RATING METHODOLOGY - AIRPORTS

May 2026

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This rating methodology updates and supersedes ICRA's earlier methodology document on this subject, published in May 2024. While this revised version incorporates a few additional clarifications and editorial changes, ICRA's overall approach to rating entities in the sector remains materially similar.

Overview

India has around 163 operational airports as of May 2026. Traditionally, the primary responsibility for the development and management of Indian airports had been with the Government of India (GoI) through the Airports Authority of India (AAI), which is under the purview of the Ministry of Civil Aviation (MoCA). Growth in aviation traffic on the one hand, and limitation of the airport infrastructure on the other, led to the call for private investments in the sector. Cochin airport was the first airport in India to be built under Public Private Partnership (PPP) in 1999. Privatisation of airports in the country gained traction with the award of build-operate-transfer (BOT) concessions to private players for greenfield airports at Bengaluru and Hyderabad in 2004, followed by the privatisation of the existing airports at Delhi and Mumbai in 2006 and six airports in 2019. The Government of India has encouraged PPP in the sector and is likely to see more privatisation of airports as well as development of private greenfield airports, going forward. Few notable greenfield airports include Navi Mumbai (Maharashtra), Jewar (Uttar Pradesh) and Bhogapuram (Visakhapatnam).

Post 2010 (excluding covid-19 period), the sector has witnessed robust growth in air travel in the country following competition-induced decline in travel costs, sustained economic growth, rising middle class income and improvement in the consumers' purchasing power. There have also been attempts to enhance regional connectivity through fiscal support and infrastructure development and revive defunct airports through Ude Desh Ka Aam Naagrik (UDAN) as a Regional Connectivity Scheme (RCS) to improve overall air connectivity. Further, the Government has approved modified UDAN scheme for a period of 10 years (FY2027-2036) with enhanced budgetary allocation aimed at enhancing regional connectivity and support affordable air travel for common citizens.

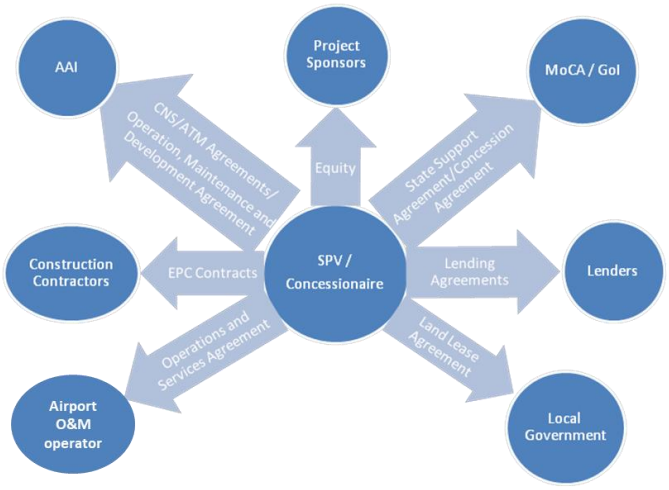
Entities in the airport sector are involved in operations, management and development of Indian airports – both greenfield and brownfield (henceforth referred to as airport operators).

Airport development projects in the private sector are being implemented through project-specific special purpose vehicles (SPVs) in which the debt is raised to fund part of the project cost. Given the increasing private sector participation in airport development, an independent regulator, Airports Economic Regulatory Authority (AERA), was formed in 2009 to determine the tariffs for all major airports (defined as those with a passenger throughput of 3.5 million passengers per annum). Overall, the regulatory aspects fall under the Ministry of Civil Aviation (MoCA), with the Telecom Dispute Settlement and Appellate Tribunal (TDSAT) being the appellate authority.

From a lifecycle and risk profile viewpoint, airports can be grouped into two categories - under construction and operational airports. From the credit perspective, many of the challenges involved in developing airport projects are similar to those faced by other infrastructure projects. For an under-construction airport, permitting and execution risk (such as land acquisition, securing necessary clearances) and funding risks (such as achieving financial closure) are prominent. The risk of time and cost overrun dominates the pre-commercial operation date (COD) period. An airport project's risk profile undergoes a significant change once it achieves COD. In operational airports, the primary risks pertain to the level of traffic at the airport, and the airport's ability to generate non-aeronautical revenues. In addition to this, airports faces risks arising from regulatory uncertainty relating to tariff determination; difficulties in predicting future capital expenditure, given that the growth pattern and service requirements could change and volatility in passenger throughput over long periods of time. Further, in the case of greenfield airports, some risk factors are more pronounced, such as the location of the airport and its acceptability, competition from the existing airport(s), besides the difficulty in appropriately forecasting the non-aeronautical revenues.

Key stakeholders

Exhibit 1: An indicative project structure for airport development in India



ATM: Air Traffic Management; CNS: Communication, Navigation and Surveillance

Developing and operating an airport entails involvement of many stakeholders - regulators (MoCA and AERA), AAI, user groups represented by airlines and passengers, state governments and the airport developer/concessionaire.

The key stakeholders and the typical contractual structure for an airport 'project' can be diagrammatically represented through the above chart. Some or all parts of this structure may be applicable to an airport, depending on factors like – whether it is an operational airport or has been undergoing major expansion, whether it is a greenfield or brownfield expansion, or whether it is a privatisation initiative.

Credit Risk Assessment Framework

This rating methodology explains ICRA's approach to assessing the business and financial risk profiles of the entities involved in the development and/or management of the airports, both greenfield and brownfield. It aims to help issuers, investors and other interested market participants understand ICRA's approach to analysing the quantitative and qualitative risks that are likely to affect rating outcomes in this sector. The list of rating drivers covered in this methodology is not exhaustive by itself but provides an overall perspective on the rating considerations that are usually considered the most relevant. For analytical convenience, the key factors are grouped under the following broad heads—Industry Risk Assessment, Business Risk Assessment, Financial Risk Assessment, Sponsor Risk Assessment, among others.

Credit Risk Categorisation

Industry Risk

- Regulatory risks

Business Risk

- Execution risks
- Funding risks
- Market position
- Service offering
- Operating risks
- Counterparty credit risks

Financial Risk and Debt Structure

- Liquidity and debt service coverage metrics
- Structural Features
- Amortising structure
- Covenant package

Sponsor Risk

- Sponsor Profile
- Financial policy, Systems & Strategic intent

ESG and other Risks

- Environment (E) and Social (S) Risks
- Governance practices
- Currency Risk
- Event Risk

Industry Risk Assessment

Regulatory risk

Typically, the aeronautical revenues are regulated, largely to counter the monopolistic nature of airports. It is important to assess the concession regime/framework of economic regulation within which the airport operates. The process of determination of aeronautical charges has evolved over the last decade in India. AERA determines the tariffs for all the major airports or as notified by the Central Government and MoCA determines the tariffs for the non-major airports. AAI's non-major airports have historically been following a uniform tariff schedule as decided by MoCA in consultation with various stakeholders. For privatised airports, the methodology to determine the aeronautical tariffs is usually given out in the relevant concession documents.

In the initial privatisation initiative, a rate-of-return methodology was followed for fixing aeronautical tariffs. Subsequently, according to the National Civil Aviation Policy (NCAP) – 2016, AERA has been directed to adopt the 'hybrid till' mechanism for determination of tariff for aeronautical services for all the operational and upcoming airports. Under the 'hybrid till' model, 30% of non-aeronautical revenue will be used to cross-subsidise aeronautical charges. While estimating the future tariffs for an airport, ICRA assesses the past regulatory decisions pertaining to these aspects, the estimation of the variables mentioned for tariff determination, along with the likely capital expenditure and traffic levels.

The tariff determination by AERA happens for a control period of five years. The returns generated on aeronautical services are capped. As per the current tariff determination methodology, any over recovery/ under recovery in aeronautical revenue generation for a control period compared to the levels estimated at the time of tariff fixation is compensated for by way of a true-down/true-up in the next control period, though with a lag. Thus, the timeliness of implementation of tariff revisions are important to lend predictability to future cash flows of an airport. In India, the aeronautical tariff determination has been significantly delayed in the past decade. However, it has improved lately and tariff orders for major private airports have been released within 3-18 months of the due date.

The regulatory regime in terms of tariff determination has evolved over the years. However, there are still certain areas where there are differences in understanding between the regulator and operator which are under adjudication at various levels. Some of these aspects could have a bearing on the future tariff determination and remains key monitorable from credit perspective.

GoI had announced a new initiative - NextGen Airports for Bharat (NABH) Nirman (Development) 2018 in the Budget speech of 2019 for the upcoming greenfield airports. The proposed structure allows the developer to earn a fixed revenue per passenger termed as Maximum Blended Aeronautical Yield (MBAY). The endeavour is to reduce regulatory interventions in aeronautical tariff determination, by fixing it upfront. The proposed structure incentivises the concessionaire by allowing it to retain upsides from higher non-aeronautical revenues, higher passenger footfall, and better cost control through operational efficiencies. However, it reduces the comfort of assured return on investment and transfers the risk of traffic volatility to the airport operator. As of April 2026, this is a proposed structure and there were no awards under this model.

Further, AERA has issued consultation proposals to link aeronautical tariffs (notably UDF) with service-quality and performance standards of respective airports. While this remains at a consultative stage and is yet to be operationalised, any future implementation could introduce an additional regulatory dimension, particularly for capacity-constrained metro airports.

Business Risk Assessment

Execution risks

ICRA examines if associated execution risks are identified and allocated appropriately, among the project stakeholders. The contractual structure, as assessed from the contracts entered between the SPV and the stakeholders, defines the allocation of risks.

A key component of the execution risk is the permitting risk, which refers to a project's ability to secure all statutory clearances required for constructing and operating an airport as well as to comply with the relevant environmental norms. In rating an airport project, ICRA on a best effort basis tries to evaluate the issues related to land acquisition, rehabilitation and resettlement, and the status of the various clearances required under the laws of the land. The permitting risks are usually lower where the project involves upgradation of an existing airport. On the other hand, such risks are significant for projects involving greenfield construction, wherein large tracts of land need to be acquired.

Apart from permitting risks, the execution risk includes safety aspects associated with the physical construction of the airport infrastructure. This can include construction of new terminals, runways, taxiways and supporting infrastructure[1], which can be complex to implement and call for significant project management skills. Even if an operational airport is transferred to a private player, development work may still be required for capacity expansion/modernisation. Thus, the credit profile of under-construction airport remains exposed to the risks in construction and commissioning, those that may cause the project not to be completed on time or within budget that could lead to penalties from the regulator.

Challenges in arriving at accurate cost estimates in the initial stages of airport development exposes such projects to the risk of cost overruns. This may be caused by a change in design, time extension, increase in cost of imported equipment, and such other factors. Cost escalation can worsen the financial metrics, including the debt coverage ratios, in case part or all the cost overruns are not recoverable from commensurate increase in airport charges. Further, factors such as difficult terrain, poor project management, weather or labour problems can contribute to construction delays and cost escalations. The established track record of EPC contractor in completing projects of similar scale on time and within budget could act as a mitigant.

Funding risks

Like any other infrastructure project, airport development is a capital-intensive activity. The capital intensity is determined by the magnitude of capacities envisaged, the structures required to be built (in terms of runways, terminal building, parking

1 Such as automated baggage systems, air traffic control facilities, and connection inter-changes.

bays, piers, aprons, etc). Moreover, depending on the traffic levels, an airport may need to upgrade its capacity as envisaged under concession agreement periodically.

Given the large upfront capital infusion required before any cash flows can be generated, these projects are usually funded with a considerable reliance on external debt. Apart from the traditional promoters' equity and debt, funding sources for airport projects in India could include grants from state/Central government, deposits received from third-party concessionaires, or real estate development concessions, or securitised loans backed by user fee levied on passengers. ICRA's analysis looks at the funding structure, 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.

The strength of the sponsors is an important risk mitigant, even though project finance is expected to be on a "non-recourse" basis. The strength of the promoter imparts financial flexibility to the SPV, by allowing funding of shortfalls and cost overruns or other contingencies.

The sources of funding for some of the airports developed in the country have included deposits from the leasing of land around the airport. Thus, project funding in such cases is dependent on the prevailing real estate scenario and the attractiveness of the area to prospective tenants. Another stream of project funding in India in the past has been the airport development fee (ADF) levied on passengers. Thus, the implementation, continuity and adequacy of ADF and the track record of such implementation remains key.

Market position

An airport's relative competitiveness for air traffic in its market, the size, economic base and other fundamental characteristics of the market it serves, competition from other modes of transport, as well as the stability and growth prospects of that market can vary meaningfully across airport operators. In assessing the market position of an airport operator, the following two sub-factors are considered:

- **Size and economic strength of service area**: Strong, stable demand for air travel is closely associated with the population of the market served. A vibrant local economy with a growing population and strong employment trends is an important characteristic in generating air travel demand. Airports in large cities that serve as international gateways tend to have a strong market position, including direct access to major international destinations and an extensive network of domestic connections. The economic potential of the region can have a significant impact on the airport's success. The economic base of the region also decides the willingness of users to pay for airport-related charges, higher share of non-aeronautical revenues and real estate income.
- **Competition from other airports:** Airports in India are generally less susceptible to competition, given their monopolistic nature and high capital intensity. This creates strong entry barriers. Nevertheless, with the mature airports reaching their peak capacity levels, risk of competition from new airports (that are being developed in the vicinity) is increasing as these can also cannibalise the traffic at the existing airport, in addition to catering to the increased demand. Alternative airport(s) or dual airports catering to increased population of a city can pose competition risk and impact the airport's ability to achieve the estimated revenues. Wherever applicable, ICRA in its assessment tries to factor in the competitive position enjoyed by the airports in terms of location, connectivity, tariffs, passenger and aircraft traffic, etc, among other factors.

Service offering

Airports primarily generate revenues from the airlines that use their facilities and from passengers of those airlines. The attractiveness of an airport to airlines and the service offerings for passengers are important factors in determining an airport's creditworthiness. In assessing the service offering of an airport operator, the following three sub-factors are considered:

- **Revenue composition**

The revenues for the airport operators are primarily divided into three streams – aeronautical revenues, non-aeronautical revenues and real estate revenues. For an airport, both aeronautical and non-aeronautical revenues are linked to its traffic, which can be divided into three categories: aircraft traffic movement (ATM), passenger movement, and cargo movement.

- **Aeronautical revenues:** Aeronautical charges are levied on the aircraft and passengers using the airports. These charges include user development fee, landing charges, parking and housing charges, passenger service fee (PSF), ground handling, fuel farm and cargo revenues[2]. These are charged from the airlines based on flight landings, take-offs, parking, and the number of passengers flown.

- **Non-aeronautical revenues:** It includes revenues from the lease/sale of commercial space at the airport, duty-free shops, baggage handling, , car parking, food and beverage outlets, lounges and advertisements. Typically, the airport enters into agreements with third-party concessionaires to provide these services and the airport earns fixed/escalating rentals and/or a share of the revenues earned by the concessionaire. The fact that non-aeronautical revenues are largely unregulated makes these an attractive revenue stream with healthy growth potential. Non-aeronautical revenues are highly correlated to macroeconomic factors, level of consumer spending in the economy, and inflation rate, apart from airport specific factors.

- **Revenues from real estate:** Earnings from the development of real estate around airports can form an important part of their funding and revenue generation plan. Traditionally, the AAI airports witnessed limited commercial use of land parcels. However, the private players have been given sizeable land parcels as part of the concession, which have been used to raise funds in certain instances. In case real estate is available for commercial exploitation, the airport's entering into lease/sale agreements with real estate developers is viewed favourably. The other factors analysed include: the land use allowed under the terms of the concession, location, and the available infrastructure.

As the return generation on aero revenues is capped, the airport's ability to increase revenues from non-aero and real estate remains important. The higher contribution of non-aero revenues (including real estate revenue) to that of total revenues is viewed favourably and it shows willingness of passengers to spend. Additionally, while aero revenues are assured based on the regulatory framework, lower passenger traffic in a particular control period is likely to have an impact on both aero and non-aero revenues and are expected to create a temporary cash flow mismatch.

- **Passenger mix**

Though traffic at Indian airports is primarily dominated by domestic passengers, a mix of international and domestic passenger traffic for an airport remains important. The healthy mix of domestic and international traffic reduces volatility in overall traffic. Further, international traffic has better yields (both aero and non-aero) compared to domestic traffic. So, higher the percentage of international traffic to total traffic, the better might be the airports' yields.

- **Traffic growth and stability of traffic performance**

For an existing airport, the track record of traffic may be well established, and historical data helps in gauging the trends and growth and volatility of traffic. The historical growth in traffic and the standard deviation of the annual growth rates of passenger traffic is measured to assess this parameter. The longer the track record (typically ten years or more) of stable and predictable traffic, the better it is in drawing traffic projections.

2 Cargo, ground handling and fuel farm revenues are categorised as non-aeronautical revenues for Delhi International Airport Limited (DIAL) and Mumbai International Airport Limited (MIAL), while for other airports these are categorised as aeronautical revenues

For a greenfield airport, however, forecasting traffic volumes and measuring market risks can be challenging, given the absence of reliable and sufficient historical data. In absence of historical trends, ICRA relies on external traffic studies, along with market and macroeconomic forecasts as well as peer analysis to estimate the traffic volumes and are suitably sensitised.

Summary of the regulatory and salient business risk factors

	Strongest		Weakest
Regulatory Risks	Established and transparent framework of economic regulation (>10 years) allowing a fair return on invested capital and there is no uncertainty in tariff on account of large capex and latest tariff order is determined as per the timelines or with a delay of up to one year	→	Airport operator doesn't have flexibility in tariff revision depending on over-recovery or under-recovery of traffic in a particular control period or tariff order is delayed by more than two years or high uncertainty in tariff on account of large capex
Execution Risk	Project progress is in line with the timelines indicated by the company and approved by the regulator	→	Project is expected to be delayed by >12 months as compared to timelines indicated by the company and approved by the regulator
Funding Risk	100% debt tied-up and existing liquidity and expected future cash flows are sufficient for funding equity portion	→	<75% Debt tied and/or existing liquidity and expected future cash flows are insufficient for funding equity portion
Size and Economic Strength of Service Area	Serves major metropolitan city or region of over two crore people along with diversified region and strong growth prospects	→	Serves Tier 2/Tier 3 or smaller towns of less than 0.5 crore people with limited growth prospects
Competition from other Airports	Has a monopoly of air travel within its geographical area (up to 150 KM radius)	→	Has a minority share of air travel within its geographical area
Revenue Composition	Contribution of non-aero (incl. Real Estate) in total revenue (cumulative of last three years to remove revenue volatility) >=40%	→	Contribution of non-aero (incl. Real Estate) in total revenue (cumulative of last three years to remove revenue volatility) <10%
Passenger Mix	Domestic passenger traffic as a % of total traffic (cumulative of last three years) <=65% along with well diversified international destinations	→	Domestic passenger traffic as a % of total traffic (cumulative of last three years) >95%
Traffic growth and stability of traffic performance	Traffic CAGR for last ten years is >10% and volatility of traffic growth < 7.5%	→	Traffic CAGR for last ten years is <0% and volatility of traffic growth > 7.5%

Financial Risk Assessment

Debt service coverage metrics

As airport projects are capital intensive, the extent of leveraging is inherently high. The coverage metrics looked at for airports are minimum DSCR and cumulative DSCR. The DSCR is a measure of the cushion between the debt servicing obligation and the cash flows available for debt servicing (CFADS) in any given period. For the amortising debt structure, CFADS is the numerator, and debt service obligation is the denominator. However, for the non-amortising debt structure wherein the entity is likely to have multiple bullet repayments, debt service annuity is calculated to arrive at the denominator for the calculation of ratios.

Debt service annuity refers to the annuity-type payment of interest and principal required to repay outstanding debt over the remaining life of the concession or 15 years, whichever is the lower. It is calculated using a standard formula that converts a present value ("PV") into an annuity payment with no residual value at maturity.

Debt service annuity is calculated with the following formula:

(Total Debt x Discount Rate[3]) / (1 – (1/(1 + Discount Rate)$^{\text{lower of 15 years or remaining concession life}}$))

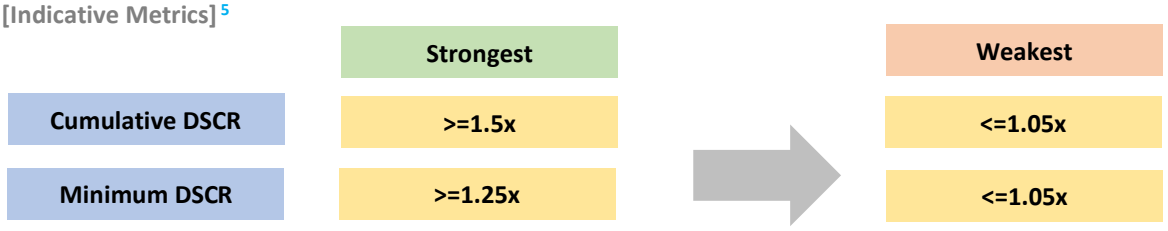
The ratios which are typically used by ICRA to analyse an entity's coverage are:

Ratio	Computation
Minimum DSCR	Minimum of DSCRs[4] during the tenure of the instrument
Cumulative DSCR	Sum of CFADS from the calculation date to the maturity of the rated instrument divided by the sum of debt servicing obligation (principal plus interest) on the rated debt instrument during the tenure of the instrument

The strength of the cash flows is tested under various sensitivity scenarios for ICRA's projections. The key sensitivity scenarios include variation in passenger traffic, tariffs and delay in implementation of tariff order.

Assessment of Coverage

[Indicative Metrics][5]



Further, ICRA assesses the funding mix of the projects, where a higher proportion of capital infusion in the form equity compared to other quasi-equity/hybrid instruments (perpetual debt/optionally convertible debentures/unsecured loans) is viewed favourably as part of financial risk assessment.

3 Discount rate used is the company actual future cost of debt or estimation of long-term average cost of debt

4 DSCR is calculated as (PAT + Interest expense + Depreciation + Working Capital Changes)/ (Principal obligation + Interest expense)

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 metrices on one or more financial parameters, but its credit risk is assessed to be strong 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.

Liquidity

Liquidity is the measure of an entity's ability to meet its short-term cash obligations from various internal or external resources. For airports, internal resources include cash flows from operations, unencumbered cash balances and cash inflows expected from the monetisation of real estate. External resources include undrawn lines of credit or equity capital. ICRA notes that an entity with strong liquidity can mitigate the impact of any short-term exigencies or events that might adversely impact cash flows.

In addition, unencumbered cash balances and the debt service reserve account (DSRA), along with other reserves stipulated by the lenders (if any) provide liquidity support and help the entity tide over temporary cash flow mismatch (if any) and is viewed favourably. In case of a DSRA guarantee, ICRA evaluates the risks associated with renewal of such guarantees and strength of the guarantee provider. It also takes into consideration the transaction documents to ascertain the availability of the DSRA prior to default, to ensure timely debt servicing.

Counterparty credit risks

The financial position of the counterparties and the strength of the payment security mechanism remain important for mitigating the counterparty credit risks. For an airport operator, the key counterparties are the airlines and the tenants for non-aeronautical revenue streams. The airport operator collects not only the aeronautical charges from an airline but also various levies such as passenger service fee (PSF) and development fees which are usually billed with the ticket price. This exposes an airport operator to the risk of delays in payment from the airlines. Therefore, ICRA examines the movement of debtor's position for an airport operator. Further, the airport operators have bank guarantees and security deposits from majority of the airlines, which mitigates the risk to an extent.

Debt Structure

While the financial risk assessment considers the capacity of the asset to generate adequate cash flows and the stability of those cash flows, the following debt structure analysis considers each tranche debt separately, considering the payment waterfall ranking and the structural features, amortisation structure and the associated refinance risks, and the covenant package. The credit analysis thus considers the various terms and conditions associated with the debt instruments being rated.

	Positive	Neutral	Negative
Structural Features@	1) Trustee administered cash flow waterfall with well-defined payment priorities 2) Dividend lock-up / restricted payment triggers with both backward and forward-looking tests 3) Trapping surpluses early and cash sweep mechanism 4) Presence of debt service reserves and Immediate replenishment (if dipped into) from subsequent operating cash flows	1) Cash flow waterfall with well-defined payment priorities 2) Dividend lock-up / restricted payment triggers; covenant testing is not forward looking 3) Debt service reserves with immediate reserve replenishment (if dipped into) from subsequent operating cash flows	1) Lack of presence or lack of adherence to the specified cash flow waterfall 2) Weak/no dividend lock up triggers 3) Debt service reserves with no replenishment
Amortisation Structure	1) Fully amortising with uniform amortisation/step-down repayment structure with more than 50% of debt amortisation in first half of the tenure 2) No put option or debt acceleration triggers	1) Fully amortising debt with back ended /step-up repayment structure; (or) Partially amortising debt with certain portion of debt having bullet repayments; 2) Debt acceleration triggers (if any) with adequate curing period 3) Availability of sufficient refinance window in case of a put option	1) Highly concentrated maturities with large bullet repayments of more than 25% of overall debt in any financial year 2) Debt acceleration triggers without any curing period 3) Inadequate refinance window in case of a put option 4) Debt tenure extending beyond the current concession period
Covenant Package	1) Prohibitions on additional indebtedness (including financial assistance) on existing asset base or liens*, restrictions on the acquisition and sale of assets; limitations on mergers and consolidations**; limitations on investments (permitted investments) and dividends 2) Limits on change of control/ownership, especially if the sponsors are important to the project 3) Lenders step-in rights and remedies to terminate the concession rights in case of non-performance of the airport operator in line with agreements	1) Prohibitions/tests on additional indebtedness on existing asset base (including financial assistance) or liens*, restrictions on the acquisition and sale of assets; limitations on mergers and consolidations**; limitations on investments (permitted investments) and dividends	1) Additional indebtedness on existing asset base (including financial assistance) or liens* is permitted; no restrictions on investments (permitted investments) or dividends

** applicable for single project SPVs; **Not applicable for single-project SPVs*

@ If structural features are well-defined as a part of the contractual terms but they are seen not being adhered to in practice, then such structural features are viewed as being largely redundant

Structural factors

Presence of an escrow mechanism and ring fencing of cash flows to prevent any leakage of funds are some of the structural considerations. In circumstances where the SPV's debt position is weakened by the existence of a weak sponsor or higher leverage of the sponsor/ holding company, if adequate cash flow ring fencing is not in place and/or if there are no/ weak dividend lock-up triggers, the rating could be lower, ceteris paribus.

Other forms of credit support include senior-subordinate debt-tranching, trapping surplus cash flows on activation of triggers, etc. Ratings on tranched debt can be distinguished only where there are no cross-default clauses, clearly established through specific documented mitigants under the project's transaction documents and a transaction framework to establish that the default on one tranche will not result in a payment default on other senior tranches.

Covenant testing like minimum debt coverage ratio requirements that must be met prior to payment of dividends, and creation of replenishment of reserves if utilised is factored positively. ICRA draws comfort from the presence of a trustee, who would effectively control the project cash flows and regularly monitor the various reserves to be created as per the common loan agreement/ debenture agreement on behalf of the debt investors.

Amortisation structure and refinancing risks

While in some cases, the debt structure is fully amortising, there are airports with a non-amortising structure including a bullet repayment and thus being exposed to refinancing risk. The airports have long gestation period, whereas the debt is not of similar maturity, resulting in asset liability mismatch. Therefore, the company's ability to refinance the debt, existence of adequate buffers of liquid assets/bank lines, or adequate funding of DSRA, to meet short-term obligations remain important. ICRA's assessment of refinancing risk includes but is not limited to determining (a) the quantum and certainty of residual cash flows at the time of refinancing vis-a-vis the amount to be refinanced (b) resilience of the project's debt coverage metrics to refinancing risk under different scenarios of refinancing costs (including ability to withstand a significant step-up in coupon at the time of refinancing), (c) available liquidity with the issuer in the event of financial market disruptions and (d) healthy track record of refinancing in the past derived from their exceptional/strong financial flexibility.

Financial Flexibility

An entity's financial flexibility (or the lack thereof) is reflected in its ability to access capital or money markets at a short notice 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, whenever required. This 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 requiring a redemption of its debt ahead of schedule. It thus creates a liquidity squeeze and affects its 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 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.

Among airports, entities with long tail period are better equipped to raise additional debt/ refinance the existing debt with elongated tenor should there be a requirement in the project. That said, there is a risk of promoters leveraging projects with high tail period to support other group projects and this could be an additional source of credit risk.

Assessment of financial flexibility

Ratio	Computation
Project Life Coverage Ratio (PLCR)	NPV of CFADS till the end of concession period, divided by the principal outstanding of senior/external debt plus present value of future debt towards capex at the calculation date

[Indicative Metrics]

	Exceptional	Strong	Ordinary
PLCR	>=1.65x	1.3x-1.65x	<=1.3x

Sponsor Risk Assessment

Airports can have a wide range of ownership structures, from being fully Government-owned and operated airport to one owned by a private player in the public private partnership (PPP) mode. Further, the concessionaire (for privatised airports) can be a joint venture with multiple shareholders or promoters. 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 in while assessing the credit profile of the entity. In addition, considering the scale and complexity of airport projects, the experience of project sponsors in executing projects of similar nature and magnitude and the requisite project management skills can be key positives. In fact, most private airport development projects in India have seen participation from international airport operators in joint venture.

All debt ratings necessarily incorporate an assessment of the quality of the issuer's management, as well as the strengths/weaknesses arising from the issuer's being a part of a "group". Usually, a detailed discussion is held with the sponsor of the issuer to understand its business objectives, plans and strategies, and views on past performance. Some of the other points assessed are:

a. Experience of the sponsor in the line of business concerned and their commitment
b. Track record of sponsor in adhering to its committed financial policies
c. The sponsor's policies on leveraging, rationale for debt raising, balance between leverage and returns, interest risks and currency risks
d. The ability and willingness of the sponsor to support the issuer through measures such as fund infusion, if required

Despite the non-recourse nature of the SPV, the financial strength of the sponsor is a key credit determinant during the pre-COD stage, given that apart from contributing the promoter's share in the form of equity capital and/or subordinated debt, the sponsor is directly or indirectly responsible for ensuring the financial closure of these projects.

While the weak financial health of the sponsor constrains its ability to support the project SPVs in times of need, the presence of a financially strong sponsor need not necessarily mean assured support to fund SPVs in case of any funding shortfall. In the absence of explicit support (guarantees/ shortfall undertakings), the sponsors' willingness to support the operational projects is determined by their skin in the game, which is a function of the long-term project attractiveness, the strength of the project cash flows, their reputation sensitivity to default and duration of the tail period[6]. ICRA considers the past track record of the sponsor in extending timely support to any of its other SPVs and gauge the intent of the sponsor to extend extraordinary support to the rated SPV based on our interactions with the sponsor.

[6] Difference between concession end date and debt maturity date

Other Elements of Credit Risk Assessment

Operating risks

Operating risk pertains to the risk of airport not conforming to the required performance parameters over the period of the concession agreement. Airport operations are complex, involving multiple functions such as aeronautical operations, terminal operations, cargo handling, retail and commercial operations. Further, non-compliance with some of the performance parameters may constitute an "event of default", with implications on the continuity of operations. Hence, assessment of experience of the airport operator, who may be different from the airport owner, is crucial from the credit perspective. This can be judged from the airport service quality (ASQ) score (5-point scale with 5 being the best score), which is given by the Airport Council International (ACI) on a quarterly basis. Airports with long and successful track records are viewed favourably compared to airports with limited track record or deficiency with respect to meeting the desired service/performance levels.

Accounting quality

ICRA reviews the accounting policies, notes to accounts, auditors' comments and other disclosures that are parts of the Annual Report of a rated entity. Deviations from the standard accounting practices which are highlighted by the auditor are evaluated and the financial statements are adjusted, where feasible, to reflect the impact of such deviations. Significant deviations may be indicative of weak corporate governance practices in the entity.

Contingent liabilities / Off-balance sheet exposures

ICRA, on a best effort basis, analyses the likelihood of devolvement of contingent liabilities/ off-balance sheet exposure and its impact on the entity's financial implications, while factoring the mitigants such as a strong liquidity cushion.

Event risks

Given the limited ability to negotiate increased cost/revenue disruptions, the adverse effect of any event risk is more pronounced for the SPVs when compared to corporate entities. Incorporating the impact of such discrete events in the credit rating, from the beginning, is often difficult. Upon occurrence of events like force majeure, changes in law and concessionaire/ authority event of default, the nature of the event and its impact on the cash flows is assessed. Also, considering the nature of such events, it is possible that the rating may undergo a material change later, upon the occurrence of the event. The concession agreement of airports enumerates various events, whose occurrence could potentially trigger termination of the concession agreement by the authority leading to termination payments.

Foreign currency-related risk

The foreign currency risk can arise from unhedged liabilities, especially for entities with unhedged foreign currency borrowings, which could pertain to part-funding of the project cost. As there is limited scope for natural hedge, the focus here is on the hedging policy of the issuer to mitigate such risk for net foreign currency exposure.

Assessment of Environmental, Social and Governance (ESG) Risks

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

Environment (E) and Social (S) Risks

As this methodology highlights, while undertaking credit assessment of entities, ICRA seeks to incorporate all relevant credit considerations into its rating decisions, while taking a forward-looking view on the risks and the mitigating elements. The relevant credit considerations include (sometimes overtly, sometimes covertly) the E&S factors that could affect the rated

entity/ transaction. While ICRA's analytical approach does not explicitly disaggregate these risks to assess their impact on the rating, these risks are often assessed broadly. 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 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. Notwithstanding the above, as an example, it is possible that even if an entity A has a higher carbon footprint than entity B, it does not materially affect ICRA's credit opinion on entity A. This is because ICRA's credit opinion on an entity considers a wide gamut of credit-relevant factors and the E&S factors are only one among those.

The airport sector has low direct exposure to environmental risk. The environmental risk for this sector could indirectly manifest if more stringent air emission and carbon regulations on airlines significantly increase the airfares resulting in a reduction in air passengers and consequently the throughput at airports. Further, airports are exposed to physical climate risks, which could adversely impact the continuance of operations for brief periods but the impact of such disruptions on earnings tends to be temporary.

Given the huge land requirements for the airport sector, there have been challenges in completing land acquisition, and social risks manifest when there are disagreements over the compensation between the authority and the landowners resulting in cost and time overruns. The sector is susceptible to labour-related risks and risks of protests/social issues with local communities, which might impact expansion/ modernisation plans.

As manifested during the Covid-19 pandemic, airports are vulnerable to the social risks imposed during situations like pandemic, where the passenger traffic was affected on account of restrictions or disruption in travel.

Governance Practices

A sound corporate governance structure should clearly delineate the roles and responsibilities of the Board of Directors and the management. The composition of an entity's board, its involvement in strategic decision making and the entity's compliance with the legal and regulatory requirements are factored in during credit assessments. ICRA seeks to gain a qualitative understanding of the entity's commitment to follow transparent and credible practices, as reflected in the presentation of the financial statements, timeliness and depth of disclosures, consistency in communication and the openness about sharing information during the rating process. Additionally, factors such as the complexity of the corporate group structure, related party transactions, instances of financial support to group entities at the expense of debt holders, and any abrupt resignations of auditors or independent directors are evaluated.

Summing Up

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 issuer's business and financial risks, its competitive strengths, its likely cash flows over the concession period and the adequacy of such cash flows vis-à-vis its debt servicing obligations and other funding requirements.

As this note highlights, for entities in the airport sector, execution risks assume importance during the implementation phase, while post COD, it is the adequacy of cash flow generation vis-à-vis the debt servicing commitments that primarily influences the rating. Overall, ICRA has a more favourable opinion on projects that are promoted by strong sponsors, that have favourable traffic flow characteristics and strong debt protection metrics. ICRA draws comfort from the remunerative and timely tariff orders, positive track record of non-aeronautical revenue generation, and presence of a strong airport operator with the requisite experience. ICRA draws comfort from strong debt agreements, characterised by strong cash flow ring-fencing, restrictive debt covenants, debt service reserve accounts and the presence of a trustee that would effectively monitor the progress of the project.

ANNEXURE

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

		Strong			Comfortable			Adequate			Moderate			Weak		
Industry Risk	Industry Position															
Business Risk	Execution Risk															
	Funding Risk															
	Service Offering															
	Market Position															
	Regulatory Framework															
Financial Parameters	Coverage															
		Enhance					**Support/Neutral**					**Hinder**					
Do these factors enhance or hinder the credit profile?	Liquidity and Financial Flexibility															
	Debt Structure															
	Management, Governance & Reporting															
		Very High				**High**				**Moderate**				**Low**		
	Likelihood of Parent Support															
Support from Parent Group	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**	

***Source**: ICRA research*

The graphic above is only for illustrative purposes and does not depict an actual rating outcome generated by a framework. The rating process typically involves the use of a framework as a reference tool to provide a broad indication of an entity's credit profile based on factors generally considered important for credit risk assessment. However, given the specific nuances and unique characteristics of individual entities, the framework may not always adequately capture all relevant considerations evaluated by the rating committee while assigning the ratings. Consequently, the ratings assigned by the rating committee may differ from the framework's indicative assessment.

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About ICRA Limited:

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

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

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