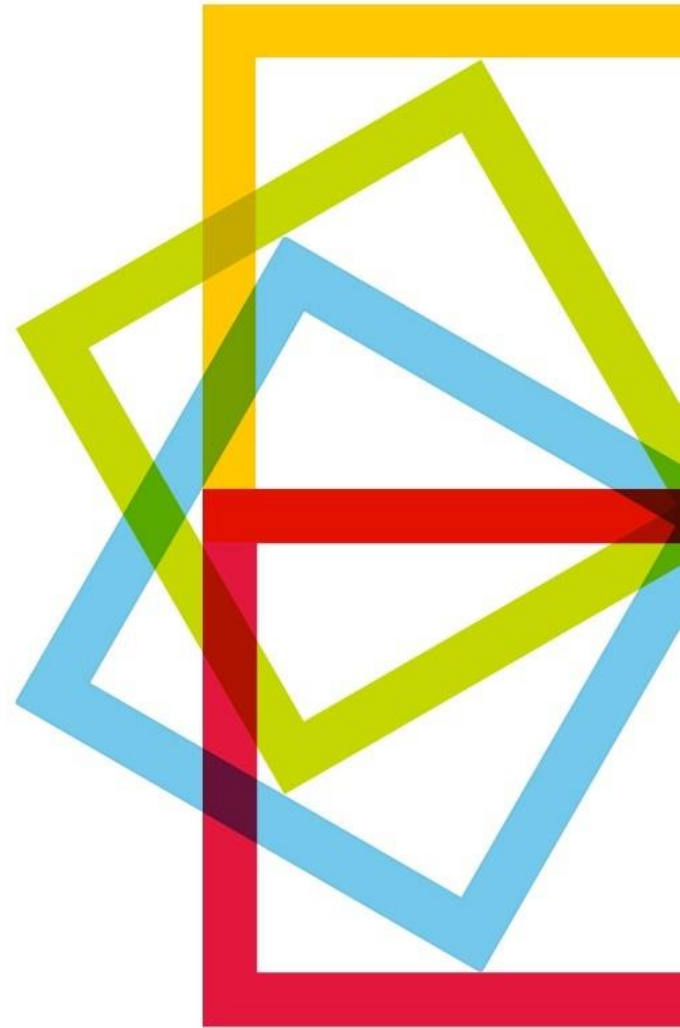


# **PROJECT FINANCE CRITERIA OVERVIEW**

**Trevor D'Olier-Lees  
Director**

**January 29, 2015**



# Agenda

## Project Finance Criteria Details:

- Framework
- Construction
- Counterparty
- Operations
- Transaction Structure

## Questions & Answers

# Project Finance Criteria Overview

[www.SPRatings.com/ProjFinFocus](http://www.SPRatings.com/ProjFinFocus)

# Project Finance Criteria Cover Five Key Areas

## PROJECT FINANCE RATINGS FRAMEWORK

Final Criteria:  
Sept. 16, 2014

### Counterparty

Final Criteria:  
Dec. 20, 2011

### Construction

Final Criteria:  
Nov. 15, 2013

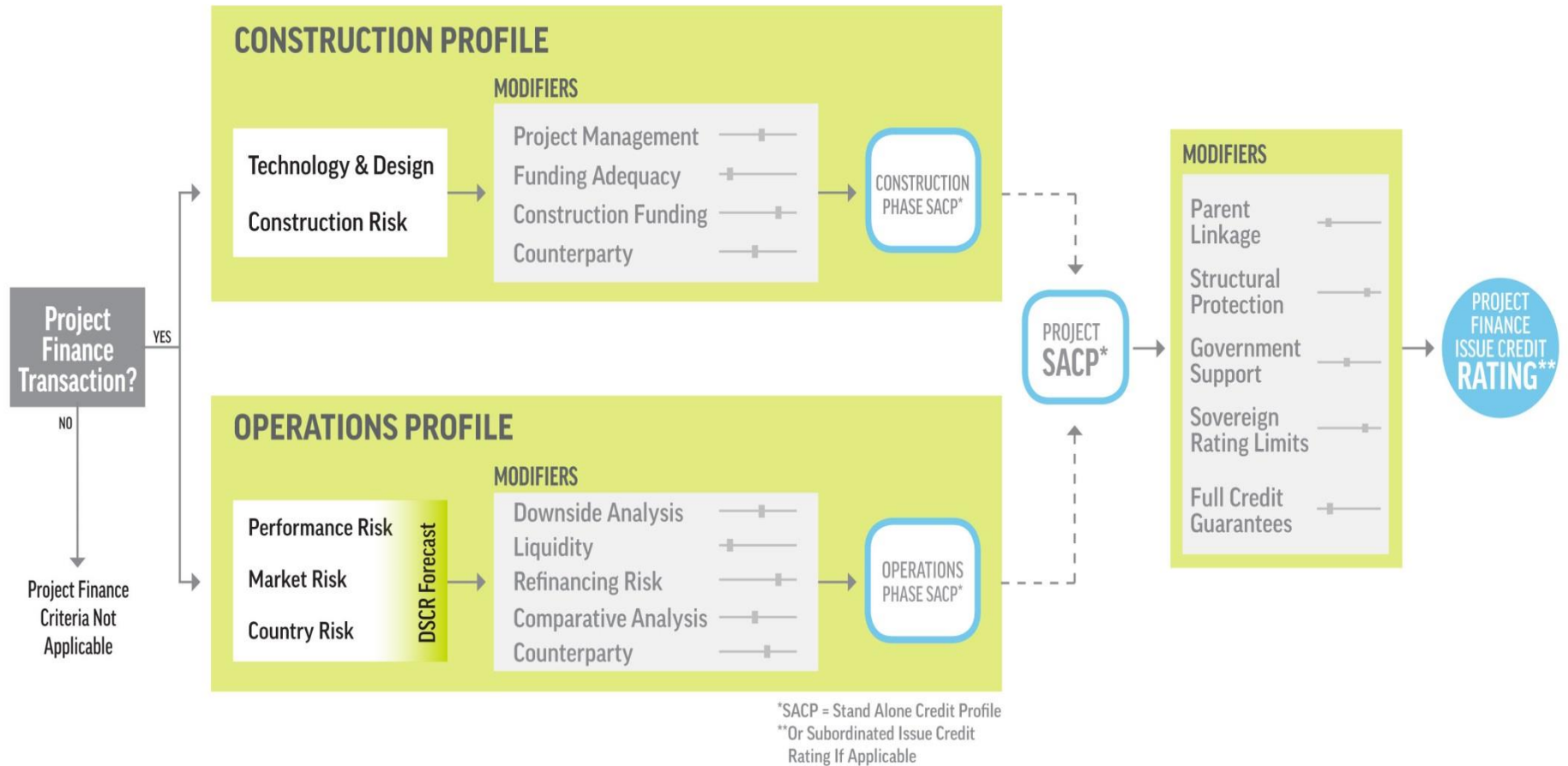
### Operations

Final Criteria:  
Sept. 16, 2014

### Transaction Structure

Final Criteria:  
Sept. 16, 2014

# Project Finance Ratings Framework



# Project Finance Ratings Framework

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# Step 1: Determine Whether Project Finance Criteria Can Be Applied

**For project finance criteria to apply, the transaction must contain:**

- Minimum transaction elements
- Limited or non-recourse to the sponsors/shareholders; lenders look only to project cash flows, assets, and contractual agreements
- Operating and revenue risk
- An asset that has a limited life, and restricted activities
- Covenants and controls for senior secured lenders
- Established responsibilities and risk allocation for project life



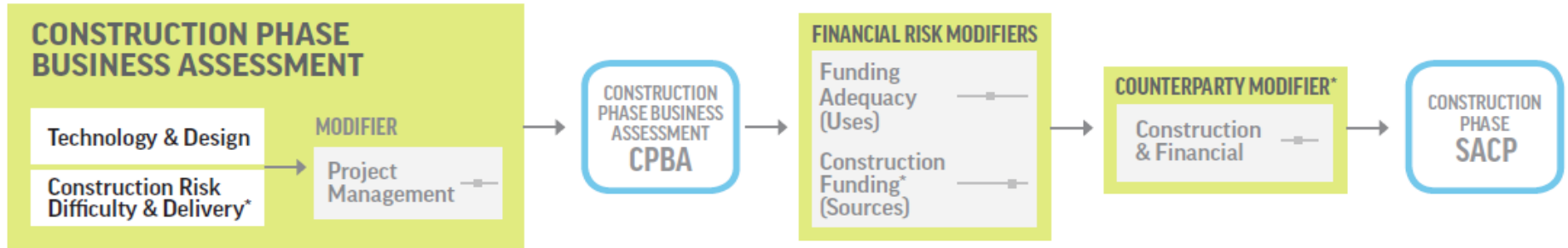
**If the features are not met, project finance criteria does not apply**



# Construction Phase Stand Alone Credit Profile (SACP)



# Construction Phase Stand Alone Credit Profile

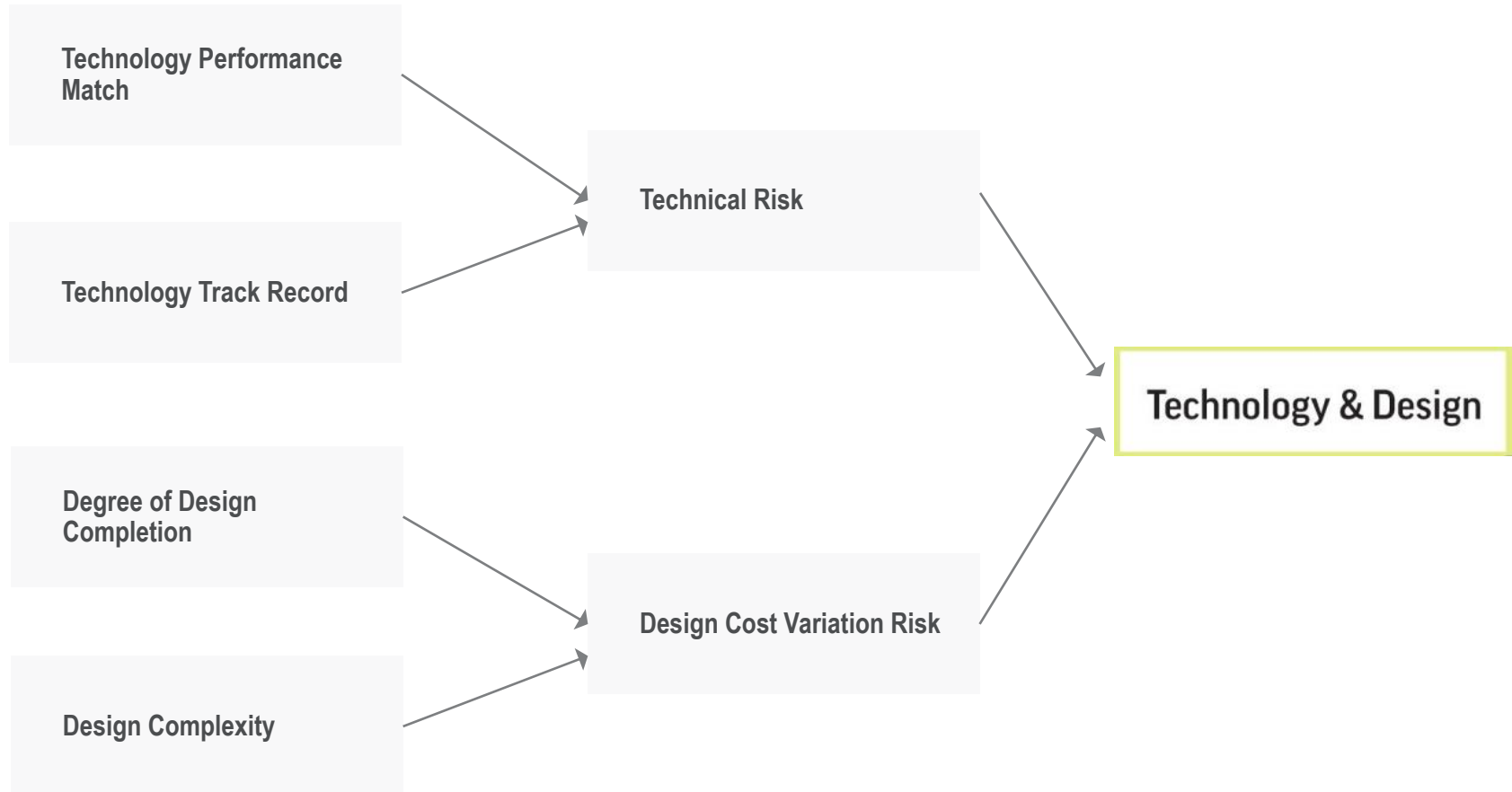


\*Country risks are assessed / incorporated

# Business Assessment:

## Technology And Design Risk Score

Assess the likelihood that when built the project will perform as expected and no will not cost more than estimated.



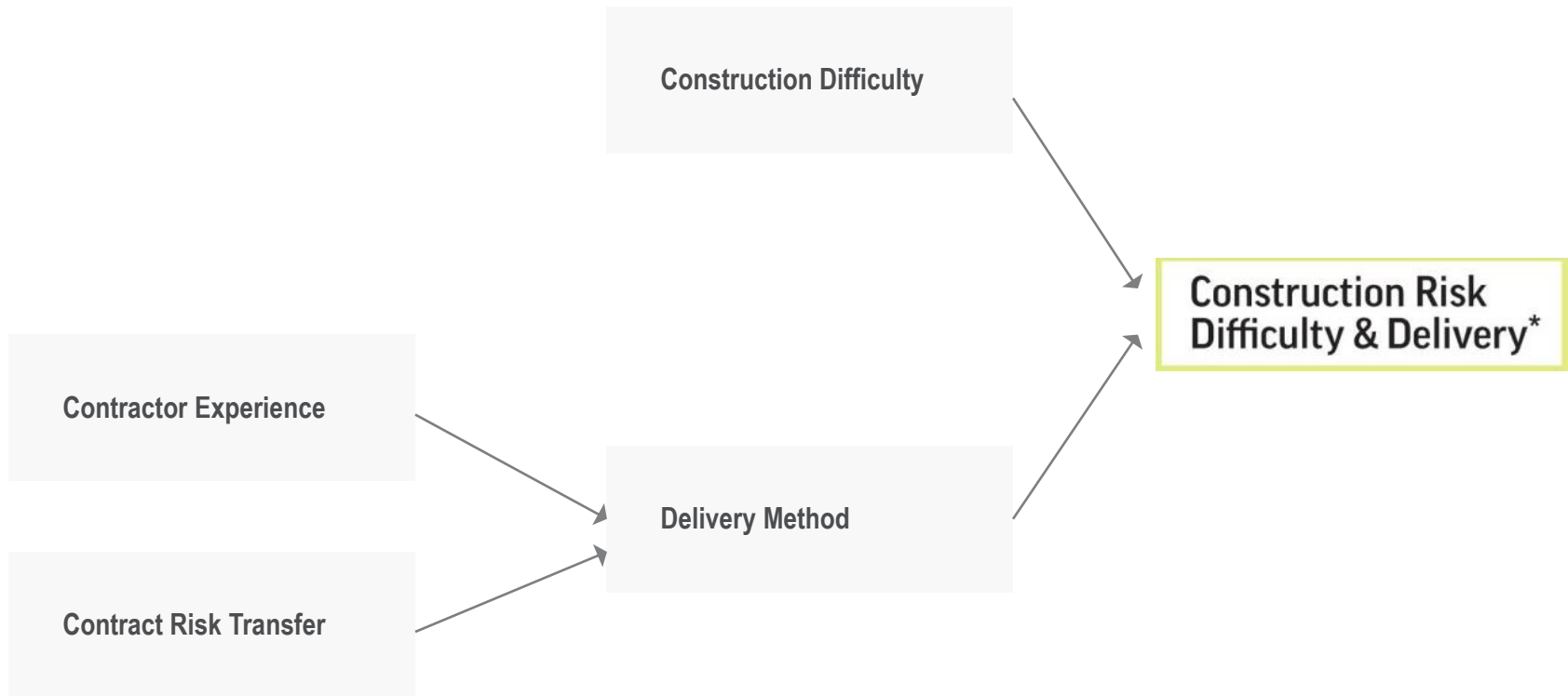
# Table: Technology And Design Risk

## Technology And Design Risk

Design cost variation risk	Technological risk				
	Very strong	Strong	Adequate	Weak	Very weak
Very low	1	2	3	4	5
Low	2	2	3	4	5
Modest	2	3	4	5	5
Moderate	3	4	5	*	*
High	4	5	*	*	*

\*Construction phase business assessment is generally not assessed higher than 'b-' unless mitigated by recourse to compensating third-party financial support otherwise more typical of full recourse financings

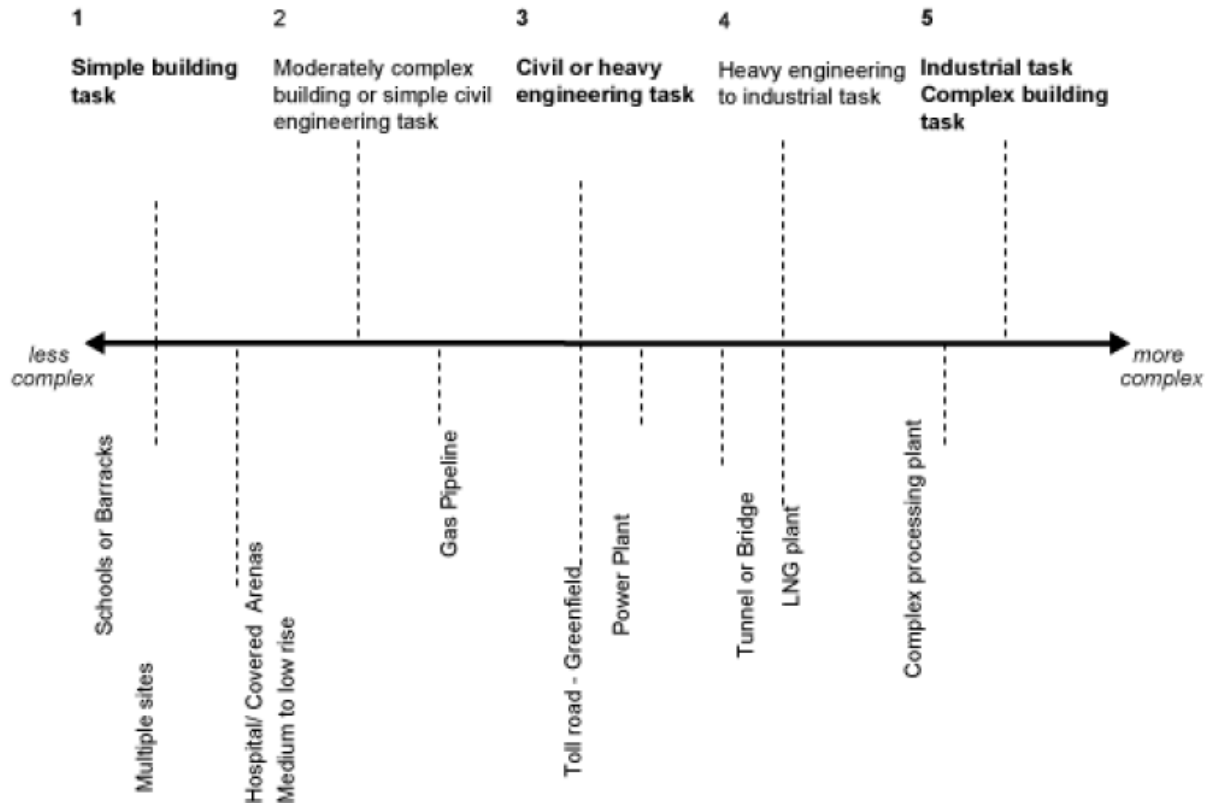
# Business Assessment: Construction Risk Scoring



# Business Assessment: Construction Difficulty

Diagram Of Construction Difficulty

Construction difficulty



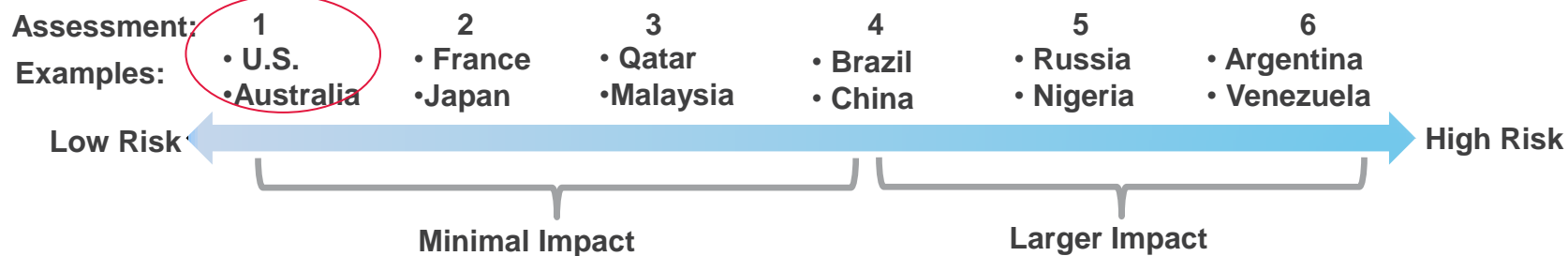
© Standard & Poor's 2013.

# Table: Construction Risk

Construction Risk					
Delivery method	Construction difficulty				
	Simple building task	Moderately complex building or simple civil engineering task	Civil or heavy engineering task	Heavy engineering-to-industrial task	Industrial task complex building task
Very strong	1	1	1	2	3
Strong	1	2	3	4	4
Adequate	2	3	4	5	*
Weak	4	4	5	*	*
Very weak	5	5	*	*	*

\*Construction phase business assessment is generally not assessed higher than 'b-' unless mitigated by recourse to compensating third-party financial support otherwise more typical of full recourse financings.

# Business Assessment: Incorporating Country Risk



Country Risk Assessment				
Sources	Sovereign Criteria + Adjustments	Sovereign Criteria	BICRA Criteria	External Sources + S&P Analytics
Country Risk subfactors	I. Economic Risk	II. Institutional & Governance Effectiveness Risk	III. Financial System Risk	IV. Payment Culture / Rule of Law Risk
Preliminary country risk assessment	Average country-risk subfactors			
Rounding	Situation and factor based rounding			
Final country risk assessment	Individual Country Risk (established for > 90 countries)			

Our country risk assessments reflect the relative risks of operating in different countries

\*When the country risk assessment is significant (assessment of 5 or 6), this limits our assessment of contract risk transfer



# Business Assessment: Preliminary CPBA



Table 1. Preliminary Construction Phase Business Assessment

Construction risk					
Technology and design risk	1	2	3	4	5
1	a+	a	a-	bbb+	bbb-
2	a	a-	bbb+	bbb	bb+
3	a-	bbb+	bbb	bbb-	bb
4	bbb+	bbb	bbb-	bb+	bb-
5	bbb-	bb+	bb	bb-	b+

# Business Assessment:

## Project Management Modifier

Assessment of the following project management sub-factors may result in an adjustment to the CPBA:

Construction cash management	Design approval	Permits and acquisition of right of way	Project management expertise	Planning and budgeting execution risk	Sunset date	Dispute resolution
------------------------------	-----------------	---	------------------------------	---------------------------------------	-------------	--------------------

Each sub-factor is assessed at Positive, Negative or Very Negative

### Determining The Overall Assessment For Project Management

#### Overall assessment of project management

#### Sub-factor (see table 8)

Strong	All of the sub-factors are positive.
Satisfactory	The majority of sub-factors are positive, with some negative assessments.
Fair	The majority of sub-factors are negative, or we view key aspects of project management as potentially harmful to the company's risk profile.
Weak	Any assessment is very negative.

### Construction Phase Business Assessment

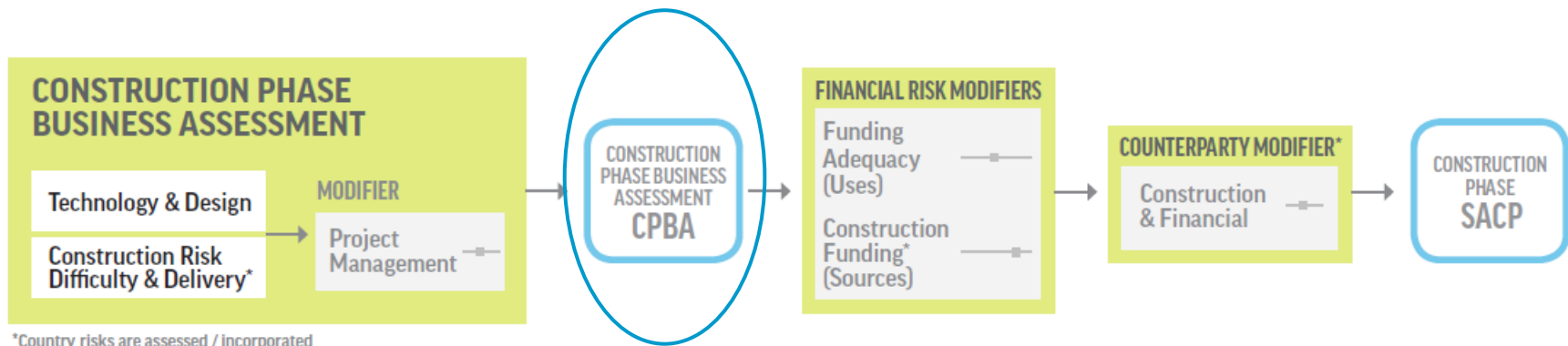
#### Overall assessment of project management (see table 9)

#### Impact on preliminary construction phase business assessment

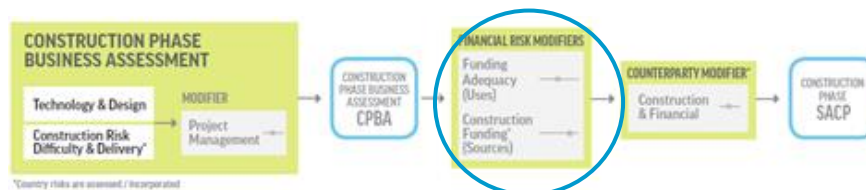
Strong	Plus 1 notch
Satisfactory	No change
Fair	Minus 2 notches
Weak	Generally not assessed higher than 'b-' and at least minus two notches

# Construction Phase Business Assessment **CPBA**

**CPBA = Preliminary CPBA + or - project management modifier**



# Financial Risk Adjustment

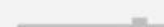


Funding  
Adequacy  
(Uses)



Construction costs  
Working capital  
Reserves  
Interest

Construction  
Funding\*  
(Sources)



Debt funding certainty

Equity certainty  
Interest income during construction  
Revenue  
Third Party support  
Contractor support

**Financial Risk Adjustment focuses on our base case and likely downside scenarios. This adjustment cannot raise the CPBA**

\*A project's construction funding can be influenced by country-specific risks

# Financial Risk Adjustment

## Funding Adequacy (Uses Of Funds)

	Downside need	Base need
<b>Construction costs and other project start-up costs</b>	Funding meets or exceeds construction costs under Standard & Poor's downside scenario (see Appendix) or funding covers any early completion bonus payment under a fast-track scenario	Funding exceeds construction costs for base-case scenario, but not that of the downside scenario (see Appendix)
<b>Interest payable during construction (see Appendix)</b>	Interest payments cover the downside case need	Interest payments funded until operations commence to cover interest under base case
<b>Working capital</b>	Initial working capital fully funded	Initial working capital fully funded
<b>Reserve accounts</b>	Fully funded	Fully funded

## Use Of Subfactor Assessments For Determining The Impact Of Funding Adequacy (Uses Of Funds)

The impact of funding adequacy	Subfactor assessment
<b>Neutral</b>	Funding is available for all costs under the downside scenario.
<b>Marginally negative</b>	Funds cover construction costs but are not sufficient to meet the combination of other uses, such as reserves funding adequacy. Reserve accounts can be less than needed in the downside case, but not less than needed in the base case.
<b>Negative</b>	A combination of the marginally negative conditions above plus any material conditions under the transaction documentation, which are assumed as having the potential to inhibit the timely drawing of a letter of credit (or similar instrument) used to support a reserve account in all downside requirements.
<b>Insufficient</b>	Funding is not sufficient to cover construction costs, interest, or working capital required to commence operations under our downside case. Total funding sources do not meet the sum of all downside requirements.

# Financial Risk Adjustment

## Construction Funding (Sources Of Funds)

**Highly certain**

**Certain**

**Uncertain\***

**--Debt funding certainty—**

**--Equity certainty—**

**--Interest income during construction—**

**--Revenues from operations during construction—**

**--Third-party support—**

**--Contractor support—**

\*No funds from uncertain sources are included in the analysis. §By “fatal” conditions we refer to the reasonable decision by lenders to prevent a drawdown when the project is on the brink of failing and has little prospect of recovery and being completed.

# Financial Risk Adjustment: Incorporating Country Risk

## Use Of Subfactor Assessments For Determining The Impact Of Construction Funding (Sources Of Funds)

The impact of construction funding	Country risk assessment 1-3	Country risk assessment 4
<b>Neutral</b>	Highly certain sources are sufficient to meet the minimum funding requirement of all the downside scenario needs.	Highly certain sources are sufficient to meet 101% of the minimum funding requirement of all the downside scenario needs.
<b>Marginally negative</b>	Sources are sufficient to meet minimum funding requirement of the downside scenario needs with <u>debt funding being certain and all other sources assessed as highly certain</u> or with debt funding and equity being highly certain and all other sources as certain.	Sources are sufficient to meet 101% of the minimum funding requirement of the downside scenario needs. With debt funding being certain and all other sources assessed as highly certain or with debt funding and equity being highly certain and all other sources as certain.
<b>Negative</b>	Exceeds the conditions necessary for uncertain but does not meet the conditions necessary for marginally negative.	Exceeds the conditions necessary for uncertain but does not meet the conditions necessary for marginally negative.
<b>Uncertain</b>	Sources are not sufficient to meet the minimum funding requirement of the downside scenario. The construction phase SACP for uncertain is generally not higher than 'b-'.	Sources are not sufficient to meet 101% of the minimum funding requirement of the downside scenario. The construction phase SACP for uncertain is generally not higher than 'b-'.

Note: Sources that have conditions on their use are only included where the conditionality means they can be used to complete construction. In jurisdictions with a country risk assessment of 4, additional funding cushion is required net of mitigants. In jurisdictions with a country risk assessment of 5 or 6, we will develop a country-specific construction downside scenario analysis because the country risk factors that impact construction are expected to be more predictable.



# Financial Risk Adjustment:

## Preliminary CPBA

### Financial Risk Adjustment

How we express our analytical opinion (rankings and qualifiers)

Impact on the construction phase business assessment by a maximum\*

#### Financial risk adjustment: Funding adequacy (uses of funds) (see table 12)

Neutral	No change
Marginally negative	-1 notch
Negative	-2 to -3 notches
Insufficient	Generally not assessed higher than 'b-' and at least minus 2-3 notches

#### Financial risk adjustment: Construction funding (source of funds) (see table 14)

Neutral	No change
Marginally negative	-1 notch
Negative	-2 to -3 notches
Uncertain	Generally not assessed higher than 'b-' and at least minus 2-3 notches

Note: Not generally rated higher than 'b-', then 'CCC' criteria applies (see "Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings," published Oct. 1, 2012). \*The total impact on the construction phase business assessment is the sum of the funding adequacy and construction funding impacts. §Three notches are applied when the total funding or financing is closer to the base case than the downside case. In contrast, two notches would mean the funding and financing are less than the total downside but not significantly below that scenario.

# Counterparty Analysis

# Counterparty Adjustment & Others



## Is the contractor counterparty replaceable or irreplaceable?

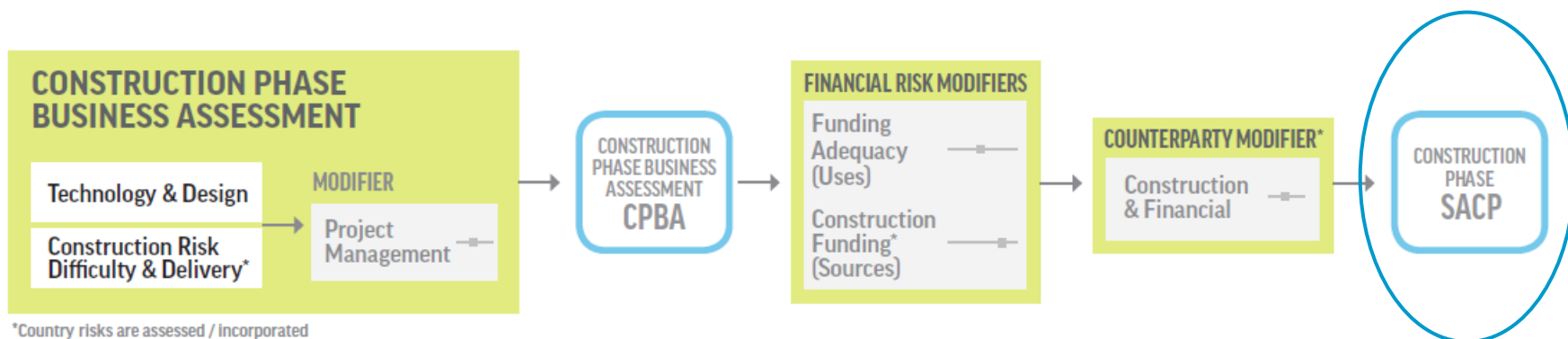
**Table 3. Maximum Contract CDA For A Replaceable Construction Counterparty (Project Finance Construction and Operations Counterparty Methodology)**

Credit enhancement provided	Maximum effect to CDA on construction counterparty Type of construction	
	Simple-to-moderately complex building	Civil or heavy engineering
No credit enhancement	Builder's ICR or credit estimate	Builder's ICR or credit estimate
Credit enhancement covers costs sufficient to cover replacement of main contractor	+2 notches	+1 notches
Credit enhancement covers cost to replace main contractor and a minor subcontractor	<b>+4 notches</b>	+2 notches
Credit enhancement covers costs sufficient to cover replacement of main contractor and a major subcontractor	+5 notches	+3 notches
Credit enhancement covers 1.5x costs to replacement of main contractor and a major subcontractor	+6 notches (two categories)	+4 notches

\*Industrial and more complex construction types do not qualify as replaceable. CDA—Counterparty Dependency Assessment. ICR—Issuer Credit Rating.

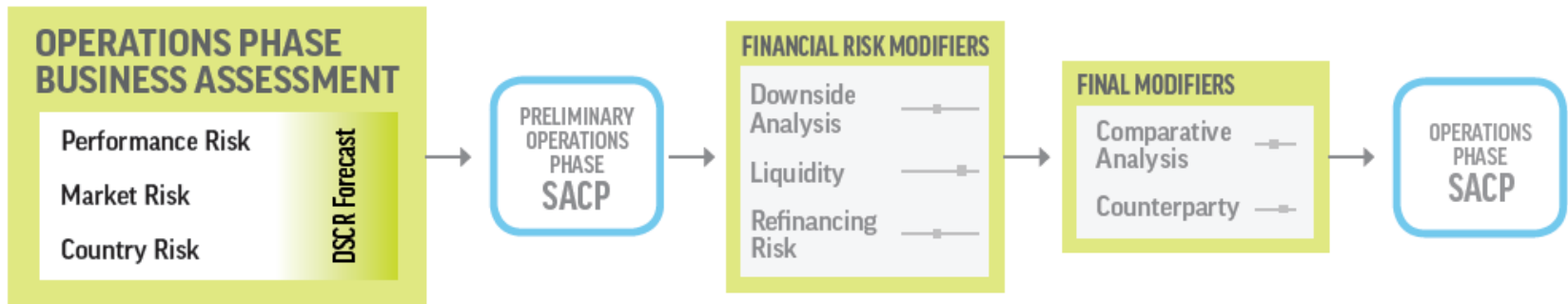
# Construction Phase Stand Alone Credit Profile **SACP**

**CP SACP = CPBA + or – Financial & Counterparty modifiers**



# Operations Phase Stand Alone Credit Profile (SACP)

# Operations Phase Stand Alone Credit Profile



# Operations Risk Profile:

## Performance Risk

**Scored 1 (best)  
to 10 (highest risk)**

### Guidance On Asset Class Operations Stability Assessment

Asset Class Operations Stability Assessment	Attributes
1-2	Very simple operating profile; typical building and maintenance facilities: e.g., schools, hospitals, roads.
3-4	More challenging building and maintenance facilities: e.g., large span bridges, ports, pipelines.
5-6	Moderately complex mechanical or electrical engineering based assets: e.g., most power plants, LNG.
7-8	Highly complex / specialized mechanical or electrical engineering based assets: e.g., complex chemical plants, nuclear power plants.
9-10	Unusually complex assets; high risk of breakdown.



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# Operations Risk Profile:

## Performance Risk

### Project-Specific Contractual Terms And Risk Attributes

**Performance redundancies**

Tangibly above or below industry standard redundancy levels?

**Operating Leverage**

Usually neutral, but could be positive / negative if materially different than peers.

**O&M management**

Reflects our view of whether O&M risk is materially different than the asset class.

**Technological performance**

Could technology issues cause a higher level of operational breakdowns?

**Other operational risk factors**

Anything else.

# Operations Risk Profile:

## Performance Risk

Most commonly,  
a neutral factor.

### Performance Standards

Assessment	Characteristics	Adjustment to operations stability assessment
<b>Above Average</b>	Project's operational performance in our base case exceeds minimum contract standards with a substantial cushion that is not typical in its industry. This is unusual.	-1
<b>Average</b>	The most typical assessment: Project's operational performance in our base case exceeds minimum contract standards, and the contract terms are such that a loss of revenue for failing to meet a performance requirement is proportional to the level of underperformance requirement.	None
<b>Below Average</b>	Project's operational performance in our base case only modestly exceeds minimum contract standards, and contract terms are such that the loss of revenue for failing to meet a performance requirement are proportionally much greater than the level of underperformance requirement.	+1
<b>Weak</b>	Project is expected to fall short of minimum contract standards and incur material performance penalties and even have the contract terminated.  We expect that this would occur rarely.	OPBA of 11 Or 12

# Operations Risk Profile:

## Performance Risk

Only applies in relevant cases: e.g., renewable projects, mining, etc.

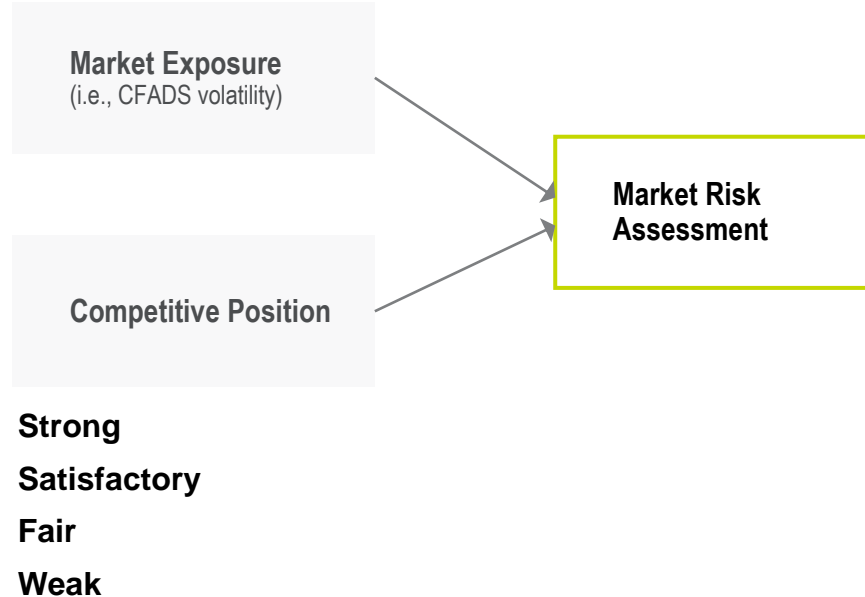
### Resource And Raw Material Risk

Assessment	Characteristics	Adjustment to operations stability assessment
Minimal or N/A	Resource and raw materials expected to be available at all times.	No change
Modest	Resource and raw materials availability and quality are expected to be high.	+1
Moderate	Resource and raw materials may not be available as expected in terms of volume and quality at all times. Example: Renewable energy projects where there is only a moderate level of confidence in resource estimation.	+2 or +3
High	Resource and raw materials supply is uncertain, based on the lack of contracts, weak supply infrastructure, or exposure to force majeure conditions.	At least 4, and usually resulting in an OPBA of 11 or 12

---

# Operations Risk Profile:

## Market Risk



# Operations Risk Profile:

## Market Exposure

**The Market Downside Case is commensurate with a “BBB” stress per S&P’s ratings definitions.**

**Calibrated to be a 1 in 20 year (or P95) event.**

### Market Exposure Assessment

Projected decline in CFADS from the base case to a market downside case\*

Assessment

Typical Examples

< 5 %

Not applicable

Availability Projects

5 – 15 %

Very low

Mature operating toll roads with traffic risk; projects with predominantly contracted revenues but a modest level of price or volume exposure

15 – 30 %

Low

Certain volume-sensitive stadiums and hotels

30 – 50 %

Moderate

Merchant power plants or gas processing plants with contracts covering a portion of expected product sales

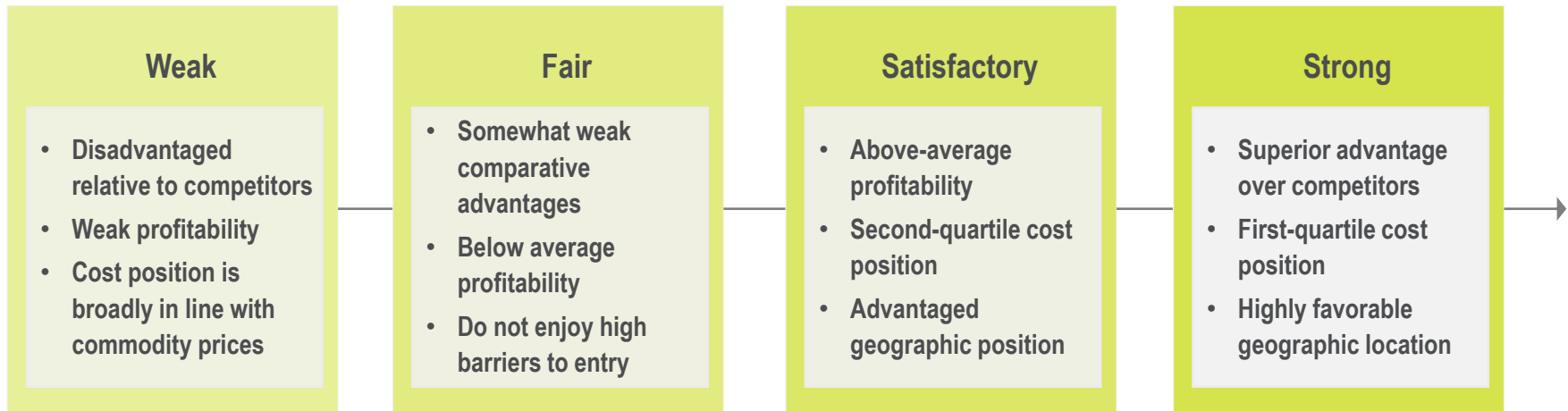
50 % <

High

Projects with full exposure to volatile commodity prices, such as mines, oil refiners, and merchant power plants in volatile markets (like the U.S.)

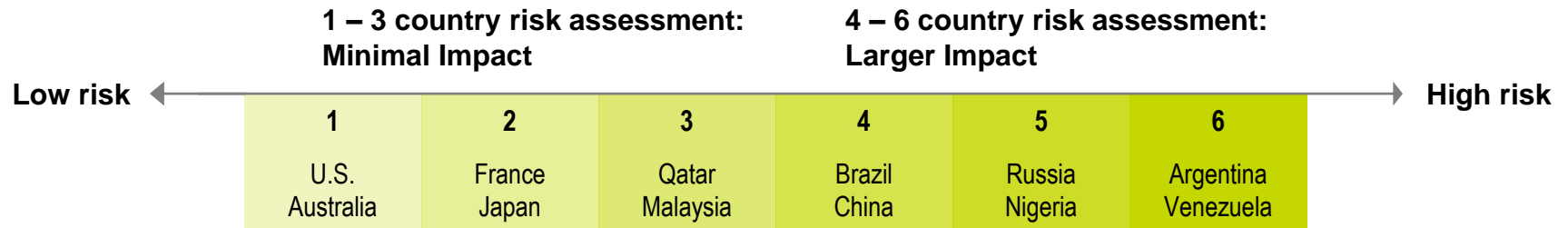
# Operations Risk Profile:

## Competitive Position



# Operations Risk Profile:

## Country Risk



**Performance Risk & Market Risk are combined into a Preliminary Operations Phase Business Assessment (OPBA).**

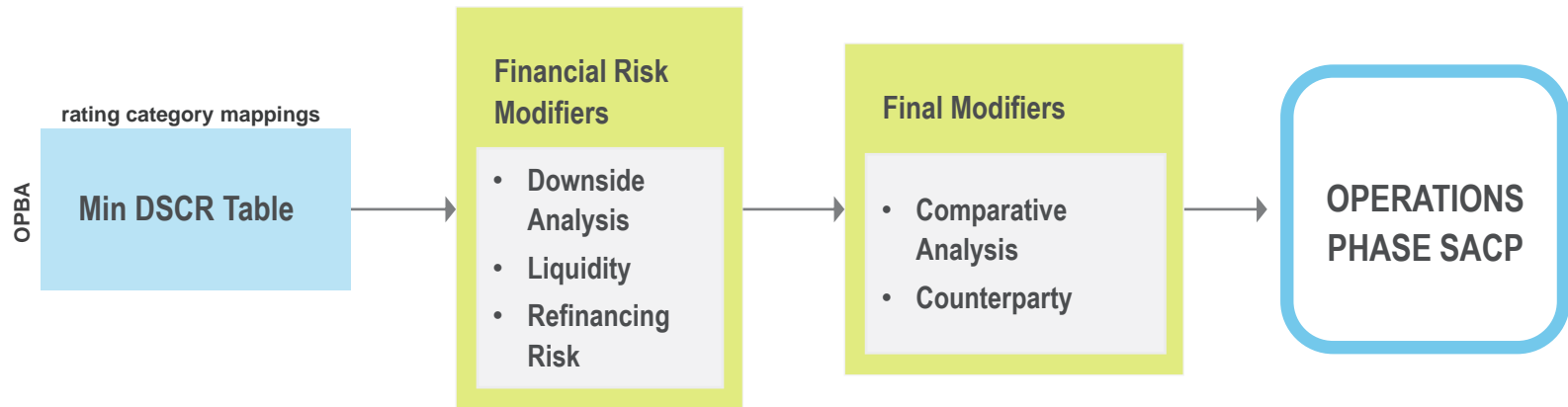
**We then overlay Country Risk\* to arrive at the Final OPBA. Country Risk only has an impact when the country risk assessment is 4 or worse.**

**In project financing, we also consider whether traditional country risk considerations may be mitigated (e.g., exporting all products overseas and not having exposure to the city's banking system).**

\*Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013



# Financial Considerations And Arriving At The **Operations SACP**



# Operations Risk Profile:

## Preliminary Operations Phase SACP

Adjustments to the Preliminary Operations Phase SACP are made for

- Atypical debt structures
- One-time lows
- Average DSCRs differing from minimums

Preliminary Operations Phase SACP Outcome Displayed in Column Headers (Minimum DSCR Ranges Shown in the Cells)\*

	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 but not 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, as well as relative breakeven performance and liquidity levels,

# Operations Risk Profile:

## Financial Risk Modifiers

**We run a single Downside Case – commensurate with 1 in 20 or “BBB” stress conditions. The likelihood of the project surviving maps to the Downside Case results.**

**The Downside case encompasses market, operational, and macroeconomic risks.**

### Downside Case Expectations

Expectations for  
adjusted operations  
phase SACP category

Performance expectations in the Downside Case

aa	Exceptional debt service cushions
a	Substantial debt service cushions
bbb	Survives at least 5 years of downside conditions
bb	Limited confidence in surviving a 5-year downside
b	Likely to deplete liquidity quickly

# Operations Risk Profile:

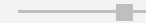
## Financial Risk Modifiers

Neutral or Less than Adequate

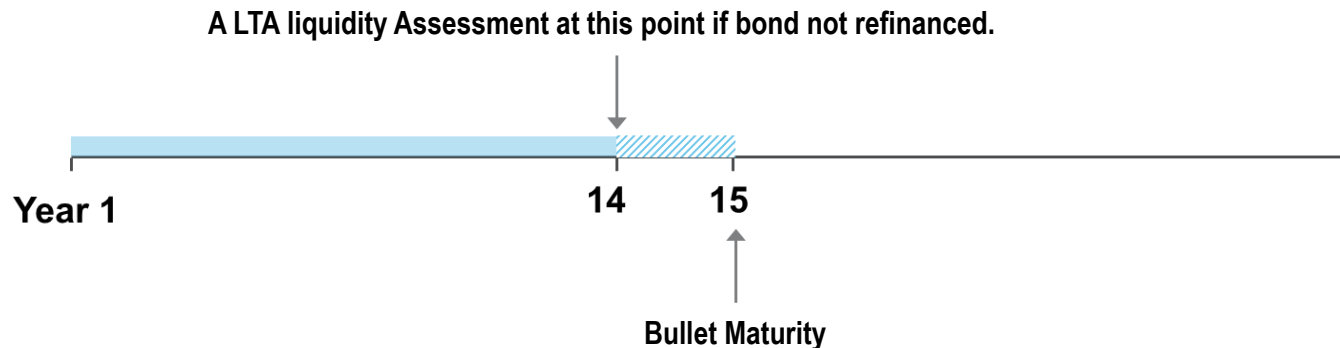
If Less than Adequate, then a bb+ cap applies, usually because

- Project lacks industry-standard reserves
- There is an upcoming near-term refinancing

Liquidity



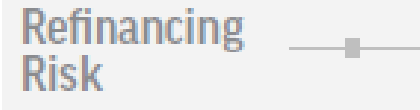
Example of a bullet maturity at year 15



# Operations Risk Profile:

## Financial Risk Modifiers

**General Approach: assume debt is refinanced, and look at DSCRs until end of life**



**Downside Case will also incorporate interest rate and credit spread risk, which can be significant**

### Refinance Risk Ratings Caps

	Stability of Cash flows		
	High (OPBA 1-4)	Medium (OPBA 5-8)	Low (OPBA 9-12)
Asset Coverage (PLCR)			
High (>3x)	None	None	None
Medium (1.5x to 3.0x)	None	None	bb+ cap
Low (1.1x to 1.5x)	None	None	bb+ cap
Very Low ( < 1.1x)	bb+ cap	b+ cap	b- cap

# Operations Risk Profile:

## Financial Risk Modifiers

Preliminary Operations Phase SACP Outcome Displayed in Column Headers  
(Minimum DSCR Ranges Shown in the Cells)\*

	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

- If a project has a 5 OPBA and has a 25-year estimated life and is initially financed with a seven-year term loan. During the forecasted seven-year period, the minimum DSCR is 2x.
- Which implies a 'bbb+'**

- We then calculate the forecasted DSCR from year seven through year 22 (three years prior to the estimated end of the project's life). In the post-refinance period, the minimum DSCR is 1.5x.
- For purposes of the DSCR we use 1.5x. Which implies 'bbb-'**

Preliminary Operations Phase SACP Outcome Displayed in Column Headers  
(Minimum DSCR Ranges Shown in the Cells)\*

	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

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# Operations Risk Profile:

## Final Steps

**+ / - 1 notch based on a holistic view  
of the project**

Comparative Analysis

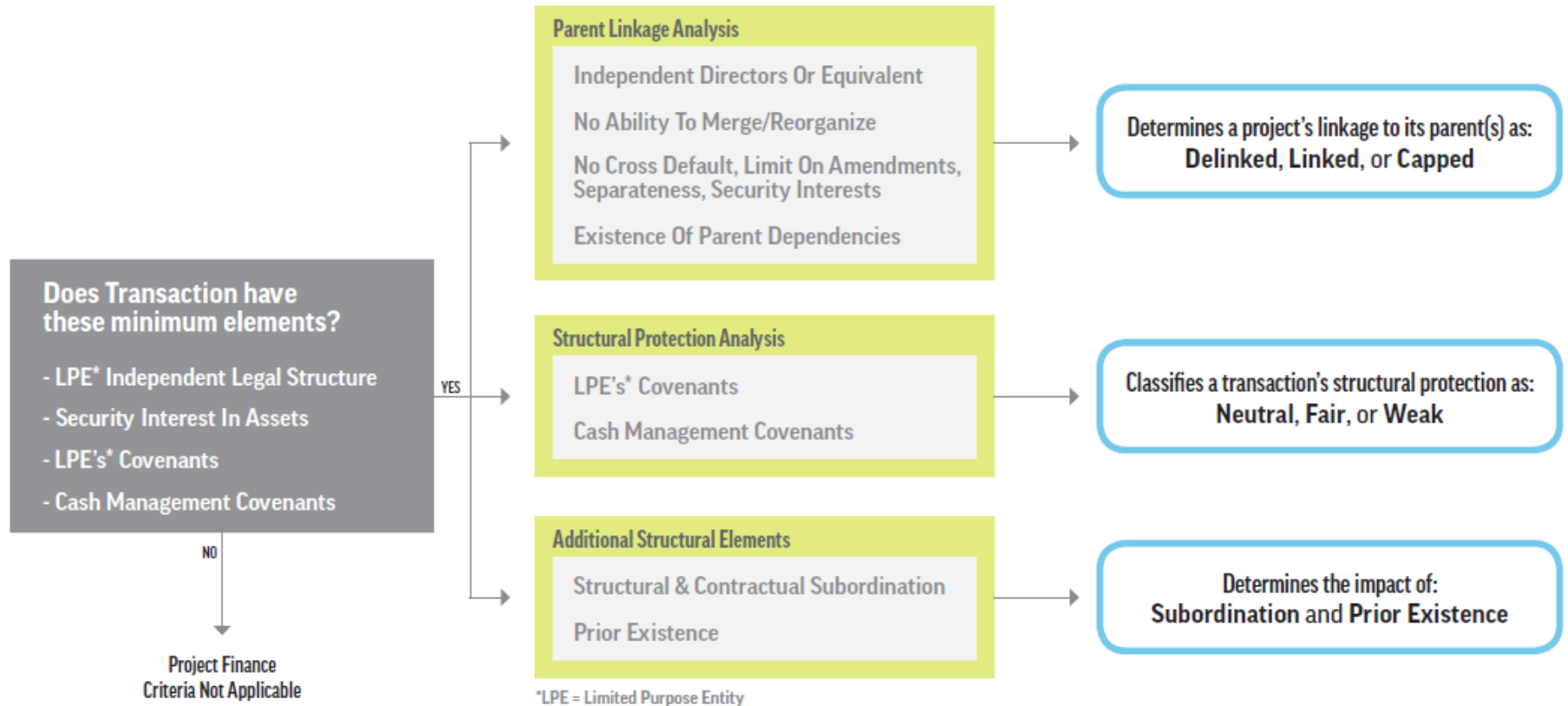
Counterparty

**Ensures that a contract can only  
improve a project's rating if the  
counterparty rating is sufficiently high**

# Framework For Assessing Transaction Structure



# Framework For Assessing Transaction Structure



## A Multi-Step Approach

# Transaction Structure: Classification of Structural Protections

We classify the project's structural protection package as neutral, fair, or weak depending on the assessment of the LPE's covenants and the cash management covenants

If we assess fewer than two of the covenants as neutral, then we would not rate the transaction under these proposed criteria

## Structural Protection Analysis

Neutral	<ul style="list-style-type: none"><li>All the covenants are neutral</li></ul>
Fair	<ul style="list-style-type: none"><li>At least four of the covenants are neutral and cash flow protection and waterfall is one of the four.</li></ul>
Weak	<ul style="list-style-type: none"><li>At least two covenants are neutral</li></ul>

# Transaction Structure: Determining The Project SACP

## Determining The Project SACP

### -- Structural Protection --

Linkage to Parent	Neutral	Fair	Weak
<b>De-Linked</b>	The project SACP is not modified	The project SACP is modified to be equal to the project SACP minus 1 notch	The project SACP is modified to be equal to the project SACP minus two notches
<b>Linked</b>	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
<b>Capped</b>	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.

Questions?



**STANDARD & POOR'S  
RATINGS SERVICES**

**McGRAW HILL FINANCIAL**

# Thank You

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