RATING METHODOLOGY – PORTS

August 2023

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This rating methodology updates and supersedes ICRA's earlier methodology document on this subject, published in August 2021. While this revised version incorporates a few modifications, ICRA's overall approach to rating entities in the sector remains materially similar.

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ANALYST CONTACTS

Mr. Sabyasachi Majumdar
Senior Vice President & Group Head
+91 124 4545 304
sabyasachi@icraindia.com

Mr. Prashant Vasisht
Senior Vice President & Co-Group Head
+91 124 4545 322
prashant.vasisht@icraindia.com

Mr. Varun Gogia
Assistant Vice President & Sector Head
+91 124 4545 829
varun.gogia1@icraindia.com

Overview

India has an extensive coastline of 7,517 kilometres, excluding the Andaman and Nicobar Islands. Ports handle approximately 95% of India's total external trade in terms of volume and 70% in terms of value. Indian ports are divided primarily into major ports and non-major ports. As on March 31, 2023, there were 12 major and 200 non-major ports spread across nine coastal states. Of the non-major ports, only about 65 are operational currently. All major ports, except Kamarajar Port (a public sector corporate entity), are managed by the respective Port Trust Boards, headed by a chairman appointed by the Government of India. The non-major ports are regulated by the respective state governments or their maritime boards and many of these are captive ports of corporate entities. This rating methodology is applicable to entities operating as major ports or non-major ports as well as companies set up to operate port terminals at these ports. Under the latter model, the port authority acts as a landlord, receiving royalty/revenue share from the terminal operators, while port operations (especially cargo handling) are carried out by private companies (terminal operators).

Indian major ports had a capacity to handle 1,600 million tonnes (MT) of cargo, while the non-major ports had a total capacity to handle over 900 MT as on December 31, 2022. The total cargo handled at Indian ports recorded a compounded annual growth rate (CAGR) of 4.4% during FY2013 to FY2023, primarily driven by containers, iron ore and coal (each segment growing between ~6% to 7%). In terms of segment-wise breakup, petroleum, oil and lubricants - POL (31%), coal (25%) and containers (20%) together constitute over 75% of the total volumes handled. In terms of market share, non-major ports had a share of 45% of total cargo in FY2023, while the balance was handled by major ports. Going forward, the long-term cargo growth potential remains favourable for Indian ports, due to expected growth in exim trade and improvement in the port infrastructure.

In terms of capacity addition and modernisation, the Ministry of Shipping (MoS) sets its targets for each year in terms of the number of projects to be approved and the total investment to be made at the major ports. Over the last few years, the Ministry has awarded several projects with significant investment outlay to augment capacity and improve port connectivity under the Sagarmala project. In addition, several private sector entities have commissioned facilities during this period, and many are either in the process of setting up new ports or are in advanced planning stages.

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 port entities. This methodology

does not include an exhaustive treatment of all 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, and Financial Risk Assessment, etc.

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Industry Risk Assessment

Regulatory Risk

As in any infrastructure sector, the port sector carries a fair exposure to regulatory risks. Earlier the tariffs (i.e., the charges levied by the port on its users) for the 11 major ports was decided by the Tariff Authority for Major Ports (TAMP). However, post implementation of the Tariff Policy for Major Port Authorities, 2021 in November 2021 under the Major Port Authorities Act, 2021 (MPAA, 2021), the board of the major port authorities (MPA) have been entrusted with the responsibility of setting the tariffs instead of TAMP. The guidelines issued in November 2021 for major ports allow them to set tariffs and respond to market forces within a limit of the Annual Revenue Requirement[1] (ARR) as calculated under the policy. While the ARR determination procedure remains essentially unchanged vis-à-vis the earlier guidelines, the port authorities have been entrusted with the approval of the tariffs to be set instead of TAMP. As a result, MPAs can exercise flexibility in setting of the tariffs. Under the new guidelines, the new terminals to be set up post November 2021 at the major ports will have complete pricing freedom to devise their own tariff structures and will work on royalty payment model with the port authorities and will not be required to adhere to the limitations of ARR calculations. The changes under the MPAA 2021 are expected to provide the flexibility to the major port authorities in setting tariffs. While MPAA 2021 has delegated the authority of tariff setting to port authorities, the authorities have to ensure that there is no loss of traffic at the ports. An adjudicatory board has also been set up as a grievance redressal mechanism regarding settlement of any grievances pertaining to the tariff determined by the port authorities.

The non-major ports have always been free to devise their own tariff structures, which gives them significant flexibility in pricing. Key parameters evaluated by ICRA include the extent of pass through of the royalty or the revenue share by the port operator/terminal operator in tariff setting and periodicity of tariff revision and its sufficiency.

The key concern for the private sector terminal operator at major ports had been the lack of a level playing field because of various tariff regimes, due to which many of them remain engaged in the legal disputes with the port authorities. However, possibility of such issues arising in the future remain low under the MPAA 2021, with the authority of the approval of tariffs for the existing terminals getting delegated to the Port Authorities instead of TAMP.

On the other hand, being a private sector port entity (non-major ports) may be a positive in terms of the operators' ability to have market-driven pricing. Although there had been indications in the past that they may also be brought under the regulatory regime, this step appears unlikely, considering the flexibility now available to the major ports as well in tariff setting.

Business Risk Assessment

For the business risk assessment of port companies, the parameters considered are broadly divided into two categories – Parameters applicable to 1) Operating port companies and 2) Greenfield port projects. These parameters are not exhaustive but provide a broad perspective on the key parameters that ICRA analyses while rating ports.

The parameters outlined below are applicable to the Operating port companies:

Operating Risk

One of the key determinants of a port's business profile is the adequacy of its facilities for effective handling of the various types of cargo. Additionally, the port's ability to expand these facilities as necessary, as well as the rail and road infrastructure connecting the port are crucial. The important aspects analysed are elaborated below:

[1] *Annual Revenue Requirement (ARR) for a financial year will be calculated as the sum of the average of the actual expenditure (as per the audited accounts) incurred over the last three years, Return on Capital Employed (RoCE) of 16% on Net fixed assets, working capital and Capital Work in Progress.*

Site conditions: The ability of a port to operate in all weather conditions is a key positive from the rating perspective, as handling could otherwise be constrained during the monsoon periods. While some ports are naturally endowed with good weather conditions all the year round, other ports achieve the same by investing in construction of breakwaters, which protect a restricted area against strong tidal waves/wind conditions. Certain ports are also vulnerable to cyclones, which form a part of ICRA's evaluation as the damage caused to the port infrastructure can be enormous in an extreme force majeure scenario.

Ability to handle larger-sized vessels: This is usually a function of the draught available at the port and the onshore facilities available for handling larger cargoes. In case adequate natural draught is not available, the port may need to dredge the sea surface. The economics of dredging is usually a function of the dredging cost, which depends on the nature of the sea surface (rocky surfaces are difficult to dredge), and the frequency of ships which call on at the port. Channels, which are dredged, also need to carry out maintenance dredging periodically to ensure that adequate draught is maintained at all points of time. The ability to receive larger-sized vessels (Capesize/Aframax/ Suezmax vessels) is also a function of the back-up storage facilities available and the cargo-handling infrastructure available (such as cranes, tractor-trailers and stacker-reclaimers), as the ships need to discharge their cargoes quickly to reduce their voyage time. This assumes considerable importance in situations where ships are contracted on a time charter basis, where the voyage duration becomes important. Thus, the ability to handle larger vessels is a function of the draught available as well as the scale of operations of the port as it needs to have adequate facilities to enable servicing of large size ships.

Ability to handle larger-sized vessels provides flexibility to meet the requirements of bulk customers, as large shipments typically reduce the average freight costs, though it also increases the inventory holding costs. High level of mechanisation in material handling enables a port to manage discharge rates, which determines the type of logistics solutions it is able to offer to its end consumers, as compared to other competing ports. ICRA also evaluates the adequacy of back-up storage facilities (open, covered and tank farms) to handle the various cargo types.

Capacity and volume of cargo handled: Capacity of cargo handling at a port is also evaluated by ICRA as it determines the scale of operations of the entity, along with the volume of the cargo handled by the port. The larger the capacity of the port, the bigger ships it can attract and thus improve competitiveness of logistics cost for the end users. The volume of cargo handled at the port is a measure of the ability of the port to attract traffic and generate adequate revenue. Higher cargo volumes earn higher revenue for the port, which will provide benefits of scale.

Reasonableness of royalty/revenue share: Terminal operators pay royalty or revenue share to the port operator. The same is charged to the end user. Increase in the royalty/revenue share for a port/terminal indicates higher cost of cargo handling and may render it uncompetitive against nearby ports, which may offer competitive prices. Thus, ICRA evaluates the reasonableness of the royalty/revenue share being paid by the terminal operator to the port operator. Lower royalty/revenue share suggests higher competitiveness for the terminal operator.

Location and inter-modal connectivity: Proximity to consuming/ exporting centres and the availability of adequate rail and road connectivity for evacuating/ carrying cargoes are essential for a good port. Successful ports operate for decades, and such infrastructure needs to be adequate, not only for meeting the existing demand but also for likely growth in demand over extended periods of time. Port authorities, therefore, need to invest considerable amounts of capital, either individually or in partnership with rail/ road development authorities for creating the necessary infrastructure for connecting the port to the hinterland. In absence of such infrastructure, a port may not be able to attract the traffic necessary to justify the capital expenditure, which is necessary to develop and grow it.

Location also assumes considerable importance in the container business, as most shipping lines operate their container vessels along selected maritime corridors. Unless the port is suitably located along such corridors, it may not be able to attract container traffic. Besides, availability of well-developed container freight stations (CFS) and good connectivity with Inland Container Depots (ICDs) is important so that seamless movement of containers takes place between the port and the end

customers. Thus, location near key demand centres and access to adequate infrastructure for evacuation of cargo is a favourable attribute.

Labour relations and productivity: Port reliability and labour productivity have become important competitive factors in the port industry. The overall operating efficiency of ports is measured by three parameters - average turnaround time (ATT) of vessels on port (in days), average pre-berthing time on port (in hours), and average output per ship berth day (in tonnes). Ports with mechanised loading and un-loading facilities can handle more cargo and would be favourably placed as compared to ports that lack mechanisation. Successful ports can gain an advantage based on a track record of well-managed labour relations and above-average productivity as measured by, for example, container dwell time at the port or containers handled per hour. While labour relation is less of an issue in private ports, it is a key issue in the case of major ports (all public enterprises) because of several legacy issues afflicting them.

Demand risk and ability to handle different types of cargo: Global trade largely takes place in crude oil, dry and bulk commodities such as coal, steel products, fertilisers, food grains, liquids, and containerised cargo. Global trade patterns change as demand-supply patterns within the country vary, although such fluctuations are usually seen in dry bulk and liquid (non-crude) cargoes. In such a scenario, flexibility in handling different kinds of cargo, ability to handle both exports and imports are necessary for countering the risks associated with a sudden and sharp change in trade flows in individual commodities. This risk also needs to be viewed in the context that the port business is highly capital intensive, with a continuous requirement for investments as cargo levels increase. Such investments are usually needed for increasing and upgrading facilities for handling more ships, increasing storage facilities and in expanding capacity of inter-modal linkages such as railways. Hence, despite the risk of trade patterns changing, most ports depend on an anchor, either in the form of a customer or a commodity for ensuring certain stability in cash flows. However, in many cases, it exposes the port to concentration risks.

Further, a concentration on a few commodities whose traffic can be affected by regulatory actions (e.g., iron ore) and project delays (imported coal for power plants, etc) can be negative from the business risk perspective. Also, as seen in the past, high concentration of single commodity (say, coal) can impact ports when the domestic demand-supply gap reduces. Iron ore volumes have seen high variations due to the changes in regulations - import/export duty changes or mining restrictions. Hence ports with a diversified cargo mix, across multiple end users have relatively better cash flow stability.

Cost competitiveness in terms of integrated logistics cost. The typical revenue sources for a port are depicted in the following table:

Source	Particulars
Vessel-related charges	Paid by the shipping company, can be considered an entry charge -- to be seen in conjunction with berthing, turnaround and waiting times
Cargo related / handling charges	Port usage/handling charge paid by the importer/shipping line
Terminal royalty (Port Dues)	Paid by the terminal operator for use of waterfront, infrastructure available at the port etc. The drivers of terminal royalty majorly are the available draft, hinterland connectivity, infrastructure availability and probable traffic flow among others. The hinterland connectivity attracts users to the port and provides revenue opportunities for the terminal operators. (in turn collected by the operator from the users)
Railway income	Payable by the importer/exporter for use of the railway corridor set up (if any)
Land / infrastructure / storage-related income	In case a port operator has access to land, which it can sub-lease to third parties for setting up their own storage and processing facilities. e.g. for importing crude oil for their respective refinery projects

As can be inferred from the above table, revenues for any port are largely a function of the traffic it can attract to the port, and the ability to build up and sustain volumes is, therefore, a key credit determinant. A typical port cargo business portfolio has three components: the dry bulk and liquid business, the crude oil business and the container business. The ability of these businesses to attract and grow traffic is influenced by the advantages that may be available to the port, and the sustainability

of the same. A key metric that could capture the potential of any port to attract traffic is the integrated logistics cost, which comprises oceanic freight, port charges and inland freight. ICRA analysis indicates port charges constitute less than 10% of integrated logistics cost for most customers, and customers are impacted more by the cost of oceanic freight and inland freight.

Competition: Analysis of market potential in the hinterland of the port is important from the rating perspective to form a view on the likely cargo growth in future. A high share of cargo from the primary hinterland, where competition from the nearby ports will be limited because of logistical and other barriers, would be a key source of competitive advantage for the port. If there are other similar cargo handling ports in the region, it might constrain the ability of the port to ensure stickiness of cargo and may affect the realisations they can command.

Share of long-term cargo: ICRA also looks at share of committed long-term cargo as a percentage of the overall cargo handled at port/terminals, which provides stability to income.

The factors explained below are applicable to the greenfield port project companies:

Permitting risk: Permitting risk is applicable to greenfield port companies and refers to a company's ability to secure all statutory clearances required for constructing and operating a port as well as comply with environmental norms. ICRA evaluates issues related to land acquisition, rehabilitation and resettlement and also examines the status of various environmental clearances required as per the laws of the land. These clearances are typically required from a variety of agencies like the Ministry of Environment and Forest and the Pollution Control Board, etc. Since clearances in the Indian context still have the potential of resulting in inordinate delays, which cannot be budgeted for, this area could have a major influence on the credit rating assigned. Normally, ICRA expects that any project requiring a rating would have most, if not all, of these critical clearances in place. This, however, is no assurance that the project will not face problems with environmental clearances or public opposition in the future. At times, projects can get delayed due to lack of support from state governments or local issues in terms of supply of adequate material or manpower to complete the project and the possibility of such risks is also considered.

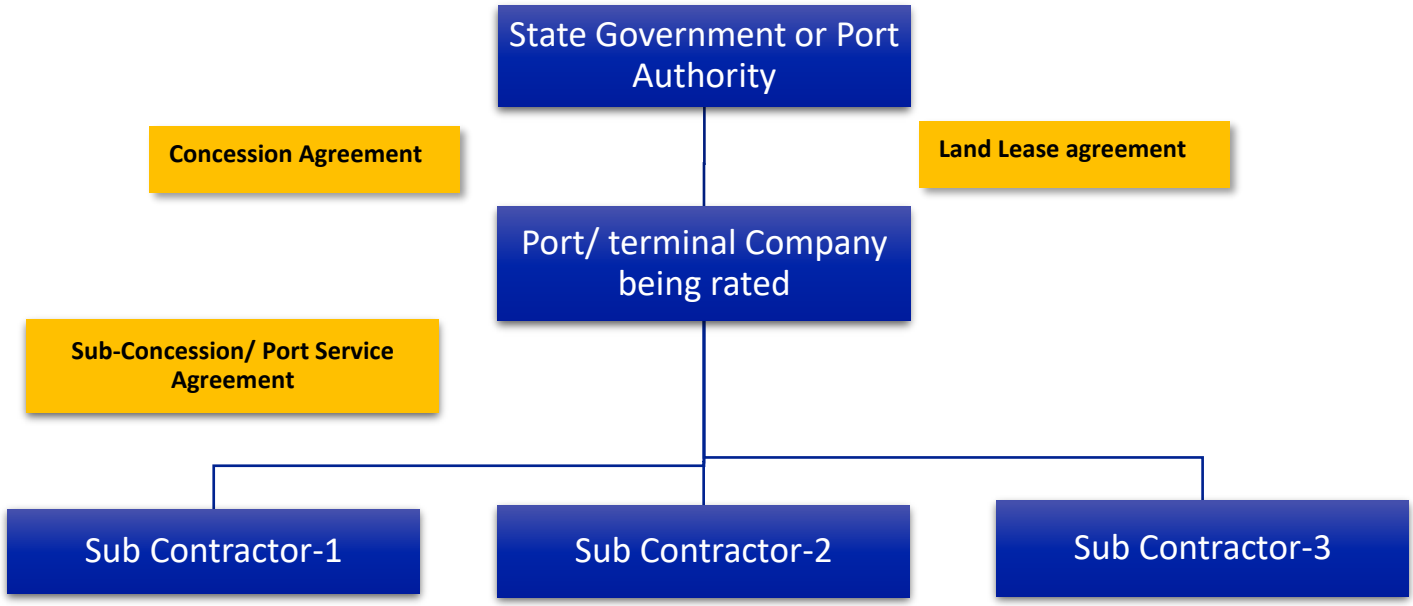
Funding risk: A project company's ability to tie up the requisite finances, as well as the planned capital structure, is the focus of the analysis here. Normally, most projects have a high leverage. While equity is arranged privately from the sponsors, the port remains dependent on financial institutions, banks and the capital markets for arranging the debt component. ICRA looks at the extent to which the funding is already in place and the likelihood of the balance funding being available in time, so that the project progress is not delayed. Clearly, the strength of the sponsors is an important risk mitigant even though project finance is expected to be on a 'non-recourse' basis. This is based on the assumption that in the Indian context, most credit-worthy sponsors are likely to support the project that extends beyond making available the initial equity component alone, even if the project risk is technically non-recourse. This is because port projects in India are not backed by take-or-pay contracts with users and thus can have long gestation periods before they achieve optimal capacity utilisation levels that result in adequate cash flows. The strength of the promoter would also impart financial flexibility in funding cost overruns or other contingencies.

The capital structure is evaluated to assess whether the debt-equity ratio is in conformity with port projects of a similar size, complexity and revenue potential. The average cost and the tenor of debt and the foreign exchange component in the debt is also looked at.

Construction risk: Construction risks refer to a project getting delayed leading to time and cost overruns. Port projects can have varying complexity levels, depending on the availability of required land in its entirety, nature of the waterfront, tidal variations, design specifications, etc. Fixed-price, fixed-time contracts with adequate clauses for liquidated damages are usually the mitigants against construction risk, as this risk essentially gets transferred to the EPC contractor. The experience of the EPC contractor in executing similar projects would be favourable for mitigation of construction risks to some extent and is

considered. The cushion that is available in the scheduled completion of the project vis-à-vis the provisions of the Concession Agreement also serves as a risk mitigant to some extent.

Assessment of contractual structure: A typical contractual structure for a port could be as follows:



Note – the sub-contractors can be terminal operators/O&M service provider etc.

ICRA evaluates the features of various contracts to study their reasonableness and appropriateness and whether the risks have been allocated to the party, which is in the best position to bear the same. Other important parameters evaluated with regards to the Concession Agreement, include tenure, project schedule, performance standards and restrictions on the development of competing ports/terminals and lock-in period for the equity holders, as they could impinge on the performance of a greenfield port.

Structure of tenant lease agreements: An important rating factor relating to the scope of a port's operations is the role of the port operator - whether it is a landlord port or an operator port. In the landlord port model, specific port facilities are usually privately operated under the terms of long-term lease agreements between the port authority/owner and private operators. These leases usually contain minimum annual guaranteed payments or MAGs, which are paid by the concessionaire to the landlord port, which are an important financial consideration in ICRA's analysis. In the operator port model, the facilities are used on a common carrier basis[2] with the port controlling the use of the facilities. However, over the last few years, there has been an increasing shift to a hybrid model, where the same port authority can have own terminals as well as terminals on PPP basis, operated by private sector entities.

[2] *To provide service to any customer willing to pay the fees*

Summary of the Salient Business Risk Factors

	Strongest	Weakest
Draft	Greater than 15 m	Less than 8 m
All Weather/Seasonal	Operational throughout the year	Operational for less than 4 months
Port Connectivity	Very good Road/ Rail/ Pipeline connectivity for Bulk Cargo; CFS Network for Container Cargo	Poor Road/ Rail/ Pipeline connectivity, critical linkages
Capacity	Total cargo handling capacity of more than 40 million TPA	Total cargo handling capacity of less than 10 million TPA
Cargo Handled	Total cargo handled is greater than 30 million TPA	Total cargo handled is less than 5 million TPA
Efficiency (Turnaround Time)	Turnaround time of less than 1 day	Turnaround time of >1.75 day
Extent of Mechanisation	Mechanised cargo handled as a % of total cargo handled is 100%	Mechanised cargo handled as a % of total cargo handled is < 40%
Competition from nearby ports	Number of similar cargo ports in vicinity currently or expected to be operational in next 3 years is nil	Number of similar cargo ports in vicinity currently or expected to be operational in next 3 years is greater than 3
% of long term cargo	Committed offtake by customers as a % of total cargo is 100%	Committed offtake by customers as a % of total cargo is < 20%
Cost of transportation for customer	Cost of transportation for customer including port charges, cost of delivery to doorstep, shipping charges and any other chargers as compared to competing ports is materially low	Cost of transportation for customer including port charges, cost of delivery to doorstep, shipping charges and any other chargers as compared to competing ports is quite high
Cargo Diversification	Share of largest cargo segment is <20%	Share of largest cargo segment is >80%
Revenue Share or Royalty	% of revenue share or royalty is less than 10% of revenues	% of revenue share or royalty is greater than 40% of revenues
Pricing flexibility	Full pricing flexibility	Pricing based on MPAA Guidelines 2021 for ports and terminals setup before November 2021

Financial Risk Assessment

Since the primary 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/SPVs. Accordingly, the entity's future cash flows are projected after taking into expected traffic volume, capital expenditure programme, 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 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 – Rating Approach—Financial Ratio Analysis - published on ICRA's website. Additionally, ICRA also evaluates the sensitivity of the credit profile of the entities to various parameters to arrive at a conclusion regarding the resilience of the credit profile to adverse business environment.

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 and Earnings Stability

A company with higher profitability margins and returns on capital has a greater ability to generate internal accruals, attract external capital, and withstand business adversity. The trends in operating margin and return on capital employed relative to the company's cost of capital are analysed to establish the stability of cash flow generation and the sufficiency of the same vis-à-vis the company's future debt service obligations. Efficiency parameters at the port like high berth utilisation, faster turnaround times, higher handling capacity and the extent of marine/infrastructure services offered in-house by the port company are some of the main factors that determine the profitability of port companies.

Assessment of Return metrics
[Indicative metrics[3]]

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

Leverage and Coverage Indicators

Given the high capital intensity of port companies, and the high leveraging that port projects commence operations with, a steady ramp up during the initial years and high capacity utilisation are essential to generate sufficient cash flows to service interest and debt. Accordingly, the objective here is to ascertain the level of debt in relation to the issuer's own funds and is viewed in conjunction with the business risks that the issuer is exposed to. ICRA, in its analysis of a port company's financial position, compares its leverage ratio with that of its peers to determine its relative leverage position. Generally, conservative leverage ratios are viewed favourably as the same reduce the committed outflows via interest and principal repayment. Long maturity profile and lower cost of loans can partially offset the risk associated with high financial leverage, as the payback period for port business is generally long. The other debt coverage indicators that are also examined include interest coverage ratio, ratio of net cash accruals to total debt, and debt service coverage ratio (DSCR).

Assessment of leverage
[Indicative metrics]

	Strongest	Weakest
Indebtedness Ratio	<=0.9x	>3.0x
Debt to Profit Ratio	<=0.5x	>5.0x

[3] *The indicative financial metrics mentioned here and elsewhere in the document are intended to provide a broad overview to the readers regarding what ICRA generally considers as 'relatively strong' or 'relatively weak' metrics. It is, however, possible that an entity has relatively weaker metrices 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 metrices 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.*

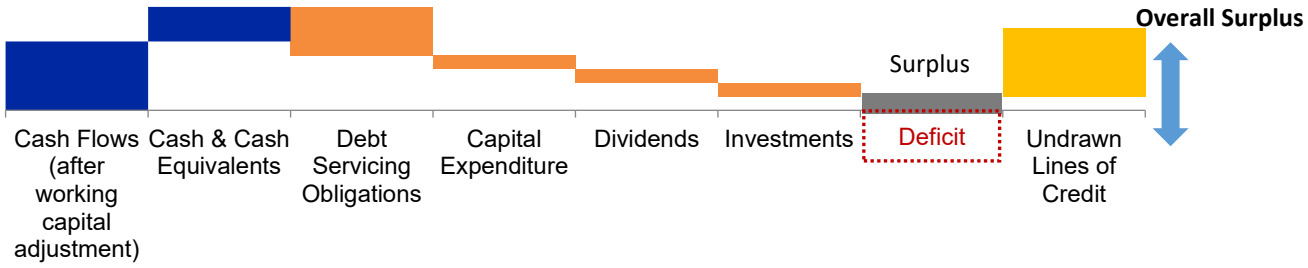
Assessment of coverage
[Indicative metrics]

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

Liquidity and adequacy of future cash flows

Liquidity is the measure of an entity's ability to meet its short-term cash obligations from various internal or external resources. Internal resources include cash flows from operations, unencumbered cash and cash equivalents on balance sheet and cash inflows expected from the monetisation of physical and financial assets. External resources include undrawn lines of credit or equity capital. The short-term obligations include both the committed as well as the contingent claims on an entity's cash, including the debt servicing obligations, working capital requirements, capital expenditure and other investment outlays, dividend and share buyback related outflows, besides the sudden demand arising from crystallisation of discrete events such as unfavourable outcome of an ongoing litigation. The higher the cushion available between the resources available (especially internal resources) and the obligations, 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.

Liquidity snapshot over any defined period



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

Other Elements of Credit Risk Assessment

Tenure mismatches and risks relating to refinancing and interest rates

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. The existence of adequate buffers of liquid assets/bank lines to meet short-

term obligations is viewed favourably. Similarly, the extent to which an entity would be impacted by movements in interest rates is also evaluated.

Financial Flexibility

An entity's financial flexibility (or the lack thereof) is reflected in its ability to access the capital or the money markets at short notice, attract diverse and marquee investors and enjoy the confidence of banks, financial institutions and intermediaries. A strong financial flexibility allows an entity to raise fresh borrowings or refinance the existing ones 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 unencumbered cash flows, unencumbered assets and the flexibility to borrow against such assets, or strong parentage or linkages with a strong group.

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

Foreign Currency Related Risks

Port companies earn moderate to high share of their revenues in dollar denomination. This income remains exposed to foreign currency variations. For any imports (of machinery, etc), the port company may avail buyer's credit for which an assessment of the hedging policy is relevant. Further, port companies raise foreign currency debt on which interest and principal obligations would be exposed to currency movements, if not hedged.

Contingent Liabilities/ Off-Balance Sheet Exposures

The likelihood of devolvement of contingent liabilities/ off-balance sheet exposures and the financial implications of the same are evaluated to assess the entity on this parameter.

Event Risks

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

Parentage

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. 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 on this, readers may refer to the document titled, "Rating Approach–Implicit Parent or Group Support", available on ICRA's website.

Force Majeure Risk

Similar to other infrastructure projects, port projects are usually exposed to force majeure events such as natural calamities, fire or other disruptions in operations, etc. The force majeure risks are, therefore, mitigated through insurance contracts and to an extent, the specific provisions in the Concession Agreement that guard against such eventualities. The type of insurance cover w.r.t the risk covered and its adequacy in the event of catastrophic losses as well as disruption of normal business are endeavoured to be evaluated. ICRA also assesses the following parameters:

- Provisions in the Concession Agreement w.r.t force majeure events
- Legal structure of the project and whether it is 'bankruptcy remote' from the insolvency risks, if any, posed by its sponsors, affiliates or its principal purchaser
- Termination clauses in the Concession Agreement
- Compensation payable in the event of termination because of events of default of both the concessionaire and the operator; and its sufficiency to cover the outstanding debt

While force majeure risk relates to the expected loss in the event of default rather than the probability of default, the presence of force majeure clauses in the Concession Agreement limits the port's liability arising from non-performance or underperformance. The strength of these mitigants influences the overall financial flexibility of the port, which could manifest in the form of a relatively superior ability to attract capital.

Management Quality Assessment

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

Quality of Management and Financial Policies

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

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

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

Assessment of Environmental, Social and Governance (ESG) Risks

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 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 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 differs widely across sectors and entities. In some cases, while the E&S risks could be material but 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. 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 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.

Port entities are exposed to long-term climate trends such as rising sea levels as well as more severe weather conditions, which may require ports to re-design the existing facilities. The dredging of ports to maintain an authorised depth and width or to accommodate larger vessels can have an adverse impact on marine life and water quality—that creates legal risks. Further, as coal and crude account for a large share of the cargo at most of the ports, the long-term cargo volumes remains exposed to carbon transition risk, especially for ports with high dependence on these segments. For new projects, regulations pertaining to coastal development may widen in scope over time and result in higher compliance costs. Further social considerations like any push-back from unions pertaining to privatisation/mechanisation of operations or community relations risk with local population like fishing community, etc, can also have an impact on operations/projects.

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's participation in strategy formulation, besides the entity's adherence to legal and statutory compliance requirements are factored in during credit assessments. ICRA seeks to gain a qualitative understanding of an entity's commitment to following transparent and credible practices by the way its financial statements are reported, 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

As in case of all other debt ratings, the qualitative analysis as outlined above is complemented with financial projections over the life of the instrument that seeks to evaluate the adequacy of cash flows in comparison with the debt servicing requirements. In this context, the amortisation profile of the project debt is a critical variable because of the long gestation period associated with the port companies. A back-ended amortisation, coupled with reasonable moratorium period, is a positive, because of the challenges associated with the ramping up of cargo in the initial years. Sensitivities are also drawn to project the company's performance under a range of variables, the most commonly used variables for sensitivity analysis being time and cost overrun and traffic volumes. The financial projections enable ICRA to understand the robustness of cash flows and debt servicing capability. However, for port companies in the project stage, even the most rigorous sensitivity analysis may not be able to factor in many of the risks as mentioned earlier and the final rating assigned primarily reflects the competitive profile of the project as well as the strength of the sponsors.

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															
Business Risk	Draft															
	All Weather/Seasonal															
	Port Connectivity															
	Capacity															
	Cargo Handled															
	Efficiency (Turnaround Time)															
	Extent of Mechanisation															
	Competition from nearby ports															
	% of long term cargo															
	Cost of transportation for customer															
	Cargo diversification															
Financial Risk	Reasonableness of revenue share/Royalty															
	Pricing flexibility															
	Leverage															
	Coverage															
		Enhance					**Support/ Neutral**					**Hinder**					
Do these factors enhance or hinder the credit profile?	Diversification															
	Refinancing Dependence, Liquidity and Financial Flexibility															
	Foreign Exchange 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

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

ICRA Limited

Registered Office

B-710, Statesman House, 148 Barakhamba Road, New Delhi-110001
Tel: +91 11 23357940-45

Branches