

## Rating Methodology - Project Finance

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This rating methodology document updates and supersedes ICRA's earlier methodology document on the rating of project finance transactions published in October 2020. While this revised version incorporates a few modifications, ICRA's overall approach for rating of project finance transactions remains materially similar. This note covers the general approach followed for evaluating project finance transactions. Project finance transactions typically involve setting up of a Special Purpose Vehicle (SPV) for creating a long-term asset, the cash flows from which are solely to be used to service the associated financial obligations without any recourse to the sponsor or the promoters. It may be noted that all rating factors mentioned in this document criteria might not apply to each individual rating or rating action. For specific sectors like roads, power producers, airports, ports and so on, please also refer to the detailed rating methodology published by ICRA for these sectors available on ICRA's website [www.icra.in](http://www.icra.in).

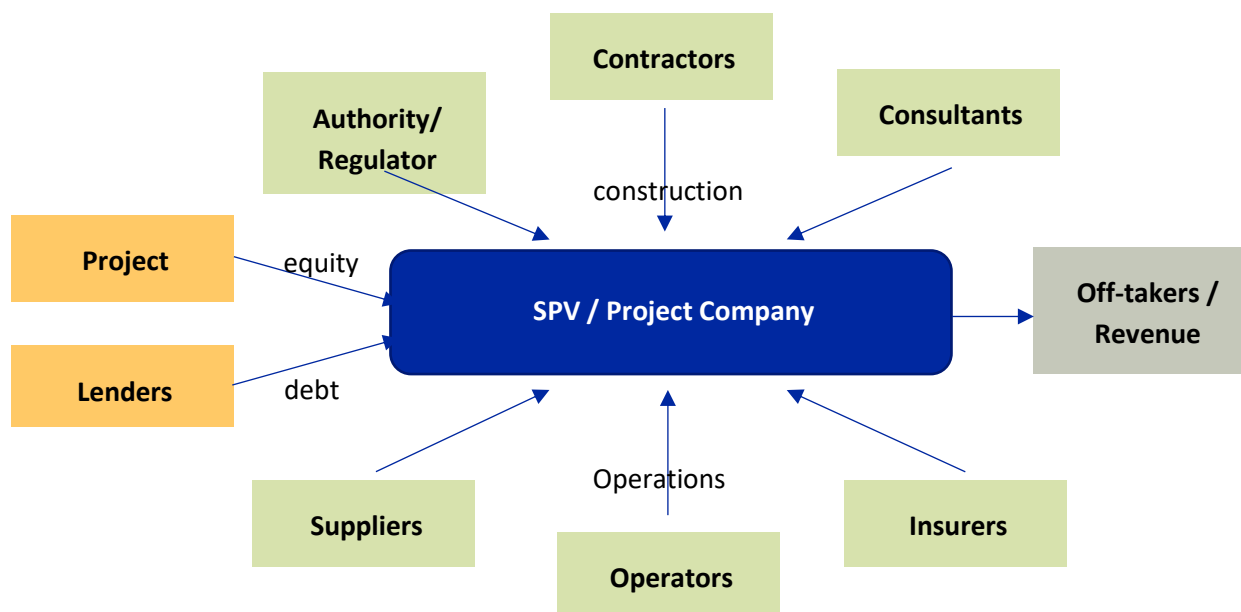
The objective of this rating methodology document is to help issuers, investors and other market participants understand ICRA's approach to analysing the quantitative and qualitative risk characteristics that typify project finance transactions. This methodology does not include an exhaustive treatment of all factors that are reflected in the ratings but would enable the reader to understand the rating considerations that are usually the most important.

### Overview

With the increasing infrastructure investment requirements in India, the private sector's role in taking up infrastructure investments has been expanding. The Government has also focused on promoting the public-private-partnership (PPP) model in infrastructure development – particularly in sectors like highways and airports – which has helped spur project finance transactions. Similarly, in the power sector, renewable energy projects have witnessed active private sector participation. Project finance, through an SPV, is the preferred route for investment in infrastructure projects as being capital intensive and significantly debt-funded, these projects can adversely impact the sponsor's credit risk profile if undertaken on their own balance sheet. Further, taking exposure on a distinct SPV allows the investors to better manage the risks associated with the assets concerned and exercise better control over the cash flows generated.

### Contractual structure

Project financing usually involves setting up of a project company or an SPV – bound by a contractual matrix comprising various project participants – which raises debt, and services it from its own cash flows, without recourse to its sponsors. Due to this, the impact on the sponsor's credit profile could be relatively lower in the project finance route. Under the SPV structure, the lenders can also put restrictions on additional borrowings, asset monetisation etc.



A typical project finance transaction can conceptually be viewed as a web of contracts and agreements, which bring together various counterparties for the sole purpose of creating and operating the asset under consideration. As these projects are financed on a non-recourse or limited recourse to the sponsor, the utility of the project agreements resides primarily in their ability to contractually transfer/allocate risks to participants who are best equipped to handle them.

Project finance transaction structures are exposed to a multitude of risks. This rating methodology note highlights some of the key risks that characterise project-financing transactions and ICRA's approach to evaluating the credit quality of such projects.

## ICRA's Risk Assessment Framework

ICRA's rating approach focuses primarily on the economic fundamentals of the project and the effectiveness of its contractual and financial structure in being able to mitigate the principal risks it is exposed to. From a credit perspective, the debt investor has access to just a single source of cash flow, much unlike in a corporate or structured finance transaction, where multiple and diversified sources of cash flows may be available. Thus, the strength of project financing rests primarily on the project's ability to generate and sustain this cash flow, which can be exposed to multiple risks. Further, project SPVs have a high degree of dependence/ linkage with the sponsor during the implementation stage, which typically gets reduced/ severed as the project becomes operational. Furthermore, the sponsor's ability and willingness to provide distress support (if required) even during the operational stage could play a role in mitigating some risks.

Hence, ICRA's assessment involves assessment of project-related/operational risk, financial risk, as well as evaluation of contracts and structural features of the debt. Besides the above, assessment of sponsor-related risks, and management quality is also undertaken.

### Key Project-related Risks

For analytical convenience, the key risk factors involved in project financing are grouped under the following categories:

Project Execution or Completion Risk

Project Funding / Financing Risk

Operating and Technology Risk

Market/Demand Risks

Counter-party Risks

Sectoral risks

Force Majeure Risks

Political and Regulatory Risks

Each of these risks, along with their possible mitigants, is discussed in the following sections.

### Project Execution or Completion Risk

Execution or Completion risk refers to the inability of a project to commence commercial operations on time and within the budgeted cost. Given that project financiers are often reluctant to take exposure to the execution risk associated with a project, project structures can take some recourse to the sponsors during the construction stage. However, this link gets severed once the project starts generating its own cash flows. Hence, during the construction period, ICRA's risk assessment is significantly influenced by the credit worthiness and track record of the sponsors and their ability to support the project via equity/subordinated debt for funding cost and time overruns, if any.

The execution risks are dependent on the complexity of construction, and working conditions like challenging terrain, climatic conditions, geopolitical environment etc, as higher the complexity (for instance, in the case of a hydro power project), higher are the risks arising on this count. In certain types of projects, such as ports and roads, completion of the project is also a function of the permitting risks associated with obtaining the necessary Rights of Way (RoW), environmental clearances, and other Government approvals. Execution risks are usually mitigated through the availability of the RoW, clearances, and strong fixed-price, fixed-time contracts with creditworthy contractors, along with the provision of adequate liquidated damages for

delays in construction, which are seen in relation to the debt service commitments. While assessing the completion risk, adequate attention is also paid to the experience of the engineering, procurement & construction (EPC) contractor and its track record in constructing similar projects, on time and within the cost budgets. Further, ICRA also looks at the reasonableness of the time available for the project completion, and an aggressive schedule for project completion, which does not provide for adequate contingency provisions and is often viewed negatively. Wherever available, ICRA relies on the Independent Engineer's Report (IER) and assesses whether the engineer's findings support the views of the sponsors and the contractor regarding the physical and financial status of project.

### Project Funding / Financing Risks

The project funding involves equity, which is arranged from sponsors or investors, and debt, which the project usually raises from the capital markets, or banks or other financial institutions. A project company's capital structure and its ability to tie up the requisite finances are the focus of analysis here. In assessing the funding risk, ICRA also considers the extent to which the funding has already been received and the likelihood of the balance funding being available in time, so that the project's progress is not delayed. This also assumes significance, given that banks and financial institutions usually disburse monies in proportion to the equity brought in, and hence delays/ inability to bring in equity could severely affect the project's ability to receive the tied-up debt.

In some cases, sponsors provide an additional undertaking to fund the project cost overrun, which could be limited to a fixed quantum. This mitigates the funding risk for increase in project cost to an extent.

### Operating and Technology Risks

Operating and technology risks refer to a project's inability to function at the desired operating levels (e.g. Plant Load Factor for a power project, lane availability for annuity projects) and within the design parameters on a sustainable basis. The disruption in operations can happen due to multiple factors like disruption of supply of inputs, inadequate maintenance, mechanical failure of equipment, etc. Track record of past operations of the project as well as of the O&M contractor helps in assessing this risk. Technology risks are prevalent in projects involving complex technology (power plants or refinery projects, for instance), or sectors where technological changes are very dynamic, which increases the risk of technological obsolescence.

For projects in the roads, ports, and airport sectors, technology-related risks are usually lower due to relatively lower complexity of their operations and maintenance (O&M). Nevertheless, O&M cost is a key variable for all the projects as a higher-than-budgeted cost can impact the project company's cash flows and its ability to meet its financial obligations. In many cases, the project company enters into an O&M contract to mitigate these risks. In this context, the experience of the O&M contractor and the adequacy of the performance guarantees from the O&M contractor are important considerations.

In addition, for projects with strong vertical linkages, the non-availability of upstream and downstream infrastructure is an important source of operating risk. Typical examples of such projects would be a liquefied natural gas (LNG) project, which depends on pipeline infrastructure, or a toll road project, which would depend on completion of contiguous road stretch to enable traffic flow on the stretch.

The operating and technology risks, where imminent, are usually mitigated through performance guarantees/ warranties from the manufacturer, supplier, contractor or operator, and the availability of adequate debt servicing reserves to accommodate temporary disruptions.

### Market Risks

Market risks usually arise because of insufficient demand for products/ services, changing industry structures, or pricing volatility (for input as well as output). Given the long-term nature of project financing, a considerable source of market risk is the possibility of dramatic changes in the demand patterns for the product, either because of product obsolescence or large parallel capacity creations, which could severely affect the economics of the project under consideration. For analytical

convenience, one can group projects into two categories: one, where commodities are produced (e.g., LNG projects, refinery projects, and power projects), and two, where certain natural monopolies exist (e.g., ports, airports, power transmission, gas transmission projects). While the first category of projects is exposed to most of the market risks identified above, the risks for the latter type of projects are more demand-related, with the pricing usually subject to regulatory or political controls.

In the past, the implementation of some of these “commodity” projects, such as power and LNG project, was supported by long-term offtake contracts, which provided considerable comfort to project financiers. However, with the development of a spot market for these commodities, customers of such projects are also exploring short term contracts which have considerably increased the market risks associated with such projects. Under these circumstances, the cost competitiveness and the nature (regional or global) and adequacy of demand have emerged as critical determinants of a project’s long-term viability. Thus, the point of focus, while assessing market risks for projects producing a commodity, is usually the cost structure of a project, which is a function of the capital costs incurred to set it up, the input costs and also the costs required to operate and maintain the asset. ICRA usually benchmarks the capital cost of a project with those of the recently commissioned facilities across the country to ascertain the cost competitiveness of the project as in ICRA’s view, cost competitiveness is the key determinant of the project’s long-term economic viability. On the input side, ICRA looks at issues related to certainty of supply, ability of the supplier to meet contractual commitments over the life of the project, the pricing structure of such supplies, and the ability of the project to pass on variations in input costs. In situations where the primary input is scarce or is not actively traded, ICRA attempts to evaluate the cost implications for replenishing shortfalls in supply and the availability of liquidated damages in the supply contracts for compensating the project for such costs.

For the second category of projects, the primary focus is on evaluating the adequacy and sustainability of existing demand, the potential for growth in demand and the possibility of competing assets (e.g., an alternative route to a toll road) being created, which could undermine the demand drivers for the project being financed. Assessing demand patterns for such projects, particularly those in the road and airport sector, is often a difficult task since in most cases, the demand is highly price elastic and a function of the pattern of socioeconomic development in the service area. While ICRA does refer to the independently conducted traffic/ demand studies by third-party agencies; however, such estimates are used only as a guide by ICRA while drawing up its own cash flow estimates for the project being rated.

In cases where there is a provision of revenue shortfall loan/ support from project owner or sponsor, additional comfort may be derived by ICRA depending on the terms of the support.

### Counter-party Risks

A project involves a number of counterparties who are bound to it by the contractual structure. Therefore, an evaluation of the strength and reliability of such participants assumes considerable importance in ascertaining the credit profile of the project. Counterparties to projects usually include feedstock/ raw material suppliers, principal off-takers, EPC and O&M contractors.

Even a sponsor could become a source of counter-party risk, as it needs to provide equity during the construction stage. A counter-party’s failure can put a project’s viability at risk. The counterparty risks are usually addressed through performance guarantees, letters of credit and payment security mechanisms (implemented via escrow mechanism), most commonly seen in the case of power projects. The credit profile and track record of the counterparty also helps in assessing the counter-party risk. However, since there can be provision of exit/ termination in the contract, a strong counterparty itself may not be effective in insulating a project from this risk, unless the project is fundamentally cost competitive and makes commercial sense for all the project participants.

### Sectoral/Industry Risks

In the credit assessment of a project finance transaction, the sectoral risk assessment and overall sector characteristics also play a role. The project risk also depends on the sector in which it operates. Some sectors have established track record of PPP

projects, both in terms of execution, operations as well as regulatory framework, and would provide more comfort on risk assessment. ICRA does relative benchmarking of sectors which encompass the project risks involved in the sector. This is superimposed on the operational risk assessment.

### Force Majeure Risks

Project finance transactions, which are different from corporate or structured finance because of their dependence generally on a single asset for generating cash flows, are potentially more vulnerable to force majeure risks. The legal doctrine of force majeure excuses the performance of parties when they are confronted by unanticipated events beyond their control. Analysis of force majeure events is important in project financing because such events, if not compensated for, can severely disrupt the careful allocation of risk on which project financing depends. Natural disasters, such as floods and earthquakes, civil disturbances, and strikes can potentially disrupt a project's operations and hence its cash flows. SPVs generally take insurance cover to mitigate the impact of certain force majeure events like natural disasters. Due to high concentration on a single project, ability to cope with force majeure events is low compared to a large corporation with a diversified portfolio of assets. ICRA also tries to evaluate the adequacy of debt reserves for meeting debt service commitments in force majeure circumstances. Projects where such event risks are not covered (say, through insurance or other contractual terms) would tend to have a lower financial flexibility (because of lesser investor interest) and hence would be an unfavourable attribute from a credit perspective.

### Regulatory and Political Risks

Regulatory and political environment plays an important role in the development of project finance. Most project-financing transactions carry an element of political risk by virtue of the fact that they are often related to capital-intensive infrastructure development and the resultant goods/ services are consumed by the public, directly or indirectly. While political and regulatory risk has a greater influence during the implementation phase, some of these risks persist even during the operational stage of the project. These could manifest themselves in various forms, and significantly impact the economics of the project concerned. Such risks may take the form of:

- Problems in acquisition of land, which are typical in the case of road, and railway projects.
- Resistance to increases in user charges for common utilities such as water charges, toll road fees, energy charges, etc despite such tariff increases being envisioned in the project documents.
- Lack of predictability regarding regulatory changes and compensation. For instance, in some states, the Government had exempted a certain category of vehicles from paying toll, while the mode of compensation to the projects was not finalised. This can have a severe impact on the project's cash flows and debt servicing capability.
- Changes in environmental norms, which could require issuers to invest substantially in meeting such norms with limited flexibility in passing-on the cost increase to buyers, or the price compensation being available only with a lag.

As is apparent from the preceding discussion, regulatory and political risks are often difficult to quantify and mitigate. While assessing such risks, an attempt is often made to understand the vulnerability of the project to such risks.

## Financial Risk Assessment

The key aspects evaluated by ICRA while doing the financial risk assessment of a project are as follows:

Financing structure of project

Stability and Predictability of Cash Flows

Inherent Profitability of the Project

Credit Coverage Ratio

Interest rate/ Foreign Exchange Risks

Refinancing Requirement/Flexibility

Accounting Quality

Contingent Liability / Off-Balance Sheet Exposures

### Financing structure of project

ICRA evaluates the following key factors in the financing structure:

- The capital structure of a project, which is evaluated to assess whether the debt-to-equity ratio is in line with the underlying business risks and that of other projects of similar profile, complexity, and size
- The protections provided to debt investors/bondholders like minimum coverage ratios that must be met before shareholder distributions are made, and the availability of substantial debt reserves to meet unforeseen circumstances
- The presence of a trustee, if applicable, to control cash flows on behalf of the bondholders
- Limitations on the project company's ability to take on additional debt

### Stability and Predictability of Cash Flows

As the cash flow streams for a project company are generally concentrated, the stability and predictability of these play a crucial role in credit assessment. ICRA lays emphasis on the predictability of cash flows and the ability of the project company to exercise better control over operating costs.

Projects whose operations are stabilised i.e. with at least one to two years of operational track record are better from cash flow predictability perspective. On the expenses front, the ability of the project company to manage operations and maintenance costs within budgeted levels remains important.

For projects under construction or with limited operational track record, the strength of the cash flows is analysed under various sensitivity scenarios. The key sensitivity scenarios include time and cost overruns during the construction phase and variability in revenues, and expenses post completion. In certain cases, an SPV enters into a fixed time and fixed price contract with a strong construction company, which partly mitigates the risks related to cost and time overrun. In such SPVs, the sensitivity analysis on cost-overrun or time overrun may not be meaningful. Stress tests are also important if it emerges that significant revenue growth is necessary to meet contractual obligations, or if there is a risk of decline in revenues.

### Inherent Profitability of the Project

Given the highly capital-intensive nature and finite life of the projects, IRR and NPV (internal rate of return, and net present value) are generally more relevant than traditional profitability indicators (like OPM or net margin). In a few instances,

particularly the projects with weak equity IRR, the sponsors may not have the economic incentive to support the project in which case there is a possibility of the sponsor not providing timely support to the project leading to pressure on the debt servicing and meeting the contractual obligation.

### Credit Coverage Ratios

ICRA primarily focuses on cumulative debt service coverage ratio<sup>1</sup> (DSCR) and the minimum DSCR over the loan tenure. The DSCR measures the cushion between debt servicing obligation and cash flows available for debt servicing (CFADS) in any given period (typically annual but may be quarterly/half-yearly especially for projects exposed to cash flow seasonality and to match with debt repayment frequency). In addition, the presence of unencumbered cash balances provides liquidity support and helps the entity tide over the period with weak DSCR. Apart from DSCR, other financial ratios are also used as appropriate for the respective sector. Projects which have strong cash flow from operations to take care of debt servicing obligations in a comfortable manner are viewed favourably.

For sector specific (like roads, power producers, airports, ports and so on) financial ratios, please refer to the detailed rating methodology published by ICRA for these sectors available on ICRA's website [www.icra.in](http://www.icra.in).

### Evaluating the Project Viability

ICRA evaluates the project contract with the purpose to understand the project's stand-alone viability. This approach is influenced primarily by ICRA's observation that there is a strong incentive to honour project contracts only so long as it makes commercial sense to all participants. It has also been seen that these contracts lend themselves to re-negotiation if they lose "economic value", and such renegotiations could affect the interests of the debt investors in the project.

### Debt Structure

Ceteris paribus, the tenure of the term debt is a key driver for the debt coverage as entities with longer tenure debt and similar levels of leverage will be more comfortably placed compared to companies with shorter tenure debt. For projects with market risk, a ballooning repayment structure is viewed favourably as the burden on cash flows is lower during the initial ramp up period of operations. However, this is not applicable for projects with increasing material uncertainty of cash flows towards the latter part of the project life. The credit analysis thus considers the various terms and conditions associated with the infrastructure debt instruments being rated.

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 tranching debt separately, considering the payment waterfall ranking and the structural features, amortisation structure and the associated refinancing risks, and the covenant package. The credit analysis thus considers the various terms and conditions associated with the debt instruments being rated.

<sup>1</sup> DSCR = Cash Flows available for debt servicing (CFADS) divided by the total amount of debt service due (principal and interest) in that period.



	Positive	Neutral	Negative
<b>Structural Features</b>	1) Third-party 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) Immediate replenishment of debt service reserves (if dipped into) from subsequent operating cashflows 5) Major maintenance/ capex reserves built from operating cash flows over the period of the frequency of major maintenance	1) Third-party administered cash flow waterfall with well-defined payment priorities 2) Dividend lock-up / restricted payment triggers; covenant testing is not forward looking 3) Immediate replenishment of debt service reserves (if dipped into) from subsequent operating cashflows 4) Major maintenance/ capex reserves built from operating cash flows over the period of the frequency of major maintenance	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 4) Inadequate major maintenance/ capex reserves
<b>Amortisation Structure</b>	1) Senior ranking in terms of payment waterfall, fully amortising with no bunching-up of repayments 2) No debt acceleration triggers	1) Fully amortising debt with back-ended/ step-up repayment structure; 2) Bunching up of repayments not over 5-10% beyond a uniform amortisation structure for same debt quantum	1) Highly concentrated maturities with large bullet repayments 2) Cross default or debt acceleration triggers
<b>Covenant Package</b>	1) Prohibitions/ tests on additional indebtedness (including financial assistance) or liens, restrictions on the acquisition and sale of assets; limitations on mergers and consolidations; limitations on investments (permitted investments) 2) Limits on change of control/ ownership, especially if the sponsors are important to the project 3) Frequent and regular reports of lenders' independent engineer and compliance with financial and non-financial obligations 4) Lenders step-in rights and remedies to terminate key contracts (including O&M contract) in case of non-performance of the contractors	1) Prohibitions/tests on additional indebtedness (including financial assistance) or liens, restrictions on the acquisition and sale of assets; limitations on mergers and consolidations; limitations on investments (permitted investments)  2) Frequent and regular reports of creditors' technical advisers to sanction base case validity and compliance with financial and non-financial obligations	1) Additional indebtedness (including financial assistance) or liens is permitted; no restrictions on investments (permitted investments)

### Structural Features

ICRA also reviews certain structural features like presence of the escrow mechanism, the debt service reserve account (DSRA), the Major Maintenance Reserve Account (MMRA), etc as these are likely to provide additional support to the credit profile. Presence of an escrow mechanism and ring-fencing of cash flows to prevent leakage of funds are some of the structural considerations which strengthen the project structure. The presence of the DSRA, generally in the form of fixed deposits or in the form of a guarantee, to cover few quarters of debt servicing obligations (principal + interest) provides additional comfort to withstand short-term liquidity mismatch. Similarly, creation of a major maintenance reserve account to build sufficient funds

for undertaking the scheduled major maintenance activities or provisions for any future bulky expenditure also supports the ratings.

### Amortisation structure and refinancing requirement

While in most cases, the debt structure is fully amortising, there could be situations where some portion of the debt involves a bullet repayment and hence is exposed to a refinancing risk. 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) Transaction features like Cash Sweeps (d) Available liquidity with the issuer in the event of financial market disruptions.

Entities with long tail period or in other words high project life coverage ratio (PLCR)<sup>2</sup> are better equipped to raise additional debt/ refinance 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.

Ratio	Computation
Project Life Coverage Ratio (PLCR)	NPV <sup>3</sup> of CFADS over the remaining project life, divided by the principal outstanding on the rated debt instrument at the calculation date

### Covenant package

ICRA draws comfort from the restrictive debt covenants, which include prohibitions/ tests on additional indebtedness or liens, restrictions on the acquisition and sale of assets, limitations on mergers and consolidations, limitations on investments (permitted investments), change of control/ ownership, especially if the sponsors are important to the project. Further, frequent and regular reports of lenders' independent engineer to validate base case assumptions and compliance with contractual and financial obligations along with lenders' step-in rights to replace/ terminate material contracts (for instance, O&M contractor in case of non-performance) are viewed favourably.

### Sponsor Risk Assessment

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:

- Experience of the sponsor in the line of business concerned
- Commitment of the sponsor to the line of business concerned
- Policies of the sponsor on leveraging, rationale for debt raising, balance between leverage and returns, interest risks and currency risks
- 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 debt, the financial strength of the sponsor is a key credit determinant during the construction stage, given that apart from contributing the promoter's share in the form of equity capital and/or subordinated

<sup>2</sup> PLCR = NPV of CFADS over the remaining project life, divided by the principal outstanding on the rated debt instrument at the calculation date

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

debt, the sponsor is also directly or indirectly responsible for ensuring the financial closure of these projects. Further, during the construction stage, most of the projects involve recourse to the sponsor for cost overrun support and shortfall in debt servicing in the event of termination. Post the project completion, while many SPVs enter into O&M contracts with the sponsors, the financial linkage is relatively lower during the operational period.

While the weak financial health of the sponsor constrains its ability to support the project SPVs in the time 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/ letters of comfort/ shortfall undertakings), the sponsors' willingness to support the operational projects is determined by their skin in the game, which is a function of the initial investment made and the economic viability of the project based on the project cash flows. Also, ICRA considers the past track record of the sponsor in extending timely support to any of its other SPVs and gauges the intent of the sponsor to extend extraordinary support to the rated SPV based on interactions with the sponsor.

## Other Elements of Credit Risk Assessment

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### Interest Rate/ foreign exchange risk

Depending on the nature of the funding, the project can be exposed to these risks. The foreign currency risk can arise from unhedged liabilities, especially for entities with unhedged foreign currency borrowings. 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. Similarly, the extent to which an issuer would be impacted by movements in interest rates is also evaluated.

### Accounting quality

The accounting policies, notes to accounts, and auditor's comments that are part of the annual report are reviewed. Any deviation from the generally-accepted accounting practices is noted and the financial statements of the issuer are adjusted to reflect the impact of such deviations.

### 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.

### Event risks

Given the limited ability to negotiate increased cost/ revenue disruptions, the adverse effect of any event risk is more pronounced for SPVs when compared to corporate entities. Upon occurrence of any 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. This is largely a post-facto assessment as factoring-in event risks at the outset may not be entirely possible.

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

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

## Environment (E) and Social (S) Risks

As this methodology highlights, while undertaking a credit assessment of entities, ICRA seeks to incorporate 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, and hence these considerations do not necessarily weigh on the rating today—with the expectation that when these risks manifest in the distant future, the rated entity by then would possibly adapt itself by realigning its business model.

While evaluating the E&S risks, ICRA's objective is only to assess the direct and indirect risks that an entity faces and how it already is or is intending to mitigate the impact of such risks on its credit profile. As an example, ICRA only assesses whether an entity is exposed to physical climate risks or carbon transition risks such as those arising from changes in regulations or other environmental and social risks; and seeks to understand the various mitigation and adaptation approaches that the entity is implementing to mollify these risks.

For the sector-specific E&S risks that a project finance transaction may be exposed, please refer to the detailed rating methodologies published by ICRA for these sectors available on ICRA's website [www.icra.in](http://www.icra.in).

## Governance Practices

Corporate governance remains a complex and an evolving subject. From a risk perspective, the same tends to hold as high an importance as an entity's business strategy. 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, 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, their level of disclosures, consistency in communication and the openness about sharing information during the credit rating exercise. Besides, the corporate group structure (whether simple or complex), the rated entity's related party transactions and instances of supporting group entities at the expense of debt holders are assessed.

## Summing Up

Project finance transactions are exposed to a variety of risks; however, many of these can be mitigated by suitably allocating them to project participants who are best equipped to handle them. ICRA, however, notes that the effectiveness of such risk allocation mechanisms, which are achieved through appropriate contractual structures, would hinge on the economics of the project contracts and its commercial attractiveness to the various participants.

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