



Rating Methodology for Project Finance Transactions*

Introduction

Infrastructure plays an important role in the development and economic growth of a country. Keeping this in mind, the Government of Indonesia has already formed a five year master plan 2011-2015 that has envisaged the direction of developing infrastructure over the medium term. Further, the government also formed Master Plan for Acceleration and Expansion of Indonesia's Economic Development (MP3EI 2011-2025). The government is constantly attempting to increase the investment in infrastructure projects and has in addition announced about USD 35 billion in around 56 infrastructure projects recently.

In order to meet the infrastructure needs, a huge amount of funding is necessary and various structures such as public private partnership (PPP) and build, operate and transfer (BOT) have been suggested and various incentives offered for private investment in infrastructure. The MP3EI 2011-2025 is in fact expected to be funded largely by private sector. It is projected that more than 70% of the estimated USD 468 billion investment in MP3EI shall be made through public-private partnerships. Thus over the medium to long term, the participation of private sector is bound to increase in such projects. Growth in such transactions would also be driven by the inability of potential project sponsors to implement such capital intensive and highly leveraged projects on their balance sheets, without having their own credit risk profile materially impacted.

Project financing usually involves setting up of a special purpose vehicle (SPV)—bound by a contractual matrix to various project participants—which raises debt and services it from its own cash flows, without recourse to its sponsors. Such structures are exposed to a multitude of risks, and the limited growth of this form of financing so far, in ICRA Indonesia's opinion, is attributable mainly to the high-risk perception of project financiers and the inability of project entities to offer suitable structures that mitigate these risks. The objective of this note is to highlight some of the key risks that characterise project financing transactions and ICRA Indonesia's approach to evaluating the credit risk of such infrastructure projects. Unlike corporate finance which mainly covers corporations already in operations for at least three years, project financing may include a start up project or entity having no operational track record.

Analytical Framework for risk evaluation in project finance

Non- or limited recourse project structures are exposed to a multitude of risks. ICRA Indonesia'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.

Evaluating project-level risks

From a credit perspective, assessing a project can be challenging, given that 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 flow may be available. Thus, the strength of a project financing rests primarily on the project's ability to generate and sustain this cash flow, which is exposed to the following risks:

- Completion Risk
- Funding and Financing Risk
- Operating and Technology Risk

- Market Risks
- Counter-party Risks
- Political and Regulatory Risks
- Force Majeure Risks

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

1. Completion Risk

Completion risk refers to the inability of a project to commence commercial operations on time and within the stated cost. Given that project financiers are often reluctant to underwrite the completion risk associated with a project, project structures usually incorporate 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 Indonesia's risk perception is significantly influenced by the credit worthiness and track record of the sponsors and their ability and willingness to support the project via contingent equity/subordinated debt for funding cost and time over-runs, if any. The risks are also dependent on the complexity of construction, as greater the complexity (for instance, in the case of a petrochemical facility), higher the risks arising on this count. In addition, for projects with strong vertical linkages, the non-availability of upstream and downstream infrastructure is an important source of completion risk. Typical examples of such projects would be liquefied natural gas (LNG), natural gas, and toll road projects. In certain types of projects, such as ports and roads, project completion is also a function of the permitting risks associated with obtaining the necessary rights, environmental clearances and government approvals.

Completion risks are usually mitigated through strong fixed price, date certainty, turnkey contracts with credit-worthy contractors, along with the provision of adequate liquidated damages for delays in construction, which need to be seen in relation to debt service commitments. While assessing 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 Indonesia also looks at the reasonableness of the time available for project completion, and an aggressive schedule for project completion, which does not provide for adequate contingency provisions, is often viewed negatively.

2. Funding and Financing Risks

A project company's financial structure and its ability to tie up the requisite finances are the focus of analysis here. The financing structure is usually reviewed for:

- The capital structure of a project, which is evaluated to assess whether the debt-equity ratio is in line with the underlying business risks and that of other projects of similar size and complexity.
- The protections provided to bondholders such as minimum coverage ratios that must be met before shareholder distributions are made, and the availability of substantial debt reserves to meet unforeseen circumstances.
- The matching of project cash flows (under various sensitivity scenarios) with the debt service payouts and the potential for cash flow mismatches.
- The pricing structure adopted for debt and the exposure of the debt to interest rate and currency risks. Such risks are particularly significant where the project raises variable rate debt or liabilities in a currency other than the one in which its revenues would be denominated.
- The presence of an experienced trustee to control cash flows and monitor project performance on behalf of the bondholders.
- Limitations on the ability of the project company to take on new debt.
- The average cost of debt, given that the cost of financing is increasingly becoming a key determinant of project viability, in view of the fact that differences in technical and operating abilities have virtually become indistinguishable among front-runners.

Usually, most projects have a high leverage, and while equity is arranged privately from sponsors, the project would be dependent on financial institutions and banks for arranging the debt component. In assessing the funding risk, ICRA Indonesia considers 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's progress is not delayed. This also assumes significance given that usually banks and institutions disburse

monies in proportion to the equity brought in, and hence delays/inability in bringing in equity could severely affect the ability of the project to achieve financial closure.

3. Operating and Technology Risks

Operating and technology risks refer to a project's inability to function at the desired production levels and within the design parameters on a sustainable basis. Such risks usually arise in projects using complex technology (power plants or refinery projects, for instance); for projects in the roads, ports, and airport sectors, such risks are usually of a lower order. Technology risk usually arises because of the newness of technology or the possibility of its obsolescence, most often seen in telecom projects. Where technology is well established, the focus of analysis is usually on determining its reliability and the sustainability of the technology platform over the tenure of debt. ICRA Indonesia usually reviews the Independent Engineer's Report (IER) and assesses whether the engineer's findings support the views of the sponsors and the EPC contractor. ICRA Indonesia supplements its review of the IER with visits to the site where it holds discussions with the project's management team, the project consultants and the EPC contractor.

Technology risks, where imminent, are usually mitigated through performance guarantees/warranties from the manufacturer, contractor or operator, and the availability of adequate debt reserves to allow for operating disruptions. ICRA Indonesia would conduct a due diligence to establish the credit-worthiness of the technology suppliers/operators and the ability of these participants to compensate the project for failure of the technology adopted. The risks associated with disruptions in operations due to mechanical failure of equipment are usually mitigated through Operations and Maintenance (O&M) contracts. Here again, ICRA Indonesia evaluates the quality/experience of the O&M contractor, the familiarity of the O&M contractor with the technology being used, and the adequacy of the performance guarantees from the O&M contractor.

4. Market Risks

Market risks usually arise because of insufficient demand for products/services, changing industry structures, or pricing volatility (for input and also output). Given the long-term nature of project financing, a considerable source of market risk is the possibility of dramatic changes in demand patterns for the product, either because of product obsolescence or sudden and large capacity creations, which could severely affect the economics of the project under consideration. For analytical convenience, one can group projects into two categories: one, which produce commodities (e.g. LNG projects and refinery projects), and two, where certain natural monopolies exist (e.g. roads, ports, airports, power or gas transmission projects). While the first category of projects is exposed to most of the risks identified above, the market risks for the latter type of projects are more demand related, with the pricing usually being subject to regulatory or political controls.

Until recently, the implementation of some of these "commodity" projects, such as LNG, in the international markets was supported by long-term off-take contracts, which provided considerable comfort to project financiers. However, with the development of a spot market for these commodities, customers of such projects are not willing to commit themselves to such long-term contracts; this has considerably increased the market risks associated with such projects. Under the circumstances, cost competitiveness and the nature (regional or global) and adequacy of demand have emerged as critical determinants of a project's long-term viability. For instance, despite power projects being backed by off-take commitments and adequate payment security mechanisms, there are numerous instances where cost competitiveness has emerged as the principal mitigant against the rather well documented market risks associated with the power sector.

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 Indonesia usually benchmarks the capital cost of a project with those of recently commissioned facilities across the world to ascertain the global cost competitiveness of the project; this, in ICRA Indonesia's view, is a key determinant of the project's long-term economic viability. On the input side, ICRA Indonesia 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

Indonesia 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 of existing demand, the potential for growth in demand and the possibility of alternative assets (e.g. an alternative route to a toll road) being created, which could undermine demand for the project being financed. Assessing demand patterns for such projects, particularly road projects, is often a daunting task since in most cases, the demand is highly price elastic and a function of the pattern of socioeconomic development in the service area of the road. ICRA Indonesia refers to “independently” conducted traffic/demand studies by reputed agencies to establish the veracity of the demand estimations prepared by the project sponsors. However, such estimates are used only as a guide and are usually suitably adjusted by ICRA Indonesia while drawing up the cash flow estimates.

5. Counter-party Risks

As discussed earlier, a project involves a number of counter-parties 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 strength of the project. Counter-parties to projects usually include feedstock/raw material suppliers, principal offtakers, and EPC contractors. Even a sponsor could become a source of counter-party risk, as it needs to provide equity during the construction stage. Because projects have inherently complex structures, a counter-party's failure can put a project's viability at risk. The counter-party risks are usually addressed through performance guarantees, letters of credit and payment security mechanisms (such as escrows), most commonly seen in the case of power projects. However, it has been observed that such contractual risk mitigants, however strong, 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.

6. Regulatory and Political Risks

Political and regulatory risks shall play an important role in the development of the project finance business in Indonesia. 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 masses, directly or indirectly. Political and regulatory risks could manifest themselves in various forms, and significantly impact the economics of the project under evaluation. For instance, such risks may take the form of:

- Lack of transparency and predictability in the functioning of the regulatory commissions which are typically involved in granting licenses, specifying the terms and conditions for use of infrastructure on a “common carrier” basis and fixing tariffs.
- Resistance to increases in user charges for common utilities such as water charges, toll tax rates, and energy charges, despite such tariff increases being envisioned in the project documents.
- Changes in environmental norms, which could impact power plants and refinery projects by requiring them to invest substantially in meeting such norms.
- Problems in acquisition of land, which are typical in the case of road projects.

As is apparent from the preceding discussion, regulatory and political risks are often difficult to quantify and also mitigate. While assessing such risks, an attempt is often made to understand the vulnerability of the project to such risks and also the nature of the relationship between the local/central government and the project under review.

7. Force Majeure Risks

Project finance transactions, which are different from corporate or structured finance because of their dependence on a single asset for generating cash flows, are potentially 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. A careful analysis of *force majeure* events is critical in project financing because such events, if not properly recompensed, 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 flow. In addition, catastrophic mechanical failure, due to either human error or material failure can be a form of *force majeure* that may excuse a project from its contractual obligations.

Projects are usually not able to cope with *force majeure* events as well as large corporations, which have a diversified portfolio of assets. In ICRA Indonesia's opinion, the wider the definition of these events, the weaker and less reliable the contractual structure for the project. It is therefore important that *force majeure* events be tightly defined, and that such risks be allocated away from the project through suitable insurance covers taken from financially strong insurance companies. ICRA Indonesia usually studies the nature, coverage and appropriateness of the insurance policies taken and also evaluates the adequacy of debt reserves for meeting debt service commitments in *force majeure* circumstances.

Evaluating the contractual structure

A project can conceptually be viewed as a nexus of contracts and agreements, which bring together various counter-parties for the sole purpose of creating and operating the asset under consideration. Where such projects are financed on a non- or limited-recourse basis, the usefulness of the project agreements reside primarily in their ability to contractually transfer/allocate risks to participants who are best equipped to handle them. ICRA Indonesia therefore evaluates these contracts for their adequacy and strength in the context of a project's technology, and exposure to market and counter-party credit risks. The contracts are also studied for consistency (across contracts), and also to ascertain whether the obligations created by each contract address the project's unique operating characteristics. It must however be mentioned that although the project contracts are scrutinised closely, the primary objective, while evaluating such projects, is to establish their stand-alone viability. This approach is influenced primarily by ICRA Indonesia's observation that there is a strong incentive to honour project contracts only so long as the project makes commercial sense to all participants. It has also been seen that these contracts lend themselves to re-negotiation once the project loses its "economic value", and such renegotiations could severely affect the interests of the debt investors to the project.

Conclusion

Despite the reluctance of domestic and international lenders to finance projects on a non- or limited-recourse basis, ICRA Indonesia feels that there exists adequate potential for suitably structured projects with strong economic fundamentals. Demand for such financing structures would be driven primarily by the large requirement for investments in Indonesia's infrastructure sector, the capital intensity of such projects, and the inability/reluctance of project developers to lend their balance sheets for funding them. Such projects are exposed to a variety of risks, which however can be mitigated by suitably allocating them to project participants who are best equipped to handle them. ICRA Indonesia 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 and its commercial attractiveness to the various participants.

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