

RATING METHODOLOGY - CHEMICALS

June 2024


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Table of Contents:

| | |
|--|----|
| Overview | 1 |
| Industry Risk Assessment | 3 |
| Business Risk Assessment..... | 4 |
| Financial Risk Assessment..... | 7 |
| Other Elements of Credit Risk Assessment..... | 9 |
| Management Quality & Corporate Governance Assessment..... | 10 |
| Assessment of Environmental, Social and Governance (ESG) Risks | 10 |
| Summing Up | 11 |
| ANNEXURE..... | 12 |

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This rating methodology describes the approach that ICRA follows to assess the credit quality of entities in the chemical sector, and supersedes ICRA's earlier methodology note on this subject, published in June 2022. While this revised version incorporates a few editorial changes to provide further clarity on a few points, ICRA's overall approach towards rating chemical companies remains materially similar.

Overview

The domestic chemical sector is estimated to be worth \$220 billion and is an important contributor to the Indian economy, with around 80,000 products, which find use in various industries and employs around an estimated 2 million people. The segment is a major component of the domestic manufacturing sector.

In this methodology, ICRA has categorised the chemical industry into the commodity and specialty chemical businesses, each of which is characterised by different types of risk factors. Examples of commodity chemicals are a) petrochemicals such as polyvinylchloride (PVC), high-density polyethylene (HDPE), low-density polyethylene (LDPE), polypropylene (PP) and methanol, and b) inorganic commodity chemicals such as caustic soda and soda ash. Commodity chemicals are manufactured in bulk quantities by a large number of players with limited product differentiation due to which the manufacturers have low pricing power and their financial profiles are susceptible to the volatility in demand and supply as well as product and raw material price trends. Commodity chemical manufacturing also tends to remain highly capital-intensive with low value addition, which in turn mandates larger scale of operations.

Specialty chemicals, on the other hand, are products which have niche and specialised applications and include certain types of adhesives, catalysts, water treatment chemicals, leather chemicals, pigments, and surfactants etc, which are produced in lower volumes compared to commodity chemicals and entail a higher value addition because of which the manufacturers have better pricing power and as a result, the financial performance is less volatile. However, ICRA notes that a specialty chemical can over time get commoditised and is also exposed to the risk of product obsolescence.

This rating methodology aims to help entities, investors and other interested market participants understand ICRA's approach in analysing the quantitative and qualitative risk characteristics that are likely to affect the ratings of entities in the chemical sector. This methodology does not include an exhaustive treatment of all the factors that are reflected in the ratings, but it enables the reader to understand the rating considerations that are usually the most important. For analytical convenience, the key factors are grouped under the following broad heads— Industry Risk Assessment, Business Risk Assessment, Financial Risk Assessment, Management Quality, Environmental, Social & Governance (ESG) Risk Assessment and Other Considerations.

Industry Risk Assessment

- Global Demand and Supply
- Regulatory Risks

Business Risk Assessment

Commodity Chemicals

- Diversification
 - Product
 - End-user Industry
- Level of Vertical Integration and Cost Competitiveness
- Scale of Operations
- Feedstock Risks

Specialty Chemicals

- Diversification
 - Product
 - End-user Industry
- Competitive position
 - Market Share
 - Sustainable Pricing Position
 - R&D and Product Pipeline
- Scale of Operations
- Feedstock Risks

Financial Risk Assessment

- Profitability
- Capital Structure and Debt Coverage
- Working Capital Intensity
- Liquidity and Financial Flexibility

Other Rating Considerations

- Parentage/Group Support
- Foreign Currency Risks
- Tenure Mismatches, and Risks Relating to Interest Rates and Refinancing
- Accounting Quality
- Event Risk
- Contingent Liabilities/Off-balance Sheet Exposure

Management Quality Assessment

Assessment of Environmental, Social and Governance (ESG) Risks

Industry Risk Assessment

Demand and Supply Trends

The demand and supply trends are critical industry risk factors, especially for commodity chemical companies, which have limited pricing power. The product pricing is largely on import parity basis and the profitability is linked to the product-raw material price spread, which can witness significant volatility. For the various products, the demand-supply trend is analysed for the addressable/applicable region, which can be global or in some cases regional because of the impact of freight costs, or other constraining factors. A sharp fall in the prices of finished goods and/or raw materials could lead to material inventory loss for an entity, especially one with higher inventory levels.

Specialty chemical companies have better pricing power due to the niche and value-added nature of the products and the limited number of players in the segment. Hence, their sensitivity to the global demand and supply trends is relatively less. The specialty chemical industry is, however, exposed to the risk of product obsolescence or commoditisation of the products over time and ICRA monitors the global trends in the use of such chemicals.

Trade Measures and Regulatory Risks

The chemical sector is exposed to regulatory risks pertaining to duty structure and trade protection measures, regulations on safety in case of hazardous products used during the production/handling process and norms on environmental impact and remediation measures.

For commodity chemical entities in India, the trade protection measures applied by the Union Government play an important role in mitigating the adverse impact of volatility in global demand and supply trends. The industry has generally witnessed a progressive reduction in duty protection in the last two decades, thereby increasing the linkage with global markets and exposing the domestic industry to global demand and supply trends. Further, trade agreements entered with other countries can also have an adverse impact on domestic companies in the form of higher competition from imports from such countries, as such agreements do not support duty protections. In some cases, there could also be an inverted duty structure wherein the duties on raw material imports are higher than that on finished products, which could be unfavourable for domestic finished goods manufacturing. At the same time, based on the representations by domestic manufacturing companies on dumping by specific companies, anti-dumping investigations have been initiated and anti-dumping duties have been imposed on the import of products from specific countries, which provides protection to the domestic industry.

With the recent policy focus on Make in India and Atmanirbhar Bharat, several segments have witnessed trade protection measures, such as the imposition of anti-dumping duty (ADD) and safeguard duties and rationalisation of exemption under free trade agreements (FTAs). In some cases, non-tariff barriers have been imposed in the form of requirement for meeting specific quality standards. While assessing an entity, ICRA reviews any trade protection measures in the form of ADD for an entity's products and the duration of such measures; any trade barriers imposed by foreign governments on the export of products from India is considered unfavourable. ICRA notes that the duty structure and trade protection measures are generally not major factors for specialty chemicals due to its smaller market size and the limited number of players.

Both commodity and specialty chemicals are exposed to safety regulations related to the production and handling of hazardous products, norms on environmental impact and remediation measures. ICRA notes that the regulations are likely to become more stringent over time, which could result in increased compliance costs related to remediation measures or in certain cases could result in restriction on the consumption of products. Further, similar risks are applicable not only for the end-customer segments but also for the raw materials used by the chemical manufacturers, which could have an impact on the performance of the rated entity.

Business Risk Assessment

As commodity and specialty chemicals are associated with different risk profiles, ICRA evaluates the product mix of chemical companies to assess the nature of the products and the mix. However, it may not always be feasible to categorise a product as a commodity or a specialty chemical, as some product offerings may possess traits of both. Further, even product segments with specific end use like dyes and pigments, agro-chemicals, construction chemicals etc. can have sub-categories which are very low-value added and produced by many players, resulting in low profit margins and high volatility. Hence, for analysis, ICRA considers only those product segments as specialty chemicals which have a relatively small market size with a limited number of players and the value added/niche nature of the product is established by a sustained track record of healthy profit margins and low volatility. Further, ICRA also assesses the track record of research and development spend by specialty chemical entities and patents/new product pipeline. ICRA also analyses the revenue share of the recently launched products and their growth over the past few fiscals to assess the research acumen of the entity. The business risk factors for assessing commodity chemical companies and specialty chemical companies are discussed below:

- **Diversification** – ICRA looks at diversification across products, geography, customers and end-user industries for both commodity and specialty chemical entities. High product diversity is favourable as it mitigates the impact of cyclicality in any one product segment. While assessing the product diversity, ICRA looks at product categories with low correlation. Typically, products derived from common key raw materials, similar chemical processes or having similar applications can be classified as a category. ICRA also looks at the end user industry exposure, with entities catering to diverse end-user sectors being looked at favourably. While looking at end-user diversity, ICRA also looks at the cyclicality of such end-user sectors, with exposure to sectors with low cyclicality considered favourable. Further, due to the nature of the commodity chemicals, while geographic diversification may not provide any major pricing advantage, high export sales may indicate consistency in the quality of products and compliance with global production processes and quality norms. High diversification will mitigate the risk of force majeure event or demand disruption in one region. Additionally, while commodity chemical entities tend to have a relatively diversified customer profile, the presence of long-term sales agreements with a few customers may result in higher customer concentration. However, if such contracts are with creditworthy entities, higher concentration may not be looked at unfavourably as such contracts limit the risk of bad debt or volatile demand, resulting in stability in the scale of operations.
- **Scale of operations** – The scale of operations influences research and development capabilities and the ability to service larger number of customers and geographies, and all else remaining same, can provide greater bargaining power with customers and suppliers. However, the scale of operations, being a key driver of cost competitiveness, is a more influential parameter for commodity chemicals compared to specialty chemicals.
- **Competitive position** – An entity's competitive position is driven by factors like market share, pricing power, cost competitiveness, R&D strengths and product pipeline. For a commodity chemical company, given the low pricing power and susceptibility to volatility in product and raw material prices¹, the level of vertical integration and cost competitiveness is a crucial parameter. The same is assessed by benchmarking the cost of production of the entity under evaluation with its peers in the industry. A high level of vertical integration lowers earnings volatility and protects against raw material unavailability risks and fluctuation in raw material prices. ICRA also looks at other sources of cost competitiveness like the location of the manufacturing unit in proximity to the consumption centres or raw material sources, which might be important for certain commodity chemical segments like chlor-alkali products (caustic soda, chlorine, soda ash), particularly in scenarios wherein a sharp escalation in logistics costs may impact the overall competitiveness of the entity. The capacity utilisation levels also drive the cost competitiveness, supporting the absorption of fixed costs and ICRA factors in the trend in the capacity utilisation of commodity chemicals. ICRA also looks at the R&D efforts for improvement in process efficiency for commodity chemical production and endeavours to assess the yield levels relative to the other

¹ Majority of the raw material used for chemicals manufacturing are crude oil derivatives and hence have largely followed the trend in the price of crude oil

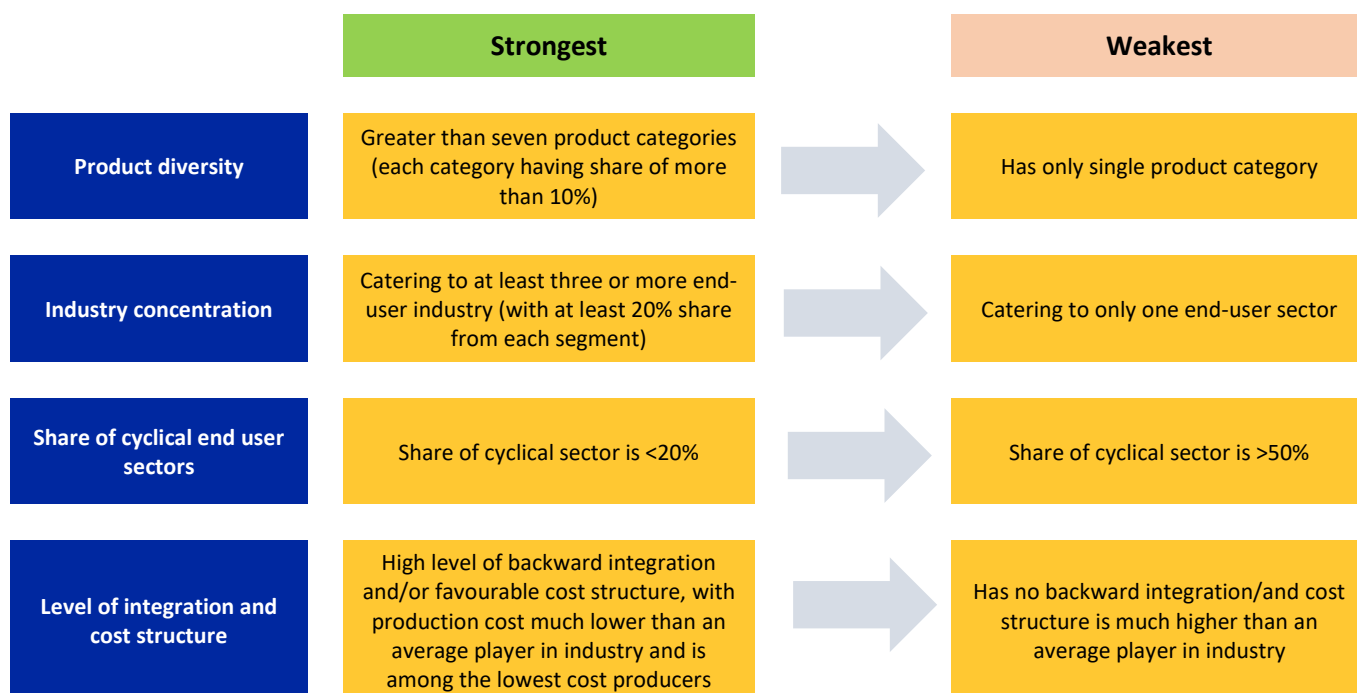
players operating in similar product segments; however, such evaluation may at times be constrained by the lack of availability of comparative data.

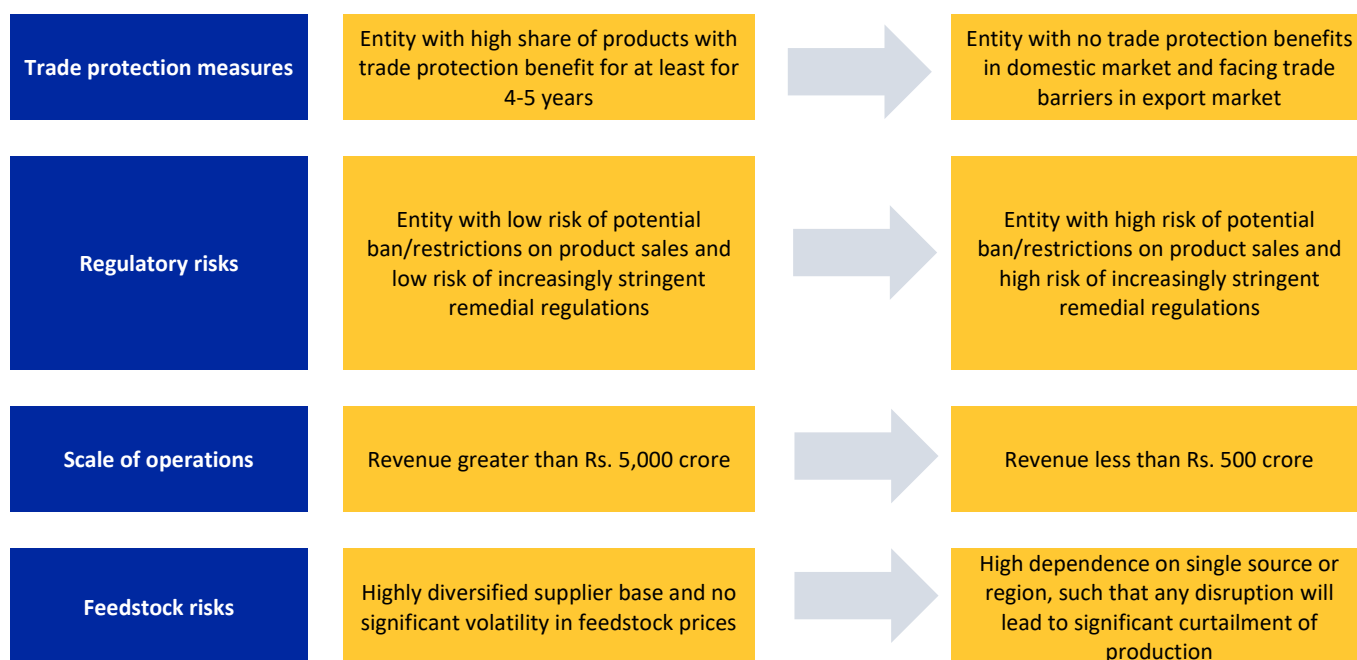
Specialty chemical companies are typically low volume, high value-added and high-margin products. These products tend to constitute a small share in the overall volume of the raw material consumed by the end user even as they play a significant role in driving the overall product characteristics. This tends to drive customer stickiness. The overall market size of such products is typically smaller than commodity chemicals, with lower industry fragmentation because of the nature of the products and the high entry barriers in the form of access to technology, product patents etc. ICRA looks at a sustained healthy market share in specific product categories as an indicator of a company’s competitive position. Further, because of the nature of the competitive position, the entities have a better ability to pass on the cost increases to customers and tend to have stable and healthy profit margins.

To sustain its competitive advantage, a specialty chemical entity needs to have strong R&D capabilities and a healthy new product pipeline to mitigate the risk of commoditisation of products over time. In this context, ICRA analyses the R&D spend trend as a % of the operating income (OI) over time, the technological capabilities of the entity concerned, and the support it gets from its technologically advanced parent, if any, besides the entity’s track record in introducing new products. A specialty chemical company may have a large number of products in the pilot stage, but ICRA looks at the entity’s ability to successfully launch these products and secure market acceptance for the same. The trends in the share of the new products to the overall sales are also important to understand the track record and success of new product introduction.

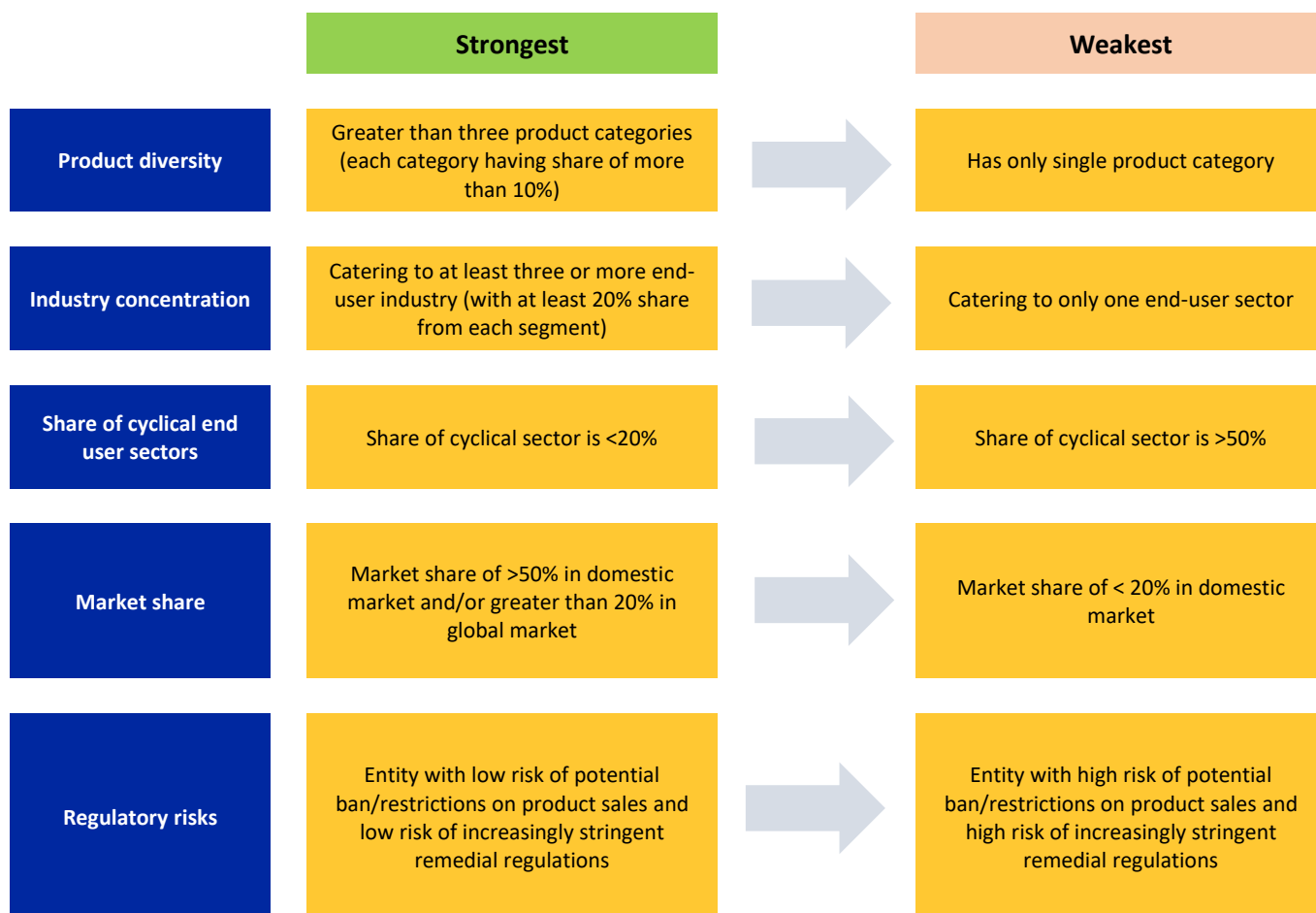
- Feedstock risks** – Raw material cost is typically the single-largest component of the cost structure of a chemical entity. Hence, issues related to the availability and pricing of raw materials have a critical bearing on such companies’ operating performance. Availability is particularly important, considering that most chemical companies operate continuous process plants and an unplanned shutdown can have severe cost implications. In this context, ICRA evaluates an entity’s sources of raw material, the supplier concentration risk, its bargaining power relative to the feedstock supplier and the pricing structure. ICRA also assesses the regulatory risks associated with the pricing of certain key raw materials, such as natural gas, the increase in price of which can have a significant impact on the cost structures of entities using it as a primary feedstock. The transportation costs also have a bearing on the delivered cost of the feedstock and could have a material impact on the cost competitiveness of a chemical entity.

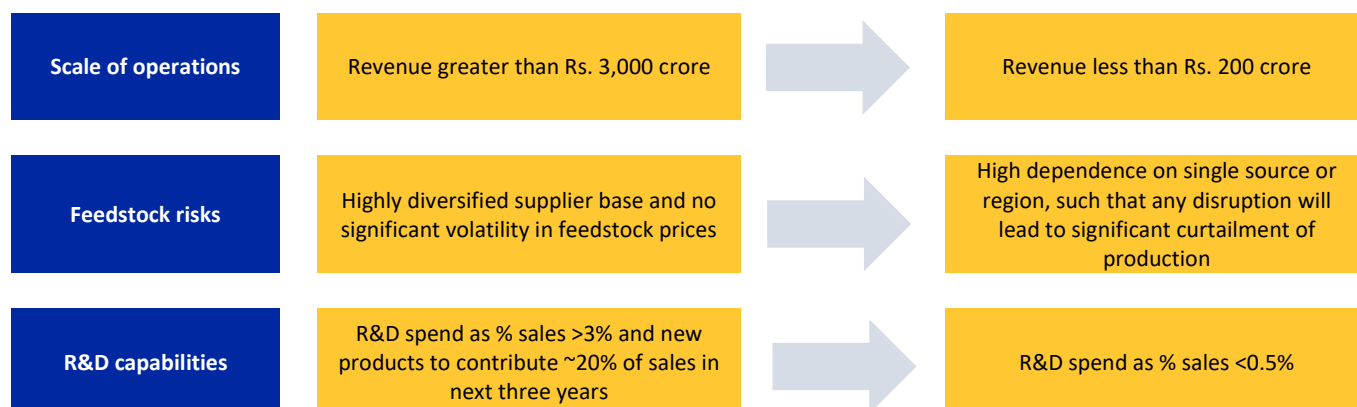
Salient Business Risk Factors (For commodity chemical entities)





Salient Business Risk Factors (For specialty chemical entities)





Financial Risk Assessment

As the prime objective of the rating exercise is to assess the adequacy of an entity’s debt servicing capability, ICRA draws up projections on the likely financial position of an entity under various scenarios. Besides, ICRA considers the commitments of the entity towards other group entities, new ventures and its investments in subsidiaries. Accordingly, the future cash flows are projected after considering the entity’s capacity utilisation levels, capital expenditure programme, the growth it envisages, the 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 various financial metrics assessed by ICRA could be divided into four categories—profitability, leverage, coverage, and liquidity. 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 – Approach for Financial Ratio Analysis – published on ICRA’s website. In case of groups consisting of entities with strong 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

For commodity chemicals, in general, an entity with superior economies of scale and efficient utilisation of by-products would have a lower cost of production than a smaller entity. As ICRA attempts to rate commodity chemical companies through the cycles, the average gross margin per metric tonne (MT) for the past cycles is also analysed, besides trends in the long-term average of other profitability metrics such as operating profit before depreciation interest tax amortisation (OPBDITA) and return on capital employed (RoCE) [profit before interest and tax/(total debt + tangible net worth + deferred tax liability)] margins. For specialty chemical entities, ICRA evaluates the stability of their operating margins over a period of time to ascertain the extent to which their pricing power has remained intact.

For a multi-product entity, to the extent the data is available, ICRA tries to evaluate the trends in key product-wise/segment-wise profitability to determine the adequacy and sustainability of cash flow generation, in reference to the debt service obligations.

Validation of Business Risk through Profitability Metrics

[Indicative Metrics²]

| | Strongest | | Weakest |
|--------------------|-----------|---|---------|
| RoCE | >=25% | ➔ | <10% |
| Volatility in RoCE | <=10% | | >55% |

Capital Structure and Debt Coverage

The commodity chemical business is capital intensive, which underscores the importance of the capital structure in determining the credit risk profile of the participant in this business. Commodity chemical companies need to periodically invest in process upgradation to keep the cost structure competitive and meet stricter environmental norms along with maintaining the market specifications for the new products. The ability of an entity to maintain conservative gearing levels helps counter the high business risks associated with commodity chemicals. For a specialty chemical entity, it would also be imperative to invest substantially in R&D and product development to be able to sustain/improve its market position. Further, entities also need to invest to add capacities for existing products or add new products for diversification benefits. ICRA assesses the sufficiency of internal cash generation vis-à-vis the funding requirement for such capital and product development expenditure, the need for the entity to raise capital from the market, and the implications of the same on its future capital structure and coverage metrics like interest coverage and debt services coverage indicators.

Assessment of Leverage

[Indicative Metrics]

| | Strongest | | Weakest |
|----------------------|-----------|---|---------|
| Debt to Equity Ratio | <=0.9x | ➔ | >3.0x |
| Debt to Profit Ratio | <=0.5x | | >5.0x |

Assessment of Coverage

[Indicative Metrics]

| | Strongest | | Weakest |
|-------------------|-----------|---|---------|
| Interest Coverage | >=18.0x | ➔ | <2.0x |
| DSCR | >=4.0x | | <1.1x |

Working Capital Indicators

The working capital intensity of the chemical sector tends to remain moderately high and in some specific cases it can be elevated as well, depending on the end markets served. In case of commodity chemicals, the receivables days tend to remain modest but the high raw material inventory to be maintained keeps the working capital intensity moderately high. Specialty chemical players have displayed wide variation in their working capital cycles, depending on the end markets served. As a result, ICRA evaluates the working capital intensity of an entity being rated and compares it with the peers to assess entity-

² 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 weak 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.

specific issues in terms of the working capital cycle. Any significant negative deviation from the general peer trend is evaluated by ICRA to assess the impact on the overall credit profile.

Liquidity and Financial Flexibility

Cash is required to service obligations. Liquidity ratios measure the buffer that an entity has in the form of cash or cash equivalents with respect to its obligations that can be utilised in case of a temporary cash flow mismatch. The presence of adequate buffers of liquid assets/bank lines to meet short-term obligations is viewed positively. In addition, ICRA notes that an entity with strong liquidity can mitigate the impact of any short-term exigencies or events that might adversely impact the cash flows in the interim. The entity's liquidity is assessed by its unutilised bank/credit limits and liquid investments. The entity's financial flexibility - as reflected in its ability to raise funds at a short notice - and the nature of its relationship with banks, financial institutions and other intermediaries are assessed. The comfort derived from a strong parent also helps in improving its financial flexibility.

Other Elements of Credit Risk Assessment

Parentage/Group Support

Apart from standalone credit considerations, the likelihood of extraordinary support from the parent to an entity or the support that an entity is likely to extend to other group companies is factored in while assessing the credit profile of the entity. 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.³

Foreign Currency Risks

Such risks arise if an entity's major costs and revenues are denominated in different currencies. Examples in this regard would include companies selling in the domestic market but having large imports, and export-oriented units operating largely on the domestic cost structure. The foreign currency risk can also arise from unhedged liabilities, especially for companies earning most of their revenues in local currency. Forex risk also arises for companies with exposure to foreign currency borrowings for part-funding of capital expenditure and/or working capital requirements. The focus here is on assessing the natural hedge available as well as the hedging policy of the entity concerned in the context of the tenure and nature of its contracts with clients (short term/long term, fixed price/variable price) to mitigate such risk for net exposure.

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 refinancing risks, especially during periods of tight liquidity. 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 would be impacted by movements in interest rates is also evaluated.

Accounting Quality

Here, the accounting policies, Notes to Accounts and Auditor's Comments are reviewed. Any deviation from the Generally Accepted Accounting Practices is noted and the financial statements of the entity adjusted to reflect the impact of such deviations.

Debt Servicing Track Record

Any history of past delays or defaults in meeting the interest and principal repayment obligations reduces the comfort level with respect to the company's future debt servicing capability and willingness. Nevertheless, the reasons behind past defaults

³ 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.

are also analysed, which could also be due to adverse demand situations in the underlying industry. The company's ability to honour its debt obligations during a period of cyclical stress is also factored in.

Contingent Liabilities and Off-balance Sheet Exposure

In this case, the likelihood of devolvement of contingent liabilities/off-balance sheet exposure and the financial implications of the same are evaluated.

Management Quality & Corporate Governance Assessment

All debt ratings necessarily incorporate an assessment of the quality of a rated entity's management. An entity with an experienced management and independent directors on its board are considered positive factors.

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 ones 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.

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 and containment
- The rated entity's policies on leveraging, interest risks and currency risks
- The rated entity's plans on new projects, acquisitions, expansion, etc.

Periodic interactions with the management also help to estimate the possibility of the management's tendency to deviate from its core philosophy in times of stress.

Assessment of Environmental, Social and Governance (ESG) Risks

Environmental (E) and Social (S) Risks

As this methodology highlights, while undertaking the 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 fully or precisely disaggregate the sub-components of E&S risks in the credit analysis as 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 differs widely across sectors and entities. In some cases, while the E&S risks could be material, their effect on the credit profile may be muted because of other fundamental strengths of the entity. In other cases, the adverse impact of the E&S risks is expected to play out in the distant future, and hence these considerations do not necessarily weigh on the rating today — with the expectation that when these risks manifest in the distant future, the rated entity by then would possibly adapt itself by realigning its business model.

While evaluating the E&S risks, ICRA's objective is only to assess the direct and indirect risks that an entity faces and how it already is or is intending to mitigate the impact of such risks on its credit profile. As an example, ICRA only assesses whether an entity is exposed to physical climate risks, 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.

The chemical entities are exposed to the risk of potential restrictions/ban on products which are hazardous in nature/highly polluting, the increased risk of tightening of handling regulations/environmental remediation measures over time, which could lead to increased costs and the potential constraints on the production of key raw materials in producing countries. ICRA assesses the product portfolio of the company and based on the risk assessment on the aforementioned parameters, the aggregate environmental and regulatory risks may be considered for the company. Further, social risks in the form of hazardous working conditions, risk of leakages, any protests by locals in the vicinity of manufacturing units, which may restrict future expansion plan or increase the rehabilitation and resettlement (R&R) related expenses may also be considered.

Governance Practices

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

Summing Up

ICRA's credit ratings are a symbolic representation of its opinion on the relative credit risk associated with the 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 entities in the chemical industry incorporates both quantitative and qualitative factors. Depending on the nature of the products, they can be classified as specialty or commodity chemicals. While factors like product diversity, industry and customer concentration, feedstock risks and geographic diversification are assessed for all companies, for commodity chemical entities, the scale of operations, level of vertical integration and cost competitiveness are the major factors assessed for business risk analysis. For specialty chemical entities, the market share, pricing power and R&D spend, and product pipeline are important factors considered. ICRA's financial risk analysis for commodity chemical companies focuses on profitability through cycles, the extent of leverage, ability to service the debt during a downcycle and financial flexibility. With regard to specialty chemical companies, stability in profitability is analysed to understand the pricing power, apart from other factors.

ANNEXURE

Summary of rating factors and an example to illustrate the key building blocks of a credit rating (specialty chemicals)

| | | Strong | | | | Comfortable | | | Adequate | | | Moderate | | | Weak | |
|--|---|-----------|-----|----|-----|-------------|------------------|----|----------|-----|------|----------|-----|-----|--------------|--|
| Industry Risk | Industry Position | | | | | | | | | | | | | | | |
| | Product Diversity | | | | | | | | | | | | | | | |
| Business Risk | Industry Concentration | | | | | | | | | | | | | | | |
| | Share of cyclical end user sectors | | | | | | | | | | | | | | | |
| | Market Share | | | | | | | | | | | | | | | |
| | Market Share | | | | | | | | | | | | | | | |
| | Regulatory Risks | | | | | | | | | | | | | | | |
| | Feedstock Risks | | | | | | | | | | | | | | | |
| | R&D/Product Pipeline | | | | | | | | | | | | | | | |
| 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 above graphic is only for illustration purpose and does not represent a rating output from a formulaic model. The ratings assigned by ICRA are determined by Rating Committees based on both quantitative and qualitative considerations.

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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.

For more information, visit www.icra.in and www.icraresearch.in

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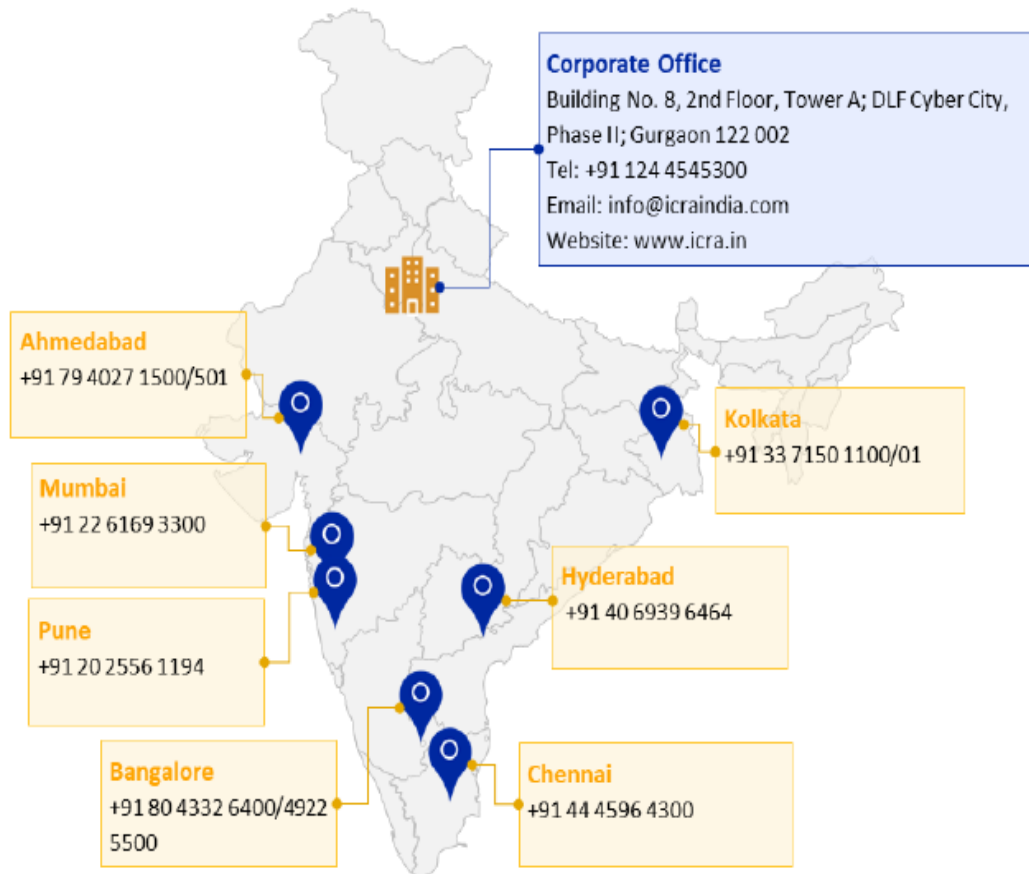
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