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Credit FAQ:

An Overview Of Standard & Poor's Criteria For Assessing Project Finance Operating Risk

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On Sept. 16, 2014, Standard & Poor's Ratings Services published its methodology for analyzing risks related to the operations phase of project finance transactions (see "Project Finance Operations Methodology"). Here we provide answers to common questions that we received about the methodology.

The methodology establishes an operations phase stand-alone credit profile (SACP), which reflects our assessment of the likelihood that a project would meet its financial commitments on a timely basis during the operations phase. We first establish a project's operations phase business assessment (OPBA)--by assessing performance, market, and country risks. Based on the OPBA, the minimum forecasted debt service coverage ratios (DSCRs) typically establish the preliminary operations phase SACP. We then adjust this for several factors--mainly our downside analysis, liquidity, and refinance risk--to determine the adjusted preliminary operations phase SACP. And finally, we use a comparative ratings analysis adjustment to arrive at the operations phase SACP.

Frequently Asked Questions

How does Standard & Poor's consider the risk attributes of different phases of a project finance transaction under the methodology, and how can ratings change over time?

A project can have different phases of risk over the life of the project, and the level of credit risk can vary with each phase. Credit risk can differ between phases because of business risk or expected financial performance, or both. A project finance issue credit rating reflects the credit quality of the project during the weakest credit phase over the remaining term of the financial obligation and until the obligation is repaid through project cash flows or, if any bullets or balloon maturities exist, it is refinanced. For example, a project might have a very high level of risk during construction, but once built and operating, would have much lower risk. In this case, the issue credit rating on the debt would initially reflect the construction phase risk, not the operating phase risk.

The operations phase may also include different credit risk subphases that can have varying effects on a project's creditworthiness. Take, for example, a project that contracts out most of its risk to creditworthy third parties for the first half of the debt tenor, resulting in potentially lower credit risk, but lacks risk-mitigating contracts for the second half of the debt tenor, which could result in greater credit risk. In this case, the debt rating would reflect the creditworthiness of the uncontracted phase.

Another example is an operating project that is fully contracted for the debt tenor but has operational phases that present different credit risks. For example, a toll road concession may have a ramp-up period when traffic builds to a steady level. Following that would be a period of more steady traffic volume, and then finally a "hand-back period,"

when the project must prepare itself to be given back to the concessioner in a predetermined condition that could involve a substantial cost. In such situations, our risk assessment at any given time reflects the riskiest phase remaining over the operational phase. For the toll road, the ramp-up phase may present the greatest risk. So, once the ramp-up phase ends, the rating would then reflect our view of the risks of the steady-state and hand-back stages.

How did you develop the base-case scenario in the methodology?

The base case reflects our reasonable expectations of a project's operating profile and market conditions. Under our base case, Standard & Poor's will forecast project cash flows and key credit metrics based on our view of operating and market conditions and the project's ability to meet contractual terms. Our forecast may vary from the project sponsor's forecast.

Example of an industrial plant availability project. An availability project financing is one where revenues are typically conditional on the project being available to operate, even if it is not actually in use or operation. Availability can be reduced as a result of breakdowns, the project being taken off line for maintenance, or breaches of specific contractual requirements.

In developing a base case for an availability project, we would typically establish an initial view of availability operational performance based on performance-related contract terms, if any. We would then make adjustments based on our knowledge or other external information that we consider to be reliable.

Contractual terms we typically assess are completion tests usually defined in construction contracts that indicate the likely operational performance of the project if construction is completed as planned. We may set our initial operating phase expectation to these performance tests levels if we are confident that they will be met. Otherwise, we may assume a lower initial performance than defined in the completion tests. Then we typically examine terms of any operations and maintenance (O&M) agreements to determine whether they establish a minimum availability, noting that these agreements may create a counterparty dependency. For example, if a project secured a 10-year contract in which a counterparty guarantees 94% availability subject to financial penalties that make the project whole given underperformance, then we would assume 94% availability for the contract tenor.

Next, we form an opinion on the project's likely availability after the O&M contract ends, factoring in our experience with the asset class and any relevant third-party opinions. During surveillance, we may change our availability assumptions. For example, if we assumed 97% availability, but the project is unable to get past 95% during the initial ramp-up period, we would revise our base-case availability to 95% or lower.

Example of a toll road. Consider a toll road exposed to traffic volume risk. The ramp-up is complete and the road has established traffic but is not yet operating at full capacity. To develop this project's base-case traffic volume, we would typically begin with the existing level of traffic and look at the historical correlation among traffic growth and GDP, population and employment. Rather than establishing a precise formula, we rely on historical trends and compare variations of each variable and which of these has the closest correlation to traffic growth. Using this analysis will then determine our future traffic growth.

For a toll road with tolls that are contractually indexed to annual inflation, we would typically assume that tolls will increase in line with our base-case inflation forecast and at the frequency allowed under the road's concession. We may apply a lower-than-contractually allowed toll rate increase (or reduce the frequency) if we have concerns about timeliness of approval or public acceptance of rising toll rates.

Can you describe the design of the downside case?

We designed the downside case analysis to enhance the stress analyses that we had always performed, as well as to provide a check on the preliminary OPBA, to provide a quantitative valuation of liquidity features, and to better ensure our project finance issue credit ratings are in line with Standard & Poor's credit ratings definitions.

The downside case factors in market (if applicable) and performance stresses, with the idea that the combined stress reflects trough market and performance conditions consistent with the 'BBB' scenario defined in our general criteria (see "Understanding Standard & Poor's Rating Definitions," published June 3, 2009). The operations methodology article and key credit factors articles (which outline sector-specific criteria) provide detailed information on market and performance stresses used to develop the downside case. Some stresses--such as macroeconomic assumptions--may be similar to all asset classes in a region, while performance stresses typically vary by asset class.

How does Standard & Poor's factor event risk into project ratings?

We typically incorporate reasonably foreseeable event risk into various parts of our analysis. For example, the risk of new competition or regulatory uncertainty is part of a project's market risk score. Similarly, the risk of an operating problem, like a turbine failure, is incorporated into our asset class operations stability assessment for the project. If an asset is located in an area subject to natural events, such as seismic activity or severe weather, we would typically assess a project's design, engineering, operations stability, and financing structure to withstand and operate under such natural events. Finally, our counterparty dependency assessment (CDA) evaluates the risk of a counterparty failure. However, unforeseeable or highly improbable types of event risk would not be incorporated into our analysis. An example would be a change in law in a low-risk country (e.g., one with a country risk assessment of '1') that nullifies a project's off-taker contract.

How does Standard & Poor's analyze refinance risk?

When we forecast that a project's cash flow available for debt service (CFADS) will not fully amortize debt by the end of the initial debt tenor, we add a refinancing phase to our analysis and consider the sufficiency of cash flows to amortize and service debt under our DSCR analysis over the remainder of the project life. For example, a 10-year term loan B financing with 1% annual amortization and no mandatory debt amortization through excess cash flows (a cash flow sweep) would have 90% of the initial project debt remaining at maturity. If the financing structure contains a cash flow sweep, we would assume additional debt repayment per the waterfall structure in conjunction with our CFADS forecast and DSCR analysis. We would then assume the most likely amortization profile to fully repay the outstanding debt (at year 10) by the end of the project's asset life.

Challenging market conditions can complicate refinancing. We assess this risk using a combination of the project's asset coverage--using a project life coverage ratio at the point of refinancing--and its expected cash flow volatility during the assumed refinancing period. Where there is very low asset coverage (generally less than 1.1x) or low cash flow stability (generally an OPBA of '9' or worse, unless asset coverage is high), we will cap ratings as described in table 18 of the criteria.

Does a weak counterparty always cap a project rating in the criteria?

Not always. Under the criteria, the rating on a project is typically weak linked to either a material CDA or the project's SACP without taking into account any beneficial contracts from counterparties (meaning we would use the weaker of

the two assessments).

Counterparty dependencies cap the rating if we view them as material and if they provide beneficial terms that cannot be replaced under similar terms and without disruption to project operations or cash flow (for more, see "Project Finance Construction And Operations Counterparty Methodology," published Dec. 20, 2011). This is typically the case when contractual arrangements improve a project's performance risk or market exposure assessment (such as through strong O&M or revenue contracts, respectively), but the agreements are provided by a counterparty with a weaker CDA than the resulting rating. For example, a revenue contract can raise the rating on a project in several ways: it can improve a project's market exposure score by lowering cash flow volatility, and it can raise the project's minimum DSCR if contract pricing is above market terms. For example, assume a project has only senior debt and a contract raises its operations phase SACP to 'bbb' from 'bb', but the counterparty's CDA is 'bbb-'. In this case, the counterparty would cap the SACP at 'bbb-'.

However, in the same example, if the revenue counterparty's CDA was 'b', we would not necessarily lower the project's operations phase SACP from 'bb' because a default by the counterparty would leave the project no worse than its uncontracted profile. Critical to this conclusion would be our assessment that cash flows from the existing contracts can be reasonably replaced, meaning that the contracts would terminate upon default by the counterparty, market-based replacement revenue through new contracts or spot sales would be available and sufficient to support a 'bb' operations phase SACP, and adequate liquidity exists to bridge the project until new cash flows begin.

For example, suppose an airport has contracted cash flows with airline counterparties that support a 'bb' operations phase SACP, but many of the airlines have CDAs of 'b'. If we determine the contracted cash flow is reasonably replaceable as described above, we could still assign an operations phase SACP to the airport of 'bb'.

However, in some cases, we may not rate a project based on the higher of its material counterparty's CDA or its uncontracted SACP.

- If a lower-rated revenue counterparty defaults and there is significant risk a beneficial contract will not terminate, thereby preventing replacement revenue, the counterparty CDA would weak link the operations phase SACP to the CDA.
- If a project has a contract with worse-than-market terms that lowers its DSCRs, we will base our DSCR analysis on the contract terms and will not give credit to the project's potential to generate stronger cash flows on the open market unless the contract terminates. For example, take a power project that sells electricity into the open market for which we assess the operations phase SACP on an uncontracted basis at 'bbb'. If this project has an underwater revenue contract with a counterparty with a CDA of 'b', and that contract would result in weaker DSCRs and a 'bb' operations phase SACP for the project, the operations phase SACP would be 'bb' because we would not assume a counterparty default that would allow the project to generate higher cash flow on the open market (this would be the outcome regardless of the counterparty's CDA).

How do you factor leverage metrics--such as debt to EBITDA or cash flow available for debt service to debt--into the operations phase analysis?

DSCRs are a key financial metric we use to assess a project's cash flow coverage of both interest and principal repayments over the term of a loan and any postrefinancing assessment. The amount of debt, forecasted CFADS, debt term, amortization profile, and the interest rate on the loan can affect a project's DSCRs. As such, forecasted DSCRs

are a useful measure of a project's debt servicing ability over time.

A project's debt tenor and amortization term typically are long to manage a project's higher leverage (relative to a corporate entity). As a result, leverage ratios, such as debt to EBITDA, are typically high. Although we do not explicitly map leverage ratios, as we do DSCRs, higher leverage (assuming equivalent DSCRs) would typically translate into longer loan tenors or higher refinancing risk, which we may penalize under the criteria, depending on the situation.

A long loan tenor or a refinancing exposure means that a project can have exposure to risk later in the life of the project--when its performance could be affected by issues associated with an ageing plant or hand-back conditions under a concession agreement, for example. High financial leverage may also translate into heavily back-ended amortization structures (that is, when amortization payments occur late in a project's life), in which the forecasted DSCRs in the later years of the project's life become highly dependent on inflationary growth that may not occur. Finally, the longer tenors can translate into market risk that becomes more pronounced over time. In these circumstances, the criteria may penalize these projects by assuming higher operating expenses, greater outages and increased market exposure in the later years of the project's life. We may also lower a project's preliminary operations phase SACP for having atypical debt structures, such as ones with abnormally high financial leverage, typically resulting from unusually long loan tenors or back-ended amortization payments.

Related Criteria And Research

Related Criteria

- Project Finance Operations Methodology, Sept. 16, 2014
- Key Credit Factors For Social Infrastructure, Accommodation, And Entertainment Project Financings, Sept. 16, 2014
- Key Credit Factors For Road, Bridge, And Tunnel Project Financings, Sept. 16, 2014
- Key Credit Factors For Oil And Gas Project Financings, Sept. 16, 2014
- Key Credit Factors For Power Project Financings, Sept. 16, 2014
- Project Finance Construction And Operations Counterparty Methodology, Dec. 20, 2011
- Principles Of Credit Ratings, Feb. 16, 2011

Related Research

- Credit FAQ: Provision Of Information For Assessing Project Finance Transactions, Dec. 16, 2013

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