract metals from ores and use them in smelters to separate liquid metal and impurities.

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.

For analytical convenience, the key factors analysed by ICRA are grouped under the following broad heads — Industry Risk Assessment, Business Risk Assessment, Financial Risk Assessment, Other Elements of Credit Risk Assessment, Management, Quality, and Assessment of Environmental, Social and Governance (ESG) Risks.

#### Industry risk assessment

- International price trends
- Domestic demand-supply trends
- Regulatory risks

#### Business risk assessment

- Cost competitiveness
- Scale of operations
- Location, and product market diversity

#### Financial Risk Assessment

- Profitability
- Leverage
- Coverage
- Liquidity
- Cash flows

#### Other Elements of Credit Risk Assessment

- Project risks
- Financial flexibility
- Foreign currency-related risks
- Tenure mismatches and risks relating to interest rates and refinancing
- Debt servicing track record
- Contingent liabilities/ Off-balance sheet exposures
- Event risks
- Parentage

#### Management Quality Assessment

#### Assessment of Environmental, Social and Governance (ESG) Risks

- Environmental (E) and social (S) risks
- Governance practices

## Industry Risk Assessment

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### International Price Trends

The non-ferrous metals industry exhibits cyclical characteristics reflected in volatile prices, which cause wide fluctuations in the profitability and cash flows of individual producers, increasing their business risks. The non-ferrous metal prices in India are largely benchmarked to the London Metal Exchange (LME) prices, which are influenced by the international demand-supply position. Hence, ICRA closely monitors the consumption trends in the major non-ferrous metal markets as well as the production levels of the global players. ICRA also keeps track of the global inventory position of these metals, which has an effect on their prices in the spot market. The commodity price risk may be hedged through entering into derivatives contracts on commodity exchanges.

### Domestic Demand-Supply Trends

The demand for non-ferrous metals in India historically has come from power, construction, automobile, packaging, consumer durable and renewable energy (wind turbines/solar modules) sectors. Import of scrap and other metal products results in lower capacity utilisation of the domestic entities; thus, an increase in scrap import is a threat to the primary domestic entities. Along with this, ICRA evaluates the share of the exports from India. Metals sold in the domestic market typically have a premium over the export markets because of the duty protections, thus providing higher margins. Given the high capital intensity of operations, supply is restricted to the hands of a few large players in India.

### Regulatory Risks

A number of Indian primary non-ferrous metal players have captive mines for their raw material/ fuel requirements. Regulatory risks related to Government policies on land acquisition, environmental and forest clearance, etc, are some of the risks relating to mining operations. Consequently, ICRA evaluates such risks while analysing the credit profile of entities that have captive mines. Moreover, the profitability of domestic manufacturers is dependent on the applicable royalties on mining of minerals as well as import and export duty structures. The domestic price of non-ferrous metals is dependent on the applicable import duty. Hence the prevailing duty regime is a key regulatory risk relevant for the industry. ICRA notes that industry is also exposed to regulatory actions taken by importing countries such as European Union (EU)'s Carbon Border Adjustment Mechanism (CBAM) policy, requiring EU importers of aluminium to purchase CBAM certificates corresponding to the embedded emissions above the EU Emission Trading System (EU-ETS) benchmark levels. In case a similar approach is followed by other regions, the same could potentially cause a loss of market share in the global trade for the domestic producers, given their relatively higher emission intensity compared to producers in competing countries

## Business Risk Assessment

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### Cost Competitiveness

Given the commodity nature of the non-ferrous metals' business, cost efficiency in the production of these metals becomes a key factor determining the producer's fundamental credit quality. Since all producers are necessarily price-takers, profitability of individual players depends upon their respective positions on the industry cost curve, which is largely determined by their cost of raw materials, cost of energy, the technology used and the extent of vertical integration. However, among the three metals, the cost of energy is the highest in aluminium on a per-tonne basis, given the power-intensive nature of aluminium production against higher raw material cost in case of copper and zinc.

**Sourcing of ore/ yield/ and reserves:** Entities with captive mines of ores typically not only have a lower raw material cost but are also secured against raw material availability risks. Moreover, ores with richer metal content lead to a lower overall cost of metal production compared to inferior grades of ore. ICRA, therefore, views the availability of captive sources of good-quality ores to a primary producer favourably. Mines close to the refinery help to keep carrying costs low, which has a cascading effect on the overall cost of production. ICRA, therefore, analyses the sourcing pattern of ore and its impact on the manufacturers' production costs. Moreover, the life of the mine, based on its reserves, is noted to evaluate the raw material security from the given mine.

**Energy Costs:** Energy cost is the other major driver of the overall cost efficiency of non-ferrous metal manufacturers. Among the three metals, aluminium production is the most energy-intensive, requiring ~14,500 units<sup>2</sup> of electrical energy for 1 MT of aluminium production, against ~1,100 units for production of copper and ~3,500 units for zinc. Typically, power and fuel costs of an integrated aluminium player account for around 30% of its operating income against nearly 15% and 8% for an integrated copper and zinc player, respectively. Hence, a cheap source of electricity keeps the overall production costs low. While the focus remains on transitioning to renewable sources of energy, in India, currently, a large portion of the aluminium manufacturing units have captive power plants, fuelled by coal. Given that cost efficiencies are materially influenced by the availability of good quality coal at competitive rates, ICRA assesses the extent to which an entity has such access. The analysis involves assessing the proportion of coal sourced by the rated entity through captive mines, or through linkages secured with Coal India Limited or other miners, or coal sourced via e-auctions or imports.<sup>3</sup>

**Technology:** The technology used in metal production has a critical impact on the overall cash cost of production of non-ferrous metals. For instance, recent capacities commissioned by the aluminium players have superior energy efficiency and are less polluting. Moreover, a modern plant typically uses allied facilities for by-product recovery (silver and lead during production of zinc, gold during production of copper), which provides an extra avenue of income to the manufacturers, thus bringing down production costs on a net basis.

**Contribution Analysis:** To the extent of data availability, ICRA assesses the contribution margins per tonne of metal sales, which captures the overall cost efficiency of the producer vis-a-vis the prevailing metal prices. While performing this analysis, gross and net contribution levels<sup>4</sup> are measured per unit of sales.

A primary metal producer, notwithstanding duty protections, needs to be globally cost competitive for it to remain profitable across business cycles. In addition to domestic supply, players are focussing on the export markets to ensure high operating rates of their capacities. ICRA, therefore, benchmarks the company's cash cost of production<sup>5</sup> against its global peers. Cash cost determines an entity's staying power in business because if price falls below this level, it starts losing cash and ultimately faces a liquidity strain.

### Scale of operations

A non-ferrous metal producer is better insulated from cyclical volatility when it has a large scale of operations and a diversified product mix. While size in itself cannot determine a player's competitive position, it confers upon it the ability to control fixed costs owing to higher economies of scale, which accrues from its size.

### Location and product-market diversity

ICRA evaluates the locational diversity of the operating assets, which mitigates the risk of potential production disruption in any given operating asset in a specific geography. Additionally, forward integration by primary players into downstream businesses<sup>6</sup> protects them against volatility risks associated with commodity metal prices to an extent. Although downstream businesses also suffer during periods of stress, such businesses display relatively lower cyclicity compared to pure primary metal businesses. Besides, since different downstream products find applications across various industries, forward integration into more value-added products enables a company to lower its dependence on any particular user industry or customer. ICRA also considers an entity's export dependence, as it diversifies the geographical reach and provides an additional market to absorb any excess domestic capacities.

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<sup>2</sup> Stated norms are representative, actual energy consumption will vary depending upon the quality of ore, efficiency of the process and equipment.

<sup>3</sup> Given the importance of assured supply of coal, aluminium players have bid aggressively for both captive coal blocks as well as coal linkage auctions in the past few years.

<sup>4</sup> Gross contribution is the contribution post incurring variable costs and fixed overheads before interest expense and taxes; net contribution is gross contribution less interest expense and taxes.

<sup>5</sup> The cash costs are the regular direct costs involved in the mining and processing of the ore and also includes cost incurred during smelting and refining process (net of any by-product credit) but generally excludes taxes, exploration, depreciation, depletion and financing cost.

<sup>6</sup> Foils, rolled products, extrusions, etc.

**Value-added product mix**

The average premium that a company earns over the price prevailing at the London Metal Exchange is used by ICRA as an indicator of the value addition by the entity from production of the primary metal. While the ingots sales are typically at prevailing LME prices, the value-added product sales (depending on the degree of value addition) command a premium over LME prices, which gets reflected in the form of higher realisations for the entity. Higher proportion of value-added product sales mix also cushions against the base metal price cyclicity to an extent.

**Summary of the Salient Business Risk Factors**

	Strongest	Weakest
<b>Raw Material Sources</b>		
<b>Source of Ore</b>	>90% From Captive mines	< 50% from domestic source (captive mines, linkages or other sources)
<b>Metal Content in Ore</b>	>50% metal content for aluminium, >10% in zinc >2% in case of copper	<30% metal content for aluminium <4% in zinc <0.5% in case of copper
<b>Proximity to Plant</b>	Mines (captive or linkages or other domestic sources) are situated within 100 kms of the manufacturing unit	Mines (captive or linkages or other domestic sources) are situated beyond 1000 kms of the manufacturing unit)
<b>Energy Costs</b>		
<b>Captive Power Plant (CPP)</b>	100% from CPP	Energy purchased from the grid
<b>Source of Coal</b>	100% of coal for CPP from captive mines/linkages	<50% of coal for CPP from captive mines/linkages
<b>Scale of Operations &amp; Market Position</b>	Revenues > Rs. 5,000 crore	Revenues less than Rs 500 crore
<b>Product and Sales Mix</b>		
<b>Value-added Product mix</b>	>15% premium over LME	<2% premium over LME
<b>Export Mix</b>	>80% domestic sales	<50% domestic sales
<b>Position in Global Cost Curve</b>	Amongst the lowest-cost manufacturers	In the fourth quartile

**Financial Risk Assessment**

ICRA analyses the long period past financial performance trends and estimates the future financial performance to assess the financial risk exposure of an entity, i.e., to evaluate the sustainability and adequacy of cash flows against its debt-servicing obligations. The financial metrics provide a useful reference not only to evaluate the performance trends of an entity over a given time horizon, but also to 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. The various financial metrics assessed by ICRA could be divided into five categories viz., Profitability, Leverage, Coverage, Liquidity and Cash Flows. Given the uncertainty around how the various credit drivers could evolve in the future, ICRA also carries out a sensitivity analysis to assess the impact of the key variables on the financial profile of the entity to evaluate its ability to withstand stress events.

**Profitability and Earnings Stability**

The profitability is a measure of the earnings generated by an entity in a given time period in relation to the resources deployed. The profitability can be influenced by multiple factors, including those that are firm-specific or 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 elevated profitability shown by an entity compared with its peers reflects a superior competitive position arising from one or more factors, including greater cost efficiency (operating or capital), higher raw material linkages, technological

superiority, etc., among others. Entities with more profitability than their 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 return on capital employed (RoCE) is unaffected by an entity’s capital structure and capital requirements and thus could be used to compare entities across diverse sectors and with different capital structures.

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)*

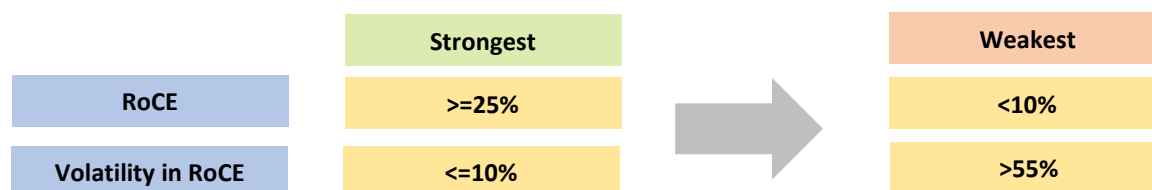
*Operating Profit<sup>7</sup> = Profit before Depreciation, Amortisation, Interest, Tax and Non-operating or Non-recurring Income and Expense*

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

Profitability of a primary non-ferrous metal producer is primarily a function of its cost structure and product mix. However, as non-ferrous metal is a cyclical industry, profitability varies significantly along the cycle. Nevertheless, producers having cost structures better than the industry median level can generally be expected to remain profitable across cycles.

**Validation of Business Risk through Profitability Metrics**

[Indicative Metrics<sup>7</sup>]



**Leverage**

Financial leverage is a measure of an entity’s dependence on borrowed funds. Entities that pursue an aggressive financial policy, including heavy reliance on debt financing, are likely to be more vulnerable to cyclical downturns than entities which employ conservative financial leverage in their business. As with companies in other commodity industries exhibiting cyclical price trends, a low financial leverage is viewed as a credit positive for non-ferrous metal players. Besides protecting the cash flows of players by imposing a lower debt service burden, especially during periods of cyclical stress, a low gearing also imparts greater financial flexibility to base metal producers to raise incremental external capital (debt or equity) for re-investment in business or to tide over temporary funding shortfalls. Given the capital-intensive nature of the business and the long gestation period associated with new capacity additions, the leverage is typically high for non-ferrous metal producers.

<sup>7</sup>Operating profit (OPBDITA) calculation includes other income which are considered core to its operations like the income from job work, scale of scrap, duty drawback, etc. However, other forms of income like the interest or dividend received are not considered under operating income though they might be recurring in nature.

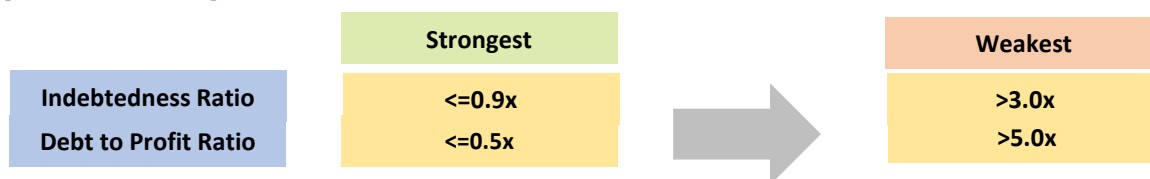
<sup>8</sup> The indicative financial metrics mentioned here and elsewhere in the document are intended to provide a broad overview to the readers regarding what ICRA generally considers as ‘relatively strong’ or ‘relatively weak’ metrics. It is, however, possible that an entity has relatively weaker 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.

Apart from gearing, ICRA looks at total indebtedness ratio (ratio of all external liabilities to shareholders’ funds), debt to profit ratio (ratio of borrowed funds to operating profits) and accruals to debt ratio (ratio of net cash accruals to borrowed funds) to ascertain the leverage of an entity.

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

**Assessment of Leverage**

[Indicative Metrics]



**Coverage**

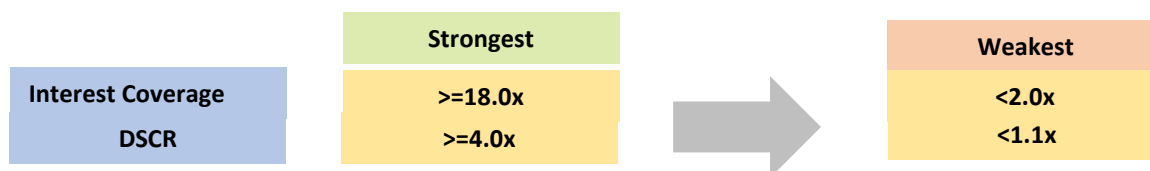
Coverage is a measure of an entity’s debt-servicing ability and is calculated as the ratio of profits to the debt-servicing obligations in a given time period. Entities with higher profitability and lower leverage will generally have better coverage ratios and thereby healthier financial risk profiles.

The various ratios which are typically used to analyse an entity’s coverage metrics are given below. While the interest coverage ratio has relevance in cases where most of the debt is non-amortising in nature, it does not reveal whether the entity would have a surplus left, after making interest payments, to repay the principal component of debt. The debt service coverage ratio (DSCR) is an indicator of an entity’s ability to meet all the fixed financial obligations on the borrowed funds. However, a ratio of less than unity does not always indicate a stressed financial position as the entity may have high financial flexibility to timely refinance or may have sufficient liquidity or internal sources to meet the debt-servicing obligations.

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

**Assessment of Coverage**

[Indicative Metrics]



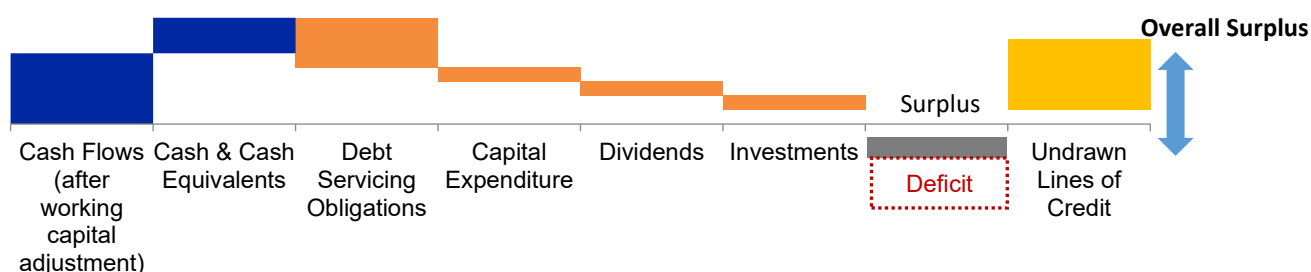
ICRA is particularly concerned with a company’s capability to honour its contractual obligations under stress conditions. The more robust a company’s performance is likely to be under a range of reasonably stressed projections, the better it is from a credit evaluation perspective.

**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 shareholder capital in the form of debt or equity. 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 the crystallisation of discrete events such as an unfavourable outcome of an ongoing litigation. Higher the cushion available between the resources available (especially internal resources) and the obligations, better is the liquidity profile of an entity. The primary non-ferrous metal industry is typically not working capital-intensive, characterised by low finished goods inventory levels and limited credit period provided to customers, driving lower short-term funding requirement. Liquidity is generally assessed in conjunction with the vulnerability of an entity to timely refinancing/renewal of short-term sources of funding. Depending on 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 approach<sup>8</sup>.

**Liquidity snapshot over any defined period**



**Cash flows**

Since the prime objective of the rating exercise is to assess the adequacy of the entity’s debt-servicing capability, ICRA draws up projections on the likely financial position of the entity under various scenarios. Besides, ICRA takes into account the commitments of the company towards other group companies, new ventures, and its investments in subsidiaries/SPVs. Subsequently, future cash flows are projected after considering the company’s capacity utilisation levels and the likely prices of raw materials and finished products, the growth it envisages for itself, debt repayment schedule, its funding requirements, and the funding options available to it. These cash flows are then used to determine its future debt servicing capability under various scenarios. A detailed sensitivity analysis on relevant operating parameters is also carried out to test the adequacy of cash flows in various scenarios.

**Other Elements of Credit Risk Assessment**

**Project Risks**

Primary non-ferrous metal capacities are highly capital-intensive. Given the high capital intensity of projects, ICRA evaluates the various risks associated with large projects, including completion, funding, technology and offtake risk, and examines the impact of the same on the entity to ascertain its credit rating. ICRA also factors in the past experience of the management in commissioning large projects in a timely manner.

**Tenure mismatches and risks relating to refinancing and interest rates**

Major dependence on short-term borrowings to fund long-term investments or other long-term funding requirements can expose an entity to significant refinancing 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

<sup>8</sup> 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.

liquid assets/ committed bank lines to meet short-term obligations. Another source of mitigation could be the entity's strong financial flexibility 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 a 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 the existing debt in quick time and whenever required. Financial flexibility could arise from factors such as an entity's large scale of operations with strong financials, large and unencumbered cash flows (such as rental income), unencumbered assets and the flexibility to borrow against such assets, or strong parentage or linkages with a strong group.

In contrast, one of the various measures of an entity's depleting financial flexibility 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. Financial flexibility could also be impacted in cases of adverse industry developments, weakening business profile, or management and governance concerns, which could translate into a sharp decline in market capitalisation or spike in bond yields and consequently constrain an entity's ability to raise fresh capital or materially increase its cost of capital.

#### Foreign currency risks

The manufacturing costs of a domestic primary non-ferrous metal producer are incurred primarily in the domestic currency. On the other hand, selling prices are linked to the exchange rate and benchmarked against the landed cost of imports, even if the company sells its produce within the country. This exposes the industry to the fluctuations in foreign currency exchange rates. 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.

#### Contingent liabilities/off-balance sheet exposures

ICRA analyses the likelihood of devolvement of contingent liabilities/ off-balance sheet exposures and its impact on the entity's financial obligations while factoring in mitigants such as a strong liquidity cushion.

#### Accounting Quality

ICRA reviews the accounting policies, notes to accounts, auditors' comments and other disclosures that are part 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 where feasible, to reflect the impact of such deviations. Significant deviations may be indicative of weak corporate governance practices in the entity.

#### 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. 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 the financial support from the parent, which is expected to be available to the entity such as loans, equity, extended credit period and advances, 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 profile<sup>9</sup>.

## Management Quality Assessment

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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

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

## Assessment of Environmental, Social and Governance (ESG) Risks

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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

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<sup>9</sup> 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.

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 overlap<sup>10</sup>.

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 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 technology or regulations (e.g., an auto ancillary that makes parts for gasoline engines facing the risk of electrification of cars) or other environmental as well as social risks. ICRA seeks to understand the various mitigation and adaptation approaches that the entity is implementing to mitigate 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.

#### Environmental considerations

The manufacturing of non-ferrous metals is an energy-intensive process and requires a substantial use of fossil fuels, which results in greenhouse gas emissions, industrial waste generation and environmental pollution. Increasing regulatory requirements to reduce greenhouse gas emissions and stricter air pollution standards may lead to higher costs for manufacturers in the medium term. This demands a greater focus on reducing the carbon footprint through various technological interventions or increasing the share of renewables in the energy mix, or the setting-up of carbon capture infrastructure and storage units, etc, to name a few. This transition could entail a significant investment for base metal manufacturers. Further, most of the mining activities leave a negative impact on the local ecology, resulting in health hazards. To limit its adverse environmental impact, the mining sector could encounter increasing regulatory oversight. Such measures could increase the cost of doing business. Also, on the operating side, following a rise in global temperatures, the increased incidence of extreme weather events, like floods, wildfires and other natural calamities, could cause greater incidences of production disruptions, much higher than historical average trends affecting the availability of minerals.

#### Social considerations

Social risks for non-ferrous metal entities manifest from health and safety considerations of employees involved in the mining and manufacturing activity. Casualties/Accidents at operating units due to gaps in safety practices could cause production disruptions and invite penal actions from regulatory bodies. The sector is exposed to labour-related risks and risks of protests/social issues with local communities, which might affect expansion/modernisation plans. Also, the adverse impact of environmental pollution in nearby localities could trigger local criticism. Also, the manufacturing plants require vast tracts of land. Therefore, rehabilitation and resettlement (R&R) challenges associated with acquisition of large land parcels, especially in proximity to densely populated areas, remain an important risk that greenfield non-ferrous metal projects encounter frequently. R&R issues could delay project implementation schedules and push up project costs.

#### Governance risks

A sound corporate governance structure should clearly delineate the roles and responsibilities of the Board of Directors and the management. The composition of an entity's Board, its involvement in strategic decision-making and the entity's compliance with the legal and regulatory requirements are factored in during credit assessments. ICRA also seeks to gain a

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<sup>10</sup> 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).

qualitative understanding of the entity's commitment to follow transparent and credible practices, as reflected in the presentation of the financial statements, timeliness and depth of disclosures, consistency in communication and the openness about sharing information during the rating process. Additionally, factors such as the complexity of the corporate group structure, related-party transactions, instances of financial support to group entities at the expense of debt holders, and any abrupt resignations of auditors or independent directors are evaluated.

### Summing Up

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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 credit rating may be influenced by its ownership, the nature of linkages with its parent or group entities, the 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.

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															
	Cost Position															
Business Risk	Scale of operations															
	Product and sales mix															
	Position in Global cost curve															
Financial Risk	Leverage															
	Coverage															
		Enhance						Support/ Neutral						Hinder		
Do these factors enhance or hinder the credit profile?	Diversification															
	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 graphic above is only for illustrative purposes and does not depict an actual rating outcome generated by a framework. The rating process typically involves the use of a framework as a reference tool to provide a broad indication of an entity’s credit profile based on factors generally considered important for credit risk assessment. However, given the specific nuances and unique characteristics of individual entities, the framework may not always adequately capture all relevant considerations evaluated by the rating committee while assigning the ratings. Consequently, the ratings assigned by the rating committee may differ from the framework’s indicative assessment.

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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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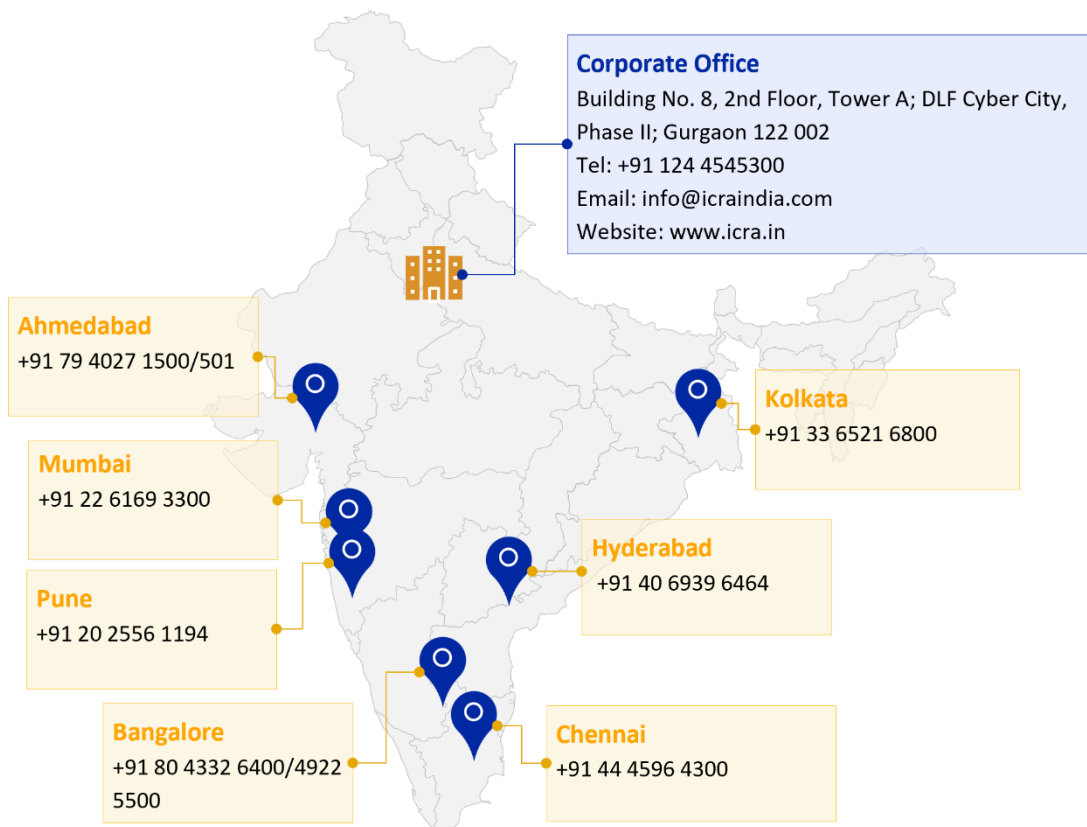
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