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ANALYST CONTACTS

Mr. Girishkumar Kadam
Senior Vice President
+91 22 6114 3406
girishkumar@icraindia.com

Mr. Vikram V
Vice President
+91 40 6939 6410
vikram.v@icraindia.com

Mr. Sumit Jhunjunwala
Vice President
+91 33 6521 6814
sumit.jhunjunwala@icraindia.com

This rating methodology explains ICRA’s approach to assess the credit quality of entities engaged in the mining industry, and supersedes ICRA’s earlier methodology note on the sector, published in June 2023. While this revised version incorporates a few modifications, ICRA’s overall approach towards rating entities in the sector remains materially similar.

Overview

Entities in the domestic mining universe include both pure-play merchant miners as well as vertically integrated captive miners in the metals, cement, and power space. For the latter, the scope of this document is limited to identifying the salient operational and financial drivers that ICRA considers while evaluating the performance of the mining division. For a more exhaustive understanding of ICRA’s rating approach for analysing the performance of vertically integrated entities having captive mines, readers are advised to refer to ICRA’s sector-specific rating methodologies on a) Iron & Steel, b) Non-Ferrous Metals (Primary Producers), c) Cement, and d) Power - Thermal.

Industry Structure

The mining industry has contributed between 2-3% of India’s gross domestic product (GDP) over the years. Within India’s mineral basket (excluding petroleum and natural gas), the share of coal remains the highest, followed by other bulk minerals like iron ore, limestone, and lignite. These four minerals cumulatively contribute around 55% to India’s total value of minerals produced. India’s other key minerals include zinc, chromite, bauxite, and copper. India is the 2nd and 4th largest global producer of coal and iron ore respectively. Additionally, India ranks as the 3rd and 6th largest global producer of chrome ore and bauxite, the 3rd largest global producer of zinc, and the 10th largest global producer of copper. As countries commit on an orderly transition to net-zero emissions, the demand for critical minerals such as lithium, cobalt, nickel, manganese, graphite, copper, rare earth elements, and the platinum group of minerals, having applications in various low carbon technologies, is expected to witness a disproportionate increase in demand compared with the bulk minerals in the foreseeable future.

The domestic mining industry is dominated by large public sector undertakings (PSUs), who contribute around 70% to India’s mineral output by value. Though the Government of India (GoI) has gradually brought in an enabling framework to increase private sector participation, the PSUs still dominate. In the case of coal mining, on June 18, 2020, the Government opened up the coal sector for commercial mining by the private sector. While contribution of captive and commercial coal miners in the total domestic production has increased from 8.9% in FY2020 to 18.8% in FY2025 following the opening up of the sector, Coal India Limited and The Singareni Collieries Company Limited (both public sector enterprises) continue to

dominate the segment, contributing 81.2% to India's domestic coal production in FY2025. In iron ore mining, out of the top three domestic miners, accounting for 37% of the total iron mining output in India in FY2025, two are PSUs. The private sector mining space is highly fragmented, characterised largely by small to medium scale miners. Moreover, regulatory oversight in the mining sector remains high, with overlapping jurisdictions of both the Central and the state Government agencies at times.

In an attempt to enhance the 'ease-of-doing' business and attract private sector investment, the Government has rolled out a slew of structural reforms in the mining sector, most notable of which would include the removal of distinction between captive and non-captive mines by auctioning blocks without any end-use restriction, the automatic transfer of statutory clearances of an expired mining lease, which gets auctioned to the winning bidder, removal of restrictions on transfer of mining leases won through the previous allotment regime, provision for up to 50% merchant sales by captive miners subject to additional revenue share with the state Government, provision for pre-embedded clearances for making auctions more attractive, and streamlining of processes for environmental clearances.

In addition, given the opportunities in the deep-sea mining and to make the ecosystem more business-friendly and transparent, the Government introduced the Offshore Areas Mineral (Development and Regulation) Amendment Act, 2023. The amendment also allowed the provision for allotment of operating rights to PSUs without competitive bidding and also reserving offshore mining of atomic minerals (above a threshold concentration) for them.

Risk Analysis Framework for Mining Entities

This rating methodology aims to help entities, investors and other interested market participants understand ICRA's approach in analysing quantitative and qualitative risk characteristics that are likely to affect ratings of mining entities. This methodology does not include an exhaustive treatment of all factors that are reflected in ratings but enables the reader to understand the rating considerations that are most important.

ICRA's risk analysis framework for the mining entities can be broadly divided into the following factors –

Industry Risk Assessment

- Demand-supply dynamics & price volatility
- Regulatory risk
- Threat of imports

Business Risk Assessment

- Reserve position and quality
- Scale of operations and customer profile
- Geographical spread of assets
- Cost position

Financial Risk Assessment

- Profitability metrics
- Leverage and coverage indicators
- Liquidity and financial flexibility
- Foreign currency-related risks
- Tenure mismatches, and risks relating to interest rates and refinancing

Other Elements of Credit Risk Assessment

- Extent of forward integration
- Project risks
- Parentage/ Group Support
- Debt Servicing Track Record

- Contingent Liabilities and Off-balance Sheet Exposures

Management Quality

Assessment of Environmental, Social and Governance (ESG) Risks

Industry Risk Assessment

Demand-supply dynamics & price volatility

Commoditised nature of minerals, which along with cyclical nature of industry, results in susceptibility of the performance to the commodity price cycles. When mineral prices are at their peak, entities have the resources to channelise higher funds in greenfield or brownfield mine expansions, supported by the confidence of their buoyant cash flows. However, given the long gestation period in the mining business, there always exists the possibility that by the time the new capacity is ready, a slowdown in demand from end-user industries leads to a supply glut. The effect of this on prices can be very damaging, especially considering that prices get squeezed between weakening demand as well as rising fresh supplies. Given the volatility in cash flows of mining entities, ICRA analyses their future debt servicing ability across cycles, which factors in the industry demand-supply fundamentals, including the health of the consuming end-user industries. In addition, price sensitivity to earnings may be carried out to assess the credit metrics in both up and down cycles. ICRA also factors in emerging structural shifts in the demand-supply balance while assessing the credit profile of mining entities. For hydrocarbon minerals like coal and lignite, the Govt's policy focus on renewable energy could temper their demand in the medium to long term. Moreover, evolving trends of higher resource recovery through scrap could reduce the intensity of virgin ore usage in the manufacturing of ferrous and non-ferrous metals, potentially disrupting the demand-supply balance over a longer time horizon.

Regulatory risk

The applicable law governing the mineral sector (other than petroleum and natural gas) in the country is 'The Mines & Minerals (Development and Regulation) Act, 1957' (MMDR Act) and its subsequent amendments. Apart from the MMDR Act, 'The Coal Mines (Special Provisions) Act, 2015' also regulates the mining of coal and lignite in the country. The state governments are the owners of minerals located within their boundaries, whereas the Central Government is the owner of minerals underlying the ocean within the territorial boundary of India. Minerals are broadly classified as a) energy minerals (like coal and lignite), b) metallic and non-metallic minerals (like iron ore, copper, zinc, etc), c) notified minerals (like bauxite, iron ore, limestone, and manganese ore), d) atomic minerals (like uranium, titanium, etc), and e) minor minerals (like sand, dolomite, clay, etc). Regulation of mining of minor minerals, and oversight on illegal mining of all minerals come under the jurisdiction of the respective state governments. However, for major minerals (which broadly include all groups of minerals excluding minor minerals), the Central Government retains the power of revision and/or fixing of royalties. Moreover, in the case of coal, lignite, and atomic minerals, the states are required to take prior approval of the Central Government to grant mining concessions.

In India, mining is a highly regulated business, requiring multiple approvals from various Central and state Government agencies that include the Ministry of Environment & Forests, Director General of Mines Safety, and State Pollution Control Board, among others. Any deviation in conformance with applicable mining laws can not only result in production disruptions due to bans, but also lead to hefty penalties imposed by the Government. The Hon'ble Supreme Court has delivered important judgments in the case of illegal allocation of captive coal mines, and illegal mining of iron ore in the states of Karnataka, Odisha and Goa. These judgments have become reference points for framing fresh regulations like 'The Coal Mines (Special Provisions) Act, 2015', and 'The Mines & Minerals (Development and Regulation) Amendment Act, 2015' that has helped create a framework for transparent allocation of mineral resources.

In the new regime post the Hon'ble Supreme Court judgments, mineral resources to private entities shall be granted exclusively through auctions. Moreover, to create an effective deterrence for illegal mining, the court has imposed penalty on violators, including lease cancellations, and 100% of the value of mineral mined illegally to be paid as penalty. Apart from the increased regulatory scrutiny for non-compliance, the burden of taxes and duties on the sector have been increasing, as additional

contributions to the District Mineral Foundation (DMF) and the National Mineral Exploration Trust (NMET) have been mandated as per law, in addition to the contributions made to the state exchequer as royalty. Also, in August 2024, the Hon'ble Supreme Court of India upheld the authority of the state governments to levy taxes on mineral rights and mineral-bearing lands, as provided under Entries 49 and 50 of List II in the Constitution's Seventh Schedule. If enforced by individual states, this ruling could increase the financial burden on the mining entities. In the context of a greater regulatory scrutiny on the mining sector, and a high cost for regulatory non-compliance, ICRA stresses upon the regulatory and environmental compliance track record of mining entities, and a clean track record adds strength to a mining entity's business risk profile. In addition to regulatory compliance, ICRA also evaluates the health and safety track record of a mining company in the overall evaluation.

Threat of imports

For minerals where imports meet a sizeable share of the domestic demand and consequently leading to a high threat of imports, domestic prices have strong linkages with international prices. Given the multiplicity of factors determining the global demand-supply balance, the threat of imports adds to volatility in the domestic prices. Additionally, in such cases, relative exchange rate movements in key producer countries also become a crucial factor that determines seaborne prices, and, therefore, any devaluation in the home currency of a large foreign supplier exporting to India exerts pressure on domestic prices.

Business Risk Assessment

Reserve position and quality

Mineral reserves represent that share of the 'proved' resources that can be mined economically, especially where feasibility/pre-feasibility study has been completed. It also includes that share of the 'indicated' resources that can be mined economically. Therefore, reserves represent an entity's potential to generate future earnings. ICRA analyses past production trends, which is a function of the initial reserves, the entity's track record in geological exploration activities and subsequent successes in reserve replacement, to estimate the production levels.

As per 'The Mines And Minerals (Development And Regulation) Amendment Act, 2015,' the validity for existing mining leases was extended to the later of a fifty years from the date of signing of original lease agreement, or b) till March 31, 2020 (for merchant miners) and till March 31, 2030 (for captive miners). A greater residual lease validity for mines won under the allotment regime is taken as a positive by ICRA, as fresh mining leases are being distributed through auctions, giving the existing players who have bagged mines under the erstwhile allotment regime a distinct competitive advantage.

With an entity's reserve position and lease validity providing a glimpse of the future revenues, the quality of its reserves determines the price levels that an entity can fetch. Generally, a higher concentration of mineral in an ore leads to better prices, mainly because it removes the requirement of beneficiation/purification, helping achieve higher profitability at a given level of mining cost. Additionally, apart from mineral grade, ICRA also notes that minerals having desirable physical and chemical properties, which aids in controlling reaction chemistry, are also sought by end-users, and, therefore, fetches better prices. Examples of desirable physical and chemical properties include iron ore lumps being preferred over fines, and iron ore, with a low concentration of alumina and silica, being preferred as it supports better process efficiency. However, the price spread between superior and inferior quality ore may narrow during cyclical downturns, such that it becomes more cost effective to produce finished products using lower grade ore.

Scale of operations and customer profile

Commodity prices tend to be cyclical, driven by swings in global macroeconomic trends, and the demand-supply dynamics in key producing and consuming countries. This leads to earnings volatility for miners. A mining entity with a larger scale is associated with a greater ability to withstand commodity downcycles, given their advantages in areas like a) product-market diversity (allowing them to mitigate revenue loss in specific businesses), b) greater pricing flexibility on account of cost-efficient production practices derived from economies of scale, as well as c) easier access to capital. Moreover, mining entities with multiple minerals in their portfolio and serving a broad range of markets hedge risks associated with volatility in individual

commodity prices. In such cases, ICRA believes that the interplay between a wide spectrum of supply and demand drivers from a diverse set of consuming industries helps in averaging out the earnings volatility to an extent.

Apart from scale, the customer profile of a mining entity is also a parameter for evaluating its credit profile. Moreover, in cases where majority of sales are made by offering credit, payment terms with buyers, including payment security mechanisms (like letters of credit), are considered in evaluating an entity's business risk profile. A strong client list not only mitigates counterparty credit risks, and ensures timely payments, but also presents future growth options. Additionally, presence of long-term supply arrangements is viewed favourably, as it gives a steady revenue visibility. In its assessment, ICRA also views a diversified client profile to be a positive, as it helps mitigate revenue loss in the event of a loss of a specific client. In this regard, a balanced share between domestic and export sales is, therefore, viewed favourably. However, in this regard, it is noteworthy to mention that in certain commodities, like high grade iron ore, the export duty acts as a barrier. This generally makes export markets less-favoured destinations for such commodities compared to domestic sales.

Geographical spread of assets

A geographically diversified asset base partially mitigates risks associated with revenue volatility due to unforeseen mine-specific production disruptions like floods/natural calamities, labour unrest, and regulatory actions. This is because a number of operating locations allow an entity the flexibility to cater to market demand by ramping up production from a different mine, subject to the incremental production being within the ceiling approved in the mining plan/environmental clearance, ensuring continuity in customer servicing. Moreover, given the history of production disruptions in key mining states like Goa, Karnataka, and Odisha, an entity having assets spread across multiple states provides comfort to its operating profile.

Cost position

Operational efficiency is a critical factor that determines the profitability of mining entities, especially given that prices are often linked to the global demand-supply forces, leading to limited pricing power for domestic miners. Moreover, entities at the lower end of the cost curve (first and second quartiles), during pricing downcycles, exhibit the superior ability to adapt to dynamic pricing scenarios, while continuing to remain profitable. A mining entity's cost position is driven by the following factors:

- Ore recovery rate
- Technology/ mechanisation
- Manpower productivity
- Statutory costs/levies/ revenue share in auction
- Operating leverage
- Evacuation infrastructure

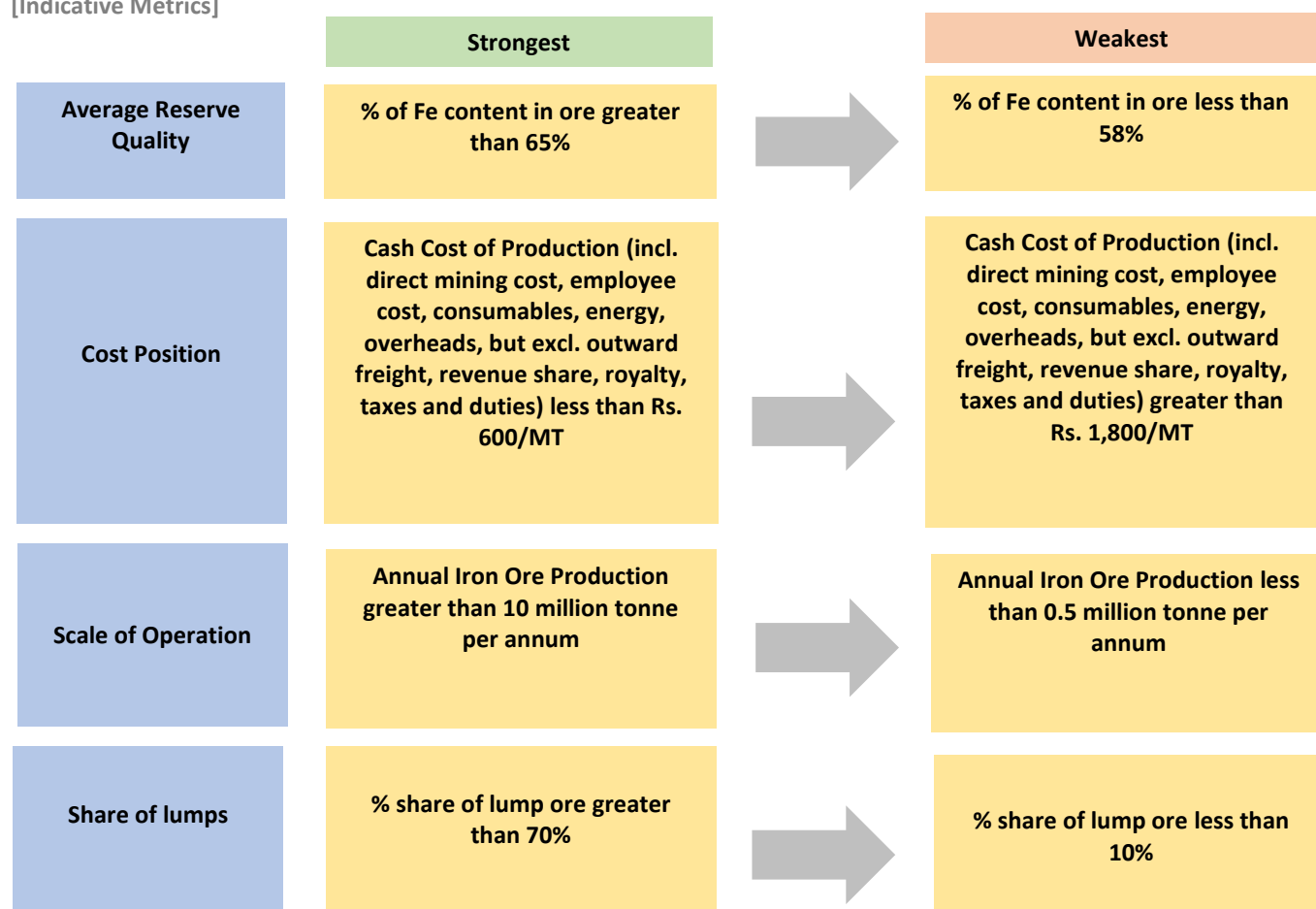
A mine's ore recovery rate is determined by the geological characteristics of the ore seam. Favourable geo-mining conditions lead to higher recovery rates/stripping ratios, necessitating lower quantity of overburden removal per unit of ore extracted, in turn supporting a leaner cost position. Additionally, a greater intensity of mechanisation through enhanced technology absorption helps increase the operational efficiency and production throughput, giving the entities an edge over their competitors. Moreover, given the high labour intensity in mining operations, manpower productivity measurement parameters like output per man-shift (OMS) is a key driver determining an entity's cost competitiveness. Further, ICRA notes that the share of manpower expenses in the overall mining cost is generally higher for Government-owned entities over private ones, as the former suffer from the disadvantage of legacy costs.

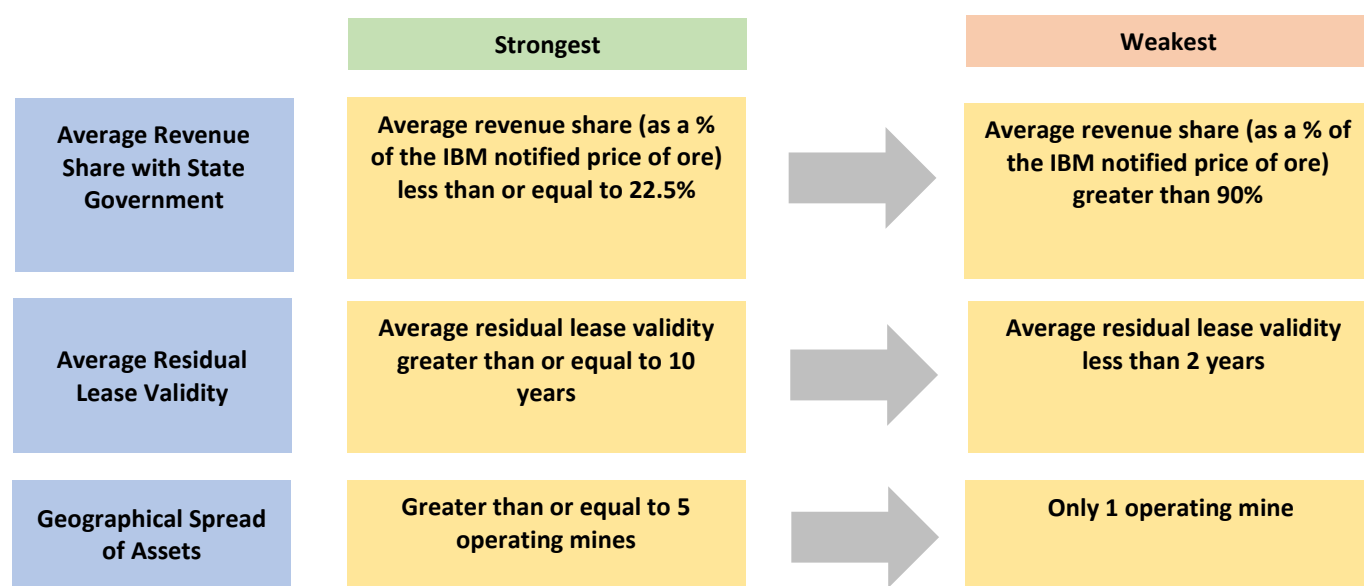
Mining entities have to pay a multiplicity of taxes and duties to the Central and State Governments. This includes royalty, contributions to district mineral foundation (DMF) and the National Mineral Exploration Trust (NMET), GST, the cesses, and export duty, among others. Additionally, entities that have won mines through the auction process have to fork out auction premiums, all of which add to their overall cost of production, and in turn impact their cost competitiveness vis-a-vis other domestic as well as international players.

Mining is a highly capital-intensive business. However, increasingly, there has been a trend of greater outsourcing by domestic mining entities, which helps in achieving lower operating and financial leverage levels. The degree of outsourcing by mining entities could range from the engagement of contractors for peripheral activities like overburden removal, and in the extreme case, engaging a mine developer and operator (MDO). In the latter case, the entire mining activity is outsourced to a third party with requisite mining experience, a usual practise seen in the case of state-owned thermal power generators owning captive coal mines. This risk-sharing model through various degrees of outsourcing is beneficial for mining entities, especially in periods of low demand, given that it provides greater flexibility in reducing costs during such periods. Therefore, ICRA’s assessment factors in an entity’s operating leverage levels, which in turn would determine its cost competitiveness across business cycles.

Logistics is an important element in determining the landed cost of a mineral to an end user. In this regard, the associated mineral evacuation network remains a driver in determining the overall cost competitiveness for a miner. For longer distances, railway connectivity having dedicated siding is viewed favourably over road transportation, given the cost competitiveness of rail transport over roads.

Summary of the Salient Business Risk Factors for Iron Ore Mining
[Indicative Metrics]





Financial Risk Assessment

ICRA analyses long period past financial performance trends as well as estimates future financial performance to assess the financial risk profile of an entity. Moreover, 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 entity towards other group entities, new ventures, and its investments in subsidiaries. Subsequently, future cash flows are projected after taking into account the entity’s production levels and the likely cost of production and mineral realisations; the growth it envisages; debt repayment schedule; its funding requirements and the funding options available to it. These cash flows are then used to determine the entity’s future debt-servicing capability under various scenarios.

The financial metrics provide a useful reference to not only 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 a higher tolerance to operate with a relatively modest financial risk profile. In contrast, those that are exposed to high business and industry risks need to maintain a stronger financial risk profile for an adequate cushion to manage cash flow volatility.

The various financial metrics assessed by ICRA could be divided into following categories—profitability, leverage, coverage, liquidity, and cash flows. This document provides a summary of why ICRA considers these ratios to be important. For a more detailed description, readers may refer to the note titled, “*Financial Ratio Analysis of Entities in the Non-Financial Sector*”, 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 analyses to assess the impact of key variables on various financial metrics.

In case of groups consisting of entities with financial and operational linkages, various parameters such as capital structure, debt coverage indicators, and future funding requirements are assessed at the consolidated / group level.

Profitability metrics

Profitability metrics are a measure of an entity’s efficiency and return on investments. It is imperative for most businesses to invest regularly in physical assets, product development, marketing, and human capital so as to sustain or improve their competitive position. Entities that have superior profitability are able to do so through internally generated resources with low

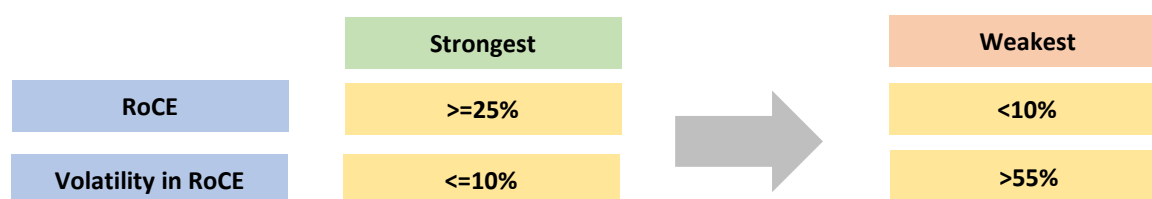
dependence on external financing. Moreover, such entities are able to generate sufficient surplus to not only meet debt servicing obligations but also to reward equity investors. This in turn improves their ability to attract fresh capital for future business requirements. Moreover, entities with higher profitability have better resilience to economic downturns and are more likely to generate adequate internal resources for re-investment and debt servicing.

Profitability of a mining entity is primarily a function of its cost structure, quality of ore, and sales mix of minerals having desirable physical and chemical properties. However, mining being 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. Diesel, lubricants, and tyres/tubes for heavy earth moving machinery form key cost elements in mining operations. Their prices depend on crude oil prices. Therefore, crude oil price is an important driver determining the profitability of mining entities.

Key profitability metrics that ICRA looks into include the OPBITDA¹ margin, the PAT² margin, and the RoCE³. Moreover, with many Indian mining entities having significant cash and liquid investments earning substantial treasury income, the EBITDA⁴ margin also captures the earnings an entity derives from non-operating income. ICRA delineates the share of profits generated by a mining entity through core operations and through treasury income to make an assessment of whether operating or non-operating income drives profits. The RoCE is also a key profitability indicator as it measures the efficiency with which an entity sweats the capital deployed in its business.

Validation of Business Risk through Profitability Metrics

[Indicative Metrics⁵]



Leverage and coverage indicators

Leverage ratios measure the indebtedness of an entity. Entities that pursue an aggressive financial policy, including heavy reliance on debt financing, as setting up of mining infrastructure in new mines requires sizeable capital investment, are likely to be more vulnerable to cyclical downturns than entities who employ conservative financial leverage in their business. As with entities in other commodity businesses exhibiting cyclical price trends, mining players are exposed to high volatility in earnings and, therefore, a low financial leverage is viewed as a credit positive for mining players. Besides protecting the cash flows of players by imposing a lower debt service burden, especially during periods of cyclical stress, lower leverage also imparts greater financial flexibility to raise incremental external capital (debt or equity) for re-investment in business or to tide over temporary funding shortfalls. ICRA also notes that the extent to which an entity leverages its balance sheet is, in addition to business requirements, also a function of the philosophy of the management towards growth and funding mix.

Assessment of Leverage

[Indicative Metrics]



1 Operating profit before interest, tax, depreciation & amortisation

2 Profit after tax

3 Return on capital employed

4 Earnings before interest, tax, depreciation, amortisation

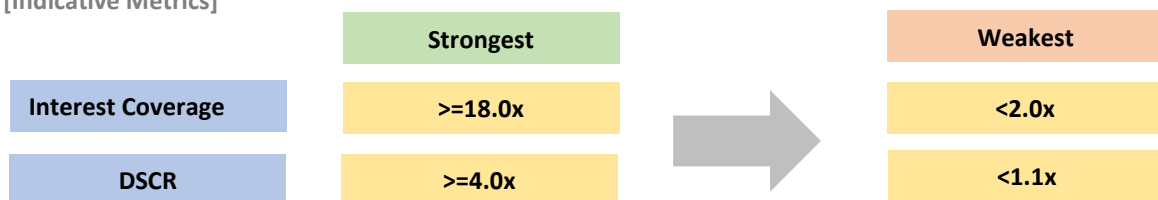
5 The indicative financial metrics mentioned here and elsewhere in the document are intended to provide a broad overview to the readers regarding what ICRA generally considers as 'relatively strong' or 'relatively weak' metrics. It is, however, possible that an entity has relatively weaker metrics on 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 the leverage, coverage is a measure of a mining entity’s debt-servicing ability and is calculated as the ratio of profits (or cash flows) to the debt servicing obligations within a given period. The interest coverage indicator reflects the entity’s ability to service the cost of external borrowings after meeting all operating expenses. It is an important rating consideration while evaluating the financial health of a mining producer as a weak OPBITDA-to-interest multiple indicates the entity’s inability to generate adequate operating profits to meet its interest obligations and may signal a default risk. The Debt-Service-Coverage Ratio (DSCR) indicates the entity’s ability to service its interest and repayment from cash accruals generated from the business. ICRA is particularly concerned with an entity’s capability to honour its contractual obligations under stress conditions. The more robust its performance is under a stress scenario, the better it is from a credit evaluation perspective.

Assessment of Coverage

[Indicative Metrics]



Liquidity and financial flexibility

Liquidity is the indicator of an entity’s ability to meet its short-term cash obligations from various internal or external resources. Internal resources include fund flow from operations, unencumbered cash and cash equivalents on the balance sheet, and cash inflows expected from the monetisation of physical and financial assets. External resources include undrawn lines of credit or equity capital. Short-term obligations include committed as well as 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 litigation penalty.

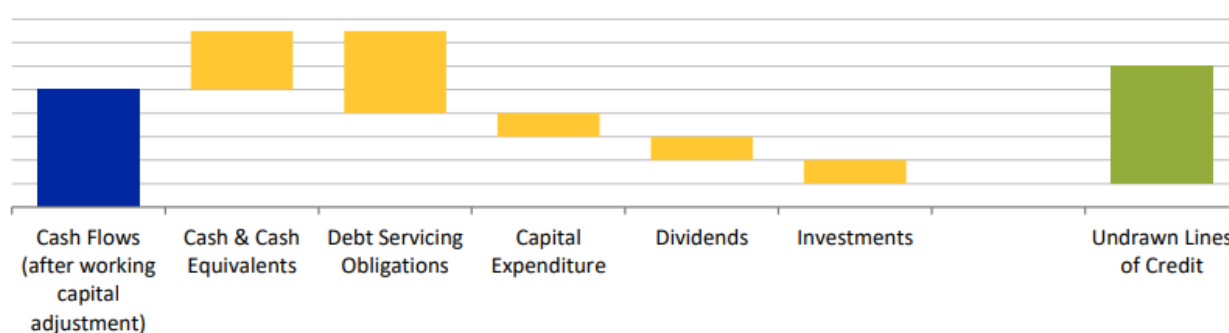
While mining operations are not working capital intensive in nature, setting up of greenfield mines requires sizeable capital investment which could suppress free cash flows during project execution, thus potentially leading to dependence on balance sheet liquidity or external financing temporarily. The higher the cushion between available resources (especially internal resources) and obligations, the 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 approach.

An entity’s financial flexibility (or the lack thereof) is reflected by its ability to access the capital or 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 quickly, whenever required. Financial flexibility could arise from factors such as an entity’s large scale of operations with strong financials, large, unencumbered cash flows (such as rental income), unencumbered assets and the flexibility to borrow against such assets, or strong parentage or linkage 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. 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.

Liquidity snapshot over any defined period



Foreign currency-related risks

The foreign currency risk can arise from unhedged liabilities, especially for entities with liabilities denominated in a foreign currency. ICRA analysis also focuses on the hedging policy of the entity concerned in the context of the tenure and nature of its contracts with counterparties (short-term / long-term, fixed price / variable price). Analysis of net foreign exposure and the extent of the timing difference in expected receipts vis-a-vis scheduled outflows is also looked into.

Tenure mismatches, and risks relating to interest rates and refinancing

Large dependence on short-term borrowings to fund long-term investments can expose an entity to significant re-financing risks, especially during periods of tight liquidity. Financial flexibility, and the existence of adequate buffers of liquid assets / bank lines to meet short-term obligations is viewed positively. Similarly, the extent to which an entity could be impacted by movements in interest rates is also evaluated.

Other Elements of Credit Risk Assessment

Extent of forward integration

Forward integration by mining players into downstream facilities (using captive raw material) such as beneficiation/pelletisation increases the overall value addition in business, and lower competitive pressures. Although downstream businesses also suffer during periods of stress, they display relatively lower cyclicity compared to pureplay mining businesses. Besides, since different downstream products find applications in different industries, forward integration into more value-added products enables an entity to lower its dependence on any particular user industry or customer.

Project risks

Mining is a highly capital-intensive business. Moreover, new mine development has challenges associated with land acquisition/ rehabilitation and resettlement and involves time-consuming processes towards seeking multiple levels of regulatory approvals like environmental/ forest clearances, often leading to delays in project execution and cost over-runs. Moreover, illegal encroachment of lease area is a common problem facing many mining projects. ICRA evaluates the various

risks associated with mining projects, including completion risk, funding risk, technology risk 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 projects in a timely manner.

Parentage/ Group Support

Apart from standalone credit considerations, the likelihood of extraordinary support coming in from the parent to an entity or the support that an entity is likely to extend to the other group companies is factored while assessing credit profile of 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. Support here does not mean 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. This process involves an assessment of the ability and willingness of the parent to extend support to the entity (and vice-versa), in addition to evaluating the entity's own fundamental credit strength. For more details, please refer to ICRA's methodology, "Rating Approach - Implicit parent or group support", available on ICRA's website www.icra.in.

Debt Servicing Track Record

The debt-servicing track record of an entity is an important input for any credit rating exercise. Any delays or defaults in the past in the repayment of principal or interest payments reduce the comfort level with respect to the mining player's future debt-servicing capability and willingness. Nevertheless, ICRA appropriately analyses the reason behind past defaults, which could also be due to adverse demand situations in the underlying industry.

Contingent liabilities/off-balance sheet exposures and accounting quality

ICRA evaluates the likelihood of devolvement of contingent liabilities/off-balance sheet exposures and the financial implications of the same.

Management Quality

All debt ratings necessarily incorporate an assessment of the quality of the rated entity's management. Thus, the comfort level of the management, evident from discussions and past actions, becomes a key rating consideration in such cases. ICRA gives considerable importance to qualitative aspects resulting from management meetings. A discussion is held with the management to understand their business strategies, growth plans, as well as risk appetite, which may have an impact on the future performance of the entity, besides the outlook on the industry. In addition, the rated entity's likely cash outflows arising from the possible need to support other group entities are of importance, in case the rated entity is among the stronger entities within the group. Usually, a detailed discussion is held with the management of the rated entity to understand its business objectives, plans and strategies, and views on past performance, besides the outlook on the rated entity's industry.

For mining entities, in particular, ICRA looks at management strategies with respect to the entity's cost position, product mix, and growth plans. ICRA also evaluates how the management responds to the cyclical behaviour of the industry, i.e. strategies followed to mitigate the risks arising out of such cyclicity. Generally, a record of the conservative financial policy provides an extra level of comfort for the rating.

Some of the other points assessed are:

- Experience of the promoter/management in the line of business concerned
- Commitment of the promoter/management to the line of business concerned
- Attitude of the promoter/management to risk taking
- The entity's plans on new projects, acquisitions and expansion, including investment plans in non-core business segments
- The entity's policies on leveraging, interest risks and currency risks

Assessment of Environmental, Social and Governance (ESG) 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 mitigants. 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. Further, it is not always feasible to disaggregate the sub-components of E&S risks fully or precisely in credit analysis since these considerations often tend to overlap.

That said, the materiality of the E&S risks and the time horizon over which they are expected to crystallise differ 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 future, the rated entity would possibly have adapted itself by realigning its business model.

While evaluating 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, or carbon transition risks such as those arising from changes in regulations 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. In spite of the above, as an example, it is possible that even if 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

Most mining activities leave a negative impact on the local ecology leading to health hazards. To limit its adverse environmental impact, the mining sector could encounter increasing regulatory oversight like stricter controls on environmental load emanating from mining and tighter compliance with sustainable mining practices. Such measures could increase the cost of doing business. In the context of increasing global consensus to transition towards cleaner energy sources, exposure to climate transition risks remain especially high for fossil fuels like coal and lignite. Further, possible introduction of a carbon pricing mechanism for emitting end-user industries, in line with what has been rolled out in some western economies, could incentivise consumers to adopt cleaner alternatives, also adversely impacting long-term demand prospects for fossil fuels. However, the mining sector would provide the critical minerals required in the ongoing process of transition to net zero, potentially leading to a secular rise in demand for elements like lithium, cobalt, nickel, manganese, graphite, copper, rare earth elements, the platinum group of minerals, among others in the foreseeable future. On the operating side, following a rise in global temperatures, the increased incidence of extreme weather events, like floods, wild-fires, and other natural calamities, could lead to greater incidences of mine-specific production disruptions, much higher than historical average trends.

Social considerations

Most of the mining activity in India is opencast in nature, which often results in displacement of locals and deforestation in mining belts. This, along with instances of the adverse impact of mining on the local ecology, creates conflicts with local communities at times. Rehabilitation and resettlement (R&R) challenges associated with acquisition of large land parcels, especially in proximity to densely populated areas, remains a key risk that mining projects encounter frequently. R&R issues in turn delays project implementation schedules and pushes up project costs. In addition, other social risks facing mining projects are frequent disruptions in operations due to a unionised labour force, weaker law and order situation in many mining belts than the rest of the country, and casualties/ accidents from mining activity due to gaps in safety practices.

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's participation in strategy formulation, besides the entity's adherence to legal and statutory compliances is 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, its level of disclosures, consistency in communication and openness in 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 current opinion on the relative credit risk associated with the instrument being rated. This opinion is arrived at following a detailed evaluation of the entity's business and financial risks, likely cash flows over the life of the instrument being rated, and the adequacy of such cash flows vis-à-vis the entity's debt servicing obligations. ICRA's approach to rating mining entities incorporates both quantitative and qualitative factors, some of which are also used to assess other commodity businesses which display cyclicity. While the former involves an assessment of cash flow generation under normal and stress scenarios, cost competitiveness and financial strength, the latter includes market position, management strategies for managing cyclical downturns and an overall approach towards investment and growth.

ANNEXURE

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

		Strong			Comfortable			Adequate			Moderate			Weak		
Industry Risk	Industry Position															
	Average Reserve Quality															
Business Risk	Cost Position															
	Scale of Operation															
	Share of lumps															
	Average Revenue Share with State Government															
	Average Residual Lease Validity															
	Geographical spread of assets															
	Financial Risk	Leverage (Total debt/ OPBITDA)														
	Coverage (Interest Cover)															
		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 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.

Contact us for any feedback or comments at: methodologies@icraindia.com

RELATIONSHIP CONTACT

L Shivakumar

+91 22 6114 3406

shivakumar@icraindia.com

MEDIA AND PUBLIC RELATIONS CONTACT

Ms. Naznin Prodhani

+91 124 4545 860

communications@icraindia.com

Helpline for business queries

+91-9354738909 (open Monday to Friday, from 9:30 am to 6 pm)

info@icraindia.com

About ICRA Limited:

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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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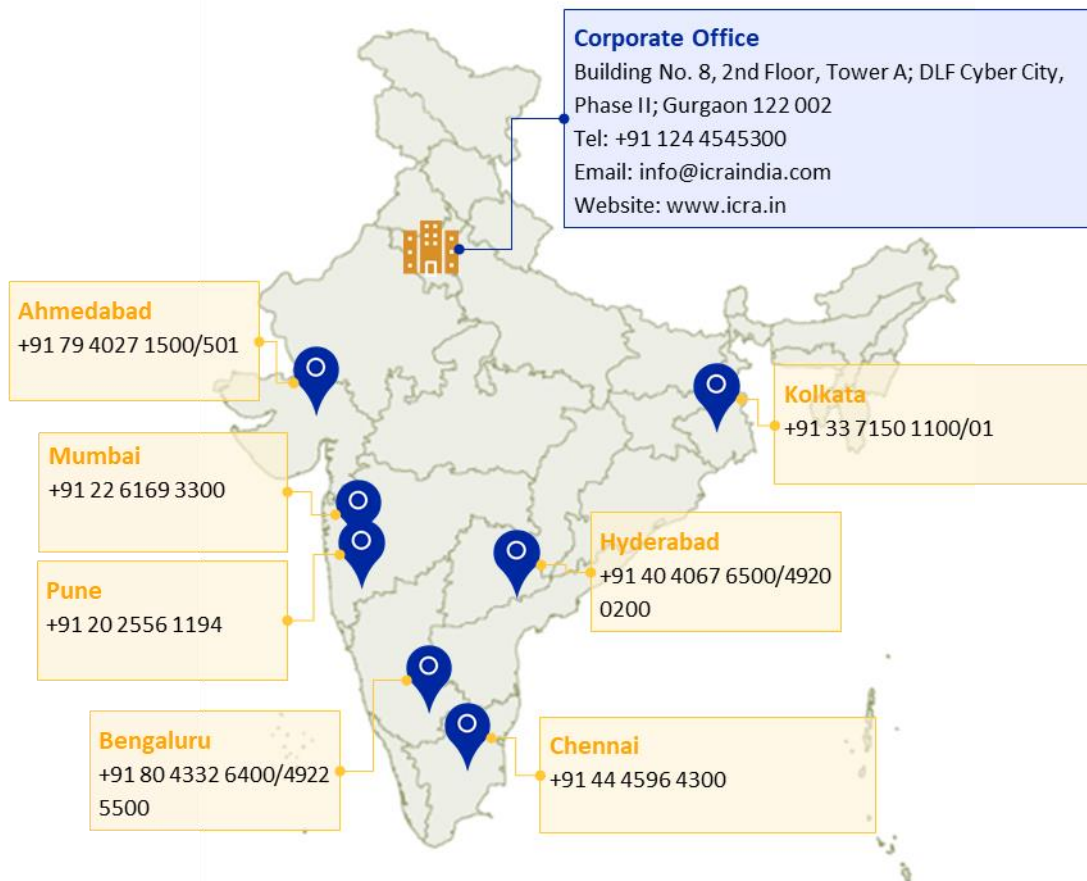
Registered Office

B-710, Statesman House 148, Barakhamba Road New Delhi-110001

Tel: +91 11 23357940-45



Branches



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