

A photograph of two men walking on a beach at sunset. The sun is low on the horizon, creating a bright glow and reflecting on the wet sand. In the background, there is an industrial facility with several tall chimneys. The sky is filled with wispy clouds and some contrails.

Guillaume Leprieur

Assessing Credit Risk of a Project Finance

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Agenda

- **Barclays' Infrastructure and Structured Project Finance team**
- **A typical Project Finance Structure**
- **Funding Project Finance**
- **Assessing Credit Risk**

Barclays' Infrastructure and Structured Project Finance

Team

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**Client
Relationship**

Barclays Group

**Industry
Specialists**

**Barclays Corporate
Infrastructure and
Structured
Project Finance
Debt Arranging & Lending**

**Barclays Capital
Infrastructure Team
Bank Syndications
over
£200mn / Bond Issues**

**Barclays Private
Equity**

**Product
Specialists**

Global Loans

**Risk
Management**

Bonds

Infrastructure and Structured Project Finance Team

- Team of 20 deal execution professionals focussing on:
 - PFI/PPP
 - Acquisition/Hybrid Infrastructure
 - Renewable Projects
- Established presence in:
 - UK
 - France
 - Portugal
 - Spain
 - Italy
 - France
- Closed over 160 transactions with a cumulative funding requirement in excess of £3.5bn.

A typical Project Finance Structure

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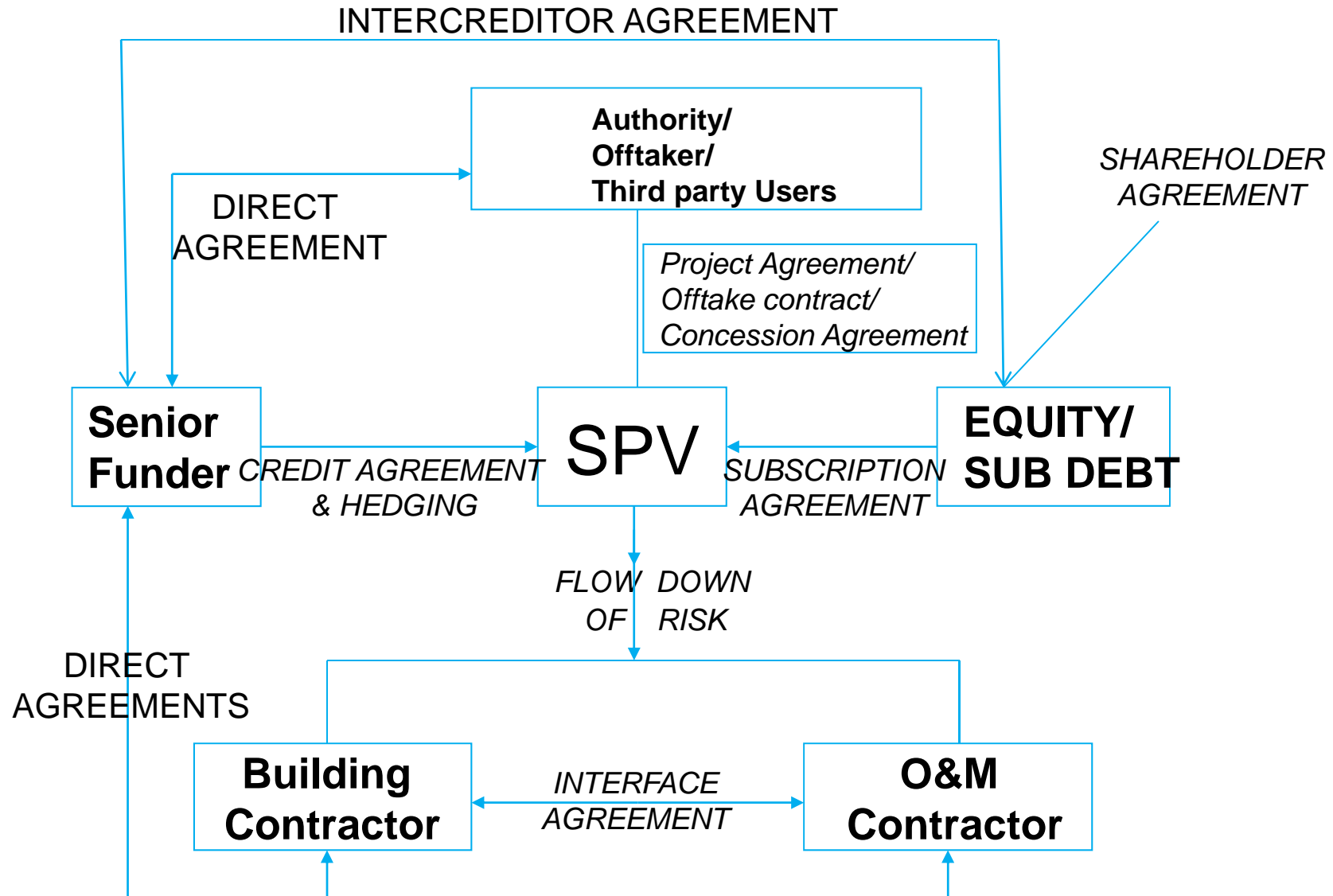
PFI / PPP

- A means by which the Government can procure and provide public services
- Partnership between the Public and Private Sector
- Private Sector innovation and efficiencies introduced to public services
- Government can spread the cost of providing public services and transfer risk to the private sector
- Provide better value for money for the provision of services and to ensure facilities continue to be maintained after they have been built/refurbished

Project Finance

- A risk sharing tool for Private Sector
- Non recourse financing for highly capitalistic projects

A Standard Project Structure



Funding Project Finance

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Typical Funding Instruments

- Senior Debt

- Bank Loans
- Bond Issuance

} May be wrapped / underwritten by Monoline Insurers to achieve economic benefit. But only if risk profile is suitable. (Was true before credit crunch)

- Junior Debt (if appropriate)

- Mezzanine Loan Tranches
- Mezzanine Bond Issuances

- Subordinated Debt / Shareholder Loans (Quasi-equity)

- Equity

- Share capital

} Shareholders' funds

Key Senior Debt Funding Principles

- Cash is lent on the basis that the Special Purpose Vehicle (SPV) will have the benefit of the projected revenue post-construction.
- The senior lenders' primary security is this future revenue stream, as opposed to standard corporate lending where the lender has security over tangible assets.
- As such, senior lender's require :
 - Significant support from external adviser to assess the visibility on Project's cash flows
 - Significant monitoring and control over the SPV and its cash flows.
- The funding is intended to be limited/non-recourse in respect of the lenders' ability to rely on the SPV's shareholders for repayment.

Key Senior Debt Funding Principles

- The risk profile of the senior debt product must be commensurate with the funding terms/pricing.
 - Hence, risks are generally passed down from SPV to relevant sub-contractors in line with the principle that the party best placed to manage a particular risk assumes that risk. Where a risk is maintained by the SPV, there needs to be appropriate resources to manage it. This approach should result in the most economic and best value for money funding.
- To achieve competitive funding structures the potential severity of loss for senior lenders needs to be well mitigated.
 - Hence, the necessity to require step-in provisions and the need to analyse the likely compensation / recovery in termination scenarios (i.e. compensation on termination).

Key Senior Debt Funding Principles

- Cover Ratios

Annual Debt Service Cover Ratio (“ADSCR”)

Measures the projects ability to service the debt in each individual year by measuring the ratio of surplus cashflow to the debt servicing requirement (interest and repayments) for each year

Loan Life Cover Ratio (“LLCR”)

The net present value (discounted at the loan interest rate) of all future surplus cashflow. We can add to this any reserve account balances available and the total is divided by the capital outstanding on the loan at the test date.

- Cover Ratio Based Requirements

- Requirements in respect of project financial model outputs at financial close to ensure robustness of project
 - Base Case (Minimum & Average)
- Ongoing covenants in credit agreements in respect of project operational phase
 - Distribution lock-up
 - Default

Key Senior Debt Funding Principles

- Debt Term
 - Typically there is a requirement for a “Tail” between final repayment of debt and project expiry
- Requirements in respect of reserve accounts and reserving mechanisms
 - Maintenance / Life-cycle reserve account
 - Percentages of reserving required and term of look-forward
 - Consideration of party which carries risk of funding works
 - Debt service reserve
 - Typical requirement is for the next 6 months’ debt service to be available to act as a buffer against debt service shortfalls
 - This is provided for traditionally via a reserve account (“DSRA”) or increasingly via a standby facility (“DSRF”)

Typical Features of Various Types of Senior Facility

- Term Loan Tranches
 - Purpose is to fund project capex; drawdown against certification of build; no repayments during “construction” phase with interest due capitalised;
 - May have bullet / balloon payments at expiry in specific types of project
- Subdebt / Equity Bridge Tranches (Recourse to shareholders)
 - Purpose is to enable deferral of subdebt/equity injection (senior debt is cheaper to service than equity hence cheaper for project);
 - Drawdown in place of subdebt/equity during “construction” phase with interest due capitalised; repaid as a bullet via the injection of the relevant shareholders’ funds at the end of construction
- Variation / standby / change in law facilities
 - Purpose is to provide standby funding for variations, unexpected capex and/or changes in law
- Debt Service Reserve Facilities
 - Purpose is to provide standby funding for the maximum 6 months’ debt service; to be available to act as a buffer against debt service shortfalls

Assessing Credit Risk

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What Are The Considerations When Assessing Credit Risk?

Some Highlights:

- Potential for revenue stream to be deducted
- Potential for costs to be higher than envisaged
- Quantitative risk analysis
 - Sensitivity / stress-testing assumptions in the financial model
 - Consideration of subcontractor credit-worthiness and recourse
- Qualitative risk analysis
 - Consideration of unquantifiable risks, the chances of such risks materialising and the likely magnitude of loss / impact thereon.
- Exposure / Balance sheet management for funders
 - Intentions to syndicate / hold
 - Liquidity / marketability issues
 - Potential for refinancing

Mitigating Mechanisms

Some Highlights:

- Hedging /use of derivative products
 - Interest rate swaps are used in most Project to give the SPV certainty with respect to debt service costs
 - RPI / Inflation hedging can provide a more robust income stream where appropriate
 - FX hedge
- Use of contingency sums and reserves in financial models can act as buffers (although over-generous contingencies can be inefficient and uneconomical)
- Standby funding & reserve accounts
- Management of risks through contractual pass-down as appropriate to allocate risks to parties best placed to manage them
- Insurance
- Bonding/guarantees
- Ring-fencing

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Questions