Temasek Foundation – Singapore Cooperation Enterprise International Technical Cooperation (Public-Private Partnership) in the Philippines

In Partnership with Department of Health, University of the Philippines & International Finance Corporation

Programme Launch – Project Finance

25 July 2019

Important Notes

Table of Contents

1

Financing Infrastructure Projects

Funding vs. Financing Infrastructure

Funding and financing are not the same

Funding
Funding can be sourced directly from users of infrastructure or indirectly through taxes and charges
Government • Subsidies
User fees • Tolls, tariffs, etc.
Other revenues • Capturing land value, commercial activities, etc.

Financing
Infrastructure can be financed by the public or private sector.
Public (domestic or foreign) • Government budget • Public borrowing • International grants
Private (domestic or foreign) • Infrastructure companies • Commercial banks • Institutional investors

"Infrastructure finance alone cannot solve the infrastructure gap, enough expenditure must be allocated by government, users and beneficiaries to pay for projects."

Source: UNESCAP, Committee for Melbourne

Financing is required if in any period cash inflows are smaller than cash outflows

What are the cash needs of the project?

- Bidding costs and project development
- Building and maintaining the asset
- Provision of services – for how long?

What are the cash receipts of the project?

- Unitary payment/service payment/tolls/fares
- Grants/Subsidies
- Asset sales

Why Raise Financing?

- Financing context includes project developers, infrastructure companies and infrastructure investment funds raising capital from the market (e.g. institutional investors such as Sovereign Wealth Funds) and deploying the capital to develop new projects or acquire operational assets
- The objectives would include the following:
  - Invest in growth (e.g. new greenfield projects)
  - Exploit opportunities and potential returns that arise in specific sectors
  - Recycle capital for other opportunities based on change in strategic plans
  - Deleverage (e.g. sell assets to pay down debt)

Types of infrastructure investors

Investor	Typical return requirement	Description
Sovereign Wealth Funds (SWFs)	10 – 15%	• Created to manage national/state wealth • Assets can range from US$0.4 billion (Bahrain's Future Generations Fund) to US$840 billion (Norges Bank Investment Management) • Tend to acquire equity stakes alongside proven partners, however there is trend toward direct investments (ADIA managed a third of assets in-house in 2014 vs. 25% the year before – Source: Financial Times) • In 2015, SWFs invested a total of US$10.2 b across 22 foreign direct investments infrastructure assets (Source: Sovereign Wealth Center 2015 Annual Report)
Pension funds	8 – 12%	• Long term liabilities require looking for long-life assets and cash flows to match • Tend to co-invest alongside experienced partners although players such as Canadian pension funds are leading the way in direct investment and active involvement in project implementation and operation
Infrastructure / PE funds	>15%	• Highest return requirements among investors • Look to exit investments within a desired timeframe
Strategics	11 – 15%	• Corporations with industry expertise and operational know-how • Stable and long time horizon – view assets as businesses they hold
Development Finance Institutions (DFIs)	While project has to be economically viable, DFIs also evaluate development and social impact	• Fill a gap in the financial market by investing in areas where commercial investors typically do not • Intended to act as a catalyst to bring in private sector investors • While development focused, can be profitable due to "first-mover" advantage

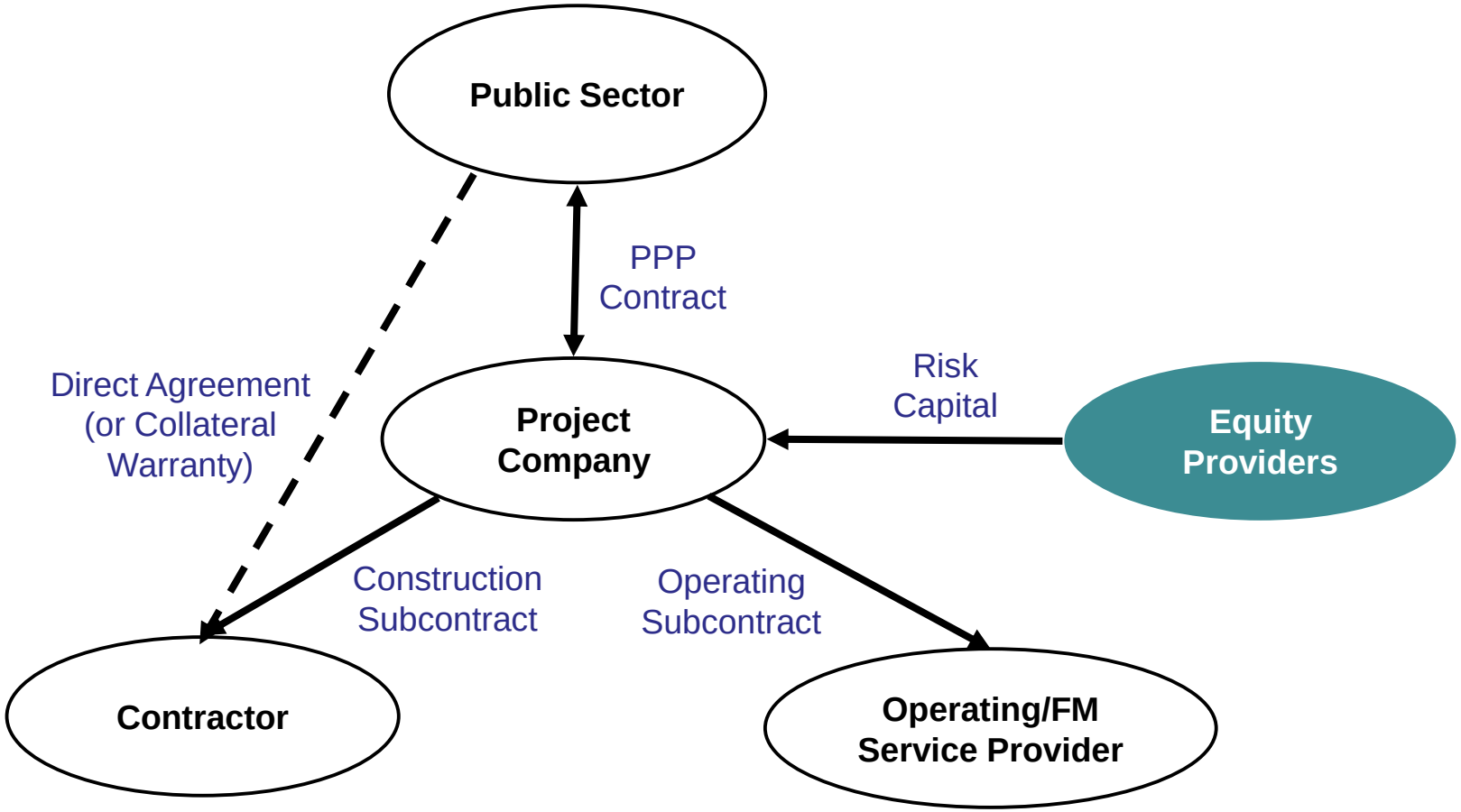
Capital raising: Debt & Equity

Debt
Raise capital through debt instruments (loans, bonds, other fixed income instruments)
Lenders become creditors
Regular payment of principal and interest

Equity
Raise capital through sale of shares
Shareholders have ownership interest
Payment of dividends

The cost of equity is typically higher than the cost of debt because of the risks associated to ownership as opposed to credit. Creditors are paid first before shareholders.

Equity financing
Role of risk capital providers



Investor Considerations

Key parameters:

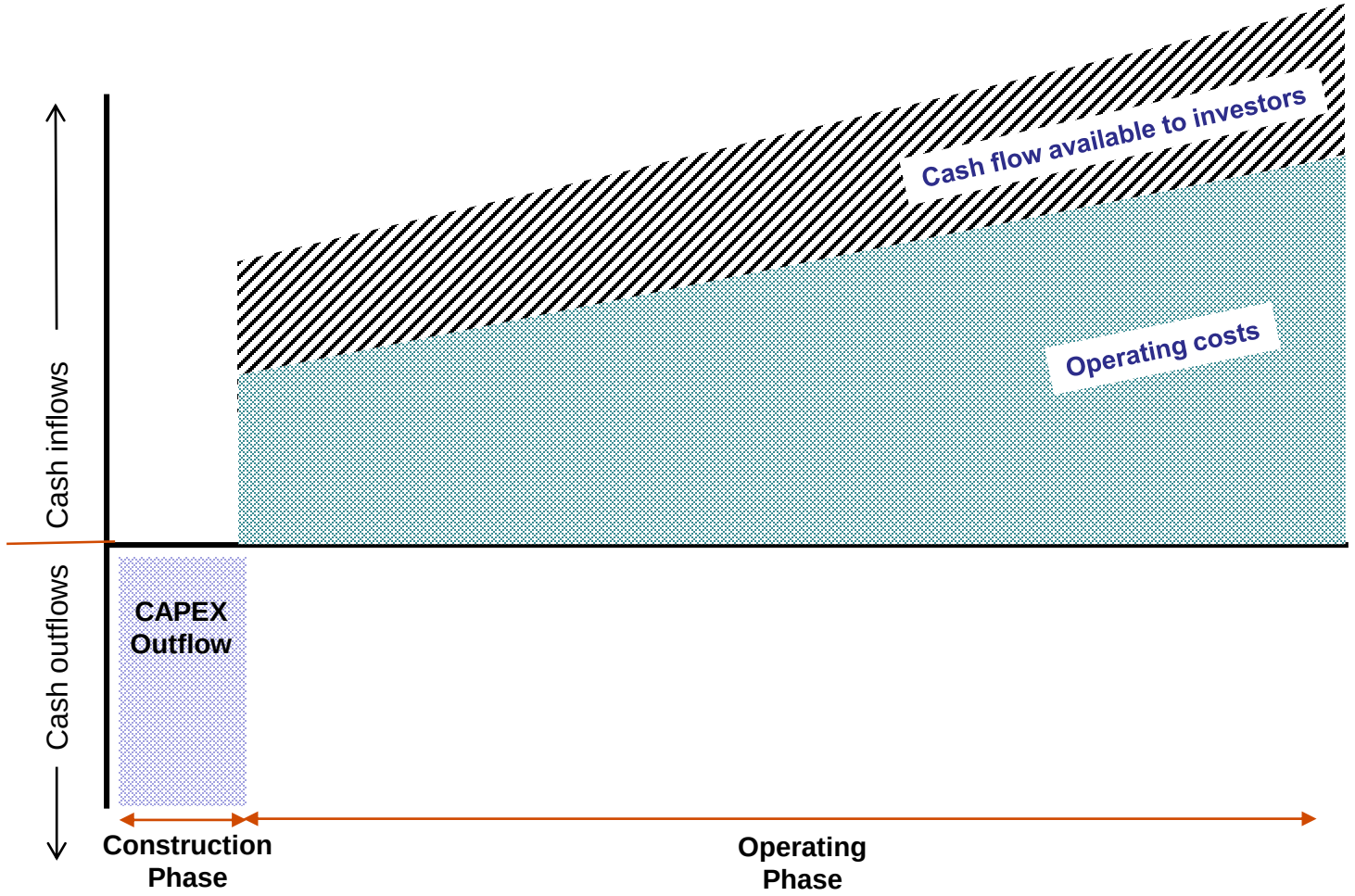
- **Stage** – strong preference for operating assets due to lower risk and yield, however investors are starting to be involved in construction and even development stages to secure better returns
- **Country** – broader diversification across countries as it is difficult to assess political and regulatory risk over long investment horizon
- **Sector** – Exposure to demand risk and indirectly economic cycle
- **Single asset weights** – how much to allocate portfolio to a single asset (e.g. 2 – 3%)
- **Other risks** – business model, regulatory, political, currency
- **Mode** – Direct, co-invest or via another fund / equity or mezzanine investment / single project or development platform

Defining the investment requirement entails knowledge of the commercial structure

Questions to consider:

- Over what period will a return be generated?
- Which cash flows are contracted and which are estimates?
- What contractual mechanisms exist that might vary the related cash flows?
- What market factors might impact my anticipated cash flows
- Which cash flows are likely to vary in line with an index

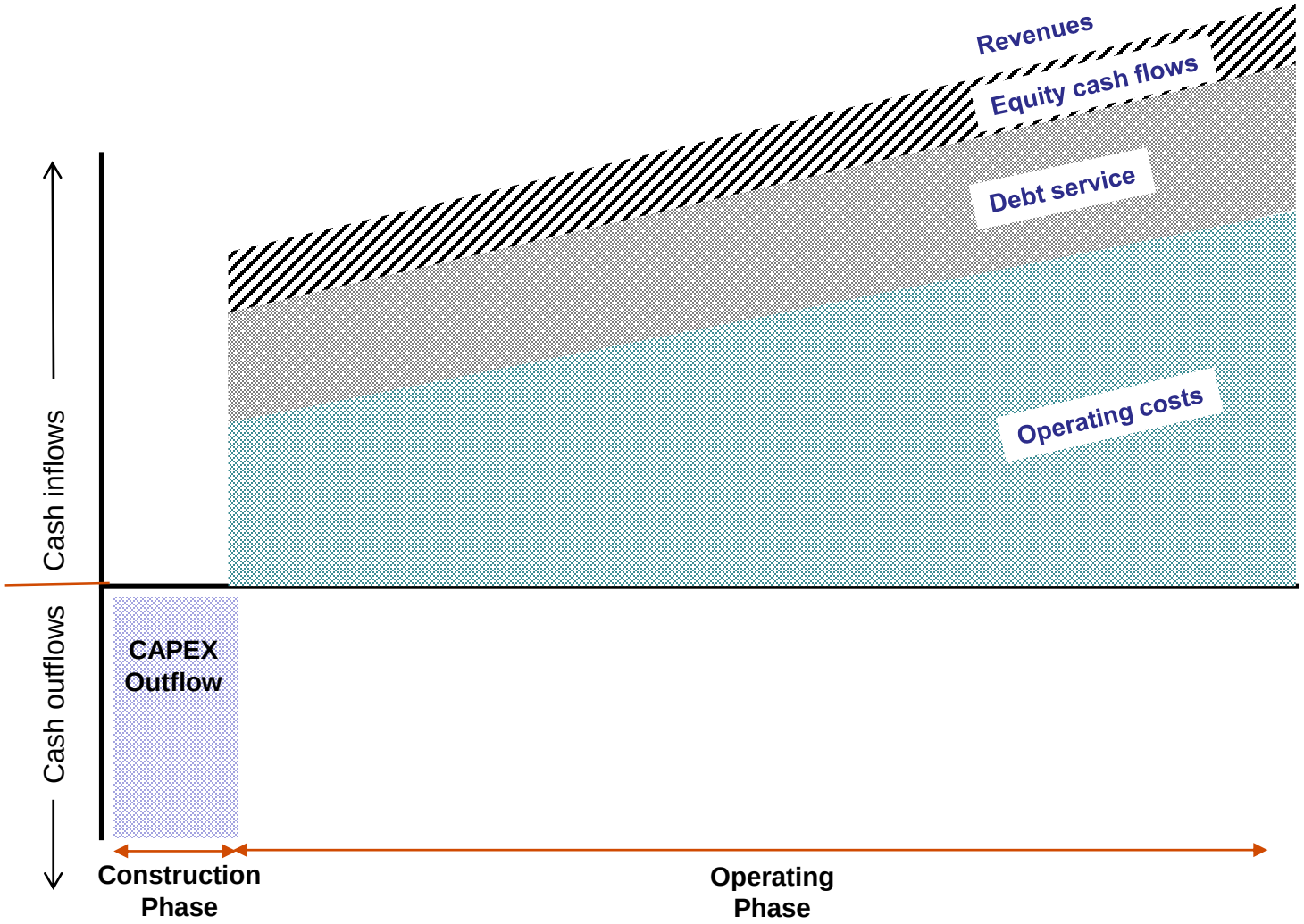
Illustrative cash flows



Why are most PPPs highly geared?

- The **high portion of debt reduces the average cost of capital** and makes large capital intensive projects more affordable;
- Significant operating profit post-construction implies **high value in tax shield created by debt**;
- **High level of contractual risk mitigation** at Project Company level;
- **Little management discretion** at the Project Company level; and
- Potentially **low work-out/recovery costs in financial distress** due to contractual protections on value through Project Agreement.

Illustrative cash flows



2

Introduction to Project Finance

What is project finance?

Defined by the International Project Finance Association (IPFA) as follows:
The financing of long-term infrastructure, industrial projects and public services based upon a non-recourse or limited recourse financial structure where project debt and equity used to finance the project are paid back from the cash flow generated by the project.

Special Purpose Company (SPC)

Involves the creation of a

- legally and economically independent Project Company or SPC
- to finance a single-purpose capital asset with limited life (e.g. the PPP project)

Equity and Limited or Non-recourse Debt

SPC is financed with a combination of

- Non-recourse debt and
- Equity

Project Cash Flows

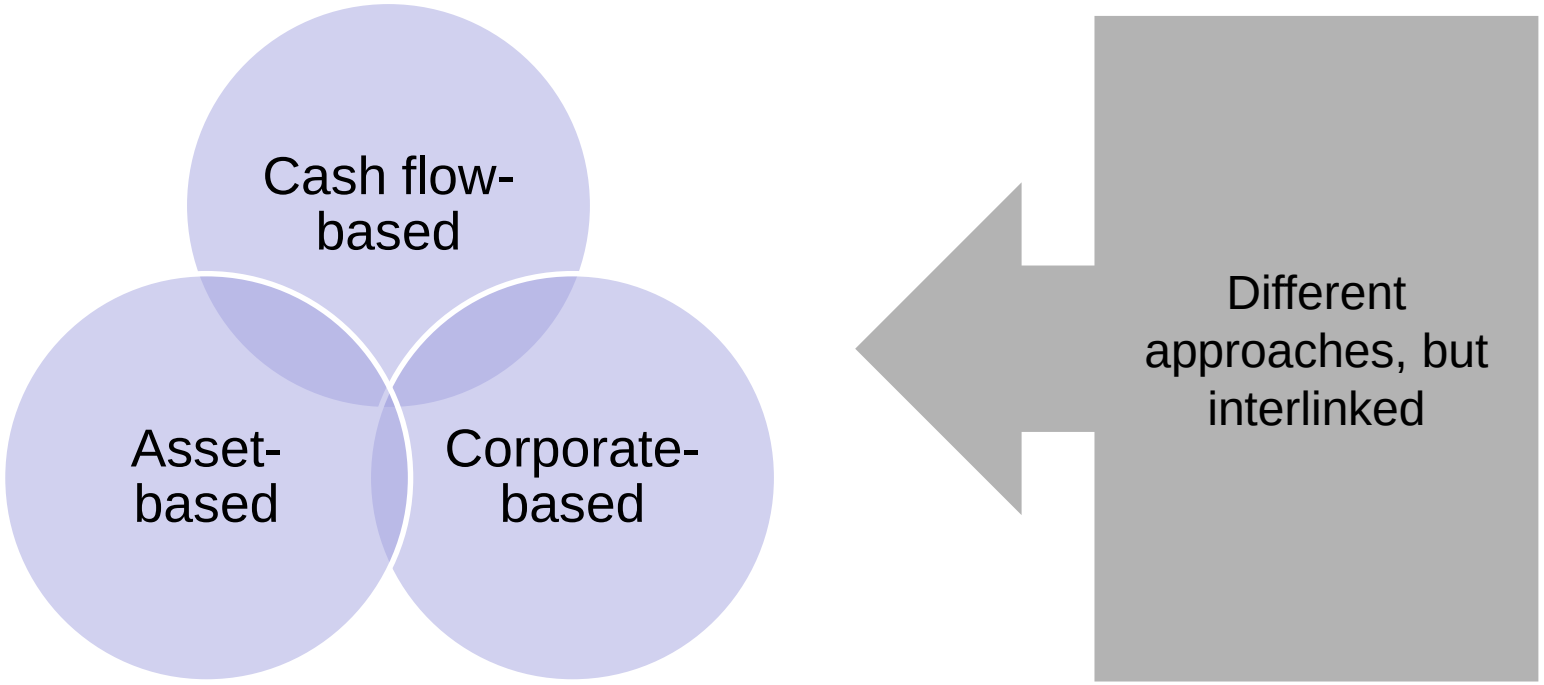
Debt and equity used to finance the project are paid back from the cash flow generated by the project.

Key features of project finance

- A structure for long term service provision using project-dedicated assets;
- Typically project financing is a type of receivables financing. Preserving the income stream is crucial;
- There is limited asset security/sponsor support;
- Debt is repaid/equity return is realised out of the income stream payable under the contract;
- Success depends on performance of the project contracts;
- Off Balance Sheet (for sponsors); and
- Long term – typically 20-30 years*.

*Note: The tenor of government bonds in the Philippines typically ranges 10-20 years.

Three Fundamentals of Lending



- All lending relies primarily on cash flows for repayment;
- Most lending involves taking security over physical assets; and
- Lending always remain a corporate obligation.

Cash flow is central to all lending

- For loans to be maintained in good condition, the borrower must find sufficient cash flow on a regular basis to pay interest and principal;

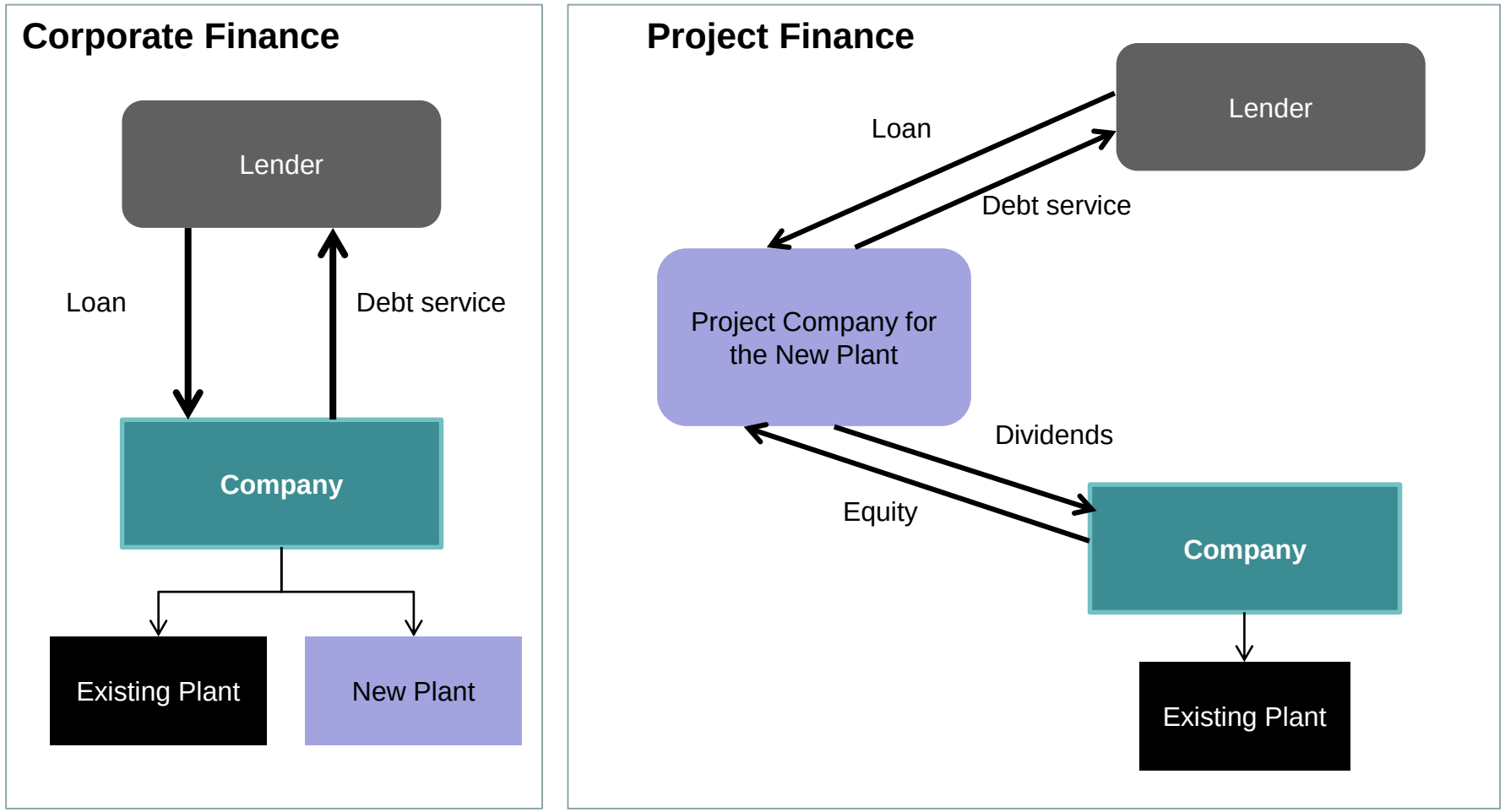
- Most sound lending implicitly and informally assesses these cash flows, and the risks associated with it.

Project Finance therefore gives insights into all lending decisions by applying a rigorous, explicit, and formal process

When to use Project finance?

- **Where project = company;**
- **Where project is large relative to company;**
- **Cheap political risk insurance;**
- **To mobilise export credits;**
- **To provide an additional discipline on investment appraisal; and**
- **To regulate a weak JV partner.**

Project finance vs. Corporate finance



Project finance vs. Corporate finance (cont'd)

Corporate Financing	Project Financing
1. Lenders have access to cash flow from borrowers' various businesses	1. Lenders rely on cash flows of the project for repayment
2. Parent company's assets as collateral	2. Project assets and/or contracts (e.g. concession agreement) as collateral
3. Recourse	3. Non-recourse or limited recourse
4. Parent company/investors may be exposed to repayment risks	4. Risk-fencing of risk for sponsors
5. On balance sheet treatment	5. Off balance sheet treatment
6. Moderate debt to equity ratio	6. High debt to equity ratio, typically around 60%-70% of capital expenditure
7. Assume company will remain in business for an indefinite period, hence debt can be rolled over	7. Project has a finite life, hence debt must be fully repaid by the end of project life

Project Finance in PPPs

Higher Equity Returns	• High leverage can facilitate in higher equity returns, as debt is cheaper than equity, especially in a case where higher debt does not increase risks proportionately.
Risk Containment	• Is usually executed by a Special Purpose Vehicle, project finance reduce the risks that the failure of the project may bring to the rest of consortium members' businesses.
Long Term Financing	• Long term financing is important for assets with a high capital expenditure; • It helps reduce the risk of default during a PPP project's early years of operation, if cash flows are less certain, by reducing the level of cash flow required for debt repayment; and • It also reduces refinancing risk.

Key Concepts in Project Finance

1. Cash Available for Debt Service (CFADS);
2. Debt Service Cover Ratio (DSCR);
3. Reserve Accounts;
4. Loan Life Cover Ratio;
5. Debt Sculpting; and
6. Cash Sweep.

Key Concepts in Project Finance
Cash Available for Debt Service (CFADS)

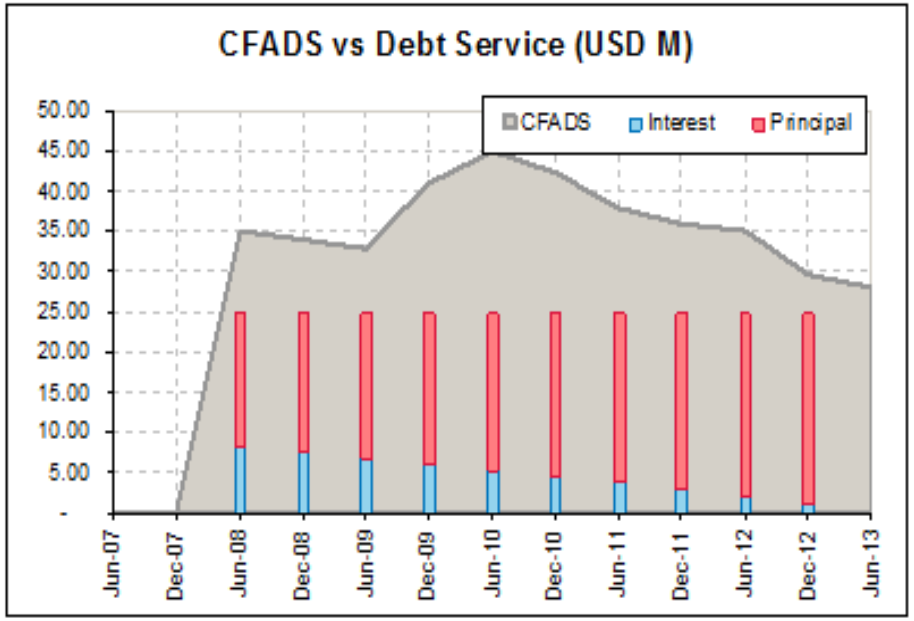
Revenue
Less:
OPEX
CAPEX
Debt & Equity funding
Tax and working capital adjustments
CFADS

- CFADS is calculated by netting out revenue, operating expenditure (Opex), capital expenditure (Capex), debt & equity funding, tax and working capital adjustments;
- CFADS is preferred to determine gearing and lending capacity as opposed to EBITDA since this measure does not takes taxes and timing of cash flows into considerations; and
- When modelling with different seniority of loans, it is important to include cash flow available at the appropriate level of seniority.

Key Concepts in Project Finance
Debt Service Cover Ratio (DSCR)

DSCR is defined as the amount of cash flow available to meet scheduled interest and principal repayment on debt.

Debt Service Cover Ratio = Cash flow available for Debt Service / Debt Service (Principal + Interest)



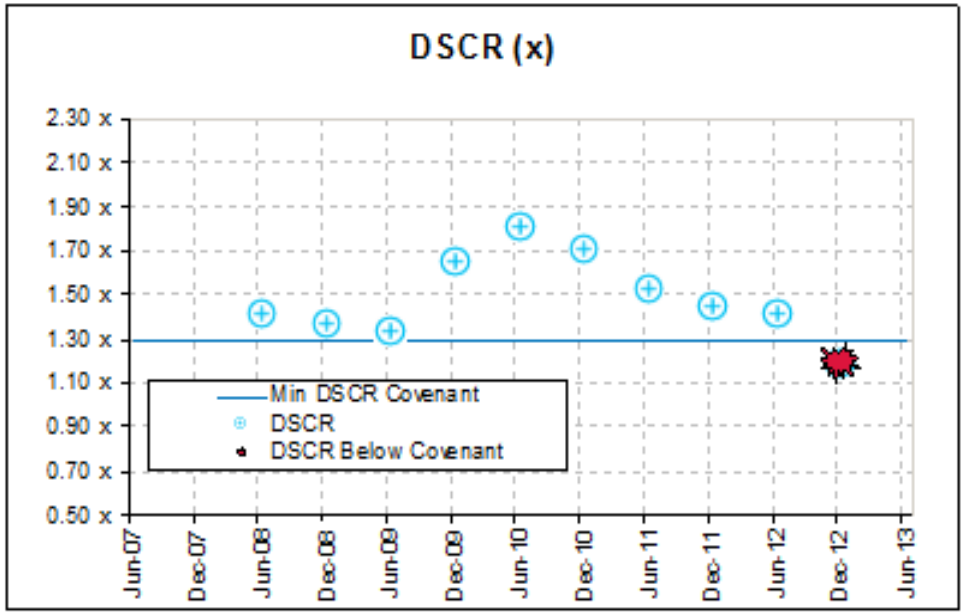
Source: Navigator Project Finance

The illustration shows the proportions of Cash flow Available for Debt Service compared to Total Debt Service (Interest + Principal); and

With CFADS significantly larger than Debt Service, there is a significant buffer in the project to protect the lenders from decreased cash flows from the project due to, for example, operation inefficiencies post end of construction.

Key Concepts in Project Finance
Debt Service Cover Ratio (DSCR) (cont'd)

- A DSCR of <1 means that the cash flows from the project are not strong enough to support the level of debt;
- Typical DSCR is set above 1; and
- DSCR is calculated at every repayment.



Source: Navigator Project Finance

Example: Minimum DSCR is 1.30x.

There is a weak cash flow in the last period (December 2012) of the project where the DSCR drops below the Term Sheet DSCR Covenant of 1.30x.

Key Concepts in Project Finance
Reserve Accounts

Debt Service Reserve Account (DSRA)	• Works as an additional security measure for the lender as it ensures that the borrower will always have funds deposited for the next x months of debt service; • Commonly is 6 or 12 months of debt service.
Major Maintenance Reserve Account (MMRA)	• Ensure cash is effectively put aside equal to the estimated major maintenance lifestyle costs in the year in which such costs are to be incurred; • Is required when lifecycle expenditure is lumpy and / or where the major maintenance cycle of the project is such that there are large major maintenance costs relative to the cash flow which is incurred during the operational life of the project; • Usually funded to certain target balance, which can be set at 6, 12, 18 or 24 months of future major maintenance expenditure; and • Interest is usually earned on the opening balance.

Key Concepts in Project Finance
Loan Life Cover Ratio (LLCR)

LLCR is defined as the number of times the cash flow over the scheduled life of the loan can repay the outstanding debt balance.

Loan Life Cover Ratio = NPV (Cash flow Available for Debt Service over Loan Life) / Debt Balance b/f

When DSRA is included, LLCR shall be calculated as follows:

Loan Life Cover Ratio = NPV (Cash flow Available for Debt Service over Loan Life + DSRA b/f) / Debt Balance b/f

- The Discount Rate used in the NPV calculation is usually the Cost of Debt, also known as the Weighted Average Cost of Debt;
- An LLCR of 1.00x means that the CFADS, on a discounted basis, is exactly equal to the amount of the outstanding debt balance; and
- As LLCR is a discounted average, it does not pick up weak periods. If the project has steady cash flows with credit foncier* repayment, a common rule of thumb is that the LLCR should be roughly equal to the average DSCR.

* A type of loan structured with regular usually monthly, repayments which incorporate principal and interest. Most mortgages operate this way.

Debt Sculpting

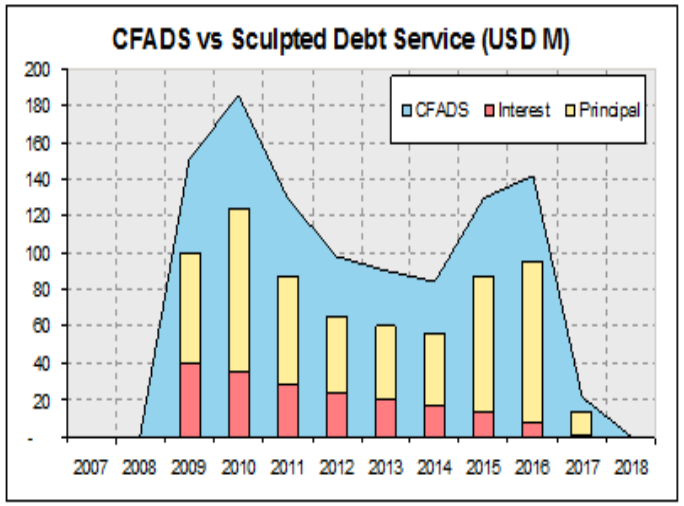
- Debt sculpting means that the principal repayment obligations have been calculated to ensure that the principal and interest obligations are appropriately matched to the strength and pattern of the cash flows in each period;
- This ensures that the DSCRs are less volatile than may otherwise be the case;
- Sculpting can be calculated by algebraically solving the principal repayment to achieve a desired DSCR.

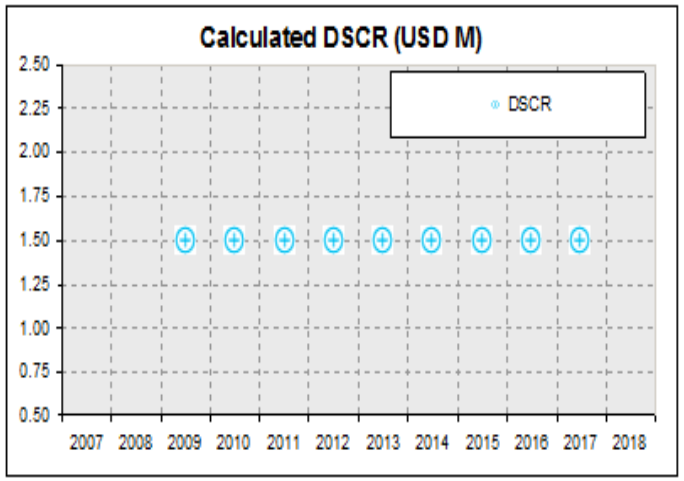
Principal = Cash Available for Debt Service / DSCR (Target) - Interest

Sculpting is required in the following situations:

- Irregular, but well understood cash flows
- Seasonal demand factors (common in power, agriculture, manufacturing industries)
- The ramp-up period of a new project, such as a toll road
- An unusual but expected payment, such as a major overhaul of an asset.

Debt Sculpting





- Graphs are often useful during the debt sculpting process as a checking tool
- The graph (left) clearly demonstrates that the project has irregular cash flow, thus the sculpted debt repayment needs to be matched to the pattern of the cash flow in each period.

Cash Sweep

- Cash Sweep is the use of surplus cash to prepay debt or provide extra security for lenders, instead of paying it out to investors;
- Surplus cash is not distributed to investors and is instead used to repay principal and interest;
- The cash flow used for a stand alone cash sweep is CFADS – Interest Payable on the cash sweep debt balance – Cash Available for Principal; and
- Cash sweep is useful in dealing with lenders who are concerned with tail risk or refinance risks.

Debt raising
Lenders' Term Sheets

When a Lender provides a Term Sheet to a borrower for a project, it will cover the following main areas:

The Project

- Project information
- Term of Contract
- Key dates
- Project costs
- Gearing
- Project financing

Parties and Project Agreements

- The Authority and Borrower
- Project Shareholders
- Key Contractors
- Underwriters, Agents and Security Trustee
- Project Agreements
- Offtake Agreements
- EPC and O&M Contracts
- Lease Agreement(s)
- Financing Agreements

Facilities

- Project facilities and tenor
- Facility purposes
- Availability period
- Interest rates and margins
- Interest period
- Underwriting commitment
- Upfront & commitment fees
- Drawdown
- Facility recourse
- Available cashflow
- Actual expenditure
- Payment cascade
- Debt service
- Interest payment
- Grace period
- Principle repayments
- Cancellation
- Prepayments
- Equity distribution
- Default events
- Annual Debt Service Cover Ratio
- Covenants
- Security
- CPs to first & subsequent drawdowns
- Interest rate swaps

General

- Governing Law
- Default events
- Material adverse effect
- Insurance policies

Debt raising
Lenders' Term Sheets

Project Facilities and Tenor

Facility	Up to S$ million	Tenor
Senior Term Loan Facility	[$x m]	Up to [x] years from commencement/ first drawdown
Revolving Debt Service Reserve Facility	[$x m]	Over the life of Senior Term Loan Facility
Standby Facility	[S$x m]	Over the life of Senior Term Loan Facility
% of Interest Rate Swap Facility notional required	[x %] of Senior Term Loan Facility	Over the life of Senior Term Loan Facility

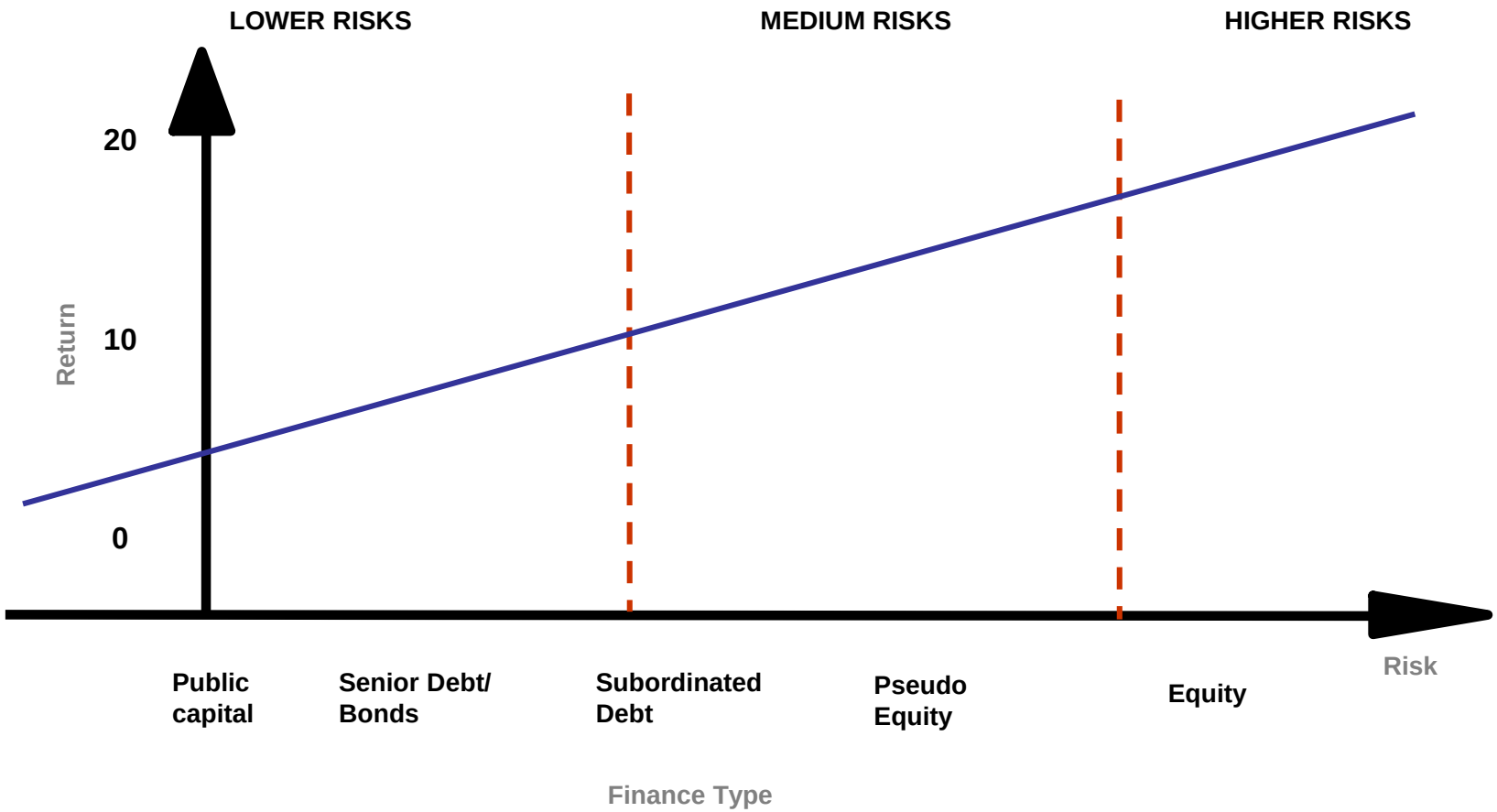
Interest margins

Facility	*Unhedged*	*Hedged*
Senior – Construction	[x.xx]% p.a.	[x.xx]% p.a.
Senior – Operating	[x.xx]% p.a.	[x.xx]% p.a.
Standby	[x.xx]% p.a.	[x.xx]% p.a.
[Other]	[x.xx]% p.a.	[x.xx]% p.a.

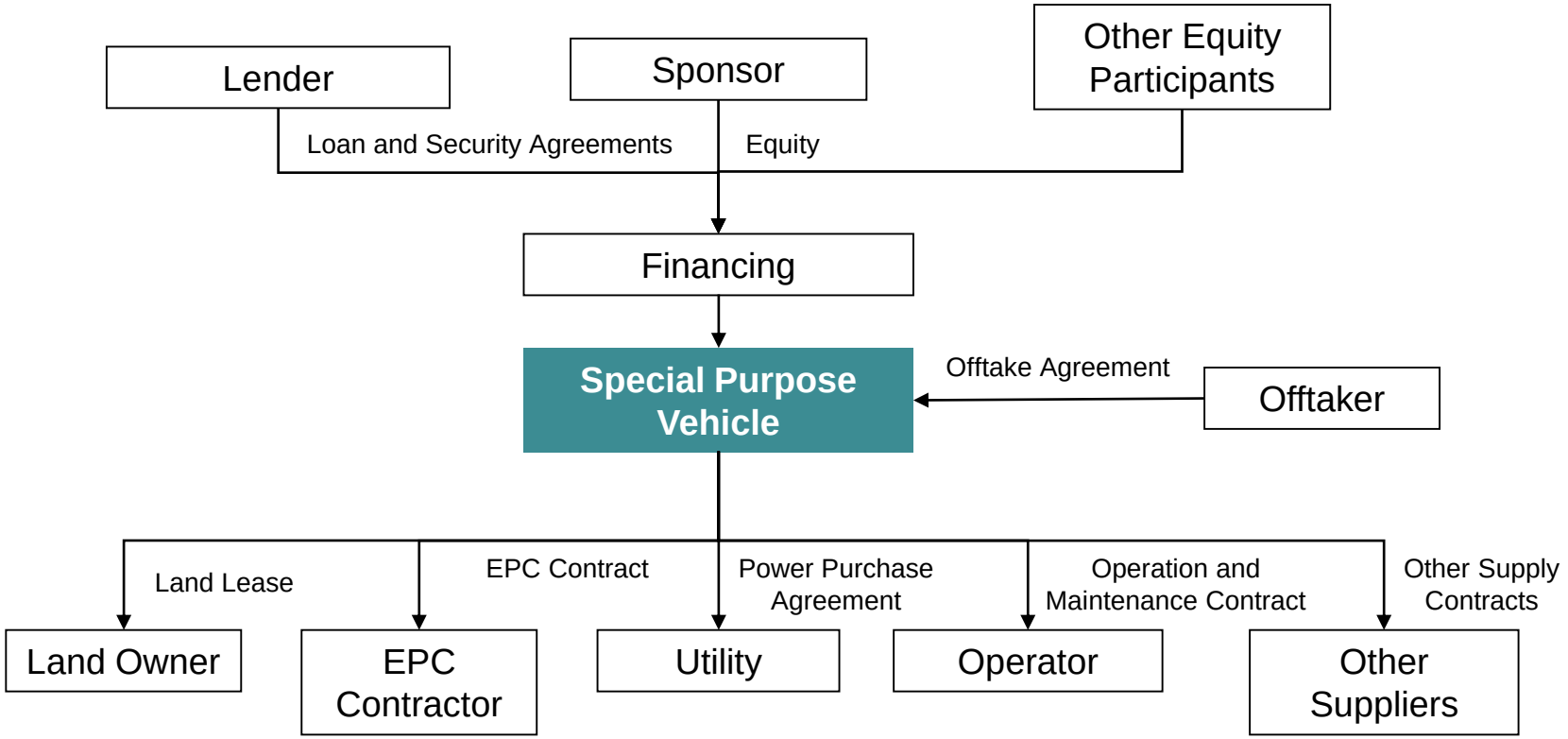
These templates are example of what a lender would typically provide in a term sheet (along with other terms)

These terms would be evaluated by the project sponsor and a lender would be selected based on that evaluation

Finance vs. Risk vs. Return

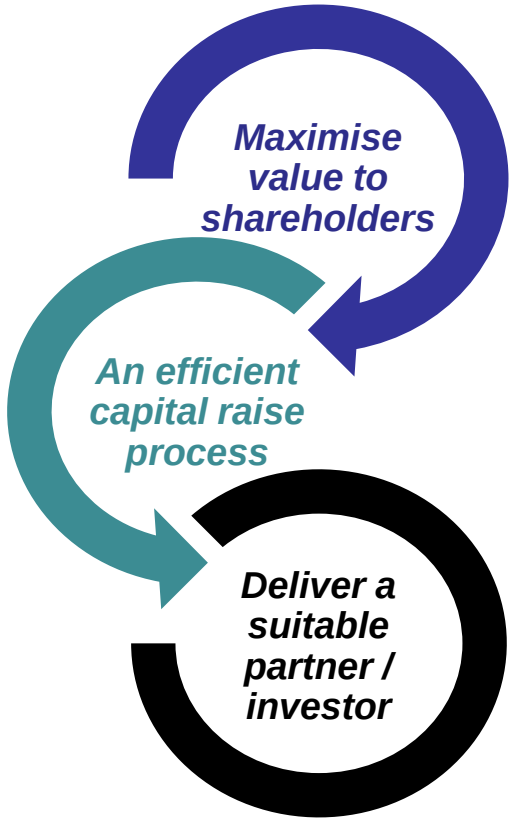


Typical Project Structure



Ensuring Objectives are met when raising capital / finding equity partners

Private Sector objectives…



Suggested approach…

1. ***Define transaction parameters:***
Define a viable financial structure, refine valuation objectives and agree parameters for achieving this through a tailored capital raise process

2. ***Undertake a structured efficient process:***
Maximise value in an efficient and well structured process, minimising input and time involvement from the private sector

3. ***Identify suitable partners / investors:***
Select investors with the suitable profile and appetite and negotiate the best terms for the private sector to maximise value

Questions?

Thank you

pwc.com

© 2019 PwC. All rights reserved. Not for further distribution without the permission of PwC. “PwC” refers to the network of member firms of PricewaterhouseCoopers International Limited (PwCIL), or, as the context requires, individual member firms of the PwC network. Each member firm is a separate legal entity and does not act as agent of PwCIL or any other member firm. PwCIL does not provide any services to clients. PwCIL is not responsible or liable for the acts or omissions of any of its member firms nor can it control the exercise of their professional judgment or bind them in any way. No member firm is responsible or liable for the acts or omissions of any other member firm nor can it control the exercise of another member firm’s professional judgment or bind another member firm or PwCIL in any way.