

Criteria | Corporates | Project Finance:

Project Finance Transaction Structure Methodology

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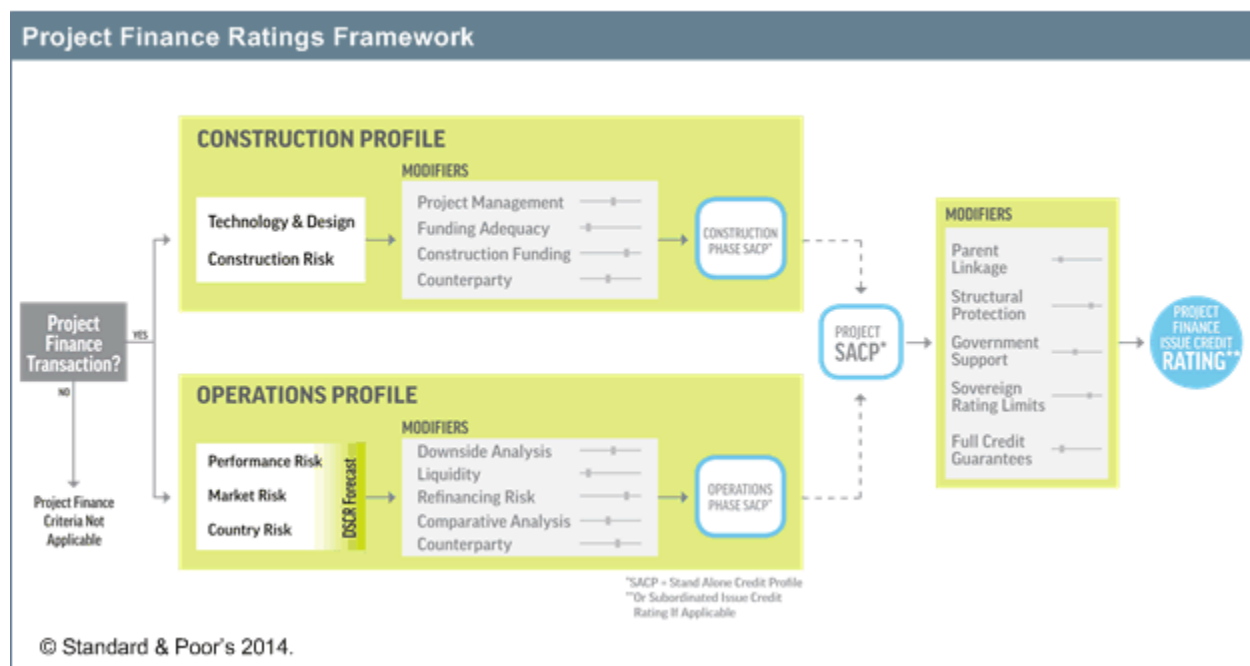
RELATED CRITERIA AND RESEARCH

Project Finance Transaction Structure 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. These criteria present S&P Global Ratings' methodology and assumptions for assessing transaction structure risk related to project finance.
2. The criteria are intended to enhance the comparability of our project finance issue credit ratings with ratings in other sectors (see "Understanding Standard & Poor's Rating Definitions," published June 3, 2009) and to 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.
4. This criteria article is one of five that constitute our methodology for rating project finance issues. The other four are:
 - Project Finance Framework 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.
5. A project finance transaction structure is a limited-purpose operating business structure that consists of one or more limited-purpose entities (LPEs) that can collectively undertake construction and operation of assets. The common characteristic of limited-recourse transactions, such as project financings, is that debtholders can only use a project's cash flows for the servicing and repayment of the project's debt.

Chart 1



SCOPE OF THE CRITERIA

6. These criteria apply to all new and existing project finance issue credit ratings.

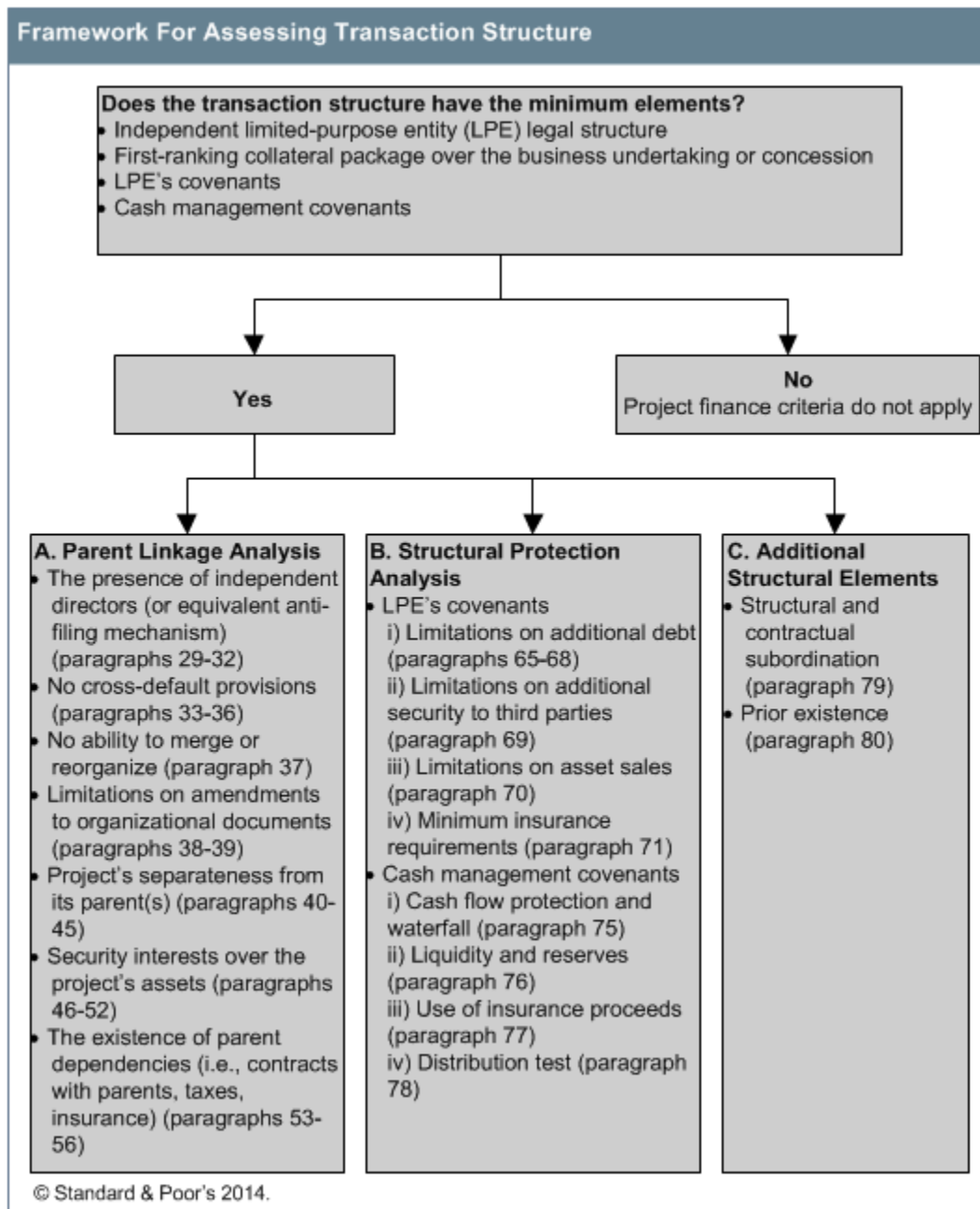
SUMMARY OF THE CRITERIA

7. A project finance transaction structure provides a governance framework that determines the scope of a project's operations and the type of business and financial risks it can incur. Our analysis of the transaction structure informs our opinion about how a project's senior debt lenders are protected from the credit risk pertaining to its parent(s), maintains a single purpose status, and limits additional debt.
8. In addition, in the criteria, we:
- Distinguish the role of the transaction structure in providing protection to the project's senior debt lenders;
 - Clarify the role of the transaction's structural provisions that cover all the entities that are part of the project financing, including the asset-owning company, the debt-issuing entity, and any other project companies (see chart 3);
 - Assess the credit risks associated with transaction structures; and
 - Define how the structural elements are included in the analysis of the project SACP.
9. The criteria set out a multistep process (see chart 2) for assessing a transaction's structural elements and factoring the risks posed by the transaction structure into the project SACP. We assess:
- Whether the transaction structure meets the minimum elements to be analyzed under these criteria (see paragraph

14);

- The degree to which the credit quality of the project is linked to that of its parent(s) to determine whether the project finance is de-linked from, linked to, or capped by its parent(s)' creditworthiness;
- The extent to which the transaction structure protects the credit quality of a project through the LPE covenants and cash management covenants to determine whether the project's structural protection package is neutral, fair, or weak; and
- Additional structural elements to determine the impact of structural and contractual subordination and LPE's prior existence.

Chart 2



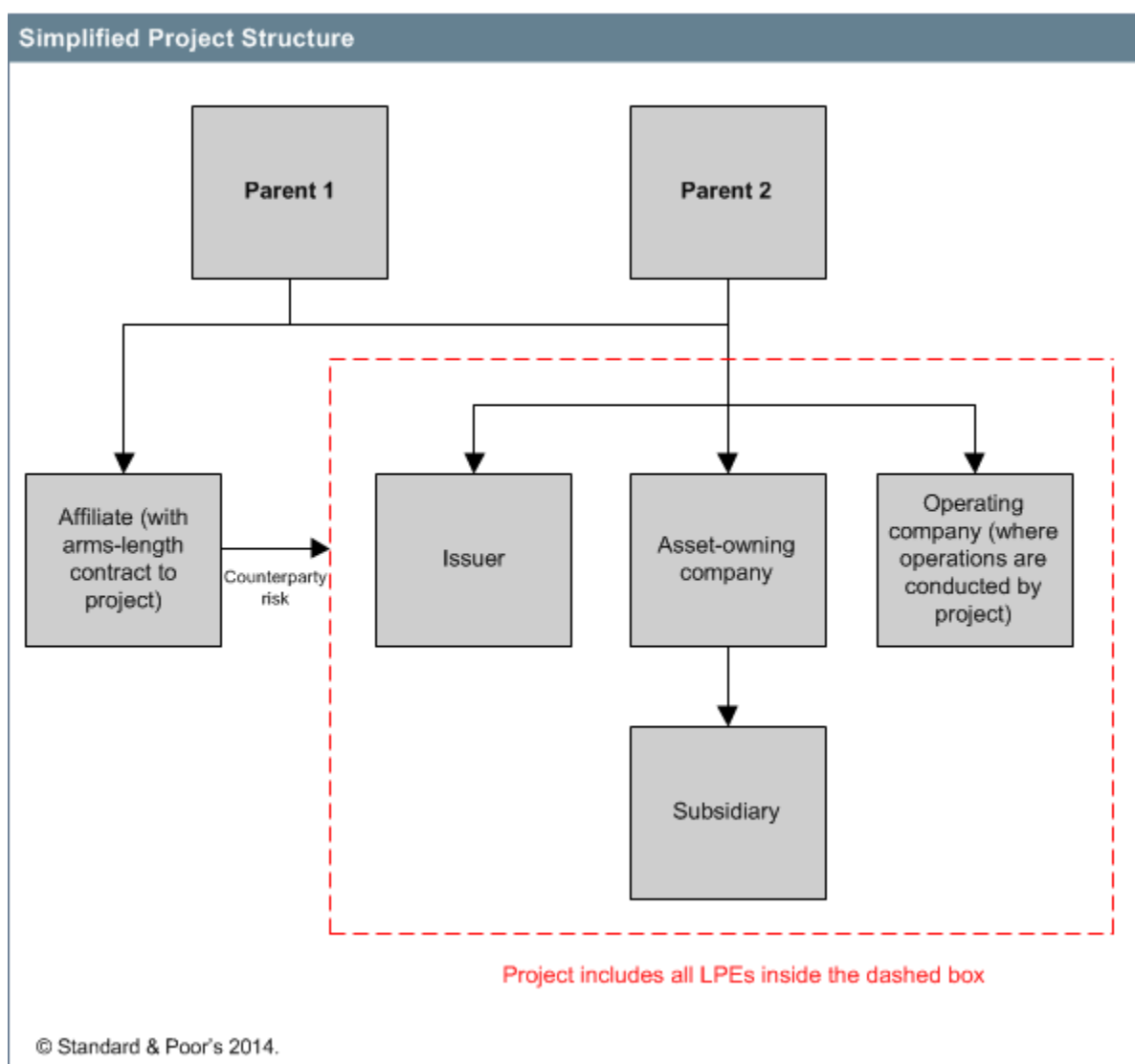
10. This paragraph has been deleted.

11. This paragraph has been deleted.

METHODOLOGY

12. A project finance transaction structure is a limited-purpose operating business structure that comprises one or more LPEs. These, combined, are the "project" (see chart 3) and can collectively undertake construction and operation of assets. The common characteristic of limited-recourse transactions, such as project financings, is that project finance debtholders may only look to the project's cash flows--specifically, the cash flow available for debt service--for the primary servicing and repayment of the project's debt. A transaction structure typically:
- Seeks to limit a project's exposure to deterioration in the parent's credit quality or the parent's insolvency;
 - Creates a right for debtholders to a project's cash flows and assets either through ownership of the assets or, in other cases, such as government concessions, the contractual right to cash flows for a specified time;
 - Maintains the single purpose status of the project; and
 - Seeks to limit additional debt.

Chart 3



13. As such, Standard & Poor's analysis of a project finance transaction structure assesses (see chart 2):

- The applicability of project finance criteria: A transaction structure must meet the minimum elements outlined in paragraph 14 to be analyzed under these criteria.
- Linkage to parent(s): The criteria classify a transaction structure's linkage to the project's parent(s) as de-linked from, linked to, or capped by its parent(s)' creditworthiness. The analysis determines the impact of any deterioration in credit quality or, at its extreme, insolvency of the parent(s) on the project's credit quality under the applicable legal regime in a jurisdiction.
- Structural protection: We assess structural protection as neutral, fair, or weak depending on the extent to which a transaction structure protects a project's credit quality through the LPE's covenants and its cash management covenants.
- Additional structural elements: The criteria analyze the impact of structural and contractual subordination of project finance senior debtholders (paragraph 79) and of an LPE not being a newly created entity (paragraph 80).

14. To be rated under these criteria, a project finance debt issue must have all of the following:
 - An LPE (or group of entities) that forms a project where the limited purpose entity is building and operating the project that is independent and separate from the parent and where lenders' risk of repayment is restricted to the project's success or failure. We believe that this element, if present, may help lower the LPE's risk of insolvency by reducing the likelihood of claims against the project stemming from activities unrelated to the project's permitted activities.
 - A senior secured ranking through a security package that limits the disposal of key assets or reduces the incentive for third parties (including parents) to attempt to file the project into insolvency or seize the business' key assets after insolvency. The security package should include first-ranking security over substantially all of the assets and undertaking of the business for the benefit of project finance debtholders.
 - 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. This covenant package should extend over the debt term.
 - A cash management covenant package that includes a mechanism that establishes priority of cash payments to holders of senior debt after maintaining ongoing operations as well as liquidity mechanisms that ration and preserve cash in a project in support of the senior debt credit.
15. The criteria also evaluate other debt issued by an entity that forms part of the "project" (see chart 3), provided that the "project finance debt" meets the above requirements (paragraph 14) 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" (see also "Project Finance Framework Methodology").
16. We modify a project SACP, which is the weaker of the project's construction phase SACP (see "Project Finance Construction Methodology") or operations phase SACP (see "Project Finance Operations Methodology" and "Project Finance Framework Methodology") depending on our assessments of linkage to parent(s) and structural protection, as outlined in table 1.
17. The impact of the transaction structure on a project SACP is asymmetrical. For example, a neutral structure does not raise the SACP, but as the structural strength declines, the SACP may decline as well.
18. If the project SACP is 'b', the SACP generally will not be modified to be lower than 'b-' (see paragraph 19). If the project SACP is 'b-' or lower, we generally will not apply any modification. The project SACP will also be constrained by any rating limits resulting from the parent's creditworthiness (see table 1), cash management covenants (table 6), and the LPE's prior existence (paragraph 80).
19. If we view a project's capital structure as unsustainable or if it is currently vulnerable to nonpayment and is dependent on favorable business and financial and economic conditions to meet its financial commitment on its obligations, then we will determine the project SACP using "Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings," Oct. 1, 2012. Similar to structured finance, when assigning a plus (+) or minus (-) sign to a 'CCC' rating on a project, the project's financial stress is generally the dominant factor, and the time frame for anticipated default is generally a secondary consideration.
20. The existence of cross-default provisions to a third party (such as the parent) that can result in debt acceleration, in the absence of documented mitigants, will cap the project SACP at the creditworthiness of that party (see paragraph 33

and separately paragraphs 34-36 under certain conditions). In this case, the project SACP is the result from table 1 and the application of any caps to the project SACP under paragraphs 33-36.

Table 1

Determining The Project SACP			
--Structural protection--			
Linkage to parent	Neutral	Fair	Weak
De-linked	The project SACP is not modified	The project SACP is modified to be equal to the project SACP minus one notch	The project SACP is modified to be equal to the project SACP minus two notches
Linked	The project SACP is modified to be equal to the lower of: 1) Project SACP, or 2) Parent(s)' creditworthiness* plus three notches	The project SACP is modified to be equal to the lower of: 1) Project SACP minus one notch, or 2) Parent(s)' creditworthiness plus three notches	The project SACP is modified to be equal to the lower of: 1) Project SACP minus two notches, or 2) Parent(s)' creditworthiness plus three notches
Capped	The project SACP is modified to be equal to the lower of: 1) Project SACP, or 2) Parent(s)' creditworthiness	The project SACP is modified to be equal to the lower of: 1) Project SACP minus one notch, or 2) Parent(s)' creditworthiness	The project SACP is modified to be equal to the lower of: 1) Project SACP minus two notches, or 2) Parent(s)' creditworthiness

*Parent(s)' creditworthiness is based on Standard & Poor's issuer credit rating on the parent, or, if the parent is not rated, on Standard & Poor's credit estimate on the parent.

A. Parent Linkage Analysis

21. The parent linkage analysis determines the degree to which the credit quality of a project is linked to that of its parent(s). We assess, under the applicable legal regime, the extent to which a project finance structure isolates the project entities (see chart 3) from the insolvency risk of other entities (such as the parent) that participate in the transaction. We also analyze cross-default provisions with counterparties that could result in debt acceleration (see paragraphs 33-36).
22. Standard & Poor's checks for the following characteristics to assess the extent to which a project's credit quality is linked to that of its parent(s):
 - The presence of independent directors (or equivalent anti-filing mechanism);
 - No cross-default provisions;
 - No ability to merge or reorganize;
 - Limitations on amendments to organizational documents;
 - A project's separateness from its parent(s);
 - Security interests over the project's assets; and
 - The existence of parent dependencies (certain contracts with parents and affiliates, taxes, insurances).
23. In assessing the degree of parent(s) linkage, we classify a project's transaction structure as: de-linked from, linked to, or capped by its parent(s)' creditworthiness (see table 2). If a project is de-linked, the creditworthiness of the parent(s) is not a constraint to the project SACP. If a project is linked, the project SACP is no higher than its parent(s)' creditworthiness plus three notches. If a project is capped, the project SACP is capped at its parent(s)' creditworthiness (see table 1).

Table 2

Classification Of Parent Linkage Analysis
De-linked
The project includes all of the following characteristics:
--Independent directors (or equivalent anti-filing mechanism);
--No cross-default provisions;
--No ability to merge or reorganize;
--Limitations on amendments to organizational documents;
--Separateness from its parent(s);
--Security interests over project's assets; and
--No parent dependencies
Linked
The project includes at least the following characteristics:
--Independent directors (or equivalent anti-filing mechanism)
--No cross-default provisions;
--Separateness from its parent(s);
--Security interests over assets; and
--No parent dependencies for tax liabilities (paragraph 55)
The other characteristics in paragraph 22 are present but less restrictive than in the de-linked classification.
Capped
The project does not meet the definition of de-linked or linked. For example, a project is capped if it does not include independent directors (or equivalent anti-filing mechanism).

24. Our assessment of whether the project entities are insolvency remote from their parents is qualitative and uses the principles in paragraph 22 as its foundation. Our conclusions, regardless of the specific organizational structure of an LPE (such as a corporation, partnership, or trust), consider how the relevant organizational or transaction documents address these elements.
25. When a project is linked to or capped by its parents' creditworthiness and multiple parents own the project, the project SACP will be linked to or capped by the parent with the lowest creditworthiness. However, if the parents of the project are unaffiliated with each other and hold material blocking rights (meaning they can block the project from being filed into insolvency) and economic interest in the project and we conclude, depending on the legal jurisdiction, that:
- The parent(s) with the lowest creditworthiness will not hurt the project and result in the consolidation of the project on the insolvency of such a parent, then the project SACP will be linked to the creditworthiness of the next-weakest unaffiliated parent(s); or
 - Any parent(s) will not negatively affect the project and result in the consolidation of the project on the insolvency of the parent(s), then the project SACP will be de-linked from the creditworthiness of any unaffiliated parent(s).
26. If we assess a project as linked to or capped by its parent's creditworthiness and if a managed fund owns the project (see also "Project Finance Framework Methodology" for the definition of a managed fund), then the project SACP generally would be linked to or capped by the managed fund's rating or creditworthiness. However, if we conclude that the managed fund's ownership of a project will not result in consolidation of a project with a failed managed fund under the insolvency law of the relevant jurisdiction, we classify the project as de-linked. For example, in Australia, it

may be possible to de-link a project from a managed fund that would otherwise be linked or capped. The reason for this is that a managed fund is typically constituted as a trust that holds assets in trust for the members of the fund (for example, by an independent trustee or responsible entity), and because a trust is not a separate legal entity, the fund cannot be technically insolvent.

27. We also recognize (and would factor into our analysis where appropriate) that local laws may address certain of these characteristics or provide that certain entities are isolated from their parent(s) or affiliates as a matter of law without regard to these specific characteristics. In this case, we would analyze the structure in the context of our legal criteria for that jurisdiction or the general principles of credit ratings (see "Principles Of Credit Ratings," Feb. 16, 2011).
28. We explain the rationale for each characteristic in the sections below.

i) Presence of independent directors (or equivalent anti-filing mechanism)

29. The presence of independent directors on an LPE's governing board may help to reduce the likelihood that the LPE would voluntarily initiate insolvency proceedings merely for the benefit of its parent. The absence of such a governance feature typically caps the project SACP at its parent(s)' creditworthiness (table 1).
30. Regardless of an LPE's legal form, we assess what mitigants exist to reduce the likelihood that the LPE will initiate insolvency proceedings. An example of how this governance feature could mitigate insolvency risk is an LPE that has independent shareholding entities whose vote is required--along with the vote of a parent shareholder--to commence voluntary insolvency proceedings.
31. If a change of control or consolidation of ownership occurs without the introduction of a mechanism that blocks the parent's ability to file the project into insolvency at the project level, we may cap the project SACP at the parent's creditworthiness.
32. We do not typically look for independent directors or an additional anti-filing mechanism to isolate the creditworthiness of the projects from the parent(s) and nonproject affiliates in the following cases:
 - The presence of additional parents that have the rights and abilities to block a filing mitigates the credit risk associated with a single parent filing for insolvency. However, if a change of control or consolidation of ownership occurs without the introduction of an anti-filing mechanism at the project level, Standard & Poor's may assign the project a project SACP at the same level as that of the parent with the weakest creditworthiness.
 - In jurisdictions where agreements not to file another entity into an insolvency proceeding (nonpetition covenants) are generally entered into, such agreement governing a project may be viewed as a mitigating factor.

ii) Cross-default provisions

33. If a project's transaction structure has cross-default provisions to a third party that has the potential to cause debt acceleration, the project's SACP will be capped by the third party's creditworthiness (or, where relevant as outlined in paragraph 34, will be capped by the related group credit profile (GCP), as defined in "Group Rating Methodology," Nov. 19, 2013), in the absence of any specific documented mitigants under the project's transaction documents. Documented mitigants that we have observed include:
 - A permanent well-documented waiving of such cross-default provision.
 - Remedies for key contractor replacement. If there is a cross default to a key contractor, we assess whether there is

an adequate remedy and cure period under a project's transaction documents that allow for a project to address and remedy the consequences of an event of default without resulting in debt acceleration through the replacement of a key contractor. In considering the adequacy of any remedy and cure periods in replacing a key contractor, we typically analyze and review the cost, manner, duration, and ability to replace in a timely manner a key contractor based on our sector experience in consultation with an independent expert, as required. This is to make sure that there is no material increase in our assessment of the likelihood of default from such a scenario. (Please refer to paragraphs 20 and 27-32 in "Project Finance Construction And Operations Counterparty Methodology," Dec. 20, 2011.)

- Committed, unconditional, and available liquidity or reserves that are sufficient and dedicated to fully repay the project's debt (and any associated costs including any break costs, if applicable) at any point in time as a result of any debt acceleration event.
- The project transaction documents provide that there is no ability to enforce a cross default or potential acceleration of debt while the project is meeting its debt service or debt-like payment obligations.

34. If the following three conditions are concurrently met, then we would cap the project SACP at the third party's related GCP (subject to paragraph 35), rather than capping the project SACP at the creditworthiness of the third party.

- Cross-default provisions are to a third party, which is a member of the group and has direct or indirect "control" of the project (as we define in paragraph 31 of "Group Rating Methodology") and any of the following is true: the group member is the ultimate parent company; the group member has a group status, according to the group methodology, of core, highly strategic, or strategically important; the loan amount to the group member is immaterial in relation to the size of the loan to the project such that we expect group support to be forthcoming; or we expect the loan to the group member to soon mature without being renewed.
- Within the group, financial obligations at core, highly strategic, and strategically important group members are subject to cross-default and acceleration provisions among themselves.
- This cross default is to the benefit of a development bank (see paragraph 36).

35. In considering a cross default across a group's financial obligations and its GCP, we consider whether the group has sufficient financial resources, on an ongoing basis, to repay debt at the related group member, which is linked to the project via the cross-default clause, or can be expected to have available liquidity to repay the project debt and any other financial obligations, including break costs that may be subject to or consequence of a debt acceleration event. If the group does not have sufficient financial resources, the project's SACP is capped at the third party's creditworthiness. As a result of a cross-default clause outlined in paragraph 34, a project would not be considered an insulated subsidiary under "Group Rating Methodology," Nov. 19, 2013.

36. A development bank, for the purpose of these criteria, is a financial institution that is government-owned, supports a government's economic policies and directives, and focuses on creating and delivering projects that have a beneficial economic and social impact for a country. A development bank typically meets this goal through lending or investing for long tenor in essential infrastructure projects. For this reason, and for the purpose of these criteria, we exclude commercially oriented banks that primarily have an incentive to lend solely for commercial reasons.

iii) No ability to merge or reorganize

37. Restricting an LPE from participating in a merger or reorganization reduces the possibility that, while the rated debt is outstanding, any merger or consolidation with a non-LPE, a reorganization, dissolution, liquidation, or asset sale, as well as another company purchasing the LPE's shares, could undermine the LPE's independent or limited-purpose

status. This restriction also reduces the risk of prior claims emerging.

iv) Limitations on amendments to organizational documents

38. We assess whether the LPE can amend its organizational documents while the rated debt is outstanding because doing so can undermine the project's isolation from its parent(s). We look for the documents to provide that debtholders must consent to any amendments to organizational documents.
39. Standard & Poor's assumes that the parent(s) of a project and its affiliates operate it in a manner consistent with the provisions of the project financing documents. We consider protections that the transaction structure provides as ineffective or null if, in our view, the parent(s) of the project or its affiliates can manipulate them to the detriment of the debtholders.

v) Separateness from parent(s)

40. We assess a project's separateness from its parent(s) by reviewing whether the project's organizational or transaction documents include covenants designed to provide comfort that the project will hold itself out as an independent entity.
41. We evaluate the risk that the courts may bring the LPE and its assets into the insolvency proceeding of another entity (such as a parent). For example, in certain jurisdictions, courts may use principles such as "piercing the corporate veil," "alter ego," or "substantive consolidation" or equivalent concepts in determining whether to disregard the separateness of the LPE.
42. In project finance transactions, we expect to see, with the exceptions described in paragraphs 43 and 44, the following separateness covenants, if applicable:
 - Maintain books, records, financial statements, and its accounts separate from any other person or entity;
 - Hold itself out as a separate entity and conduct its own business in its own name;
 - Observe all corporate or other formalities that the project's organic documents require;
 - Not to pledge or commingle its assets for the benefit of any other person or entity and not to make any loans or advances to any other entity or person (except as provided in the criteria);
 - Avoid acquiring obligations or securities of its parent(s) or affiliates;
 - Allocate fairly and reasonably any overhead for shared office space;
 - Use separate stationery, invoices, and cheques;
 - Pay the salaries of its own employees and maintain a sufficient number of employees in light of its contemplated business operations; and
 - Avoid guaranteeing or becoming obliged for the debts of any other person or entity or hold out its credit as available to satisfy the obligations of others.
43. Standard & Poor's evaluates the breadth and number of separateness covenants based on the likelihood that the courts may, in a specific jurisdiction, bring a project or its assets into the insolvency proceeding of another entity (such as a parent). Furthermore, we have observed that the types of separateness covenants in project finance transactions may vary between legal jurisdictions, as well as depending on LPE type, meaning whether it is an "orphan" LPE or an LPE whose shares are held in trust for charitable purposes.
44. When a specific covenant is not present in a project's organizational documents or transaction documents, we also consider a project's track record and day-to-day practice in acting as a separate entity to assess the likelihood that the

courts could bring the LPE and its assets into the insolvency proceeding of another entity, as outlined in paragraph 43. For example, we have observed established projects publishing separate accounts, using their own stationery, and paying their own overheads independently from their parent(s).

45. We typically receive and review a nonconsolidation opinion to support our assessment of a project's separateness from its parent(s). We may also review legal opinions covering, among other things, the risk that a project may be consolidated with its parent(s) for tax purposes (see paragraph 55). In some jurisdictions, such as the U.S., we do not expect to receive a nonconsolidation opinion for projects that have multiple unaffiliated parents and no single parent owns more than 50% of the project entity. In cases where a single parent owns more than 50% of the project entity, we may request a nonconsolidation opinion.

vi) Security interests over the project's assets

46. Security interests over a project's assets in favor of the holders of the rated debt may help to reduce the likelihood of third parties filing a project into insolvency. Security interests can reduce the incentives of an unsecured third-party creditor of the LPE to file the project into insolvency proceedings to potentially gain access to the LPE's cash flows and assets. Along with the presence of security interests, Standard & Poor's also evaluates whether laws applicable to the LPE or certain structural features of the transaction provide incentives analogous to a security interest (see paragraph 49).
47. We assess a project's security package to determine the degree to which:
- The project finance debt benefits from first-ranking cash flow and security, including a perfected first-ranking security interest over all project assets, including documents and accounts, and the whole business undertaking, and
 - The security covers all key activities and assets of the project (including physical assets, agreements, permits, cash flows, accounts, and shareholder's ownership interest in the project).
48. 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 project equity), except for the conditions outlined in paragraph 49. In assessing the security interests, the following considerations also apply:
- If the deficiencies in the security package do not meet the variations (see paragraph 49), we would assess the transaction structure as capped.
 - If higher-ranking securities are present and project finance debtholders do not have an opportunity to remedy any breach of those securities (see paragraph 50), the default risk of the project debt depends on the breach that cannot be remedied.
 - If liabilities ranking ahead of senior debtholders increase beyond the amount described in paragraph 51, then we would rate the project finance debt as being structurally or contractually subordinated.
 - We analyze early termination of hedging arrangements because they may result in a cash flow shortfall, as described in paragraph 52.
49. The types of security interests over assets that may appear in project finance transactions vary depending on the project and the jurisdictions. Examples of these variations that, in our opinion, would satisfy the security package characteristics described in paragraph 48 include:
- Government concessions. Under government concessions or in some legal jurisdictions or some joint ventures, the

physical assets cannot be pledged directly, and debtholders lend on the basis of a key project agreement, such as the concession. In these cases, the secured asset is the concession or agreements that create the project, and the rating we would assign to the project would typically be no higher than that on the government counterparty (see "Project Finance Construction And Operations Counterparty Methodology," Dec. 20, 2011).

- **Limitation on physical security.** At times, physical security may be impractical, such as registering a mortgage on each property for a pipeline easement that crosses a large number of small properties. In these cases, lenders must have the same rights as the project with respect to the easement, and those rights should be properly constituted and transferable. To the extent that lenders don't have those rights, the project cannot be rated under these criteria.
- **Security limitations.** In some countries, effective security, as commonly available in jurisdictions such as the U.K. and U.S., is not permitted or enforceable under local law on certain types of assets. The transaction should provide all security consistent with project financings that is permitted under the laws that govern the project. This means that project accounts and agreements governed under the laws of separate jurisdictions where security is permitted should be pledged. In cases where project accounts and agreements are not pledged because of the limitations described above, the analysis would view all debt classes in the project structure as having the same default likelihood and would cap the project SACP at the parent's creditworthiness.

50. **Higher-ranking security.** Higher-ranking security can create additional credit risks unless concessions and joint ventures give project finance debtholders an opportunity to remedy any breach before taking action. We evaluate lenders' ability to step in or take other action that will enable the project to keep operating without interrupting cash flow or negatively affecting the lenders' security. Any remedial action should be either automatic, such as replacement of an operator, or should nominate a qualified party, such as an independent technical expert familiar with the transaction, to recommend and to act or to recommend actions to be implemented. We would not consider the trustee as qualified. If a mechanism to remedy any breach before taking action is not in place, the default risk of the project debt becomes based on the activity that cannot be remedied.
51. **Priority liabilities.** Liabilities that rank ahead of or *pari passu* with senior debt, such as hedges and swaps, can increase the default risk of the project finance debt by introducing terms and conditions that may expose the project to risks that are otherwise limited under these criteria (see paragraph 52). Other than liabilities created in the normal course of business, we would expect priority liabilities (such as operating leases or take-or-pay-agreements) to be limited to those that reduce project risk and are factored into the rating when we first assigned it. To the extent that other priority liabilities are established, we would analyze the structural or contractual impact on senior debt and any other debt rated in a project's capital structure.
52. **Early termination of hedging arrangements.** An event of default or a termination event that potentially gives a derivative counterparty the right to terminate or suspend a derivative agreement may introduce uncertainties in the amount and timing of an issuer's derivative cash flows. To identify provisions and assess the potential rating impact in derivatives agreements that may introduce such uncertainties, we use the "Global Derivative Agreement Criteria," June 24, 2013. If, in our view, any forecast cash flow uncertainties may exist, we would consider these in our cash flow analysis under the "Project Finance Construction And Operations Counterparty Methodology" and "Project Finance Operations Methodology."

vii) Existence of parent dependencies

53. The parent linkage analysis also evaluates whether any dependencies exist between a project and its parent that weaken the structural protections. To assess the degree to which parent dependencies are present at the project level, we examine whether an LPE is separate from its parent(s) with respect to contracts with parents and affiliates (see paragraph 54), taxes (see paragraph 55), and insurance (see paragraph 56).

54. **Contracts with parents and affiliates.** For Standard & Poor's to assess a project as de-linked from its parent, it must be limited to arms-length dealings with its parent(s) and its affiliates. (The arm's length principle is that the parties to a transaction are independent and on equal footing.) If a parent provides personnel, shared services, or other key needs, that could create a counterparty risk or a priority liability through the service agreement and may link the project to the parent (see "Project Finance Construction And Operations Counterparty Methodology," Dec. 20, 2011). We view seconded staff (the parent's employees) that are legally contracted to and paid by the project as project staff, not parent staff.
55. **Taxes.** If a project's parent or affiliates do not pay their taxes, that can result in a claim against the project's assets or cash flows. So, the analysis evaluates whether the project has any exposure to the tax obligations of its parent(s) or affiliates (see Appendix B). If it does--and if that exposure is not legally and structurally mitigated--the project SACP is capped by its parent(s) or affiliates (see table 2). For example, in certain jurisdictions, grouping all companies for tax calculation purposes can consolidate both tax losses and tax liabilities. Multijurisdictional transactions create additional tax issues that the criteria consider.
56. **Insurance.** The analysis evaluates whether project insurances are for the benefit of the project and are project specific. If a project relies on group insurance, it is exposed to the maintenance of insurance and the claims history of group members outside the project, effectively linking the project's credit quality to that of the group's. If we are unable to assess how the insurance benefits the project, we consider the project uninsured.

B. Structural Protection Analysis

57. We assess the extent to which a transaction structure protects the credit quality of a project through two main sets of covenants:
58. The LPE's covenants, which typically must include:
- Limitations on additional debt;
 - Limitations on additional security to third parties;
 - Limitations on asset sales; and
 - Minimum insurance requirements.
59. Cash management covenants, which typically must include:
- Cash flow protection and waterfall;
 - Liquidity and reserves;
 - Use of insurance proceeds; and
 - Distribution tests.
60. We classify a project's structural protection package as neutral, fair, or weak (see table 3) depending on the assessment of the LPE's covenants in table 4 and the cash management covenants in table 5. Both of these tables assess whether the LPE's covenants and the cash management covenants listed in paragraphs 58 and 59 are either neutral or negative. If a project's structural protections are fair, the project SACP is lowered by one notch. If a project's structural protections are weak, the project SACP is lowered by two notches.
61. The criteria assess the LPE's covenants and the cash management covenants based on the residual risk to the project--after mitigants and after allowing for any conditions attached to mitigants. If we assess fewer than two of the

covenants as neutral, then we will not rate the transaction under these criteria.

62. If we believe, following a review of a project's transaction and related documents, that any of the covenants listed in paragraphs 58 and 59 could materially limit the intended structural covenant protection under these criteria, we will likely classify a project's structural protection as weak.

Table 3

Structural Protections Analysis

63. We explain the rationale for each covenant and the assessment of its quality (neutral or negative) in the sections below.

LPE's covenants

64. Table 4 summarizes how we would assess the LPE's covenants.

Table 4

LPE's Covenant Quality Assessment		
	Neutral	Negative
Limitations on additional debt	--Debt limits are specified for each obligation across the project;	--Additional debt limits are absent or excessive, in our opinion, and/or
	--The additional debt is subject to appropriate nonrecourse provisions, and either the additional debt is rated at least as high as the project debt (at the time of issuance and at all times thereafter) or is subordinated to the project debt; and	--Provisions exist that allow increases in debt without mitigants either directly or through other means. For instance, the project can re-leverage and flow funds to equity.
	--Increases in debt are backed by an improvement in the project's business position or debt-funded expansions are conditional on the rating on existing debt not being lowered.	
Limitations on additional security to third parties	--No additional security is permitted, except in the normal course of business.	--Additional security, beyond that granted in the normal course of business, is permitted.
Limitations on asset sales	--Material asset sales are only permitted to fund replacement asset purchase or where there is expected to be no rating impact and with proceeds applied to senior debt reduction. The sale of essential assets is not permitted.	--Material asset sales are permitted, which may have a rating impact, or proceeds are not mandatorily used to replace assets or reduce senior debt.
Minimum insurance requirements	--The project maintains insurances appropriate for activities and risks undertaken, as determined by an independent insurance expert, as long as they are commercially available and are for the benefit of the project.	--The project does not maintain sufficient insurance.

i) Limitations on additional debt

65. Standard & Poor's examines limitations on additional debt to assess whether any restrictions on an LPE's ability to incur indebtedness exist, beyond those factored into the original rating. Additional debt limitations, if present, may help to reduce the likelihood that an LPE's other creditors would force the LPE into insolvency proceedings.
66. When analyzing permitted additional debt, Standard & Poor's also assesses the terms and conditions and form of any debt-like obligations, including take-or-pay arrangements and leasing agreements (see Appendix B for the treatment of additional debt in the financial analysis). Because the project is an operating business, at a minimum the additional debt test must allow for the project to raise debt in the normal course of business, such as for working capital and day-to-day transactions, but not for shareholders' benefit.
67. When reviewing the extent to which an LPE is restricted from incurring additional indebtedness, we may view certain

types of additional debt as not necessarily affecting an LPE's insolvency remoteness. Examples include debt that:

- Has the same or lower seniority and the same rating from Standard & Poor's as the rating on the existing rated debt; or
- Is issued as a series of deeply contractually and structurally subordinated debt. However, in addition to analyzing the specific terms and conditions of any deeply subordinated debt, we would also assess the extent to which the courts in a particular legal jurisdiction would enforce these terms and conditions (see "Project Finance Framework Methodology").

68. To assess this covenant as neutral, Standard & Poor's also evaluates whether:

- There are material agreements between the LPE and its creditors that include nonpetition language, pursuant to which the creditors agree not to initiate insolvency proceedings against the LPE and not to join any such proceedings; and
- There are material agreements between the LPE and its creditors that limit the creditors' recourse to the assets backing the rated debt in accordance with the relevant order of priority set out in the documentation.

ii) Limitations on additional security to third parties

69. Additional security interests over a project's assets or security to third parties that is equal to or higher than the project debt weakens the credit standing of the senior debt, and we would assess it as a negative factor (see table 4). This excludes security resulting from the normal course of business (by trade creditors) and security taken into account that is typically in the form of leases over moving equipment, such as motor vehicles and moveable plants. If the additional security interests are extensive and cause the security to transfer control of essential project components, such as the power plant to a third-party lender that can reduce project lenders' ability to step in and operate the project, the transaction structure does not meet the requirements of an LPE, so these criteria will not apply.

iii) Limitations on asset sales

70. If material assets can be sold, the use of proceeds to reduce existing debt may be a negative or neutral factor (see table 4). Asset sales are often part of normal business. However, disposing of material income-producing or essential assets can weaken credit quality--particularly when they are sold below market value. Assets also include financial assets such as swaps and hedges that may be terminated for a profit if in the money and, hence, remove the credit advantage they provided. The ability to sell material assets and then purchase replacement services through a lease or equivalent (take or pay), such as the rolling stock to ship ore from a mine, generally places lenders in an inferior position relative to before the transaction, and we will typically consider this a negative factor. If acted upon, it may result in a lower rating if senior debt is structurally subordinated.

iv) Minimum insurance requirements

71. For the criteria to assess a project as neutral, the project should maintain insurances appropriate for activities and risks it undertakes, as determined by a reputable insurance expert, as long as they are commercially available and are for the benefit of the project. A neutral insurance package includes business interruption and casualty insurance policies. Absence of insurance or deductible limits that are high will result in Standard & Poor's analyzing the normally insured risk as if it is not insured.

Cash management covenants

72. A cash management structure establishes priority of payments through cash flow waterfalls and provides liquidity measures, such as reserve accounts and restrictions on distributions. These provisions can reduce project risk because they establish contractual account management and the allocation of operating revenue and other cash inflows. We assess the cash management covenants as neutral or negative (see table 5). Furthermore, weaknesses in the cash management structure can result in the project SACP being capped (see table 6).
73. We analyze cash flow waterfall, reserve accounts, and distribution tests to determine whether a project retains adequate liquidity for future cash needs given the variability of cash flows from period to period. Because the cash is retained for future liquidity, forward-looking tests and reserving mechanisms provide stronger protection from future cash flow volatility.
74. If there is no trustee to control all cash flow the project generates (based on detailed project documents that define precisely how cash is collected and managed), the project SACP may be no higher than the rating on the cash manager (see also "Counterparty Risk Framework Methodology And Assumptions," June 25, 2013).

Table 5

Cash Management Covenants Quality Assessment		
	Neutral	Negative
Cash flow protection and waterfall	--Waterfall meets guiding principles (paragraph 75).	--The financing documents allow for payments for growth capital expenditure that ranks ahead of any component of senior debt service or senior debt reserve replenishment.
Liquidity and reserves	--All funds in reserve accounts, including the DSRA, are available at all times and in full, as established in the financing documents.	--The financing documents do not provide for the replenishment of reserve accounts when used (except for single use reserves) or reserve account replenishment ranks after subordinated debt service and growth expenditure in the cash waterfall.
	--The amount of the DSRA covers the period of time from the breakdown to return to full-scale operations after a major breakdown--such as a turbine failure for a power plant.	
Use of insurance proceeds	--Insurance proceeds, other than for immaterial claims, should be under the trustee's control in a special account and used to reinstate the project, including replenishment of reserves or the repayment of debt before excess proceeds can be distributed.	--The project can use insurance proceeds to meet distribution tests and, subject to passing those distribution tests, the project can distribute those proceeds to equity.
Distribution test	--Distribution test is robust and takes into account actual performance and future project needs (paragraph 78).	--Distribution test is absent or does not adequately reserve cash ahead of a project need, unless mitigated by compensating liquidity, additional reserve (see paragraph 78), or other mechanisms, such as an effective cash sweep; or
		--Parent or affiliate has the right to forego contractual payments such that the distribution test can be exceeded.

Table 6

Rating Limits Applied To Cash Management Covenants On Stand-Alone Projects		
Category	Situation	Impact on project SACP
Debt service reserve account	DSRA is insufficient to cover a period of major operations interruption (paragraph 76).	Generally not higher than 'bb+' unless mitigated by compensating liquidity.
	DSRA is not replenished automatically from cash flow if drawn (paragraph 76).	Generally not higher than 'bb+' unless mitigated by compensating liquidity.

Table 6

Rating Limits Applied To Cash Management Covenants On Stand-Alone Projects (cont.)		
Category	Situation	Impact on project SACP
Insurance proceeds	The project does not use material proceeds of insurance claims to reinstate the project or reduce debt fully before being included in the general funds, which can be distributed (paragraph 77).	Generally not higher than 'bb+' unless mitigated by compensating liquidity.
Distribution test	Distribution test includes expected, rather than actual, proceeds of an insurance claim (paragraph 78).	Generally not higher than 'bb+' unless mitigated by compensating liquidity, additional reserve (see paragraph 78), or other mechanisms, such as an effective cash sweep.
	Distribution test is absent or the test is only backward-looking, except when expenses or revenues are variable by no more than 5% year over year (paragraph 78).	Generally not higher than 'bb+' unless mitigated by compensating liquidity, additional reserve (see paragraph 78), or other mechanisms, such as an effective cash sweep.

i) Cash flow protection and waterfall

75. A project's cash flow waterfall is either neutral or negative (see table 5). The guiding principle of the cash flow waterfall is that the cash usage priority during operations should, as a first priority, provide for all expenses necessary to maintain ongoing operations, followed by senior debt service and then replenishment of senior debt protections, such as reserve accounts.

ii) Liquidity and reserves

76. Standard & Poor's assesses a project's liquidity and reserves as neutral or negative (see table 5), based on the extent to which a reserve account that provides protection against an interruption to debt service due to a breakdown or an interruption to operations reduces default risk. For example, the criteria typically assess a project that uses proven technology as neutral when it includes a debt service reserve account (DSRA) with a minimum of six months of debt service (interest payments and scheduled principal) or expected future demand on such reserve. If principal payments are made once every year, Standard & Poor's would calculate the minimum protection the reserve offers by the number of months of coverage provided in every period. When calculating the level of reserve coverage in our analysis, we deduct the amount of sinking funds and committed agreements used to mitigate lumpy debt repayments and to refinance bullet or balloon maturities ahead of refinancing, from the amount of scheduled principal.
- Major maintenance and other reserve accounts. Standard & Poor's assesses to what extent prefunding major maintenance, including lifecycle costs or setting aside a reserve to cover ramp-up, strikes, or tax payments, ensures funds are available when needed to mitigate specific risks (for the definition, see the Glossary in "Project Finance Framework Methodology"). To be effective mitigants, they will need to be funded adequately and in advance of the need. Lifecycle look-forward tests that identify and address remaining lifecycle deficiencies and that preserve cash well ahead of the need are a credit positive. Lack of a maintenance-reserve account for a project in which capital expenditures are expected to be lumpy or where there is some concern about the technology being employed is a negative factor for the project SACP. We do not have a minimum funding level threshold for these reserves, but we do gauge the need based on the findings of the independent expert's technical evaluation and our experience.
 - Funding of reserve accounts. For comparability in our cash flow analysis, we assume the reserve is cash funded and the letters of credit (LOCs), or similar instrument, are drawn and included as part of project debt service at the project interest rate after allowing for any fees payable for the LOC (see Appendix B). Cash reserves deposited in appropriate bank accounts or invested in low-risk and liquid deposits provide the most certainty of availability (see "Counterparty Risk Framework Methodology And Assumptions," June 25, 2013).
 - Replenishment of reserve accounts. For a project to have a 'bbb-' or higher project SACP, once the project uses a

DSRA, the project must use excess cash flows to replenish the reserve before servicing subordinated debt or equity to ensure senior debt protection levels remain at the level assumed before the use of the reserve. If the DSRA is not replenished once used, senior debt no longer benefits from its protection. If compensating liquidity does not mitigate this weakness, the project SACP can be no higher than 'bb+' (see table 6). However, we would not expect the project to replenish reserve accounts for single-use events, such as change of law, once used.

iii) Use of insurance proceeds

77. A project's use of insurance proceeds is either neutral or negative (see table 5). Inclusion of insurance proceeds (other than any excess once the project is reinstated) in general project revenue could lead to funds leaking from the project, thus weakening the project's credit quality. Unless compensating liquidity mitigates this, the project SACP can be no higher than 'bb+' (see table 6).

iv) Distribution test

78. We assess a project's distribution tests (see the Glossary in "Project Finance Framework Methodology") as neutral or negative (see table 5). Tests vary in their format but should reflect needs within the next 12 months of operations, to allow for seasonality and volatile cash flows and to effectively preserve additional cash to meet project liquidity needs. A test that is absent or only backward-looking limits the project SACP to 'bb+', unless mitigated by compensating liquidity, or if cash flow available to service debt is very predictable (varies by no more than 5% year over year) (see table 6).

C. Additional Structural Elements

Structural and contractual subordination

79. For Standard & Poor's to apply these criteria, the project finance senior debt should not be structurally or contractually subordinated unless adequately mitigated. An example of structural subordination would be a project entity that is a subsidiary or a parent company of the debt issuer, and the issuer is not the immediate beneficiary of the project's cash flow and assets. If the security arrangements, back-to-back loans, and cross guarantees within the project structure seek to ensure that the debtholders have rights to enforce against the assets and cash flows at the project-company level, that could mitigate the risk related to the issuer not being the immediate beneficiary of the project's cash flow and assets. If any entity that forms part of the project is not part of the LPE structure, that entity exposes the project financing to its credit risk, defeating the risk mitigants of the transaction structure. As such, if a project entity is not covered by the project LPE structure directly or through some form of cross project loan or guarantee, we will incorporate that into our rating on the project's debt and may render the structure not ratable under these criteria.

Prior existence

80. We assess the risk associated with prior existence of an LPE by analyzing audited accounts, certifications from company officers about preexisting liabilities, including potential or actual legal proceedings and outstanding tax liabilities, and, where appropriate, legal and tax opinions (see table 7).

Table 7

Rating Impact Of LPE With Prior Existence	
Description	Impact on the analysis
All project entities are newly created or are shelf companies with no operating history	No impact
An entity has prior operating history with all known outstanding potential liabilities, such as prior contractual obligations and/or employment liabilities, reasonably identified and able to be calculated	Project SACP incorporates the outstanding liabilities into the analysis.
An entity has prior operating history, but the transaction sponsor may remove or mitigate potential liabilities from the existing entity to create an LPE	Audited accounts, legal and tax opinions, certifications from company officers about preexisting liabilities, including, but not limited to, potential or actual legal proceedings and outstanding tax liabilities, may be requested to confirm such removal or mitigation. In addition, we would assess any resulting dependence or link to the parent as a result of the removal. Such removal or mitigation would reduce the outstanding liabilities included in the analysis.
An entity has audited accounts but prior operating history that is incomplete, or the entity has some outstanding liabilities or legal tax action that cannot be accurately quantified	Project SACP would incorporate the outstanding liabilities and would not be higher than 'b+'. If another rated counterparty takes on the liabilities, for example under an unconditional guarantee, that counterparty may constrain the project SACP.

APPENDIX

81. This paragraph has been deleted.

A. Cash Management Controls And Financial Analysis

82. Our analysis assesses a project issue's cash flow management. For consistency and comparability across projects, we treat all cash management controls similarly in our financial analysis (see table 8).

Table 8

Factoring Transaction Structure Into The Financial Analysis		
Category	Situation	Impact on the financial analysis
Permitted activities	The project's permitted activities include expansion or other activities beyond those necessary to undertake construction and operation of the assets.	The downside scenario may assume that any permitted activities will be carried out at the earliest date permitted, factoring in any other conditions and mitigants and any additional debt required to carry out the expansion, and that all cash that is permitted will be distributed to equityholders.
Transfer of tax losses	Tax losses have been or can be transferred to the parent or other nonproject entities.	In the base-case financial analysis, any taxes the project owes (such as income, withholding, sales, and property taxes) are treated as operating expenses. If the project's tax losses are transferred to the parent or other nonproject entities, the cash flow analysis will ascribe no benefit to the tax losses that are permanently transferred unless otherwise mitigated (see "Counterparty Risk Framework Methodology And Assumptions," published June 25, 2013). Consequently, we would expect the timing of cash payment of taxes to be earlier than when the tax losses had been retained.
Government taxes	Government taxes are likely to be payable.	We would increase the debt service to ensure full payment of debtholders in case taxes need to be paid. This is often mitigated by dedicated cash reserves--or some other mitigant, such as a contractual obligation on the part of sponsors--to fund these taxes.
Priority liabilities	Swaps and other liabilities may rank higher or equal to senior debt before or after default.	We will analyze the project's exposure to these additional liabilities as part of the project's senior debt and in accordance with "Global Derivatives Agreement Criteria," published June 24, 2013.
LPE covenants	LPE covenants set limits defined in the financing documents.	Our base-case financial analysis is that the project will operate within the levels that the covenants establish, except for additional debt.

Table 8

Factoring Transaction Structure Into The Financial Analysis (cont.)		
Category	Situation	Impact on the financial analysis
Additional debt	Project is able to issue additional debt.	We'll factor the limits set by the additional debt covenants into our base-case and downside scenarios, taking into account mitigants, conditions, and likelihood of additional debt being drawn.
Subordinated debt	Subordinated debt is not fully subordinated in payment and security or can constitute a claim on senior debt.	We would analyze subordinated debt as if part of the project's senior debt.
Insurances	The transaction structure does not have adequate insurance.	Our base-case and downside scenarios will assume no mitigation of this risk.
Cash flow waterfall exception	The cash waterfall includes payments to subordinated debt ahead of topping up the senior debt reserve account or before paying senior debt principal.	We would treat subordinated debt as part of senior debt in the cash flow analysis.
Management fees	According to financing documents, expenses due to affiliates or management fees are considered subordinated.	We will include expenses necessary to operate the project's asset as an operating expense, even though they are subordinated, according to financing documents.
Cash management discretion	Management has some discretion over cash management.	We will assume management will use its discretion to benefit the parent.
Distribution test	Project passes distribution test.	Once the project passes the distribution test, all available cash is distributed with no clawback (meaning that the cash cannot be claimed back).
Reserve account fluctuations	Target debt service reserve amount fluctuates with future scheduled debt repayments.	Funds from operations to top up the reserve are included as an expense ahead of any payment to subordinated debt in our rating analysis.
Reserve account balance	Reserve balance exceeds target.	The amount of excess reserves released above the target amount is added back to cash flows and may be distributed once the project passes the distribution test.
Reserve account funding	DSRA funded by LOC.	An LOC or similar instrument is drawn and included as part of the project's debt service at the project interest rate after allowing for any fees payable for the LOC. Given the role of the DSRA, we do not include projected interest income on deposits as a funding mechanism, and we do not include the DSRA as available to reduce the final debt payment. Repayment of debt associated with drawing an LOC is added to the analysis where the LOC would rank if drawn.
Reserve account funding	DSRA funded from cash flows.	We would only give credit to a portion of the reserve account funded at the time of our analysis. Therefore, we would assign no value to the expected balance of the reserve until it was fully funded.

REVISIONS AND UPDATES

This article was originally published on Sept. 16, 2014. These criteria became effective on Sept. 16, 2014, the date of publication.

Publication of this article followed our request for comment "Project Finance Transaction Structure Methodology," published Nov. 15, 2013.

This article superseded "Updated Project Finance Summary Debt Rating Criteria," published Sept. 18, 2007, and "Criteria For Special-Purpose Entities In Project Finance Transactions," published Nov. 20, 2000, as well as other articles superseded by the release of the criteria referred to under the heading "Related Criteria."

Changes introduced after original publication:

- Following our periodic review completed on Sept. 16, 2016, we updated the criteria references, including removing references to superseded criteria, updated the contact list, and deleted sections that appeared in paragraphs 3, 10, and 11, which were related to the initial publication and no longer relevant.
- Following our periodic review completed on Sept. 14, 2017, we updated the contact list and criteria references.

RELATED CRITERIA AND RESEARCH

Related Criteria

- Structured Finance: Asset Isolation And Special-Purpose Entity Methodology, March 29, 2017
- Project Finance Framework Methodology, Sept. 16, 2014
- Project Finance Operations Methodology, Sept. 16, 2014
- Group Rating Methodology, Nov. 19, 2013
- Project Finance Construction Methodology, Nov. 15, 2013
- Counterparty Risk Framework Methodology And Assumptions, June 25, 2013
- Global Derivative Agreement Criteria, June 24, 2013
- Project Finance Construction And Operations Counterparty Methodology, Dec. 20, 2011
- Principles Of Credit Ratings, Feb. 16, 2011
- Understanding Standard & Poor's Rating Definitions, June 3, 2009

These criteria represent the specific application of fundamental principles that define credit risk and ratings opinions. Their use is determined by issuer- or issue-specific attributes as well as Standard & Poor's Ratings Services' assessment of the credit and, if applicable, structural risks for a given issuer or issue rating. Methodology and assumptions may change from time to time as a result of market and economic conditions, issuer- or issue-specific factors, or new empirical evidence that would affect our credit judgment.

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