



**NOVEMBER 2023**

# PROJECT FINANCE RATING METHODOLOGY

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GLOBAL PROJECT  
FINANCE RATING  
METHODOLOGY

This is an update to the methodology previously published in November 2022. There are no material changes and as such no rating impact.

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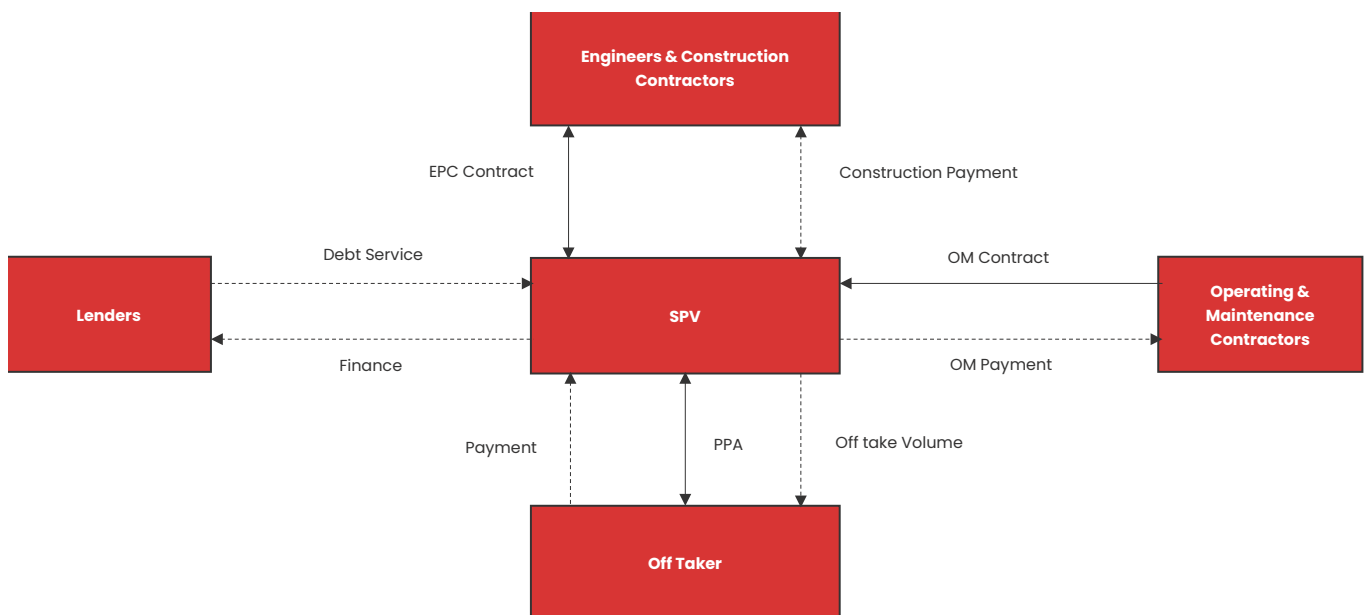
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# I. INTRODUCTION

ARC Ratings’ (“ARC”) Global Project Finance Rating Methodology (the ‘Methodology’) applies to the single purpose, long-term financing of large scale projects. The Methodology may apply to both non-recourse and limited recourse project financings. Project finance assets may include electricity or power generation or distribution projects, as well as infrastructure and transportation projects, to name a few of the diverse range of financeable asset types.

This report provides a framework for ARC’s analytical approach to all project finance transactions globally. Each project type, as well as each jurisdiction, will have its own specific characteristics which will be reflected in the individual transaction report and any deviation from this Methodology will be disclosed in such report.

Project finance is the long-term financing of assets for a single purpose, typically structured so it is non-recourse to the project owner or any other party, that is, the financing repayment is solely or mostly reliant on cash flows deriving from the project itself, although some transactions do benefit from the implied support of originators or other parties. Project finance structures rely on various contracts being in place to manage risk during the construction and operating periods. The diagram below depicts a typical simplified project finance structure.



Assets are typically held in a special purpose vehicle (‘SPV’)<sup>1</sup> with the revenue-generating output of the project typically contracted with an external party via a contract between the SPV and the purchaser (or ‘off-taker’) which specifies volumes and prices or formulae to establish them. An example would be a power purchase agreement (‘PPA’), in the context of electricity generation from a renewable energy source where the contract would be for a specific term with renewal options at set intervals.

If there is a construction period, the engineering, procurement and construction (‘EPC’) contract sets out the terms of construction, normally at a fixed price. The operating and maintenance (‘O&M’)

<sup>1</sup> Some project finance transactions may be instead structured as limited recourse loans.

contract sets out the terms of the operating and maintenance contractors during the operating period. The EPC and O&M contracts thereby transfer construction and operational risks from the SPV (or project) to those transaction counterparties, allowing the project to operate in a manner segregated from the original sponsor.

## II. RELATED RESEARCH

This Methodology report should be read in conjunction with ARC's Global Structured Finance Rating Methodology available on [www.arcratings.com](http://www.arcratings.com) since many of the principles relating to the establishment of securitisation SPVs and analysis also apply to project finance transactions. Each transaction will be accompanied by a transaction specific report that will disclose the specifics of the transaction and modifications to the Methodology, if any.

## III. KEY RATING DETERMINANTS

ARC's analysis of a project finance transaction is multi-faceted.

Each factor is discussed in further detail throughout the report. ARC applies a scorecard approach (see **Appendix A**) to project finance ratings which may be weighted towards certain factors with scorecard rating categories notched up or down for certain structural deficiencies/enhancements or mitigated/unmitigated risks. Whilst the scorecard acts as a guideline for indicative rating categories there are also several sub-factors that incorporate both a quantitative and qualitative analysis. As such the scorecard is only a guide and the final project finance rating may be further notched to reflect these characteristics.

Project finance transactions typically have one or two distinct phases which carry different risks, namely the construction phase and the operational phase. The construction period is often considered to be the riskier part of a project, and as such any project covering both phases can often receive a lower rating assigned during the construction period with some propensity for upgrade once construction is complete satisfactorily.

ARC's scorecard (see **Appendix A**) assumes a fully amortising transaction during the operating period. Where the transaction is non-amortising or partially amortising additional factors will be taken into consideration in the analysis, as detailed later in this methodology report.

### CONSTRUCTION PERIOD

To analyse the construction period and its inherent risks, ARC will assess the following elements, among others, to determine the appropriate rating:

- Complexity of Construction.
- Assessment of Quality of EPC Contractor and EPC Contractual Arrangements.
- Construction Period Funding Adequacy; and
- Guarantees/quality of Counterparties.

## Complexity of Construction

Construction risk varies for different project types. The more complex the technology, and the less tested it has been on previous projects, the higher the construction risk. Certain geographical locations or different types of terrain may also have an impact on construction risk, as may the design and scale of a project. There is a clear hierarchy of complexity where, using the power sector as an example, a nuclear plant is considerably more complex than a solar farm, an offshore wind farm more complex than an onshore one. The higher the complexity, the higher the risk and, by implication, without mitigation of such risk, most likely the lower the rating achievable.

Construction is not covered by the scorecard analysis but is used as a base to determine notching if a construction period is applicable.

## Assessment of Quality of EPC Contractor and EPC Contractual Arrangements

In evaluating construction risk ARC will evaluate the contractors' experience, reputation, and track record. ARC will also ensure the construction contractor has sufficient experience with respect to the size and type of project to be constructed. Where a contractor is not rated, ARC will conduct an internal credit assessment process to assess the credit quality of the construction contractor.

In respect of EPC contractual arrangements, ARC will evaluate the arrangements, whereby a 'fully wrapped fixed price turnkey arrangement<sup>2</sup>' presents the least number of variables to assess in ARC's credit analysis, versus other types of contractual arrangement albeit typically at a higher cost burden to the project. The contractual arrangements should clearly transfer the risk of construction to the third-party contractor. To the extent the SPV or project is left with any construction risk, ARC will evaluate the severity of risk retained, and assess any other mitigants present. Project sponsors might also assume construction risk in the form of cost overrun undertakings or completion guarantees.

ARC will review findings from an independent engineer ('IE') for projects that are technically complex. For such projects, an IE might be engaged to comment on achievability of the construction schedule, budget, and technology risk as well as the ability of the project to meet any future offtake performance thresholds regarding availability, output etc.

## Construction Period Liquidity / Funding Adequacy

ARC will assess if the project has sufficient ability to pay debt service until construction is completed and payment commences under the off-take agreements. Whilst construction risk is a material risk to a project, so too are delay risks and failure to operate in accordance with project specifications. For instance, an off-take agreement might impose penalties for a delay in attaining commercial operation.

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2 A 'fully wrapped fixed price turnkey contract' is a type of contract in which the contractor agrees to provide all the services and materials necessary to complete a project for a fixed price. The contractor is responsible for delivering a fully functional and ready-to-use product to the client, who only needs to "turn the key" to start using it. This contract model is often used for complex and large-scale projects, such as power plants, industrial facilities, or real estate developments. Some of the advantages of this contract model are that it reduces the risk and uncertainty for the client, simplifies the contract management, and ensures a high quality and performance of the product. Some of the disadvantages are that it may increase the cost and duration of the project, limit the flexibility and customization of the product, and create potential disputes over the scope and specifications of the project.

ARC will assess the adequacy of available liquidity to cover the assumed delay, the precise number of weeks/months assumed will again be dictated by the project's complexity.

Liquidity may be provided by several different means, for example by liquidated damages arrangements<sup>3</sup> to be paid by the EPC contractor, cash funded reserves, or letters of credit (LC's) amongst others. The value which ARC attributes to each form of liquidity in its rating process depends on how immediately it can be called upon, and whether there are any conditions to drawdown.

If the EPC contractor is unrated or has a low rating, other sources of external liquidity may be required in addition to liquidated damages.

### **Guarantees**

If any guarantees or insurance policies are in place that negate some elements of construction risk, ARC will assess their adequacy and conditionality of such guarantees and insurance policies, along with the credit standing of the providers, and factor these into its analysis accordingly.

## **OPERATING PERIOD**

Relative to construction costs, O&M costs are typically low, and the ability to replace an operator is generally higher than for a construction contractor. Nonetheless, there are several factors which ARC will consider when assessing O&M risk.

### **Operating and Maintenance Risks and Costs**

For project cash flows to be sustained, operational availability and effective maintenance is necessary. O&M costs may be affected by a poorly performing O&M contractor which might result in project revenue targets not being met, so ARC will assess the experience and track record of such a contractor. ARC will look to the O&M to see if it contains a clause for operating damages should a contractor underperform and/or an option to replace the contractor.

A project sponsor will typically have equity in a project and the greater amount of equity should mean a higher commitment to ensuring a successful project. ARC will also review the sponsor's equity investment as well as its track record and credit worthiness. Although referred to as 'equity', the sponsor's investment might be provided in the form of subordinated debt or preference shares but in any event the SPV should be able to defer payments on these instruments if cash is lacking. A weak sponsor is often deemed to be a credit negative within the analysis.

O&M costs are expected to be a highly predictable amount of the cost structure and be largely stable over the life of the project.

### **Revenue /Off-take Agreements**

The certainty and sustainability of cash flows throughout the life of the transaction is key to a project finance rating. Therefore, ARC will assess the revenue/off-take agreements in place. ARC will evaluate the credit strength of the off taker as well as their ability to honour the revenue contract. In cases where there are multiple off-takers, this can add diversity to the revenue stream and can be credit-positive.

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<sup>3</sup> i.e., compensation that is agreed upon in advance by the parties in a contract, in case one of them breaches the contract and causes a delay or loss to the other.

Where there is a single off-taker, the analysis will focus on its ability to honour the revenue contract – if the off-taker is a highly rated single entity, e.g., a government or state-owned entity and the project is integral to the off-taker's infrastructure, more credit may be given. There may also be instances where a project may be rated higher than the rating of the off taker as many other factors, not solely the off-taker's rating, are taken into consideration in the analysis.

If revenues and operating costs are mismatched this can result in increased risk for a transaction, whilst fixed pricing and a longer-term contract can help to mitigate risk.

Merchant risk projects, i.e., projects that sell output at market price, are deemed to be higher risk and as such will not be covered under ARC's scorecard analysis. Such projects will be assessed on a case-by-case basis and will typically require independent market studies to be carried out, which ARC expects to be made available to it.

Fixed-price contracts typically lower risk in a project, however this can create further risk if costs can fluctuate. For example, contracts for power supply may include a variable element as well as a fixed price component that may be payable by the off-taker based on availability of power and not on actual dispatch.

The contract should be assessed for contract exclusions (or 'outs') as these can increase risk if a contract imposes increasingly high availability on a project for example.

Contracts based on 'availability' – typical in a 'pipeline' project where payments are made on the volume of gas or electricity than can be delivered but regardless of whether it is actually delivered – can add further risk to a transaction if levels of availability are set close to the attainable range, making them liable to be breached and thus result in penalty payments to the off-taker or a reduction in the revenue received. Availability should be set within reasonable limits of the project and will be assessed within the analysis. ARC will assess if the technology is tested and has a proven and strong track record and ARC will look to evidence of warranty period and duration of long-term service arrangements to assist in providing required availability.

### **Competitiveness**

ARC will assess the competitiveness of the project relative to other projects/plants in the market. For example: for a power plant project, this assessment looks at the cost of production of power and the cost competitiveness of the project in current market conditions if the contract were to be terminated and the power sold into the market. Therefore, if the revenue contract, in this example, a PPA, pays substantially above market price this increases risk. Regulatory issues are also considered in the analysis as a change in law or the regulatory environment could have a substantial impact on existing revenue contracts for power or other forms of production.

In addition to the scorecard analysis ARC will consider the following risk mitigants as inputs to the analysis.

### **Debt Structure**

The debt service coverage ratio ('DSCR') is the single most important financial measure for a project finance transaction and is based on the cash flow available for debt service (CFADS), defined in broad terms, for any period, as: the revenue generated by the asset less its operating expenses, maintenance,



taxes and any contribution to future life cycle costs such as a maintenance reserve (where known replacement costs for certain components are spread more evenly over the project life).

DSCR values can be stable over time, initially higher at the start or lower initially then rising over time typically where a project builds up its capacity to a sustainable operational level. In the case of higher initial DSCR ratios, it allows more immediate repayments of principal once the project has entered its operational phase, which is credit positive as it means there is less uncertainty about the likelihood of full debt repayment.

The level of DSCR expected for each rating level is dictated by the extent of amortisation of principal over the life of the debt, as discussed further below. An acceptable level of amortisation is, in turn, dictated by the nature of the project, particularly its expected life, the profile of revenues expected (or contracted) over its life and the extent to which revenues are expected to continue beyond the term of the initial debt. For example, a project with a very long expected life (50 years or longer) with an initial level of debt with a considerably shorter maturity (say, 25 Years), as well as an expected flat stream of revenues over its entire life might have a non-amortising initial debt structure with all cash in excess of interest being paid to equity holders.

Typically for a project to achieve an investment grade rating by ARC, the excess cash available after debt payments have been met should be at least four times the interest payable, simply because at the end of the debt maturity the sale or refinancing of the project is more certain. A guide to the DSCR bands for amortising and non-amortising transactions and their relevant corresponding rating categories can be found in **Appendix B**.

DSCR forecasts are analysed by ARC in its project finance ratings, since they may be sensitive to underlying assumptions made about future cashflows, such as availability assumptions in power projects and the level of optimisation embedded in traffic forecasts in the case of toll road projects.

Subordinated debt and any other fixed charges are usually included in ARC's DSCR calculation. ARC's calculated DSCR is the most relevant measure when rating fully amortising project finance structures. Whereas for partially or non-amortising structures ARC will review other key financial metrics subject to certain minimum DSCR levels for these transactions at each different rating level, dependent on the project and structure type.

It may be possible to rate a non-amortising or partially amortising project at investment grade, if there is a strong likelihood that the project will have a terminal value – i.e., a sale or refinance value, based on its potential for continuing to generate positive cash flows beyond the debt maturity. A common example of this situation is in the case of a power project, where the PPA extends beyond the debt maturity or is likely to be continually renewed.

For fixed revenue transactions ARC will assess if any inflation protection is in place and stress the cash flows with an inflation assumption. It is assumed that an investment-grade transaction can withstand a stressed annual inflation (such stress to be determined by reference to the specific jurisdiction) annually throughout its life and still achieve a DSCR of 1.0x or higher. If the DSCR potentially could fall below 1.0x ARC would see if interest deferability language were present within the transaction documentation, the absence of which would be treated negatively in ARC's analysis.

For power generation projects, ARC expects a DSCR of between 1.2-1.6x to achieve the lower end of a 'A' rating category. It is atypical for project finance transactions to achieve higher than an 'A' category



rating. However, where all other factors are of exceptional quality, and a high DSCR exists, this may be achievable. DSCR triggers may be implemented for transactions that trap the flow of cash and prevent equity distributions if they are breached. ARC will view any such DSCR triggers as favourable to a transaction to stop the deterioration of DSCRs.

The term of the debt is also key. The debt should ideally mature prior to the off-take agreement (e.g., PPA) contract term end date. If the term of the debt exceeds the term of the contract, then market value risk and potentially interest rate risk is assumed at maturity. Projects that are scheduled to be fully amortised only at maturity of the off-take agreement will typically have no predictable material terminal value (although they might realise greater than zero).

Refinancing risk is another structural risk. If a transaction is refinanced this can incur a different interest rate which in turn may have an impact on the required DSCR. If the DSCR was at the higher end of the scale for the given rating category the impact may be limited but this will not always be the case.

There may be other risks present within a project, each of which is assessed on a case-by-case basis by ARC but may include, amongst others: siting and permitting risks (environmental and resettlement issues may introduce obstacles), sponsor risk, and regulatory and political risks which may not only have an impact on revenue but may also have an impact on costs.

### **Reserves**

For project finance transactions a reserve for a minimum period of debt service is standard. ARC will assess the amount of the debt service reserve dependent upon the underlying project type. Projects that exhibit volatility in production may be expected to include higher debt service reserve requirements. Projects that have less than a six-months debt service reserve may achieve lower ratings than those with a minimum of six months.

In addition to a debt service reserve ARC will also look to a maintenance reserve if maintenance costs are considered substantial for a project if they are not highly predictable or tend to increase over time or at specific intervals. Where there is a need for regular maintenance such as for wind power generation projects a debt service reserve is necessary as standard.

ARC will review any other reserves or forms of liquidity available to a transaction within its analysis.

Such reserves should be cash funded or provided by means of a letter of credit whereupon ARC will assess the creditworthiness of the counterparty via their rating (or another appropriate measure).

### **Insurance**

ARC will assess the insurance coverage provided to the project. For ARC's analysis to give credit benefit to the insurance policy, it should cover amongst other items, replacement cost of a project, force majeure, and potential business interruption.

The project lenders should be an insured party and have the option to elect to be paid out from any insurance proceeds or for the project to be replaced or rebuilt if necessary. Any changes to the insurance policy typically also require consent of the lenders. Where insurance is also provided by a recognised insurance company, ARC will consider the rating (or other appropriate measure of insurance risk) of the insurance counterparty, and the level of coverage provided by the policy, to

assess whether full or partial value can be given to the insurance policy, or indeed if a rating cap will apply due to the insurer's credit quality.

Annual insurance certificates should be supplied by the SPV detailing continued coverage and compliance with terms. Insurance renewal risk is deemed to be low as insurance premiums make up a small proportion of the project's costs.

### **Counterparties**

Any financial counterparty to the transaction such as account bank, letter of credit provider, swap counterparty should be rated. Typically for project finance ratings, the financial counterparties are usually rated higher than the debt rating. Please refer to ARC's counterparty rating guidelines published within its Global Structured Finance Rating Methodology available at [www.arcratings.com](http://www.arcratings.com).

### **Legal and contractual integrity**

ARC expects to receive copies of all legal or transaction documents as well as all other structural and legal documents pertaining to the transaction. Such documents may also include legal and tax opinions. ARC's review of the transaction documentation and legal opinions will be performed to ensure they reflect the structure and credit aspects presented to ARC.

The SPV construction and operating contracts, due diligence and engineering reports (where relevant) should be provided, and additionally address risks associated with the transaction, such as construction risk, operating risk, price and inflation risk, and catastrophic risk, to the extent possible. Absent any specific mitigations, ARC will apply stresses to the transaction cashflows in line with the requested project finance rating.

ARC's legal analysis will also address the credit risk of the transaction counterparties and contracts to the extent that there is credit reliance on them. Please refer ARC's Global Structured Finance Rating Methodology available at [www.arcratings.com](http://www.arcratings.com) for a description of how legal, counterparty and other risks may be analysed for project finance transactions.

### **On-Site Review**

ARC will typically meet with management of a project to discuss their business strategies, policies, competitive performance, and projections to assess whether the project will be well managed, is realistic, as well as review the managerial track record at delivering similar completed projects successfully. ARC will review and assess all relevant construction phase information and business projections for the completed project.

ARC also expects to receive audited financial statements for the SPV, or the sponsor prepared by a recognised audit firm, and to receive adequate information on a regular basis to monitor project performance. Delays in receiving audited financial statements may be considered an indication of a potential breakdown in internal controls of a project.

## **LEGAL CONSIDERATIONS**

Project finance SPVs are often not bankruptcy remote from the sponsor. Whereas in a securitisation, bankruptcy remoteness of the SPV is commonplace this is not the case for many project finance transactions. Whilst project finance SPV's may engage in a broader range of activities than

securitisation SPVs, these should still be reasonably limited. ARC expects to see separateness covenants in respect of the SPV as well as for the SPV to have at least one independent director in place.

From time-to-time commercial disputes may arise in respect of the SPV, its contractors or the revenue producing counterparty(ies). ARC expects to see a robust dispute resolution clause to be in place that provides a transparent and timely guideline that limits legal recourse and enables continued operation or construction until such dispute has been resolved, for it to be able to assign its ratings.

ARC will analyse the security structure presented. Project lenders should have a first-ranking, perfected, senior security interest, or other form of security such as a mortgage over the assets of the SPV. Upon a default of the SPV the lenders should be able to control its assets and take over any contractual rights and / or obligations of the SPV including control of contracted cash flows.

ARC expects to receive full transaction legal documentation as well as legal opinions addressing, amongst others, the creation and legal existence of the SPV, validity and enforceability of security and the power and authority for the SPV to enter certain projects.

ARC will typically use external counsel to review legal opinions.

## NON-AMORTISING OR PARTIALLY AMORTISING TRANSACTIONS

Project finance transactions are typically fully amortising and the scorecard in **Appendix A** addresses such structures. Where a structure is non-amortising or only partially amortising, the DSCR will not adequately fully address the implicit financing risk, particularly where any excess cash that does arise is paid to the equity holders. In such transactions, ARC will seek assurance that, at the end of the debt term, the project can either be refinanced or on-sold at price which would allow full repayment of any outstanding financing. For example, ARC will seek evidence of similar projects which have been on-sold or have had their lives extended in such a way to allow for the full repayment of the expected outstanding debt, e.g., by continuation of the revenue flows at the same or a higher level.

Transactions with highly predictable cash flows, and with fixed amortisation profiles, will likely be regarded as more likely to result in adequate amortisation by the end of a project's life. For projects with no planned amortization, a higher DSCR threshold is necessary because the DS of the DSCR calculation is only interest.

DSCR ranges for a rating category will be significantly higher when compared with amortising transactions – i.e., greater than or equal to 1.2x but less than 4.0x for 'BB', greater than or equal to 4.0x but less than 6.5x for 'BBB' and greater than or equal to 6.5x for 'A'. The DSCR bands and their relevant corresponding rating category can be found in **Appendix B**. In addition to reviewing cash flow coverage ARC will also assess the total debt to total capitalisation from a project company's balance sheet. To achieve an 'A' rating ARC will look for a 20% to 40% total debt to total capitalisation ratio, 41% to 60% for a 'BBB' rating while over 60% would be reflective of a BB or lower rating. The ratios and their corresponding rating category can be found in **Appendix B**.

A qualitative assessment may be made in respect of future cash flows regarding refinancing risk.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE FACTORS

ARC's project finance ratings are always based on a holistic analysis of the project to be rated with the goal of identifying all relevant aspects, including environmental, social and governance (ESG) factors, which might impact the project from a credit risk perspective.

ARC always takes the most forward-looking perspective that current knowledge about these risks permits, acknowledging that in the case of some ESG factors their credit impact may only be known over a longer time horizon than the one considered for the rating analysis, making an accurate quantification of its potential impact subjective.

ARC incorporates ESG factors into its project finance ratings through quantitative analysis wherever possible, or qualitatively when it is not possible to quantify them. Where ESG factors are a key driver of the assignment or change of a credit rating or rating outlook the ESG factor that was considered a key driver will be clearly identified and its materiality explained in the accompanying press release and/or report.

For ARC, ESG factors do not have a specific score; the impact for the analysis is directly at the level of the rating when, from the analysis, it is determined as a potential risk for the issuer that could therefore affect the rating in the long term.

## IV. RATING MODIFIERS

An Indicative Rating – evidenced by the suffix (ind) – is a rating assigned by ARC to an issuer or an instrument when the assignment of a final rating is dependent upon the fulfilment of specific contingencies as for instance, the case with indicative ratings prior to the closing of a transaction.

Any material deviation in the fulfilment of these contingencies from the assumptions underlying the Indicative Rating can have a material impact on the final rating accorded, which accordingly may be fundamentally different to the initial Indicative Rating. Moreover, ARC reserves the right not to issue a final rating. Potential investors are advised to bear this in mind when considering any indicative rating.

Whilst project finance transactions may be analysed by ARC's structured finance team, project finance ratings do not carry an (sf) modifier. Please refer to ARC's 'Credit Ratings and Other Analytical Products (Definitions and Scales)' document available at [www.arcratings.com](http://www.arcratings.com), for more information.

## V. QUALIFICATION

ARC Ratings only provides a rating of the rated securities and neither recommends nor will recommend how an issuer can or should achieve a particular rating outcome. A rating only considers the law, or tax, or reasonable macroeconomic prediction known at the time of assignment. Such rating does not cover unexpected or sudden changes in law, tax, or material changes in macroeconomic conditions, nor is it, nor can it be regarded as, an audit. Moreover, ARC Ratings is not and should not be made a party to any transaction documents of the instrument/transaction it is rating. Users of our ratings should familiarise themselves with the transaction documents. ARC Ratings does not act as a legal, tax, financial, investment or other advisor and users should seek professional advice from appropriate third parties where necessary.

## VI. MONITORING

Ongoing monitoring of performance of project finance rating transactions is key to maintaining current and accurate project finance ratings.

ARC expects to receive transaction reports at least quarterly informing of milestones reached, and the project revenues amongst others. ARC also expects to be notified of any changes to the transaction or project that may impact the current rating and its analysis. Since project finance ratings vary significantly in nature and scope, ARC's monitoring information reporting requirements will typically be bespoke for each project.

ARC will also monitor any relevant transaction covenant levels to ensure no breaches have occurred in line with limits set within the transaction documentation. Periodically ARC will expect to receive more detailed underlying information regarding the construction progress and/or operations of the project.

ARC may additionally meet with the originator/servicer to provide an update on the progress of the project.

Upon each reporting period ARC will review the performance information provided to ensure it is reflective of the information the analysis was based on at the outset.

In addition, surveillance rating panels are held by ARC annually at a minimum or as events warrant. Negative or improved performance of the underlying project may trigger a potential rating action. For public project finance ratings ARC will publish a performance report on an annual basis at a minimum or as events warrant.

# APPENDIX A:

## SCORECARD

The following scorecard should act as a guideline for the rating analysis. Additional factors may be taken into consideration in the analysis and both a quantitative and qualitative assessment may be made in addition to the scorecard below. These assumptions will be discussed during the rating panel process.

Operating Period Assumptions	A High Quality	BBB Average	BB or < Wea
Operating & Maintenance costs, proven technology and track record	<p>High replaceability of operators</p> <p>Technology proven</p> <p>On-going O&amp;M costs expected to be modest</p> <p>Operator strong track record</p> <p>O&amp;M contract contains significant operating damages</p> <p>Sponsor track record of on-going financial support for project</p>	<p>Average replaceability</p> <p>Technology proven, operating issues have occurred / average operating history</p> <p>O&amp;M essentially to maintain project efficiently</p> <p>Recognised operator</p> <p>Long-term O&amp;M contract with limited or no operating damages</p> <p>Sponsor has good track record and financial support and oversight</p>	<p>Low replaceability</p> <p>Technology considered proven, with untested elements or limited history</p> <p>Need for active O&amp;M</p> <p>Operator experience limited to this technology type</p> <p>Contractor may not exceed project life</p> <p>No operating damages</p> <p>Sponsor with little or no track record</p>
Revenue / PPA / Off-take Agreements	<p>Very highly predictable / stable cashflows</p> <p>1 or more highly rated off-takers</p> <p>No fuel / resource supply risk</p> <p>Extremely limited contract outs</p>	<p>Highly predictable / stable cashflows from minimum 1 credit worthy counterparty for full term of project</p> <p>Low fuel / resource supply risk</p> <p>Limited contract outs</p> <p>Attainable availability demands</p>	<p>&lt;50% cashflows contracted</p> <p>Cashflows considered less stable</p> <p>High risk of fuel / resource supply risk</p> <p>Contract constrained by availability tests and other outs</p>
Competitiveness of Contracts	<p>Strong competitiveness</p> <p>Strong economic rationale for projects and predictable profitability</p> <p>Terms of contract competitive</p> <p>Little impact on revenue following termination of the contract</p>	<p>Reasonably cost competitive</p> <p>Some degree of barrier to entry</p> <p>Terms of contract at or near market price</p> <p>Modest revenue erosion on termination of the contract</p>	<p>Weak or no competitive advantage</p> <p>Terms of contract 20% - 50% above market price</p> <p>Failure to replace contract may result in a lack of revenue and potential default within 2 years</p>
Competitiveness of Assets	<p>Competitive assets located in 1 or more countries / regions</p> <p>High obstacles to entry</p>	<p>Consistently competitive in 1 or more countries / regions</p> <p>Regulatory / legislative protection for limited time</p> <p>Mid-range obstacles to entry</p>	<p>Legislative or regulatory obstacles</p> <p>Low obstacles to entry</p> <p>New entrants are severe threat to business</p>

## APPENDIX B:

### FINANCIAL RATIOS GUIDANCE

The DSCR ratios considered in determining ARC's project finance ratings for amortising transactions, map to the rating bands as follows:

<b>Financial Ratios Guidance for Amortising Transactions</b>			
	<b>A</b>	<b>BBB</b>	<b>BB or &lt;</b>
DSCR Ratio	>=1.6x	>=1.2x to < 1.6x	<1.2x

For non-amortising or partially amortising transactions a combination of DSCR ratios and Total Debt to Total Capitalisation ratios is used, with the following indicative bands:

<b>Financial Ratios Guidance for Non-Amortising or Partially Amortising Transactions</b>			
	<b>A</b>	<b>BBB</b>	<b>BB or &lt;</b>
DSCR Ratio	>=6.5x	>=4.0x to <6.5x	>=1.2x to <4.0x
Total Debt to Total Capitalisation	20% - 40%	41% - 60%	61% or >



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