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Criteria | Corporates | Project Finance:

Project Finance Framework Methodology

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Table Of Contents

SCOPE OF THE CRITERIA

SUMMARY OF THE CRITERIA

METHODOLOGY

A. Definition Of A Project Finance Transaction

B. Determining A Project's Stand-Alone Credit Profile

C. Parent Linkage And Transaction Structure Weaknesses

D. Extraordinary Government Support And Sovereign Rating Limitations

E. Determining The Issue Credit Ratings

F. Rating Other Debt In Project Finance Structures

Table Of Contents (cont.)

G. Assigning Recovery Ratings

H. Derivation Of The Subordinated SACP

APPENDIX 1

A. Derivation Of The Subordinated Issue Credit Rating When No Operations SACP Exists

B. GRE Rating Impact From Cross-Default And Debt Acceleration Linkages

GLOSSARY

REVISIONS AND UPDATES

RELATED CRITERIA AND RESEARCH

Criteria | Corporates | Project Finance:

Project Finance Framework Methodology

*(**Editor's Note:** We're republishing this article following our periodic review completed on Sept. 14, 2017. See the "Revisions And Updates" section for details.)*

1. This article describes Standard & Poor's Ratings Services project finance framework methodology used to assign issue credit ratings to senior secured and subordinated debt or debt-like obligations issued from project finance structures.

2. The criteria are intended to enhance the comparability of our project finance issue credit ratings (see "Understanding Standard & Poor's Rating Definitions," published June 3, 2009) and increase the transparency about how we assign project finance issue credit ratings. The criteria constitute specific methodologies and assumptions under our "Principles Of Credit Ratings," published Feb. 16, 2011.

3. This paragraph has been deleted.

SCOPE OF THE CRITERIA

4. These criteria apply to all project finance issue credit ratings on project finance structures globally--whether the debt is public, confidential, or privately rated. "Project finance" is a financing structure that is used to finance a variety of capital-intensive greenfield and brownfield assets (see the Glossary). Sectors that commonly use project finance structures include transportation infrastructure (e.g., toll roads, parking facilities, airports, and ports), social projects (e.g., barracks, hospitals, and schools), energy and water infrastructure (e.g., power generation, gas transmission, liquefied natural gas terminals, and water treatment plants), and integrated multisite commodity-based projects such as oil and gas and mining projects backed by reserves.

5. Paragraph 15 defines the key attributes of a project financing and establishes the minimum requirements that must be present for Standard & Poor's to assign an issue credit rating to a given debt issue or financial obligation that is part of a project finance transaction.

6. Standard & Poor's may assign issue credit ratings to one or more classes of debt or debt-like obligations in a project finance structure, such as senior secured debt, subordinated debt, and holding company debt (see paragraph 46).

7. These criteria do not apply to corporate ratings, structured finance ratings, project developers, corporate securitizations, and public finance ratings.

SUMMARY OF THE CRITERIA

8. This article describes how we use these criteria and related criteria to assign issue credit ratings to senior secured, subordinated, or other debt or debt-like obligations in project finance transactions. This article is one of five that together constitute the approach we use to rate project finance issues. The four other pieces are:

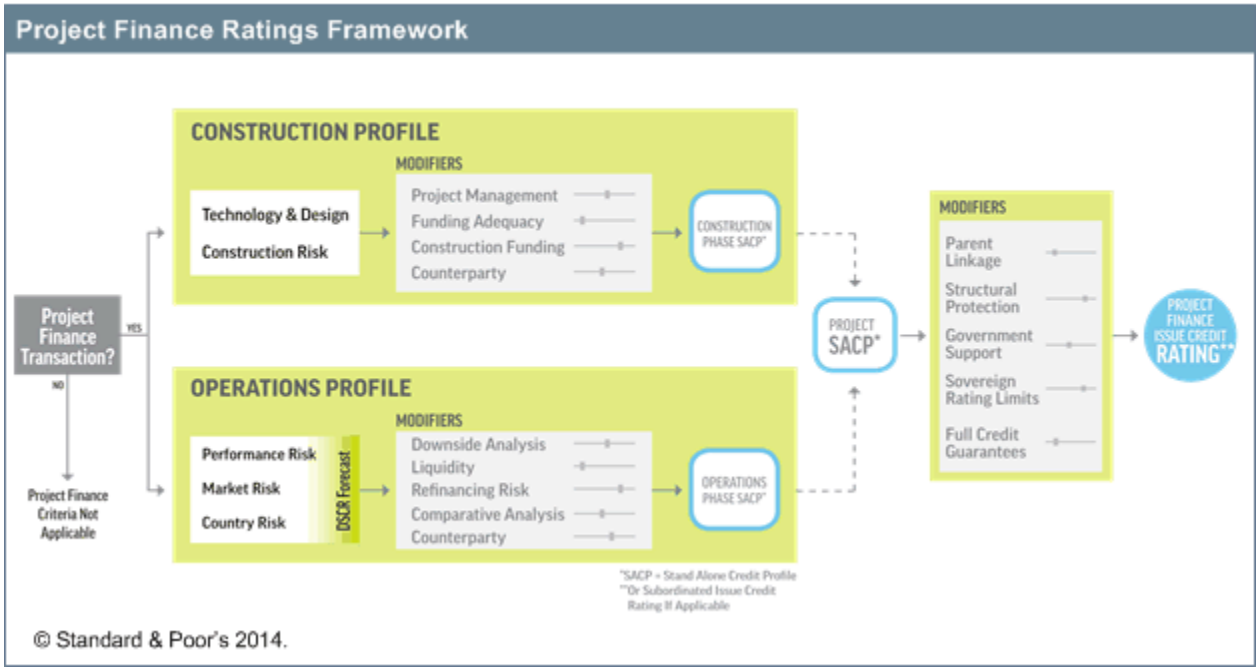
- Project Finance Transaction Structure Methodology, Sept. 16, 2014;
- Project Finance Operations Methodology, Sept. 16, 2014;
- Project Finance Construction Methodology, Nov. 15, 2013; and
- Project Finance Construction And Operations Counterparty Methodology, Dec. 20, 2011.

9. Sector-specific criteria articles called key credit factors (KCFs) complement these criteria. The KCFs describe specific risks and assumptions for sectors that commonly use project finance structures and expand on how we apply our criteria in each sector. The KCFs, published Sept. 16, 2014, that accompany these criteria are:

- Key Credit Factors For Social Infrastructure, Accommodation, And Entertainment Project Financings;
- Key Credit Factors For Road, Bridge, And Tunnel Project Financings;
- Key Credit Factors For Oil And Gas Project Financings; and
- Key Credit Factors For Power Project Financings.

10. Chart 1 provides an overview of our methodology for determining project finance issue credit ratings and subordinated project finance issue credit ratings. We assign project finance issue credit ratings to a project's senior secured debt. Subordinated project finance issue credit ratings are assigned to subordinated debt, if present in the structure. We refer to both as issue credit ratings in this criteria article.

Chart 1

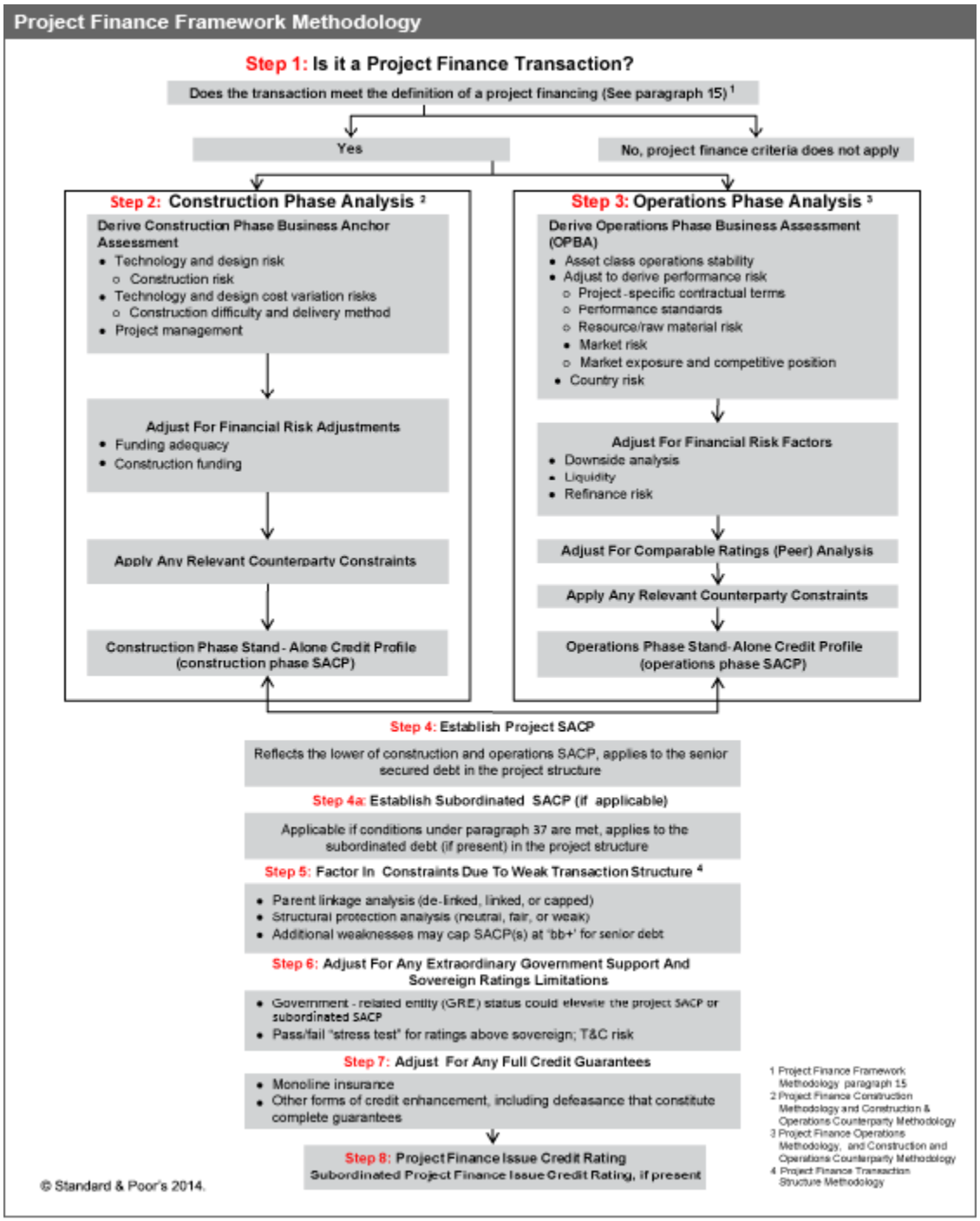


11. Issue credit ratings reflect our view of the overall relative creditworthiness of a debt issue, which encompasses the likelihood of default, payment priority, and credit stability within a project finance structure. The criteria set out a multistep process for assigning an issue credit rating to each debt and debt-like obligation in a project finance structure (see chart 2). The process consists of:

- Determining whether project finance criteria are applicable. We apply these criteria to debt issues that meet the

minimum requirements of a project finance transaction (see step 1 in chart 2 and paragraph 15);
- Establishing the project's stand-alone credit profile (project SACP, see step 4 in chart 2), which is the lower of either our assessment of the project's construction phase SACP (step 2) or operations phase SACP (step 3). If construction risk is not present, the operations SACP establishes the project SACP. We assign the project SACP to the most senior class of debt in the project structure and to other debt as described in paragraphs 31-33.
- Establishing the subordinated SACP, if subordinated classes of debt or debt-like obligations are present in the structure (see step 4a in chart 2).
- Factoring in any weaknesses in the transaction structure due to parent linkages or structural deficiencies, cross-default and debt acceleration linkages, as well as any extraordinary timely government support and sovereign risk (see steps 5 and 6 in chart 2 and sections C and D).
- Adjusting for any full credit guarantees (see step 7 in chart 2 and section E of this article), such as a financial guarantee provided by a monoline insurance company.
- Determining the project finance issue credit ratings for senior debt and, if present, the subordinated project finance issue credit rating(s) for any subordinated debt issued as an outcome of the adjustment in step 7 (see step 8 in chart 2).
- Using, where applicable, "Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings," Oct. 1, 2012, for project finance issue credit ratings and subordinated project finance issue credit ratings.

Chart 2



12. A project finance issue credit rating and a subordinated project finance issue credit rating do not reflect recovery post an event of default. Standard & Poor's may assign a recovery rating to a project finance or subordinated issue when the project finance issue credit rating is 'BB+' or lower and the project is in a jurisdiction in which Standard & Poor's assigns recovery ratings to corporate debt. (See Section G for a description of the methodology used to assign recovery ratings.)

13. This paragraph has been deleted.

14. This paragraph has been deleted.

METHODOLOGY

A. Definition Of A Project Finance Transaction

15. In order for a debt issue or debt-like obligation to be assigned an issue credit rating under these criteria, the project and transaction structure (see chart 2 and paragraph 14 in "Project Finance Transaction Structure Methodology," published Sept. 16, 2014) must have all of the following characteristics:

- A project finance transaction structure: A project must have a transaction structure that meets certain minimum requirements. That is, the project is structured as a limited-purpose entity (LPE); provides senior lenders a senior secured ranking through a security package to the key project assets; contains covenants to limit the project's range of permitted actions, including future financings; and includes cash management covenants and establishes a cash management system that prioritizes the payment of senior debt service ahead of other project obligations. (For details, see paragraph 15 of "Project Finance Transaction Structure Methodology.")
- Limited recourse or nonrecourse to the sponsors or shareholders of a project, but full recourse to the project's cash flows and assets: In a project finance transaction, the project finance lenders typically only have recourse to the project's assets, cash flows, and contractual agreements. The lender's investment is protected by key structural elements, including the security structure, legal framework, payment structure, cash flow mechanics, reserve accounts, and credit enhancements. As a result, lenders rely on the project's cash flow available for debt service and collateral for the servicing, repayment, refinancing, and security of project debt or debt-like obligations.
- Both revenue and operating risk: A project's ability to service, repay, or refinance a project finance debt issue or bank loan is dependent on the future cash flows generated by the operations of the asset once constructed and fully operational.
- A limited asset life with restricted activities: A project financing has a finite economic life, and project documents constrain the level of permitted asset and business expansions.
- Covenants and controls for senior secured debt in the structure: Project finance transactions are structured to issue senior secured debt, which is typically the majority of the project's capital structure. This is backed by covenants and forms of security for the benefit and credit protection of senior secured lenders in a project finance transaction.
- Specified responsibilities and risk allocation over the life of project: Project finance transactions have established and specified responsibilities that limit risk through contracts and transaction documents over the project life. A project financing comprises a mix of integrated contracts that are in place over the life of a project.

B. Determining A Project's Stand-Alone Credit Profile

16. Our issue credit ratings reflect the credit quality of a project during its weakest period over the remaining term of the financial obligation and until the obligation is repaid through project cash flows. In project structures with bullet or balloon maturities (see Glossary), we assess the credit quality beyond the scheduled bullet debt maturities through the end of a project's life and over an assumed debt amortization period.

17. As a result, a project SACP is the lower of the construction phase SACP or the operations phase SACP (see step 4 in chart 2). For our construction and operations phase methodologies, see "Project Finance Construction Methodology," Nov. 15, 2013, and "Project Finance Operations Methodology," Sept. 16, 2014.

18. For example, if we determine a project's construction phase SACP is 'bb+' but assess its operations phase SACP--once the project is operational--as 'bbb-', the project SACP would be 'bb+'. Similarly, if the construction phase SACP is 'bbb' and the operations phase SACP is 'bbb-', then the project SACP would be 'bbb-'.

19. In cases where the construction phase SACP is the weak link, once construction is completed and we consider that all construction-related issues are resolved, we may adjust the project SACP to the operations phase SACP. The initial operations phase SACP would reflect start-up risks. It is commonly the case that we are asked to assign an issue credit rating at the time construction begins, but if the project has completed construction at the time of assigning the rating, only an operations SACP would apply.

20. Operating projects typically undertake maintenance and refurbishment activities such as road repaving, the repair or replacement of worn parts and equipment such as solar panels and inverters, or the refurbishment of the asset such as hotel or hospital rooms as part of social infrastructure projects. Generally, these activities are planned and assessed at the project's inception and updated according to a prescribed refurbishment and maintenance schedule. We typically assess these maintenance and refurbishment activities and their associated risks to the project as part of the operations phase (see "Project Finance Operations Methodology," Sept. 16, 2014). However, if maintenance and refurbishment activities result in a material expansion of the project or are new construction activities, we typically assess this under "Project Finance Construction Methodology," Nov. 15, 2013. We view an expansion as material if permanent debt increases, or if the expansion is required to repay existing or any new debt issuance or loans.

21. Projects that include subordinated classes of debt that we view to be part of the project's transaction structure will have a subordinated SACP for each subordinated debt or subordinated debt-like obligation that we rate.

22. As with the project SACP (that applies to the senior secured debt obligation), the subordinated SACP is also based on the weak-link assessment (see Glossary) of the operations and construction phase SACPs. The steps for determining the subordinated SACP are detailed in paragraphs 41-48.

23. Once we establish the project SACP and subordinated SACP for a project structure with more than one class of debt or debt-like obligations, the adjustments shown in step 5 of chart 2 apply to all rated debt in the project structure.

C. Parent Linkage And Transaction Structure Weaknesses

24. We could lower the project SACP and, if present, the subordinated SACP if, in our assessment, the project's transaction structure has weaknesses (see table 1 in "Project Finance Transaction Structure Methodology," Sept. 16, 2014).

25. Specifically, under the project finance transaction structure methodology, we assess:

- How linked a project structure is to its parent;
- Cross-default and debt acceleration linkages;
- How strong a project's structural protections are; and

- Whether a project's transaction structure has any other meaningful deficiencies that would cap the project SACP at 'bb+' and the subordinated SACP at 'bb'.

D. Extraordinary Government Support And Sovereign Rating Limitations

26. If we assess a project as a government-related entity (GRE), we may adjust the project SACP and, if present, subordinated SACP for any extraordinary timely government support (or negative intervention if present) that improves or weakens the GRE's ability to meet its financial obligations (see "Rating Government-Related Entities: Methodology And Assumptions," March 25, 2015). The project SACP and subordinated SACP also would be subject to our criteria for ratings above the sovereign (see "Ratings Above the Sovereign--Corporate And Government Ratings: Methodology And Assumptions," Nov. 19, 2013).

Extraordinary government support

27. We may factor extraordinary government support into our analysis, although we expect any support to be rare. For example, governments that elect to award a concession or contracts using a project finance structure often do so to shift the risks of constructing and operating an infrastructure asset to a private enterprise. As such, the government's incentives are typically limited to satisfying its obligations embedded in the concession or contract it awards. In addition, there is a clear distinction between government intervention that enables a timely repayment of a GRE's debt and intervention that principally aims at supporting an entity's employment or operations but might not necessarily reduce the likelihood of a project issue default.

28. In a limited number of situations, we may conclude that a project's SACP or subordinated SACP benefits from timely extraordinary government support because of its "role" and "link" as assessed under the GRE criteria. If there is more than one class of debt in the project structure, the "role" and "link" may differ between classes. Based on our view of how important a project's role is to the government and how linked the project is to the government and subject to the conditions outlined in Appendix B, on cross-default linkages, we could raise the project SACP and, if present, subordinated SACP from one notch to as high as the local currency rating on the government (see step 6 in chart 2). (For details, see "Rating Government-Related Entities: Methodology And Assumptions," March 25, 2015.) For instance, a strong precedent of government support for financial obligations of projects that operate in an essential segment of the economy and are systemically important to a country (such as key water or power projects in some countries) could qualify for SACP uplift if such extraordinary intervention supported a project meeting its financial obligations on a timely basis.

Sovereign rating considerations

29. The project SACP and subordinated SACP, if present, may be constrained by the sovereign rating, depending on what country the project operates in. As part of step 6 in chart 2, for the project or subordinated SACPs to be higher than the respective sovereign foreign currency rating, the project should be able to pass a hypothetical sovereign foreign currency default stress test and also may be constrained by a country's transfer and convertibility risk. (See "Ratings Above The Sovereign--Corporate And Government Ratings: Methodology And Assumptions," Nov. 19, 2013, and "Methodology: Criteria For Determining Transfer And Convertibility Assessments," May 18, 2009).

E. Determining The Issue Credit Ratings

30. We determine a project finance issue credit rating and any subordinated project finance issue credit rating after applying any full credit guarantees as part of step 7 (see chart 2). Such adjustments typically relate to unconditional and irrevocable guarantees for full and timely payment of interest and repayment of principal from a monoline insurance provider or bank. (For more information, see "Methodology: The Interaction Of Bond Insurance And Credit Ratings," Aug. 24, 2009, "Guarantee Criteria--Structured Finance," May 7, 2013, "Europe Asset Isolation And Special-Purpose Entity Criteria--Structured Finance," Sept. 13, 2013, and "Legal Criteria For U.S. Structured Finance Transactions: Select Issues Criteria," Oct. 1, 2006.) Other forms of appropriate credit enhancements may apply and include legal defeasance (see "Methodology And Assumptions: Assigning Ratings To Bonds In The U.S. Based On Escrowed Collateral," Nov. 30, 2012).

F. Rating Other Debt In Project Finance Structures

31. Additional debt or debt-like obligations may sometimes be included as part of a project financing. We distinguish between debt that is subordinated as outlined in paragraphs 36-40 and debt that we do not consider subordinated (see paragraphs 49-50). As a result, the calculations of debt service coverage ratios (DSCRs) for each class of debt could differ.

32. For a project with subordinated debt or debt-like obligations as defined in paragraph 37, we would view the default potential for the senior and other subordinated debt classes to be different, and the calculation of the senior DSCR will exclude subordinated principal and interest obligation(s). If a project has more than one class of subordinated debt, we calculate DSCRs as cash flow available for debt service (CFADS) divided by debt service of the class of debt in question plus the debt service of the more senior classes. As an example, if a project has three rated debt classes (e.g., a senior issue and two subordinated issues [A and B]), the DSCR for subordinated class A would be calculated as CFADS divided by senior debt service plus the subordinated debt service of class A. Class B's DSCR would be calculated as CFADS divided by senior debt service plus the subordinated debt service for class A and the subordinated debt service for class B.

33. If debt or debt-like obligations do not meet the conditions defined in paragraph 37, we would consider them to have the same likelihood of default as senior secured financial obligations in the structure. As a result, the senior DSCR would include the interest and principal of both the senior debt and the other debt that is not subordinated.

Issuer to be part of "project"

34. We may evaluate other debt, issued by an entity that forms part of the "project" (see chart 3 in "Project Finance Transaction Structure Methodology") under these criteria, provided that the "project finance debt" meets the requirements of these criteria and remains outstanding in the project structure, or, on its repayment, the other debt becomes the senior debt in the project and meets the requirements to be rated as "project finance debt" under the transaction structure criteria. The issuer of the other debt or additional debt typically must have the following characteristics:

- An LPE that is included in the "project."
- A mechanism that acts to limit disposal of key assets or disincentives third-party--including parents'--attempts to file the project into insolvency or seize the project's key assets after insolvency.
- A covenant package that establishes limits on additional debt, additional security, and asset sales; minimum insurance requirements; and limits on amendments to the structure, including mergers and acquisitions and existence over the debt term.
- A cash management covenant package that includes a mechanism that establishes priority of cash payments in favor of senior debt after maintaining ongoing operations and liquidity mechanisms that ration and preserve cash in the project in support of the senior debt.

35. If the other debt matures later than the senior secured debt and after the maturity of the senior debt would not meet the conditions in paragraph 34, the rating would be the lower of its rating under these criteria until repayment of the senior debt or its rating over the remaining term as assessed under our corporate criteria (see "Corporate Methodology," Nov. 19, 2013, and "2008 Corporate Criteria: Analytical Methodology," April 15, 2008).

Subordinated debt obligations

36. Within a project's capital structure, a subordinated debt or debt-like obligation refers to structurally or contractually subordinated debt at the project level and structurally or contractually subordinated debt at a holding company that we view as part of the project financing structure (see paragraph 46).

37. For Standard & Poor's to consider other debt or debt-like obligations in a project structure subordinated under the criteria, all of the following conditions must be met:

- Subordinated debt is only paid after any senior debt obligation is paid, any prior ranking reserves are replenished, and any cash flow waterfall lock-up conditions as a result of a senior lock-up trigger or cash flow sweep provisions, if present, are met.
- Subordinated debt has no right to access or share the reserves dedicated to senior financial obligations.
- Subordinated debt has no right to call or trigger a default and no cross default exists between it and any senior debt or debt-like obligation.
- Subordinated debt has no acceleration rights (see Glossary), even at maturity, and maintains its ranking in the cash flow waterfall while any senior financial obligation is outstanding.
- Nonpetition language is included in the project's transaction documents, pursuant to which subordinated debtholders or lenders agree not to initiate insolvency proceedings against the LPE and not to join any such proceedings.
- Subordinated debt has no voting rights while any senior debt or debt-like obligation is outstanding.
- Any collateral and security interests or claims on liquidation granted to subordinate lenders should rank after senior debt.

38. We rate debt and debt-like obligations that meet the conditions of paragraph 37 at least one notch below the next most senior debt in the structure, reflecting a different likelihood of default. For example, if there are two classes of debt in a project structure--senior secured and subordinated--and the project finance issue credit rating assigned to the senior debt is 'BBB-', then the subordinated debt cannot be rated higher than 'BB+' unless paragraph 40 applies.

39. The minimum one notch difference referenced in paragraph 38 is maintained in cases in which rating caps apply due to weaknesses, including:

- Transaction structure shortcomings (see paragraphs 33 and 73-76 in "Project Finance Transaction Structure Methodology");
- Liquidity that is less than adequate during operations (see paragraph 82 in "Project Finance Operations Methodology");
- Refinancing risk (see paragraph 91 in "Project Finance Operations Methodology"); and
- Irreplaceable counterparties (see paragraph 14 in "Project Finance Construction And Operations Counterparty Methodology").

40. A subordinated project finance issue credit rating may be the same as a project finance issue credit rating if the following applies:

- GRE support applies to both issues. In some limited cases, the GRE mapping based on the project SACP, subordinated SACP, and government local currency rating equalizes the ratings. For example, if a project's senior and subordinated debt classes have an SACP of 'bbb' and 'bbb-', respectively, and the government local currency rating is 'A-', both of the issue credit ratings would be 'BBB+' (according to table 4 of "Rating Government-Related Entities: Methodology And Assumptions").
- A full credit guarantee exists. For example, if a monoline insurance company guarantees a project's senior and subordinated debt classes, then the issue credit rating for both classes of debt will be the same.
- The "Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings," Oct. 1, 2012, applies. For example, if the senior and subordinated debt ratings both meet the conditions of a 'CCC+' rating, each issue would be rated 'CCC+'.

Determining the subordinated SACP

41. We determine the subordinated SACP by taking the lower of the:

- Construction phase SACP less one notch, or
- Subordinated SACP over the operations phase that is derived using the steps in paragraph 42 (see also step 4a in chart 2), subject to the outcome being at least one notch below the project SACP.

42. The steps for determining a subordinated SACP over the operations phase (see Section H for a numerical example) are:

- Calculate i) the minimum total DSCR on senior debt service (interest and principal) plus subordinated debt service (interest and principal), and ii) the minimum DSCRs on senior debt service.
- iii) Divide the forecast minimum DSCRs on senior debt service by any senior distribution or lock-up test (see the Glossary) between the senior and subordinated debt, if present.
- Take the lower of the forecast minimum total DSCR (i) or the forecasted minimum senior DSCRs divided by the distribution or lock-up test (iii).
- Apply table 15 of the "Project Finance Operations Methodology" and any notching modifiers under that criteria (see paragraph 64 of that article) to map the forecasted minimum DSCRs with the operations phase business assessment (OPBA).
- Apply any adjustments based on the downside analysis, liquidity, and refinance risk in the operations methodology (see paragraphs 66-95 of "Project Finance Operations Methodology").

43. In applying table 15 of the operations methodology, if the minimum DSCR lies toward one of the endpoints of the DSCR range for a relevant OPBA, the subordinated SACP will have a plus (+) or minus (-) sign, subject to paragraph 38.

44. In addition, "Project Finance Operations Methodology" (see paragraphs 75-78) outlines factors, such as unusually high amortization payments in the outer years of the project's life, that could lead to additional downward adjustments to the operations phase SACP for the senior debt. Similarly, we may further lower the subordinated SACP if these factors are present in the project structures that include subordinated debt.

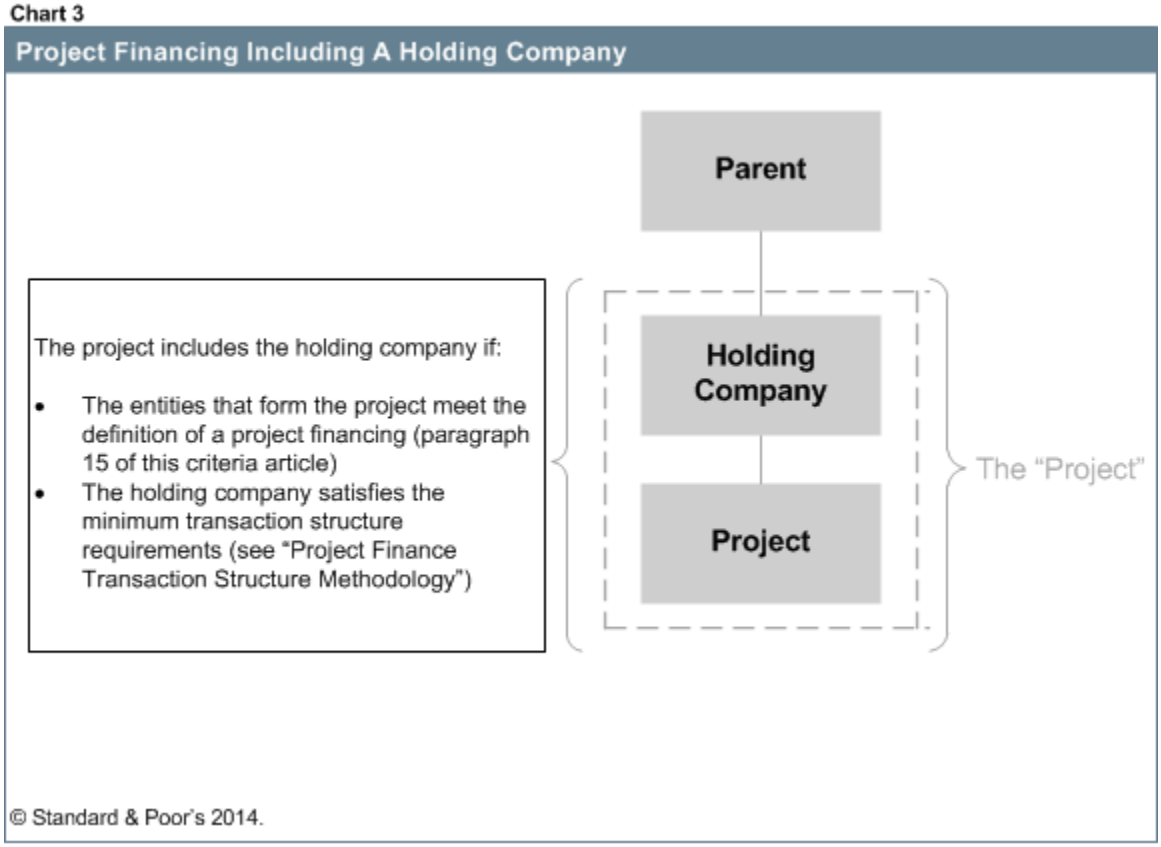
45. In rare situations, an operations phase SACP may not be assigned to a project because we are relying on the counterparty to absorb all operational risk (see paragraph 15 in "Project Finance Operations Methodology"). For example, if a project has subordinated debt, and the senior debt is not assigned an operations SACP (which could occur, for example, if all performance and market risk is transferred to a counterparty), the steps outlined in paragraph 42 would still apply to determine the subordinated SACP, so long as the subordinated issue credit rating is at least one notch below the project finance issue credit rating assigned to the senior debt. (See Appendix A for an example.)

Project holding company debt

46. Project holding company structures are sometimes created as part of a project financing structure. Typically, we treat holding company debt as subordinated debt so long as it meets the conditions of paragraph 37. Holding companies are typically formed for the sole purpose of issuing debt, which is serviced from the residual cash flows of the operating assets at one or more projects. In turn, the project holding company is structured as a wholly owned entity of one or more parents. Commonly, project structures that include a project holding company do so to issue debt at both the project and holding company level. A project holding company is typically secured by the equity shares of the project entity below it (see chart 3).

47. If a project has holding company debt, senior secured debt, and other classes of debt as part of the project structure, we will rate the holding company debt lower than both the senior and other debt obligations in the project cash flow waterfall.

Chart 3



48. Structures that contain a project holding company that has unfettered access to the cash flows of operating projects beneath it would typically not meet the requirement that the project have a cash management package that establishes a priority of cash payments in favor of senior obligations. As a result, we would analyze the project holding company and the project on a consolidated basis.

Debt that is not subordinated

49. If a project structure contains more than one class of debt that is not subordinated (e.g., the debt class does not meet one or more conditions in paragraph 37), we would combine the senior and other debt service (interest and principal) in our DSCR analysis (see Appendix B in "Project Finance Transaction Structure Methodology"). As a result, we calculate debt service coverage for each class of debt, including senior obligations, as CFADS divided by the principal and interest of the senior and all other debt payments that are not subordinated.

50. We rate other debt that is not subordinated the same as the project finance issue credit rating assigned to the senior debt or debt-like obligation, subject to "Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings," Oct. 1, 2012, "Timeliness Of Payments: Grace Periods, Guarantees, And Use Of 'D' And 'SD' Ratings," and "Principles For Rating Debt Issues Based On Imputed Promises," Dec. 19, 2014. The calculation of debt service, per paragraph 49, reflects our view that other debt in a project structure that does not meet the subordinated conditions of paragraph 37 has the same default potential as senior debt.

G. Assigning Recovery Ratings

51. Recovery ratings in project financings do not affect the project finance issue or subordinated issue credit ratings. Rather, a separate recovery rating is assigned on a scale of '1+' to '6'. The recovery rating estimates the range of principal that lenders can expect to receive following a default of the project (see table 1). For example, as per table 1, a '2' recovery rating corresponds with a nominal recovery expectation between 70%-90%. We also provide an estimate of our nominal recovery expectation, rounded down to the nearest 5%. For example, if we estimate recovery to be 87%, we would round that estimate down to 85% and reflect this as 2 (85%). We define the likely default scenario and then assess recovery using one of two techniques, such as discounted cash-flow analysis or liquidation analysis. Or, we will examine the terms and conditions of project assets, such as contracts and concession agreements, for example, to estimate the expected recovery.

52. We assign recovery ratings to debt in project financings when the project finance issue credit rating is 'BB+' or lower in jurisdictions where corporate ratings also assign recovery estimates (see "Recovery Rating Criteria For Speculative-Grade Corporate Issuers," Dec. 7, 2016). When a project has multiple debt types, it is the rating on the senior debt that determines whether we assign recovery estimates. For example, if the project finance issue credit rating assigned to the senior secured debt in a project structure is 'BBB' and the project also includes subordinated debt, which has a subordinated project finance issue credit rating of 'BB-', we would not assign a recovery rating to the subordinated debt.

53. In many cases, because senior debt is the largest component of the project's capital structure, we would expect most subordinated debt to have a recovery estimate of or close to zero.

54. Recovery ratings do not blend default risk and recovery given default. Rather, they express only an opinion of an issue's recovery prospects. Each rating category corresponds to a specific range of recovery values (see table 1). For the assignment of '1+' recovery ratings, see the section "1+ Recovery Ratings" in the criteria "Recovery Rating Criteria For Speculative-Grade Corporate Issuers," published Dec. 7, 2016.

Table 1

Group A And B Jurisdictions

For issuers with speculative-grade credit ratings

		Group A jurisdiction		Group B jurisdiction	
		Nominal recovery expectations			
Recovery rating*	**Recovery description**	**Greater than or equal to**	**Less than**	**Greater than or equal to**	**Less than**
1+	Highest expectation, full recovery	100%	N/A	N/A	N/A
1	Very high recovery	90%	100%	N/A	N/A
2	Substantial recovery	70%	90%	90%	100%
3	Meaningful recovery	50%	70%	50%	90%
4	Average recovery	30%	50%	30%	50%
5	Modest recovery	10%	30%	10%	30%

Table 1

Group A And B Jurisdictions (cont.)

For issuers with speculative-grade credit ratings

		Group A jurisdiction		Group B jurisdiction	
		Nominal recovery expectations			
Recovery rating*	**Recovery description**	**Greater than or equal to**	**Less than**	**Greater than or equal to**	**Less than**
6	Negligible recovery	0%	10%	0%	10%

*Recovery ratings are capped in certain countries to adjust for reduced creditor recovery prospects in these jurisdictions (see "Methodology: Jurisdiction Ranking Assessments," published on Jan. 20, 2016). Recovery ratings on unsecured debt issues would generally also be subject to caps similar to those outlined under the "Recovery Rating Criteria For Speculative-Grade Corporate Issuers," published Dec. 7, 2016 (see Step 6, paragraphs 90-98 for further detail). A recovery rating of '1+' or '1' can only be applied in Group A jurisdictions. ICR--Issuer credit rating. N/A--Not applicable.

55. Assigning a recovery rating to a project or subordinated issue consists of analyzing the project's default risk and, secondly, analyzing whether cash from the project--post-default, whether derived from operations or from an asset sale--is sufficient to repay lenders' principal. The likelihood of default, of course, is irrelevant to a recovery analysis. It is not beyond the realm of possibility for a low probability of default to coexist with a weak recovery in default. Nevertheless, the circumstances of a potential default are germane to the recovery outcome. Thus, comprehending the default scenario is part of every analysis.

56. In rare cases, we may not assign a recovery rating to projects that meet the conditions outlined in paragraph 52 if we do not believe a default scenario exists. For example, for some U.S. project financings that involve municipally owned assets, a default scenario cannot be estimated because lenders lack acceleration rights under a project's transaction documents. Also, the application of Chapter 9 of the U.S. bankruptcy code (and equivalent statutes in other jurisdictions) can enable municipalities to reorganize their debt obligations and maturity such that a project's assets cannot be immediately liquidated.

57. As part of a project's debt issue analysis, Standard & Poor's also analyzes the project's legal structure and the collateral pledged to secure the project debt. The recovery risk profile is established by assessing the project collateral and subjecting the collateral values to stress analysis under different post-default scenarios. High collateral coverage levels can increase confidence that pledged assets will cover the secured debt, even under adverse conditions (although greater levels of collateral obviously do not entitle a creditor to any more than the amount of the claim).

Default scenarios

58. The analysis of recovery prospects for secured project debt--which underpins the assignment of both conventional issue credit ratings and recovery ratings--focuses exclusively on the economic value of the project in the post-default scenario. The only meaningful stress scenario is the one consistent with the default. This is true whatever method is used to appraise the project's value, be it discounted cash flow of the enterprise or some other approach.

59. Projects fail, or suffer downgrades, for various reasons, including: vulnerability to counterparty credit downgrades, sovereign risk, technical risk, competitive exposure, exposure to weak parents or sponsors, and poor financial performance. In most cases, these factors exacerbate the fundamental problem: an overly ambitious borrowing program that so burdens the project that it has little room to maneuver around a structural dependency or other

weakness. In rare cases, the default issue lies with a fundamental misjudgment about the economic and/or technical viability of the project. In the first instance, a financial restructuring will often restore the project to viability. In the latter, the inability of the project ever to meet its obligations not only precludes any meaningful recovery, but may also expose the lender to clean-up or remediation costs when the equity in the project has long since vanished.

Availability of collateral

60. It is the nature of project financing to have the project's collateral pledged as security for the project debt. The security generally takes the form of a first-perfected security interest over all project assets (including physical assets, contracts, permits, cash flows, accounts, and shareholder's ownership interest in the project equity) as outlined in paragraphs 46-49 of "Project Finance Transaction Structure Methodology"). In effect, senior project lenders have the entire enterprise as collateral, including everything needed to ensure operations continue as smoothly as possible in case lenders take possession.

61. Furthermore, we assume that the whole is usually worth more than the sum of its parts, as long as the business enterprise remains a going concern. All else being equal, this supports strong recoveries because it greatly facilitates a creditor's ability to take over operations with minimal or no disruption to revenues. Indeed, a project's financing documentation typically anticipates the potential situation in which lenders take control of a project, thereby eliminating much of the enterprise value destruction that often accompanies a corporate bankruptcy due to a multitude of competing claims. A single class (or perhaps two or three at most) of secured lenders helps ensure that lenders' interests will be aligned with each other, which should facilitate a project restructuring. This is another factor that should help preserve enterprise value.

Valuation methodologies

62. As noted above, we consider whether a default is likely because of factors unrelated to the business position of the project or a fundamental deterioration in the underlying project viability. Thus, if a project's underlying operations are sound but a default nevertheless occurs for other reasons, a restructuring of the project's capital structure, renegotiation of certain contracts, the replacement of nonperforming transaction parties, or other solutions might allow the project to return to profitability. If the project is capable of performing, a "project value analysis" is undertaken. On the other hand, when the project's viability is seriously at issue, a "liquidation analysis" might be a more appropriate method of determining the value of the assets constituting the collateral. The two approaches are described below. Any value might be qualified by clean-up or remediation expenses to be borne by lenders under relevant lender-liability laws.

Project value analysis

63. Where project value analysis is appropriate because of the continuing viability of the project, a discounted cash flow (DCF) approach is generally employed. The DCF approach is based on financial analysis incorporating historical operating data and forecast cash flow (i.e., including any contracted termination payments under a concession agreement) over a discrete period that lasts until the originally scheduled final maturity date. The cash flows during a discrete period are stressed to reflect the most likely default scenario. The adjusted cash flows are discounted back to the present value at the point of default using a discount rate that reflects our assessment of the risk of the enterprise, to arrive at a project value. The discount rate reflects a number of factors such as country risk and expected asset values. For asset classes in which we have sales data, we could also use asset value multiples, for example, dollar per

kilowatt sales information for power plants.

64. One of the advantages of assessing project finance recovery values using the DCF approach is that most projects produce a single commodity or provide one primary service--such as electricity or transport along a toll road. Typically, more easily observable demand and price exist for the product and its inputs, as opposed to a company that may manufacture hundreds, if not thousands, of products across multiple sites. Moreover, it is very likely that the project will never cease operations, which would eliminate the need to make assumptions about how and when the enterprise will resume operations and at what cost. Indeed, if a project has a long-term contract, that contract might very well survive the bankruptcy or default process intact.

65. Although projects by their nature have finite lives and the recovery is based on the level of rated debt, the value of the cash flows may extend beyond the term of the debt, particularly in the case of bullet maturities.

Liquidation approach

66. The liquidation approach is applied when the project is not considered a going concern or if the transaction is only partially secured. Value assumptions are based on the concept of an orderly liquidation of assets under a forced sale. Important considerations include the type and amount of collateral, whether its value is objectively verifiable and likely to hold up during various post-default scenarios, and any legal issues related to perfecting and enforcing the security interest. The analytical starting point is the assets' current value. For projects, this may be difficult to establish.

67. Projects tend to be unique and might lack any reference to establish a market value. Clearly, any objective valuation of the project assets will support a more accurate estimate of a project's recovery under a liquidation approach. For example, a project might have little future enterprise value but may be located on valuable real estate, which--if available for alternative usage--supports recovery. The assets' potential to retain value over time is critical. Collateral is, therefore, judged according to volatility, liquidity, and its special-purpose nature.

The recovery rating

68. In arriving at its collateral valuation, we determine the project's "ultimate recovery" of principal assuming that the bankruptcy or administration process fully plays out. We do not determine ultimate recovery on the basis of, for example, what a defaulted loan might sell for at a fire sale or distressed loan price. This approach is different from that applied to some collateralized debt obligation (CDO) structures, where the focus may be on liquidation values shortly after default--generally "distressed market" prices that are often lower than the ultimate recovery.

69. Our ultimate recovery calculation, therefore, is the net amount after deduction of administration and related direct costs of bankruptcy, or restructuring and workout costs (which can be significant), costs of resolution of any contingent liabilities, and any prior-ranking claims (for example: taxes, environmental claims, and state law liens).

Project capitalization and structural factors

70. Recovery ratings take into account various other factors, such as structural features of the transaction and the applicable insolvency laws applying to the project. For example, a sound security structure in a creditor-friendly environment might indicate a higher probability of successful recovery.

71. ***Project capitalization.*** A project's capital structure is a factor in the recovery rating. Subordinated debt generally protects the senior project debt lenders by absorbing certain potential losses. The relative position of the piece of debt within the capital structure and amount of prior claims are also factored in when calculating the recovery rating on a project. In estimating recovery for senior or subordinated debt, we assume that any debt-service reserve accounts are not available. In evaluating a project's capital structure, we consider:

    - Equity contributions;
    - Subordinated debt;
    - Contingent equity;
    - Whether the composition of the stakeholder group makes it likely that the business will be restructured;
    - Debt-service schedule;
    - Intercreditor agreement terms, especially the rights of senior lenders in relation to subordinated debt providers;
    - Payment blockage mechanisms;
    - Acceleration rights; and
    - The voting majority required to initiate enforcement proceedings.

72. Any obligations under hedges and swaps are also considered.

Project security

73. In evaluating the sufficiency of project collateral, we also consider the completeness of the security package, enforceability of guarantees, and the location of the collateral. This latter factor is important because projects in creditor-friendly jurisdictions are assumed to have greater ability to enforce and realize security on a timely basis. If the project assets are widely dispersed or are located predominantly in debtor-unfriendly jurisdictions, the analysis might change.

Jurisdictional considerations

74. Access to collateral and the timing of its realization largely depend on how the relevant legal regime resolves bankruptcies. Creditor rights vary greatly, depending on the country. We have published reports on the security and insolvency regimes, which limits our assessment of recovery (Methodology: Jurisdiction Ranking Assessment," Jan. 20, 2016).

An example of our recovery ratings methodology

75. We begin by selecting a hypothetical default scenario that we think best reflects the key risks that would lead to a default. For a project that has significant revenue exposure to commodity prices, the assumption may be that project revenues decline rapidly because of a collapse in market prices. In contrast, a project that contracts all of its output at a fixed price for the life of its debt may have resource risk (such as a wind farm that is paid only if it generates). In this case, the assumed default is likely to be related to a poorly characterized wind resource, which leads to consistent undergeneration relative to forecast, along with an unexpected increase in operations and maintenance costs.

76. Here is an example of our recovery analysis:

    - The asset is a 400 MW natural gas combined cycle power plant project that has a long-term, fixed-price offtake contract with a $36 million letter of credit and $600 million in senior secured debt outstanding at the time of default, with no other debt in the project structure.
    - Operational problems constrain project cash flows, and the letter of credit is drawn in year four of the project life and by year five the facility is exhausted, at which point the project default occurs in 2017.

- The offtake contract remains unchanged and cash flows continue for the remaining contract life. There is no residual asset value at contract termination, and the discounted net present value of the cash flow available for debt service (cash flows) is $575 million, using a discount rate of 12%.
- We reduce the net present value of the cash flows by 5% (which is typical) to account for estimated administrative expenses related to the default, assumed to be $29 million in this example.
- We add an amount equal to six months of interest as pre-petition expenses to debt outstanding, assumed to be $18 million.

77. Given these assumptions, the expected recovery is 84% (see table 2). This falls within the "substantial" recovery range of 70%-90%, resulting in a '2' recovery rating, as outlined under our recovery scale shown in table 1.

Table 2

Example Of A Project Finance Recovery Rating

Recovery calculation (mil. $)	
Default year	**2017**
Discounted cash flow at 12%	575
Less: administrative expenses at 5%	(29)
Net enterprise value	546
Debt outstanding	600
Debt service reserve LC fully drawn	36
Add: prepetition interest (six months)	18
Total senior obligation	654
Expected recovery (%)	84
Recovery rating	2

H. Derivation Of The Subordinated SACP

Example 1

78. The following example illustrates how we derive a subordinated SACP when other debt exists in the project structure that is rated and meets our conditions of subordination (see paragraph 37). The underlying assumptions we use in this example are:

- The senior debt in the project financing has a minimum senior DSCR of 1.70x over the life of the project debt.
- The OPBA (assessed according to "Project Finance Operations Methodology") is a '5'. (Note: The OPBA is always the same for each class of debt in the project structure.)
- Based on the operations methodology, this would map to an operations phase SACP of 'bbb', as shown in table 15 of "Project Finance Operations Methodology." We have provided this as table 5 in this example. In this example, it is assumed no adjustments per paragraphs 66-95 in the operations criteria apply. In example 2, we make adjustments to the subordinated SACP during operations because of the downside analysis.
- The construction phase SACP is 'bbb-'.
- The operations phase SACP is 'bbb'.
- The minimum total DSCR (senior debt service plus subordinated debt service) is 1.20x.
- A senior lock-up ratio is present in the structure and is 1.21x.

Table 3

Derivation Of The Subordinated SACP (Assumes No Adjustments Apply To The Subordinated SACP In Operations Due To The Downside)

Steps	Explanation	Criteria references
1) Calculate the minimum total DSCR for the senior plus subordinated debt service and the minimum DSCRs on senior debt service.	Based on the assumptions above, the minimum DSCR for senior plus subordinated debt is 1.20x, and the minimum for DSCR for senior debt service is 1.70x.	Framework criteria, paragraph 42, first bullet
2) Divide the forecast minimum DSCR for senior debt service by the senior lock up trigger.	1.70x/1.21x = 1.40x	Framework criteria, paragraph 42, second bullet
3) Take the lower of the: • Minimum total DSCR for senior plus subordinated debt, or • Minimum senior DSCRs divided by the lock-up test trigger derived in step 2.	The minimum total DSCR for senior plus subordinated debt is 1.20x, and the minimum senior DSCR derived in step 2 is 1.40x. The lower of the two is 1.20x	Framework criteria, paragraph 42, third bullet
4) Apply table 15 of "Project Finance Operations Methodology" to the results derived in step 3 above to calculate the subordinated SACP during operations.	1.20x DSCR and an OPBA of '5' maps to a 'bb' category assessment for the subordinated SACP during operations, as per table 15.	Framework criteria, paragraph 42, fourth bullet, see also table 15 and paragraphs 65-66 in operations criteria
5) Adjust the subordinated SACP in operations.	A DSCR of 1.20x is at the lower end of the DSCR ranges in table 15, resulting in a one-notch adjustment to 'bb-'. No other adjustments are assumed in this example.	Framework criteria, paragraph 44, no other adjustments assumed for this example
6) Derive the subordinated SACP by taking the lower of the: • Subordinated SACP during construction, or • Subordinated SACP during operations (step 5).	• The subordinated SACP during construction is equal to the construction phase SACP ('bbb-', see assumptions above), minus one notch, or 'bb+'. • The subordinated SACP during operations is 'bb-', as per step 5 above. • The lower of the two is 'bb-'.	Framework criteria, paragraph 41
7)	**RESULT = Subordinated SACP is 'bb-'**	

Example 2

79. The following example shows how we derive the subordinated SACP when the downside case modifies the subordinated SACP in operations. The underlying assumptions used in this example are the same as in example 1, except for the following:

- The prior example is a simple version in which the subordinated SACP during operations is not adjusted by the downside analysis. In fact, in many cases, we would expect the subordinated SACP during operations to face adjustments for the downside.
- An example of how this would affect the results for this example is below.
- To simplify, we assumed no downside adjustments to the project SACP, and, as a result, steps 1-4 in table 3 are unchanged, and example 2 begins at step 5.

Table 4

Derivation Of The Subordinated SACP (When Downside Adjustments Modify The Subordinated SACP In Operations)

Steps	Explanation	Criteria references
5) Adjust the subordinated SACP in operations	A DSCR of 1.20x is at the lower end of the DSCR ranges in table 15, resulting in a one-notch adjustment to 'bb-'. The downside analysis would be applied at the 'bbb' level (the operations phase SACP) to the project. Assume: • The subordinated SACP, even considering its dedicated reserves, is unable, due to lock ups, to survive the stress and would default in less than three years. • This outcome would cap the subordinated SACP in operations at 'b+'.	Downside analysis is outlined in the operations criteria, paragraphs 67-74
6) Derive the subordinated SACP by taking the lower of the: • Subordinated SACP during construction, or • Subordinated SACP during operations (step 5).	• The subordinated SACP during construction is equal to the construction phase SACP ('bbb-', see assumptions above), minus one notch, or 'bb+'. • The subordinated SACP during operations is 'b+' as per step 5 above. • The lower of the two is 'b+'.	Framework criteria, paragraph 41
7)	**RESULT = subordinated SACP is 'b+'**	

Table 5

Preliminary Operations Phase SACP

	--Preliminary operations phase SACP outcome in column headers--				
	--Minimum DSCR ranges shown in the cells below*--				
	aa	**a**	**bbb**	**bb**	**b**
OPBA					
1-2	=> 1.75	1.75-1.20	1.20-1.10	<1.10§	<1.10§
3-4	N/A	=> 1.40	1.40-1.20	1.20-1.10	< 1.10
5-6	N/A	=> 2.00	2.00-1.40	1.40-1.20	< 1.20
7-8	N/A	=> 2.50	2.50-1.75	1.75-1.40	< 1.40
9-10	N/A	=> 5.00	5.00-2.50	2.50-1.50	< 1.50
11-12	N/A	N/A	N/A	=> 3.00x	< 3.00

*DSCR ranges include values at the lower bound, but not the upper bound. As an example, for a range of 1.20x-1.10x, a value of 1.20x is excluded, while a value of 1.10x is included. §In determining the outcome in these cells, the key factors are typically the forecasted minimum DSCR (with at least 1.05x generally required for the 'BB' category), as well as relative break-even performance and liquidity levels.

APPENDIX 1

A. Derivation Of The Subordinated Issue Credit Rating When No Operations SACP Exists

80. The following is an example of how we would assign an issue credit rating to subordinated debt in the rare instance that the senior secured debt in the project structure does not have an operations SACP (see table 6).

81. Such a situation is possible if the project issues both senior secured and subordinated debt, but the operational risk inherent in a project financing has been entirely shifted to a counterparty.

82. This could occur, for example, if an offtaker of a power plant project financing agrees to purchase all electricity generated at a fixed price (eliminating market risk), assumes all fuel price and procurement risk (through a tolling agreement or other), and pays the project irrespective of output produced (e.g., the project is not subject to any performance requirements). As per paragraph 15 of "Project Finance Operations Methodology," in such a case, we would not assign the project an operations phase SACP. Rather, the senior secured rating would be based on a credit estimate or rating on the offtaker.

83. To illustrate how we would assign the subordinated issue credit rating, assume the following:

- A project is rated at its inception, so we assess both the construction and operations phases in assigning a project finance issue credit rating and a subordinated issue credit rating.
- We begin by establishing the project finance issue credit rating that is assigned to the senior debt. If the offtaker of a project financing assumes all operational risk that would normally be project risk, an operations SACP would not apply because all project risks are shifted to a counterparty (in this example, the offtaker).
- As a result, the project finance issue credit rating assigned to the senior debt will be based on the lower of the construction SACP and our assessment of the credit quality of the offtaker. Assume the counterparty dependency

assessment (CDA) for the offtaker is 'bbb-' based on the issuer credit rating on the offtaker and the construction SACP is 'bb+'. The project finance issue credit rating would be 'BB+' (the weak link result as shown in table 6). (Post-construction, the rating could be raised to 'BBB-', reflecting the CDA of the offtaker.)

- Next, to assign the subordinated issue credit rating in such a structure, we begin with assessing the construction SACP, which, by convention, is one notch below the construction SACP assigned to the senior most debt in the structure (see paragraph 41), or 'bb' in table 6.
- To determine the SACP applicable to the subordinated debt in the operations phase, we start with the project's operational phase business assessment (OPBA). Assume the project asset is a natural-gas fired power plant that we would view to have an OPBA of '5'.
- The consolidated debt service coverage ratio (e.g., considering the principal and interest obligations of both the senior and subordinated debt classes) is 1.20x. Using table 15 of "Project Finance Operations Methodology," this coverage maps to a 'bb-', which is the project's subordinated debt SACP during operations. For simplicity, assume there are no further adjustments to the project's subordinated SACP due to the downside, liquidity, transaction structure, GRE support, or full credit guarantees. The subordinated debt would have a 'bb-' SACP during operations, reflecting the consolidated debt service coverage and the asset's OPBA.
- The weak link of the subordinated SACP during construction and operations, therefore, is 'bb-', resulting in a subordinated issue credit rating of 'BB-', provided that the result is at least one notch lower than the project finance issue credit rating. In this example, if the debt service coverage for the subordinated class was stronger, for example, such that it mapped to a 'bb+', the weak link result for subordinated debt would be one notch lower, to be consistent with paragraph 38.

Table 6

Determining The Subordinated Issue Credit Rating If No Operations SACP Exists

Issue type	Construction phase SACP	Operations phase SACP	Counterparty dependency assessment	Weak link results
Senior secured debt	'bb+'	N/A	'bbb-'	'BB+'
Subordinated debt	'bb'*	'bb-'§	N/A	'BB-'

*By convention, per paragraph 41, the subordinated SACP during construction is the construction phase SACP assigned to the senior class, less one notch. §Reflects a '5' OPBA and a 1.20x debt service coverage level under table 15 of "Project Finance Operations Methodology." N/A--Not applicable.

B. GRE Rating Impact From Cross-Default And Debt Acceleration Linkages

84. If a project is considered a GRE and a project's loan documentation could result in debt acceleration as a result of a cross-default clause, the resulting project rating under step 6 in chart 2 will be determined as follows.

85. In case the creditor is a commercial lender, a project issue credit rating, subject to mitigants under paragraph 33 of "Project Finance Transaction Structure Methodology," will be capped at the creditworthiness of the weakest entity referenced by the cross-default clause. This is the same treatment as projects that are not GREs under paragraph 33 of the transaction structure methodology.

86. If the creditor is a development bank (see "Project Finance Transaction Structure Methodology"), which, in turn, is owned and controlled by the same government providing potential extraordinary government support to the GRE project, we expect the government to have a strong incentive to mitigate or remedy the cross-default clause on a timely basis, if the government support status is "strong enough." By "strong enough," we mean the government

support for the GRE project is "high" or stronger ("almost certain," "extremely high," "very high," or "high") as defined under "Rating Government-Related Entities: Methodology And Assumptions." In such cases, the issue credit rating on the project will be determined by using the project's SACP (or subordinated SACP, if applicable) as the reference point for applying the GRE criteria after factoring in constraints under "Project Finance Transaction Structure Methodology," as illustrated in step 5 in chart 2. If the government support status is "moderately high," "moderate," or "low," under the GRE criteria, we will determine the issue credit rating on the project by using the project's SACP (or subordinated SACP, if applicable) as the reference point for applying the GRE criteria, and we would apply the constraints identified in paragraphs 33-35 of "Project Finance Transaction Structure Methodology."

GLOSSARY

Abatement

A reduction in the fee paid (revenues) to a concession for failing to meet certain key performance indicators (KPIs).

Acceleration or acceleration rights

Acceleration or acceleration rights are document clauses that are typically included in debt agreements (such as loans, bonds, and notes). They give the lender the right to demand the entire loan amount (principal plus interest) to be paid at once, in case the borrower fails to make payments (defaults) or gets into serious financial difficulties, or as a result of specified events of default within a projects transaction documents.

Accreting debt

A capitalizing instrument or program in which interest is added to principal according to a formula (e.g., inflation linked rather than being paid). It moves debt service to later periods in the project's life.

Ancillary services

Services that power plants provide to an electrical transmission system to help support the stable functioning of that system.

Arms-length agreement

An agreement between the project and a related party that is constructed as if they were unrelated. All documentation, terms (including consideration), and other arrangements associated with the transaction are as if an external unrelated party had been involved in the transaction.

Asset class operations stability

Standard & Poor's relative measure of a project's ability to be available to operate on a stable basis.

Asset coverage

A project's forecasted project life coverage ratio (PLCR) at the point of maturity.

Asset protection

Typically measured by debt leverage, but generically, the value of the asset (measured a variety of ways) relative to the financial debt burden.

Availability-based projects

Projects are typically governed by a contract(s) between the project, a government or nongovernment entity, and commercial counterparties, where the project's revenue is contractually established based on the achievement of KPIs, output specifications, and other market-related variables (such as inflation movements) stipulated in the contract. Typically, the vast majority of social infrastructure, accommodation, and entertainment projects structured as public-private partnerships would fall under this category.

Availability factor

An operating performance measure, typically equal to the number of hours in a period that a plant is available to produce output, divided by the number of hours in the period.

Availability period

The period of time during which the debt is available for advance.

Availability power projects

A type of project financing where receipt of payment is conditional on the project being available to operate even if it is not actually required to operate. Availability can be reduced through breakdowns, the project being taken off line for maintenance, or breaches of health and safety requirements.

Balance of plant

Essentially all of the nonpower island components that are required to support production and delivery of electricity.

Balloon payment

The principal balance due at maturity for a debt instrument that does not pay principal on a fully amortizing basis and, therefore, requires refinancing.

Base case

See "Project Finance Operations Methodology" and "Project Finance Construction Methodology."

Basis differential

The price of a commodity measured at two different delivery points.

Breakeven

A level of performance or market price (or quantity) that results in cash available for debt service being equal to scheduled debt service for a period or, where appropriate, to a financial covenant level.

Brownfield project

A project that is being developed on an existing site and, thus, benefits from or is constrained by existing infrastructure.

Bullet payment or maturity

Debt structures that pay only interest during the tenor of the debt; the full principal amount is payable at maturity.

Business interruption insurance

Insurance that covers lost cash flows for a specified period after a breakdown, subject to a deductible period and cap.

Capacity factor

A ratio of actual output to maximum potential output.

Capacity flywheel

A mechanical device typically consisting of a large flywheel that is used to store electric energy in the form of kinetic energy.

Cash flow available for debt service (CFADS)

CFADS for a period is calculated strictly as operating revenues less operating and maintenance expenses (defined later). As an operating cash-flow number, CFADS excludes any cash balances that a project could draw on to service debt, such as the debt-service reserve fund or maintenance reserve fund, or cash balances that are not required to be kept in the structure.

Cash flow sweep, also known as a sweep

A method for reducing debt balances by which a portion of the cash flow available after paying scheduled debt service and replenishing reserves is used to pay down principal.

Cash flow waterfall

Cash flow priority during the operations phase for projects with revenue from operations typically applied in the following order: expenses necessary for the ongoing operation of the business (operating expenses), including taxes, ongoing maintenance, and lifecycle costs, management fees, and trustee fees, then as follows:

- 1. Senior debt interest
- 2. Scheduled senior debt principal
- 3. Senior debt reserve, accounts replenishment, LOC fees
- 4. Subordinate debt interest (provided any senior debt distribution test is passed)
- 5. Subordinate debt principal
- 6. Subordinate debt reserve account replenishment
- 7. Growth capital expenditures
- 8. Distributions to equity, provided any applicable distribution test and distribution conditions are passed

Cash management

Cash management refers to the management of a project's financial activities, including account management, the allocation of operating revenue and other cash flows under a project's waterfall, liquidity, and covenant and debt service management.

Collecting solar plant

A type of power plant in which sunlight is reflected off of solar panels and concentrated to a tower to heat up a fluid that is used to drive electric generation equipment.

Combined cycle gas turbine (CCGT) plant

A power plant that uses exhaust heat from a CT to heat water and create steam, which is then fed into a steam turbine to produce electricity.

Combustion turbine (CT) plant

A natural gas fired combustion turbine.

Commissioning

The act of testing and starting up a project that is at the end of construction consistent with long-term operational conditions.

Completion

The set of conditions that must be satisfied before construction of a project is considered complete under its construction agreements.

Completion test

The testing scheme defined in construction contracts that is used to determine whether the project meets required operational performance.

Concession agreement

An agreement between a government entity and a project, whereby the government grants the project the right to build and operate an asset for a specific period of time. The concession agreement may involve a payment from the government entity to the project for providing a service, or it may allow the project the right to capture revenues from third parties for providing a service.

Conditions precedent to drawdown (CP)

A set of conditions that must be completed before a drawing can be made under a bank loan.

Contingency

An allowance dedicated to help cover unexpected construction or operating costs. Contingency is often included in construction contracts and within the project budget and is typically in the form of cash or a letter of credit. Our analysis would typically only rely on contingencies that would be available to the project upon a termination of the construction contract.

Contractually obligated income (COI)

Contractually obligated income is revenue generated by a stadium or arena under the terms of a multiyear contract agreement. The agreements may be short term to medium term--from three years to 30 years. Products such as suites and naming rights are generally considered COI.

Conversion efficiency

A measure of a power plant's efficiency in converting fuel to electricity. A lower heat rate is more favorable than a higher heat rate.

Cost to complete test

A calculation to determine whether the project can be completed within budget and on time. Such a test usually triggers the release of construction support, and the loan becomes typically fully nonrecourse. The test can set terms of offtake and payment to the builder.

Counterparty dependency assessment (CDA) (shortened definition from "Project Finance Construction And Operations Counterparty Methodology")

Standard & Poor's assessment of the risk a counterparty poses to a project financing takes into account the credit quality of the counterparty; any credit enhancement; factors that may increase or decrease risk in the context of the credit of the project, such as the ability to replace the party; the type of commercial role being performed by the counterparty; any differences between the default risk on the counterparty's financial debt; and the counterparty's obligations to the project. We do not assign outlooks to CDAs, and we do not place them on CreditWatch. The CDAs are assigned on a scale from 'aaa' to 'd', which parallels the issuer credit rating (ICR) scale of 'AAA' to 'D'. Standard & Poor's uses lowercase letters for CDAs to indicate that they are not ratings per se. We refine the CDAs by using plus and minus signs to graduate the scale in the same way we do for ICRs.

Country risk

Standard & Poor's uses the term "country risk" to mean the wide variety of economic, institutional, financial market, and legal risks that arise from doing business in a specific country and can affect credit quality. Some elements of country risk may be mitigated by project finance structures, while others, such as the legal system and strength or weakness of institutional features, that underpin it may increase or decrease the risk faced by a project financing.

Credit enhancement

Third-party support supplied to a project from a contractor that, in these criteria, can be used to cover the cost of replacement of a failed contractor or to cover immediate cash costs while other remedies are pursued. The form is normally an unconditional, irrevocable, letter of credit payable on demand.

Credit foncier style

A type of loan, structured with regular, usually monthly, repayments that incorporate principal and interest.

Credit substitution

Where one party substitutes its credit for that of another(s).

Critical path

The sequence of construction activities that must be completed on schedule to achieve substantial completion on schedule. A delay in completion of a critical path item will lead to an equal delay in substantial completion. A project may have more than one critical path.

Debt balance

The amount of debt outstanding at a point in time, adjusted to include the present value of accreting debt, if any.

Debt-like obligations

Liabilities or obligations, such as a loan or equivalent, that are serviced, paid, or capitalized. They are typically contractual in form or nature and include loans, leases, derivative agreements, and take-or-pay obligations. Debt-like obligations are examined on a case-by-case basis relative to their terms and conditions, substance, form, and intent.

Debt per kilowatt

A measure of valuation of a power plant in some market, equal to the debt outstanding divided by the operating kilowatt capacity of the plant.

Debt service coverage ratio (DSCR)

A measure of financial performance for a scheduled debt servicing Period that is equal to CFADS divided by scheduled debt service per Period.

Debt service reserve account (DSRA)

A liquidity reserve that can be used to pay debt service in the event that CAFDS is not sufficient to pay debt service. The DSRA is usually in the form of cash or a letter of credit and mitigates cash flow loss from temporary project outages or unexpected expenses.

Debt Servicing Period

The time interval covered in calculating the Debt Service Cover Ratio. Depending on the terms and conditions of debt obligations (such as a loan or bond) and stability of a projects cash flows such debt servicing periods may be annual or more frequent. The circumstances on what approach could be adopted are described in the Project Finance Operations Methodology.

Defects liability

The construction contractor's liability for construction defects.

Design and construct (D&C)

A type of construction contract.

Direct costs

Specific costs that can be associated with a particular activity, including equipment and supplies, salaries, and travel, directly benefiting the project.

Dispatch level

The amount of time a plant is operational or called on to operate by an offtake or market administrator.

Distribution test (also known as a "lock-up" test)

A test that must be passed before cash balances can be used to satisfy cash flow priorities lower in the cash flow waterfall. The cash waterfall prevents cash from being distributed until all project expenses are paid, and a distribution test may, subject to its terms, preserve additional cash for future liquidity.

Downside case

The market downside case coupled with project-level operating stresses, and macroeconomic and financial stresses.

Embedded loans

Loans that are embedded in swaps and may cross default to senior debt.

Energy margin

Revenue from the sale of electricity less the cost of fuel used to produce it.

Engineering, procurement, and construction (EPC)

A type of construction contract.

Engineering, procurement, and construction management (EPCM)

A type of construction contract.

Escalation

The growth in cost or price between two periods of time, typically annually.

Feed-in tariff

A type of offtake arrangement in which a project is able to earn a revenue stream by simply feeding its production into the electric system. The feed-in tariff can be paid in the form of a contract (such as in Canada) or through tariff agreements between power customers and regulatory agencies.

Feedstock

A raw material or feedstock used in the production of goods, finished products or intermediate materials that are themselves feedstock for an industrial process or finished products. The term "raw material" is typically used to denote material that is in an unprocessed or minimally processed state.

Financial close

The date at which the project's financing documents are executed and CPs have been satisfied or waived for the initial drawdown.

First fill

The supply of materials sufficient to fill the plant for a full run.

Fit for purpose

A contract by which the contractor agrees that the design will meet the project's operating requirements.

Force majeure (expanded definition from "Project Finance Construction Methodology")

A set of conditions, defined under the project contracts, under which a party to a contract is excused from meeting its obligations under the contract. These conditions are usually events beyond the party's control, are difficult to predict, and can disrupt a project's operations and devastate its cash flow. Typical conditions include events defined in each document (such as fire, floods, earthquakes, and freezing weather; civil disturbances such as strikes; and government actions such as change of law). In addition, catastrophic mechanical failure due to human error or material failure can be a form of force majeure that may excuse a project from its contractual obligations.

Government-related entities (GREs)

See Standard & Poor's GRE criteria, "Rating Government-Related Entities: Methodology And Assumptions," published Dec. 9, 2010.

Greenfield project

A project that is being developed on a site where no existing operations or prior operations have been conducted.

Hard facilities management

Planned and reactive maintenance of the building fabric and fixed mechanical and electrical systems. This typically includes energy and water management, maintenance of building systems such as heating and hot water, and planned maintenance within a building such as routine repainting of walls.

Heat rate

A type of conversion efficiency measure for a power plant determined by the amount of energy used to generate one kilowatt-hour (kWh) of electricity. This heat rate is typically measured as million British thermal units (Btu) per kWh generated.

Independent experts (IEs)

An expert that is independent of the sponsors and contractors and reports to debt investors on its review of the accuracy and viability of the sponsors' plans and projections.

Indirect costs

Costs incurred by the project that cannot be identified specifically with a particular activity, such as administrative costs or insurance.

Integrated gasification combined cycle (IGCC) plant

A plant that converts a feedstock to synthetic natural gas that is used to fuel natural gas combustion turbine.

Interest expense

Interest expense in the period includes the interest component of financial leases and assumed interest (received or paid) under any swaps or derivative contracts, and it excludes interest earned on deposits. Where accreting debt is present, two interest numbers are calculated: one on the basis of cash interest and the other including the amount that would have been paid assuming no accretion.

Joint and several obligation

An obligation of two or more parties for which each party is equally liable for payment or performance.

KPI

Key performance indicator.

Latent defects

As used in a construction contract, normally means a potential risk (for example, contamination) that may already be present but has not been identified. The cost of rectifying latent defects often is a project cost rather than a constructor cost.

Liability cap

Maximum liability for nonperformance established under a contract.

Lifecycle

Major maintenance requirements at a point in the life of an asset that allow it to operate efficiently for the reminder of the expected life.

Limited recourse

Under certain conditions, the project's lenders have recourse to the sponsors that is limited in both conditions and amount.

Limited-purpose entity (LPE)

An entity that meets or exceeds the minimum requirements set out in "Project Finance Transaction Structure Methodology," published Sept. 16, 2014.

Liquidated damages (LD)

Amounts defined in contracts that a contractor will pay in the event that an agreed on performance requirement has not been met.

Loan life cover ratio (LLCR)

A measure of financial gearing, the LLCR measures the present value of CFADS (discounted at the cost of debt) from a specified point in time through the loan's maturity divided by the debt outstanding at that point in time.

LOC

Letter of credit.

Long-term service agreement (LTSA)

An agreement in which a contractor will typically take the risk of certain major maintenance activities and related costs in exchange for an annual fee. The LTSA tenor is often variable, based on the operating profile of the project.

Maintenance capital expenses

Expenses incurred for major maintenance of existing infrastructure and the development of new infrastructure. These expenses are included in operations and maintenance expenses but may be identified as different from routine maintenance works.

Maintenance reserve account (MRA)

A reserve that is used to fund major maintenance expenses and that is typically funded over time prior to the moment of use.

Managed fund

A professionally managed investment portfolio that individual investors can buy into, typically through the purchase of units rather than shares. Each managed fund has a specific investment objective or mandate. This is usually based on the different asset classes, such as cash, fixed interest, property infrastructure, and shares. In the U.S., a managed fund is often referred to as a mutual fund, while in other countries, such as the U.K., they are referred to as an investment trust or investment fund.

Managed lanes

A tolled lane or set of lanes that is adjacent to a free or general purpose lane. Toll rates are variable and adjusted depending on the speed and volume of the traffic and congestion on the managed lane with the goal of maintaining free-flowing traffic. Examples of managed lane projects include high-occupancy vehicle lanes, high-occupancy toll lanes, and exclusive or special-use lanes.

Market downside case

Reflects our expectations for a project's performance under trough market conditions, consistent with the 'BBB' stress scenario defined in our general criteria ("Understanding Standard & Poor's Rating Definitions," published June 3, 2009) and generally defined as the worst market conditions we would expect over a 20-year period.

Market exposure

Measures the expected volatility of a project's CFADS from our projected base case to the market downside case due to price changes or volume fluctuations or both.

Market-implied heat rate

The market price of power in a particular region divided by the market gas price (including transportation) for that region. The measurement unit for market heat rate is British thermal units per kilowatt-hour (Btu/kWh). The market heat rate reflects the thermal efficiency of the generation plant deemed to be the marginal unit for the time period being measured. The market heat rate is different from a power plant's heat rate.

Maximum annual debt service (MADS)

An amount equal to the largest annual debt service payment of principal and interest scheduled over the debt tenor.

Merchant project

A project that lacks offtake agreements for its production or service, which exposes the project's revenue to volume sale and price risk.

Milestone

Dates or events that mark the progress of construction and are normally related to payments.

Nonrecourse

Lenders have access to a project's cash flows and collateral security to satisfy their claims as the only means of paying debt service.

O&M operator

A contractor that performs for a project routine operations and maintenance and sometimes major maintenance.

Offtaker

A party that contractually agrees to take the product of the project under a contract.

Opening debt balance

The balance of debt at the start of a calculation period.

Operating and maintenance expenses

Cash costs for a period required to conduct operations and perform regular and major maintenance, including paying taxes, and prefund dedicated operational reserves such as ramp-up, major maintenance, and taxes. Costs in the period paid from prefunded reserves are excluded from expenses for the period.

Operating and maintenance reserve account (O&MA)

A reserve that is used to fund routine operating and maintenance expenses and is typically funded over time prior to the moment of use.

Operating margin

Operating profit divided by total revenue, which is commonly used in hotel projects.

Operating revenues

Project cash revenues that consist of cash receipts from normal operations for the period. These amounts exclude (all on a cash basis) interest earned on cash deposits, capital revenues such as capital subsidies and sales of assets, and any proceeds from insurance payments, borrowed funds, or equity contributions.

Operations phase business assessment (OPBA)

Standard & Poor's assessment of a project's performance, market, and country risks during the operations phase.

Parent

Parent is synonymous with owner, shareholder, or equityholder of a project. This differs from a sponsor, who is the proponent of a project but may not be the parent.

Peaking plant

A type of power plant designed to operate during periods of peak demand.

Performance bonding

Third-party support supplied to a project from a contractor in case of nonperformance or insolvency to cover cash costs while other remedies are pursued. The project may also be required to supply performance bonds to its suppliers or offtakers.

Physical completion (also known as mechanical completion)

The point at which a project is mechanically and structurally complete but not yet operating and generating revenue. Typically, at this point, completion testing begins.

PJM

The Pennsylvania, New Jersey, and Maryland administered power market.

Power island

The main components that produce electricity, usually the turbine (hydro, steam, and combustion), boilers, and generator components and the buildings that house them.

Power purchase agreement (PPA)

A form of offtake contract for power plants that is composed of an availability fee that typically covers specified fixed costs, including debt service. This fee is typically paid to the project subject to the project meeting and passing minimum availability standards. In addition to the availability fee, an energy fee is also typically paid that covers the variable costs of generating electricity. Typically, the fuel price is borne by the offtaker and the conversion risk by the project. The fee typically includes either an energy delivered and capacity payment or just an energy delivered payment.

Preliminaries

Construction costs related to time, such as craneage, offices, and fencing. These costs increase if there is a schedule delay and are often owner costs.

Principal expense

For a period, when a revolver draw is repaid, the principal expense included as principal expense will be no more than the amount drawn from the revolver. For a period, if there is a cash flow sweep feature that reduces principal through

excess cash after all prior obligations are satisfied, the reduction in principal from the sweep is not considered a principal expense.

Probability of exceedance

A forecast of the probability that a power plant's production will exceed a specified amount in a defined time period, typically one year.

Project debt

In addition to bank or bond debt take-or-pay contracts, leasing, hedging, and swaps are included as project debt.

Project documents or transaction documents

Project documents are the set of documents that fully define the project and its legal, financial, and operating constraints. They can include formation documents for the project entity; credit documents, such as the indenture, intercreditor agreement, and hedging agreements; documents defining interactions with counterparties, such as construction contracts, operating agreements, and offtake agreements; and offering documents for project debt and third-party consultant reports, such as traffic reports and our independent engineering reports. The set of project documents fully defines the project and sets important limitations (such as on additional debt).

Project finance issue credit rating

The rating assigned to senior secured debt or debt-like obligations in the project finance structure.

Project life cover ratio (PLCR)

A measure of financial gearing, the PLCR measures the present value of CFADS from a specified point in time until the end of the project's life, discounted at the cost of debt divided by the debt outstanding at that point.

Project

A project is a limited-purpose operating business structure that comprises one or more LPEs that in combination form a project finance transaction structure. This includes all wholly or partly owned subsidiaries of any LPE in the project.

Public-private partnership (PPP), also known as a P3 or a private finance initiative (PFI)

This type of project usually involves a private entity that is financing, constructing, and operating public-sector infrastructure.

Punchlist

A list of minor construction tasks remaining after substantial completion that documents the work by the contractor that was incomplete or that did not meet specifications.

Ramp-up

The period between commencement of operations and achievement of steady-state operations.

Real toll

The toll that a project collects directly from the project user. Sometimes referred to as a "user pay" model.

Relief events

As defined in the project contracts, cover variations, breach of contract, and risks not allocated to the supplier in the risk allocation schedule. Whenever a relief event occurs, the parties must try to reach agreement on the time and the

cost implications. If they fail to do so, the dispute resolution procedure can be applied.

Reserve account

An amount of funding set aside to cover expenses prior to the moment of use (see debt service reserve account, major maintenance reserve account, and operating and maintenance reserve account).

Reserve margin

For a power market, the amount of power plant capacity in excess of the capacity that is expected to meet demand to mitigate unexpected demand for power, plant outages, or other events.

Retentions

Amounts that are held back under a construction contract from amounts payable and are used in lieu of providing credit enhancement in some circumstances.

RevPAR

Average daily room revenue generated per available hotel room and calculated as room revenues divided by available rooms.

Right of way

The right of the project to use a specific section of land or property, such as a roof.

Run of river hydro plant

A type of hydro power plant located along a river that uses river water to generate electricity.

Scheduled debt service

For a scheduled debt service period, an amount equal to the cash interest expense plus scheduled principal due in the period, including payments due under financial leases, and swaps (net).

Senior lock-up test

A cash flow coverage test (typically a debt service coverage ratio test) that if breached under a project's transaction documents will lock up cash flow that would have otherwise been available for distribution to subordinated debtholders or equityholders. Such cash flows, if locked up, are typically reserved for the benefit of senior debtholders or ultimately used to repay senior debt principal if structured accordingly under a project's transaction documents.

Several or several obligation

An obligation of two or more parties for which each party is only liable for its share of payment or performance.

Shadow toll

The toll a project is paid by a government agency based on the number of vehicles rather than paid by users directly.

Sinking fund

A fund into which a project will set aside cash to help meet all or a portion of future debt service on typically large financial obligations.

Soft facilities management

Services provided to ensure staff working in a building may work in a safe, clean, and productive environment. This typically includes cleaning, grounds maintenance, portering, security, pest control, and catering services.

Solar photovoltaic plant

A solar project using conventional solar panels made of crystalline silicon solar cells.

Solar thin film plant

A solar project using solar cells made by depositing one or more layers of photovoltaic materials on a substrate.

Sovereign credit risk

The risk that a sovereign government will default, according to Standard & Poor's definitions, on its foreign or local currency debt.

Sponsor

A party that is developing or financing a project. A sponsor may or may not be an equity participant in the project.

Step-in rights

Lenders or offtaker rights under predetermined circumstances, where lenders or offtakers can step into the shoes of management to operate the project.

Structural subordination

Structural subordination is when the issuer of the debt is not the immediate beneficiary of the project's cash flow and assets--for example, the project company is a parent company of the issuer.

Subordinated debt

Standard & Poor's views subordinated debt as ranking junior to the existing rated debt, such that additional debtholders would not be expected to be able to successfully pursue remedies against collateral securing existing rated debt. In payment terms, subordinated debt should rank after service of both project senior debt principal and interest, and after any replenishment of senior project debt protections, such as reserve accounts. Nonpayment of subordinated debt should not result in an ability to accelerate the debt or otherwise act on the default while the project debt is outstanding.

Subordinated issue credit rating

The rating assigned, if present, to subordinated debt or debt-like obligations in a project structure.

Substantial completion

A set of conditions that must be met for a project to be considered substantially complete under the construction arrangements. The key conditions usually require that the project is fully operational and has met all completion tests, leaving only a well-defined set of minor punchlist items to complete.

Sunset date, also known as a long-stop date

The date on which a contract can be terminated if contractual obligations have not been met.

Supercritical coal plant

A coal plant that operates with much higher pressure and temperature than a conventional coal plant.

Tail period

The period between the last debt service payment and the end of concession, asset life, or other offtake agreement. In mining projects, a reserve tail is an amount of reserves after repayment of debt.

Take-or-pay contract

A type of offtake contract, where the offtaker agrees to pay for a project's production, whether or not the offtaker actually takes the production.

Term loan B

A form of high-yield lending typically from institutional investors where quarterly repayment terms include interest and a specific but small portion of principal, resulting in a balloon maturity. Term loan Bs often have cash flow sweeps.

Third-party income

Noncontractual income generated by an availability-based project. This may include revenues generated by leasing out school facilities outside of school hours or revenues generated by retail facilities in hospitals.

Tolling agreement

A type of offtake contract for which a counterparty pays a project to convert a feedstock into a product at a defined efficiency rate. Typically, the feedstock is supplied by the counterparty.

Top tier (also "very experienced")--refers to "Project Finance Construction Methodology"

Generally recognized by their industry or project location.

Transfer and convertibility risk

The risk that an entity will not be able to convert and transfer local currency into foreign currency to service its debt. Standard & Poor's reflects this risk in its T&C assessments.

Turnkey construction contract

A type of construction contract in which a contractor agrees to deliver an asset that is ready for use. In addition to the risk of building a project within budget and on schedule, the contractor assumes the risk that the plant will perform as designed and agrees to compensate the project for an amount related to the present value of the underperformance for the life of the project. In effect, the contractor needs only to turn over the keys at the end of construction.

Variation (also known as change order)

A change to the design or component leading to a payment claim by the construction contractor for additional funds to cover the cost of the change.

Volume based

Volume-based projects have been structured in accordance with project finance criteria and operate in a competitive environment whereby the project accepts volume or price risk, and revenues are either received directly from users of the facility or payments are made by a contracted counterparty based on performance and contracted prices. As with availability projects, the majority are structured as P3s because the facility is typically owned by a government and the commercial counterparty operates the facility under the terms of the contract.

Weak link (expanded definition from "Project Finance Construction Methodology")

A weak link means that the rating on project finance debt is rated the lower of any of the following: its own credit quality, the creditworthiness of the parent if the project is linked or capped due to a transaction structure weakness, the CDA of the counterparty, the construction phase SACP, or the operations phase SACP.

REVISIONS AND UPDATES

This article was originally published on Sept. 16, 2014. These criteria became effective on Sept. 16, 2014, the date of publication, and superseded the previous project finance criteria, "Updated Project Finance Summary Debt Rating Criteria," published Sept. 18, 2007, as well as a number of other articles.

Changes introduced after original publication:

- Following our periodic review completed on Sept. 15, 2016, we updated contact information, and the list of superseded criteria was deleted. We also added to the glossary a definition of the time period to be applied when determining debt service coverage ratios.
- Following the release of the criteria article "Recovery Rating Criteria For Speculative-Grade Corporate Issuers," published on Dec. 7, 2016, we republished this article to align table 1 and paragraph 51 with the new recovery criteria.
- Following our periodic review completed on Sept. 14, 2017, we updated contact information and updated paragraph 54 to point to the methodology to assign '1+' recovery ratings.

RELATED CRITERIA AND RESEARCH

Related Criteria

- Structured Finance: Asset Isolation And Special-Purpose Entity Methodology, March 29, 2017
- Recovery Rating Criteria For Speculative-Grade Corporate Issuers, Dec. 7, 2016
- Guarantee Criteria, Oct. 21, 2016
- Methodology: Jurisdiction Ranking Assessment, Jan. 20, 2016
- Rating Government-Related Entities: Methodology And Assumptions, March 25, 2015
- Principles For Rating Debt Issues Based On Imputed Promises, Dec. 19, 2014
- Project Finance Transaction Structure Methodology, Sept. 16, 2014
- 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
- Corporate Methodology, Nov. 19, 2013
- Ratings Above The Sovereign--Corporate And Government Ratings, Nov. 19, 2013
- Project Finance Construction Methodology, Nov. 15, 2013
- Timeliness Of Payments: Grace Periods, Guarantees, And Use Of 'D' And 'SD' Ratings, Oct. 24, 2013
- Methodology And Assumptions: Assigning Ratings To Bonds In The U.S. Based On Escrowed Collateral, Nov. 30, 2012
- Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings, Oct. 1, 2012
- Project Finance Construction And Operations Counterparty Methodology, Dec. 20, 2011
- Understanding Standard & Poor's Rating Definitions, June 3, 2009
- Methodology: Criteria For Determining Transfer And Convertibility Assessments, May 18, 2009
- Legal Criteria For U.S. Structured Finance Transactions: Select Issues Criteria, Oct. 1, 2006

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