

ERES 2010

Project Finance for Infrastructures

24 June, 2010



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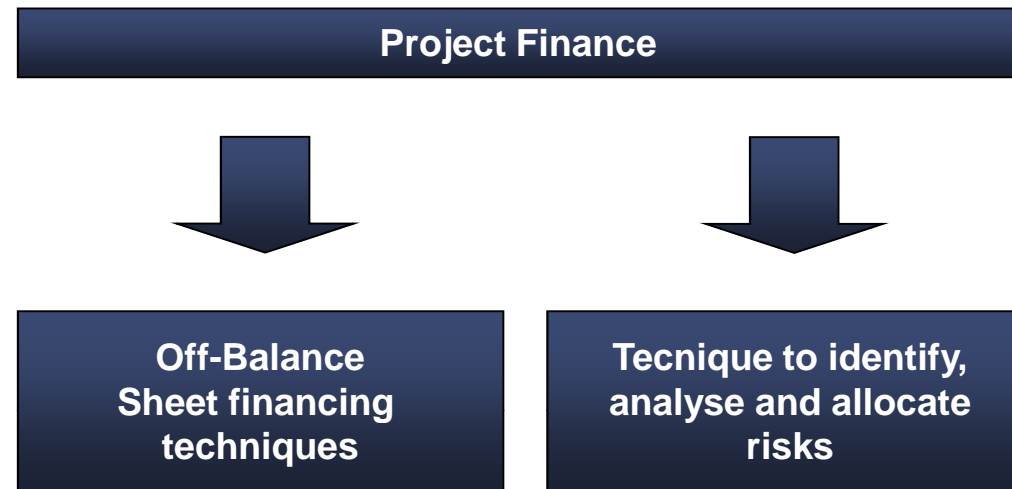
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Section 1

Project Finance: what is PF?

Project Finance

What is Project Finance



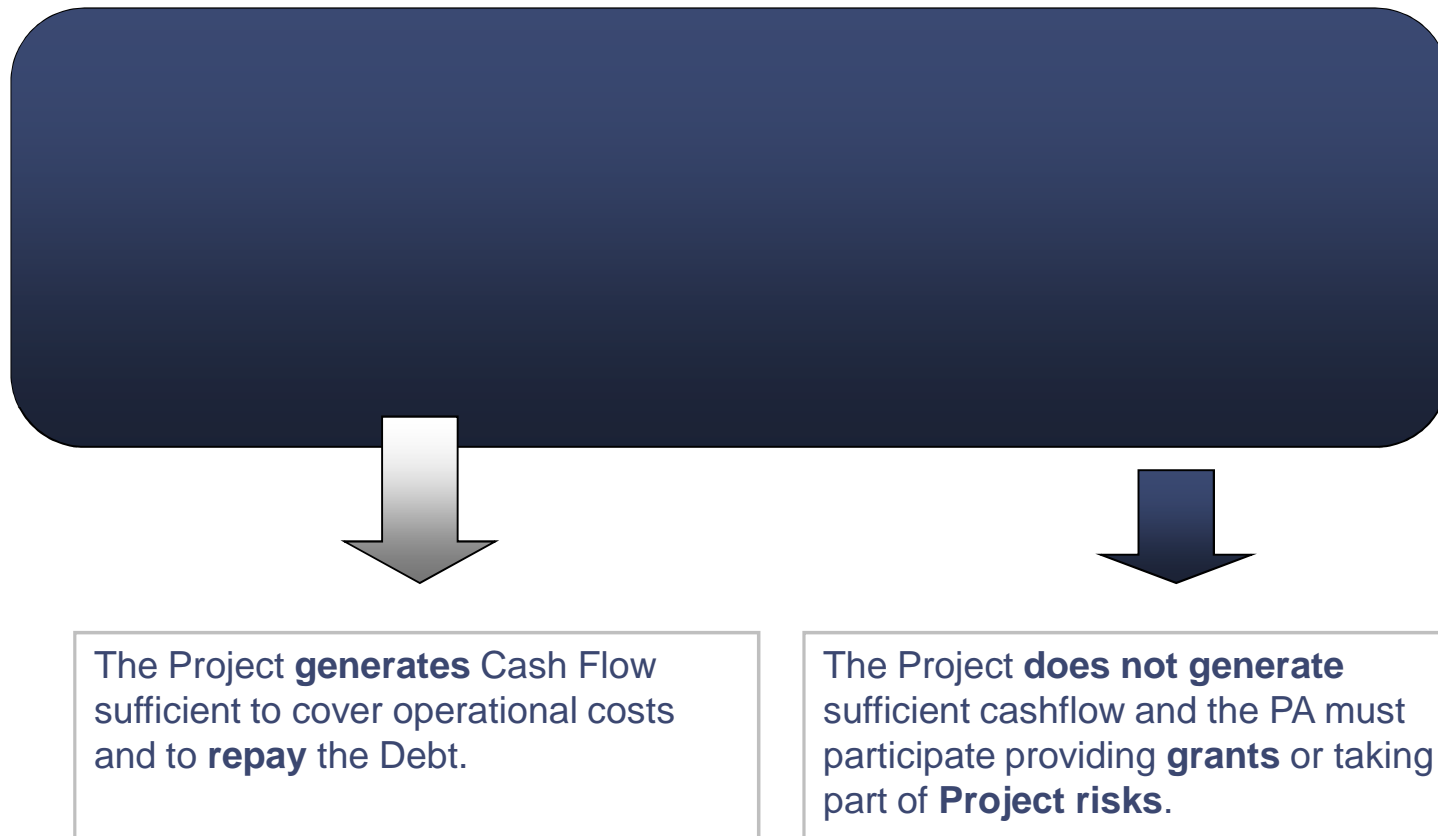
Project Finance (“PF”) is a financial **technique** that involves a corporate sponsor **investing** in and **owning** a single-purpose industrial asset through an economically and legally **independent** entity.

The providers of funds are primarily interested in the **cash flows generated** by the **project**.

This scheme of financing is project-specific and is debt, rather than equity, driven.

Project Finance

Introduction



Project Finance

Main Features

Cash-Flow based	The project, as well as its assets, contracts, inherent economies and cash flows are separable from promoters/sponsors in order to allow independent credit appraisal.
Off-Balance	Attractiveness of Project Finance lies in its capability to fund projects off balance sheet, without impacting Sponsors' merit of credit.
Limited/No Recourse	In case of project failure, lenders are allowed recourse only to the project assets, with limited or no recourse to other assets of the equity investors.
Ring Fenced	In case of Sponsor's failure, Sponsors' corporate lenders are not allowed to recourse to the Special Purpose Vehicle assets.
Risk Allocation	Project risks identification, analysis, allocation and mitigation are the key aspects of Project Financing.

Project Finance

Pros & Cons

Pros

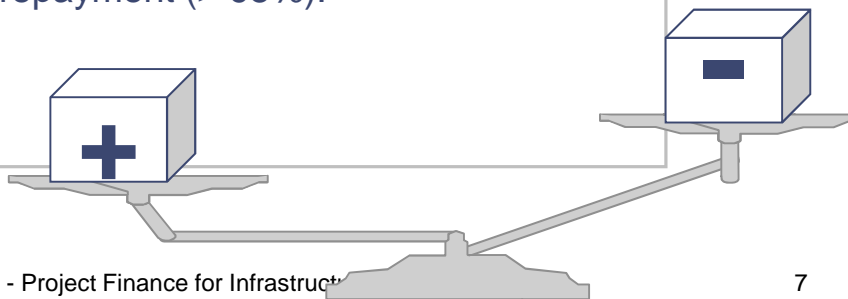
- Allows promoters to undertake projects without impacting their ability to borrow for traditional projects.
- Limits project financial risks to the amount of equity/quasi-equity invested.
- High leverage is possible as lenders are assured that cash flows from the project will not be used for other corporate uses.
- Project finance provides strong incentives for careful project evaluation and risk assessment.
- Deep technical and financial review of the projects provides a very high probability of repayment (> 95%).

Cons

- Complexity: high number of involved parties links to high transaction costs.
- Costs: levels of due diligence required lead to high project development costs.
- Time-consuming negotiations.
- Volume and complexity of information required.

Specific skills required

- Sophisticated financial modelling competences.
- Financial structuring competencies.
- Fund raising competencies.
- Negotiation skills.



Project Finance

Objectives of Project Finance transactions

Objectives of Project Finance Transaction

- **Ensure availability** of financial resources to the project
- Secure the necessary **funds** at the **lowest** possible **cost**
- **Minimize sponsors' exposure** to the project
- Establish a dividend policy to **maximize** the **return on equity** subject to the **constraints** imposed by the lenders (financial covenants)
- **Maximize** the **value** of **Tax Benefits**
- Achieve a **beneficial regulatory treatment**

Pre-commitment of Funds

Commitment from lenders and equity investors have to be coordinated and inter-related in order to cover the initial construction expenditure amount

Maximum Feasible Debt to Equity ratio

- Expected profitability and operating risks of the project
- Adequacy of project security arrangements

Timing of the Drawdown

The drawdowns schedule should match the schedule of construction expenditure

Lenders can require a certain amount of equity to be invested before first debt drawdown take place (Equity upfront payment)

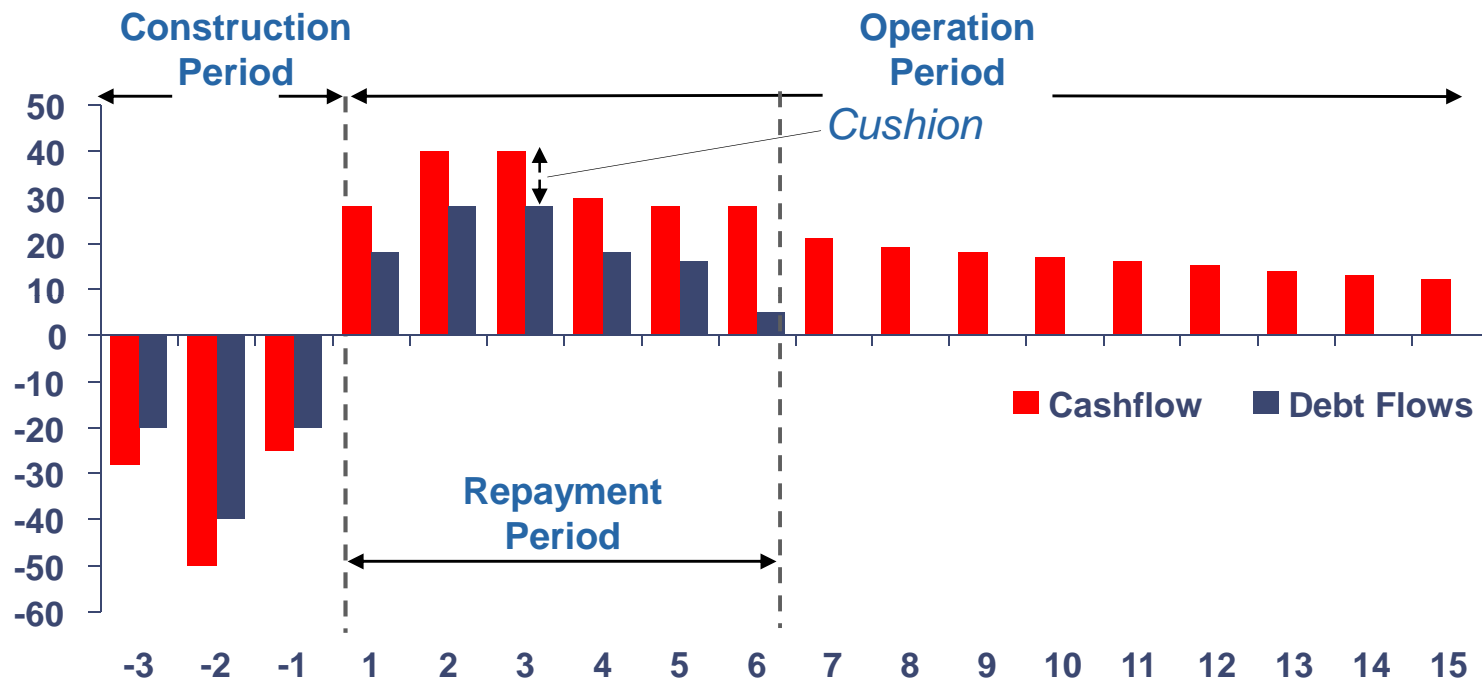
Expected Project Cash Flows Profile

The project's cash flows determine the debt repayment schedule. The cash flows structure should cover the maturities of fund raised

Project Finance

Cash Flow Based

The Repayment Mechanism is Cash Flow Based \Rightarrow *Sculpted repayment profile*



Cushion \rightarrow Debt Capacity > Debt Repayment

Project Finance Ratios

	<i>Natural resources</i>	<i>Road</i>	<i>Power</i>	<i>Infra-structure</i>
<i>DSCR Minimum</i>	1.25	1.25	1.35	1.20
<i>LLCR Minimum</i>	1.75	1.50	1.35	1.30
<i>PLCR Expected</i>	2.00	1.80	1.50	1.40

Risk reduction

Project Finance

Risk Analysis

Why is it important to understand the Risk of the Project?

- To **allocate** the risks among involved parties
 - > key element in negotiations
 - > risk / return reflected in the payment mechanism
- To **evaluate** and **manage** the project risks
 - > risk response strategy (i.e. risk matrix)

More Information → Less Uncertainty

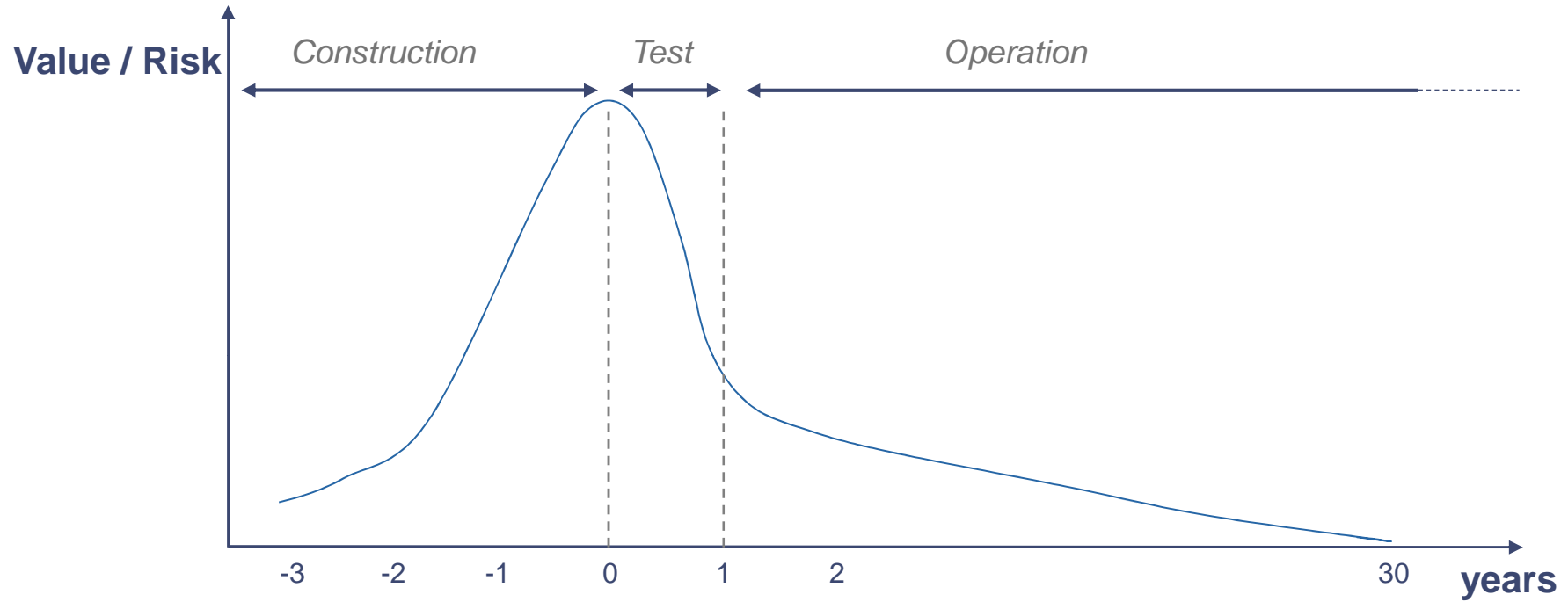
Project Finance

Key Risks

Pre-completion risk	Operating risk	Market risk
<ul style="list-style-type: none"> ▪ Risks that face a project reaching completion and being able to deliver the required service ▪ Abandonment / delays / cost overruns / partial failures ▪ Generally perceived as the highest area of risk in any project as least ‘manageable’. <p><i>Examples:</i> Scottish Parliament</p>	<ul style="list-style-type: none"> ▪ A project is defined as complete once it has reached, and usually maintained for a minimum period, a certain level of operating efficiency. Operating risk starts when the project can operate to specification. ▪ Sub-optimal performance due to poor design or build / poor operating management / rise in operating costs. <p><i>Examples</i> East Coast Main Line</p>	<ul style="list-style-type: none"> ▪ A project which is completed successfully, and operates to specifications, may still fail if a change in the market makes its product uncompetitive or unwanted. ▪ The aspects of market risk can be broken down into demand, supply and cost. <p><i>Examples</i> M6 Toll</p>

Project Finance

Risk Evolution over the Project Life



Project Finance

Risk Allocation

Identifying the **project's risks** and then analyzing, allocating, and mitigating them is the key in order to structure a project finance. Banks take a big portion of the operating risks if the cash flows margin is sufficient. Otherwise, residual risks have to be mitigated by contracts and guarantees.

The key issue in order to mitigate risks are:

- counter-party is able to manage the risk;
- counter-party is willing to retain the risk;
- counter-party has financial strength to afford the risk.

Identify the Risk

- Events/actions that adversely affect revenues/costs, performance, timing and viability of the project.

Determine severity of Risk

- Cost, time or reduction in performance in the case this events take place.

Allocate the Risk

- Risk should be managed by the subject best able to manage it.

Mitigate the Risk

- Perform actions to reduce the likelihood of the adverse event.

Price the Risk

- Quantify the cost of addressing the risk.

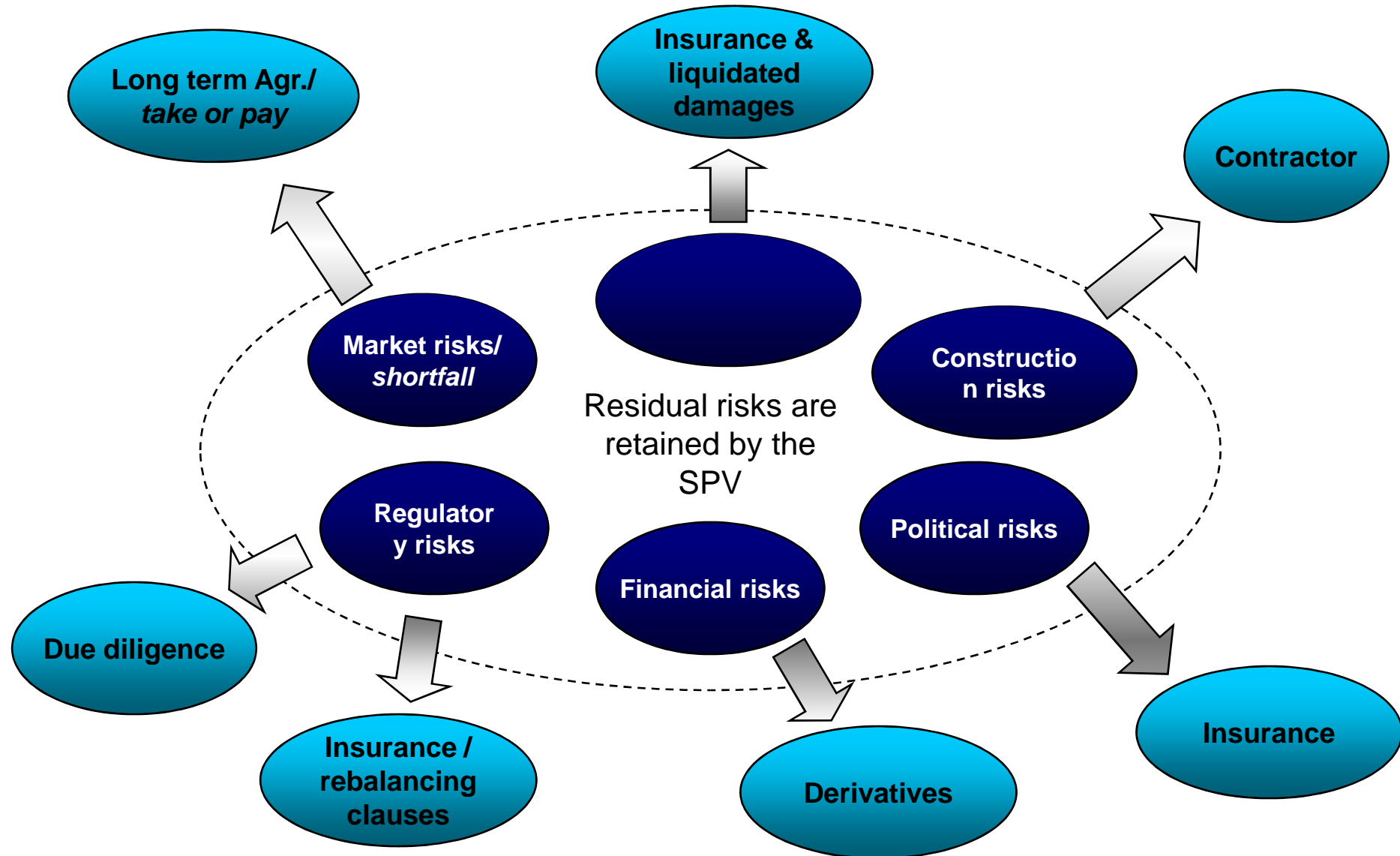
Project Finance

Risk Matrix

	Constructor	Administrator	SPV	Banks	PA	Insurer
Regulatory risks			✓		✓	
Construction risks	✓					✓
Commercial risks		✓	✓			
Technological risks	✓	✓				
“Permits” risks			✓		✓	
Financial risks			✓	✓		

Project Finance

Risk Mitigation Strategy



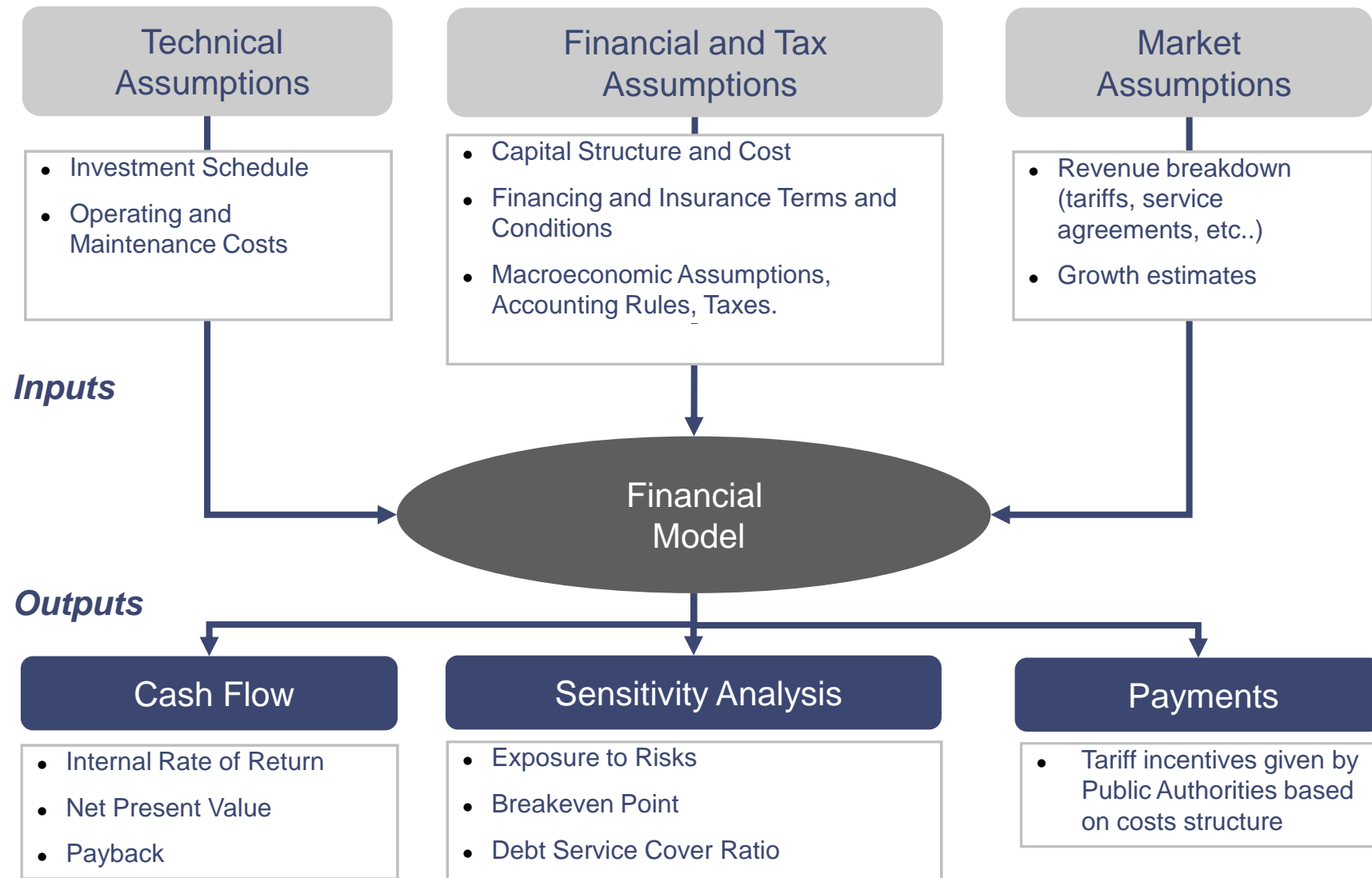
Project Finance

Financial Modelling

- A Project Finance loan is secured with its future revenues rather than existing Balance Sheet or other existing assets.
- **Completion** of **project** and its profitability during operation are the key concern of the lenders and equity investors.
- Hence all elements that determine **costs**, **revenues** and **returns** of the project are keys in order to structure the project.
- **Analysis of projected cash flows** is essential from the *bankability* point of view.
- The results of **financial analysis** support the decision whether the project is sound enough to be pursued by:
 - ✓ giving an initial figure for project **internal rate of return** (IRR);
 - ✓ establishing a sustainable Financial structure;
 - ✓ reassuring lenders and equity investors to the attractiveness of the Project.

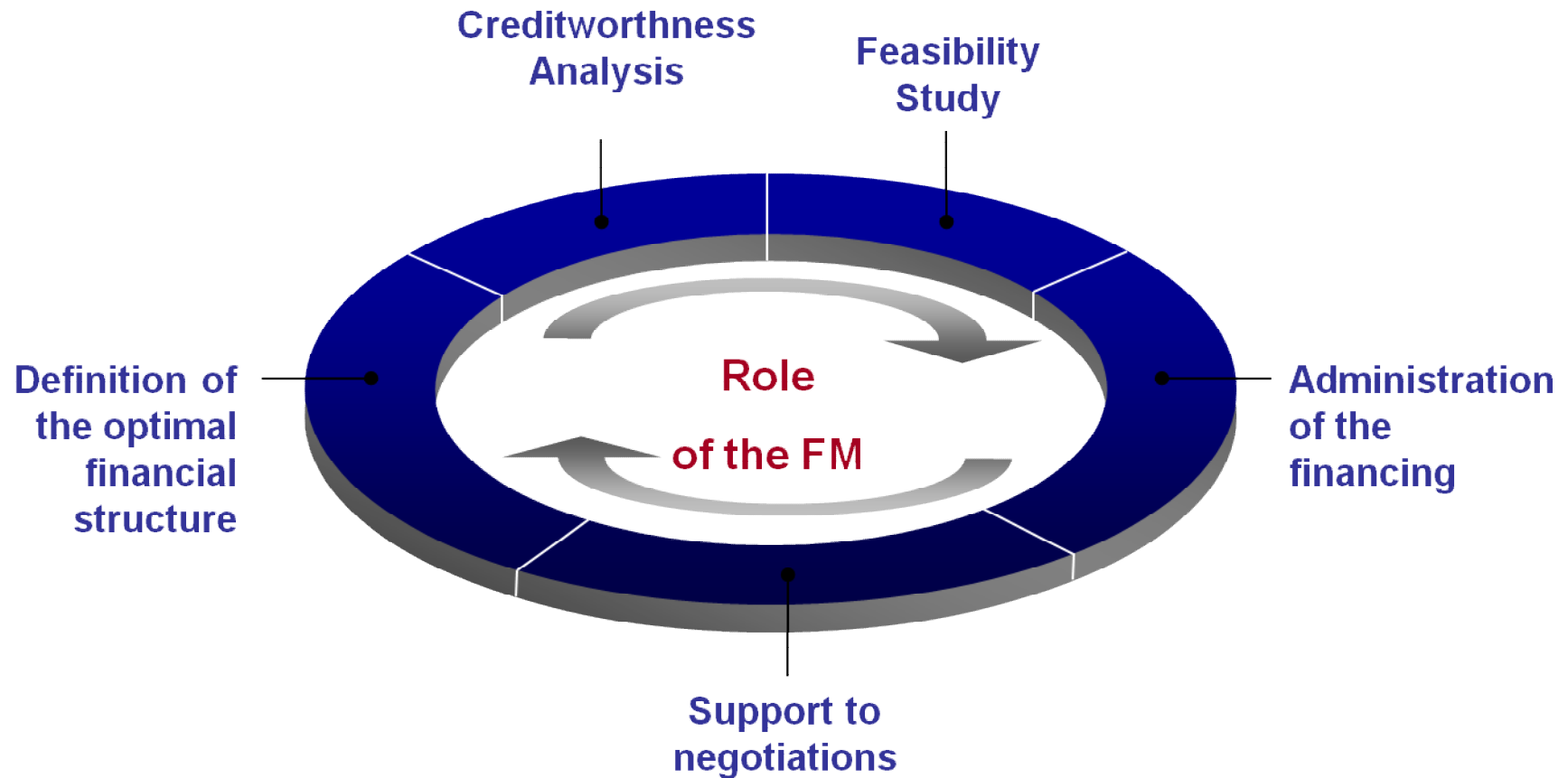
Project Finance

Scheme for Financial Modelling



Project Finance

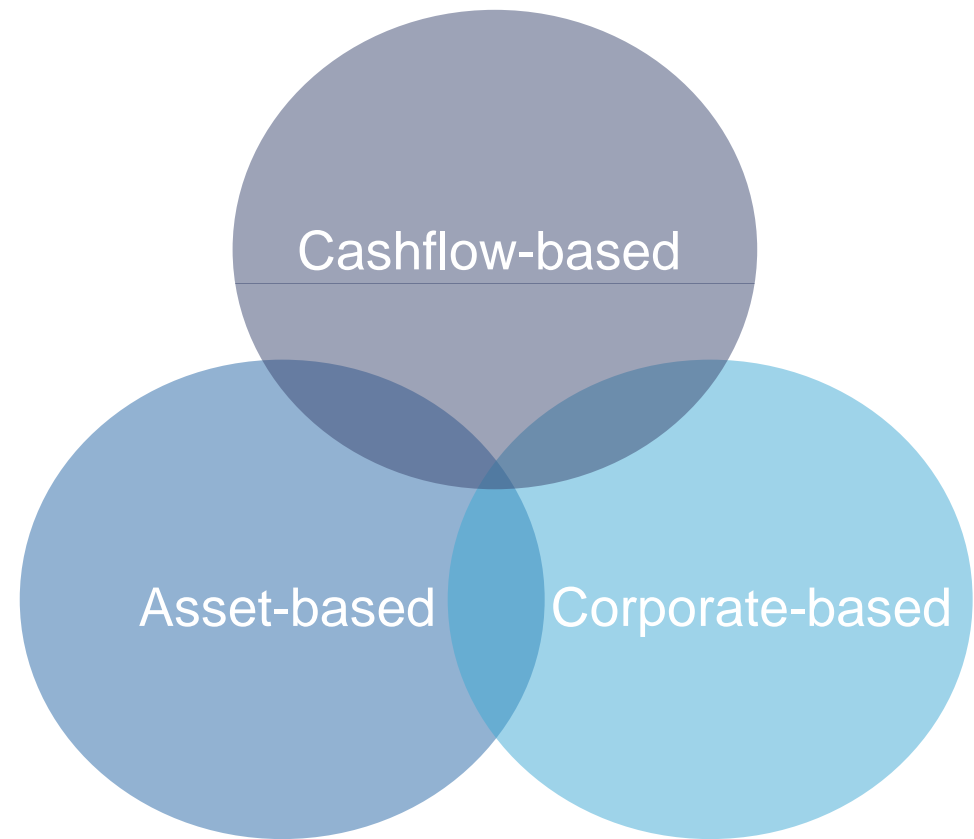
The Role of the Financial Model



Section 2

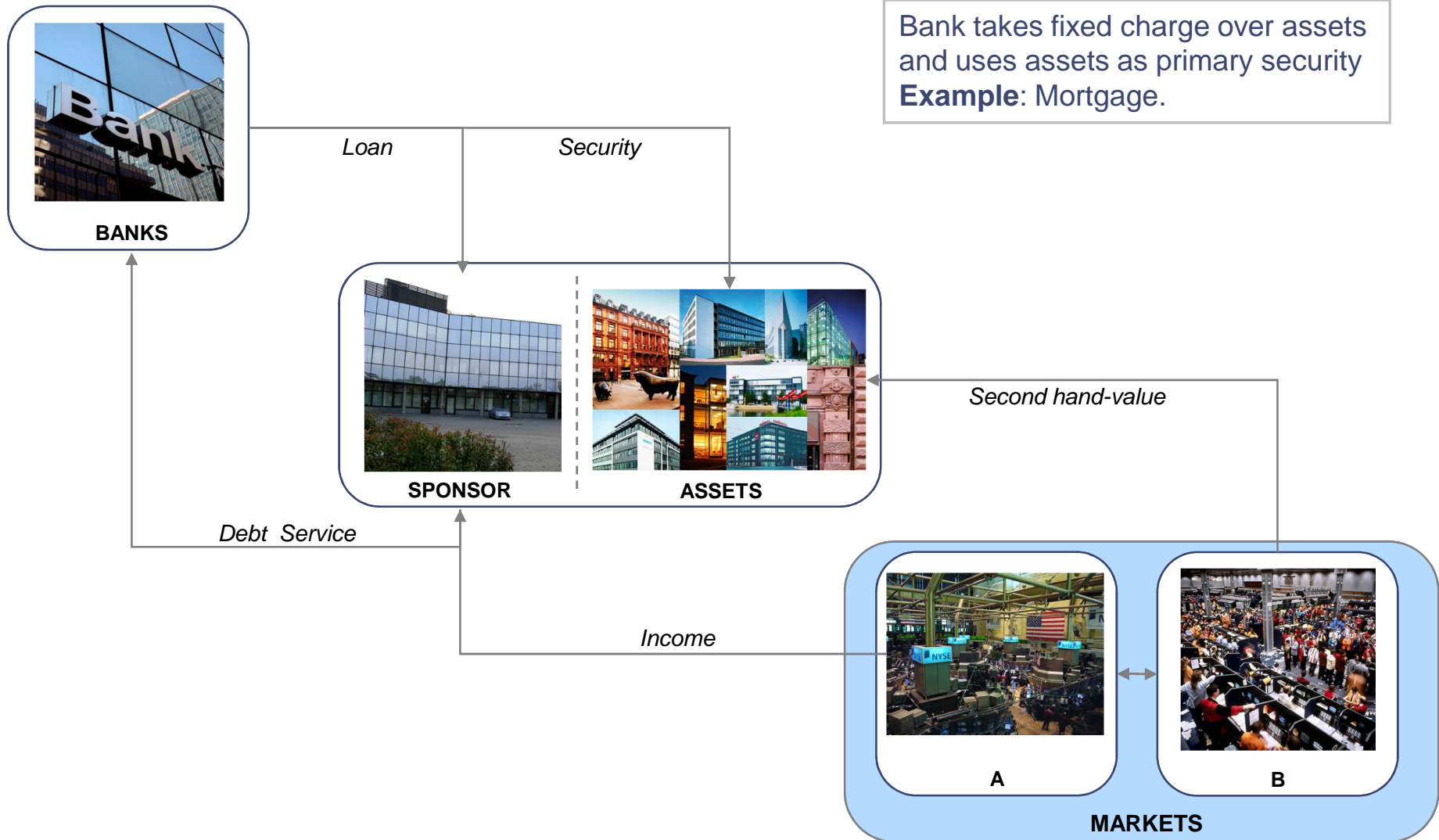
Project Finance Vs Other Lending Models

3 Key Types of Lending

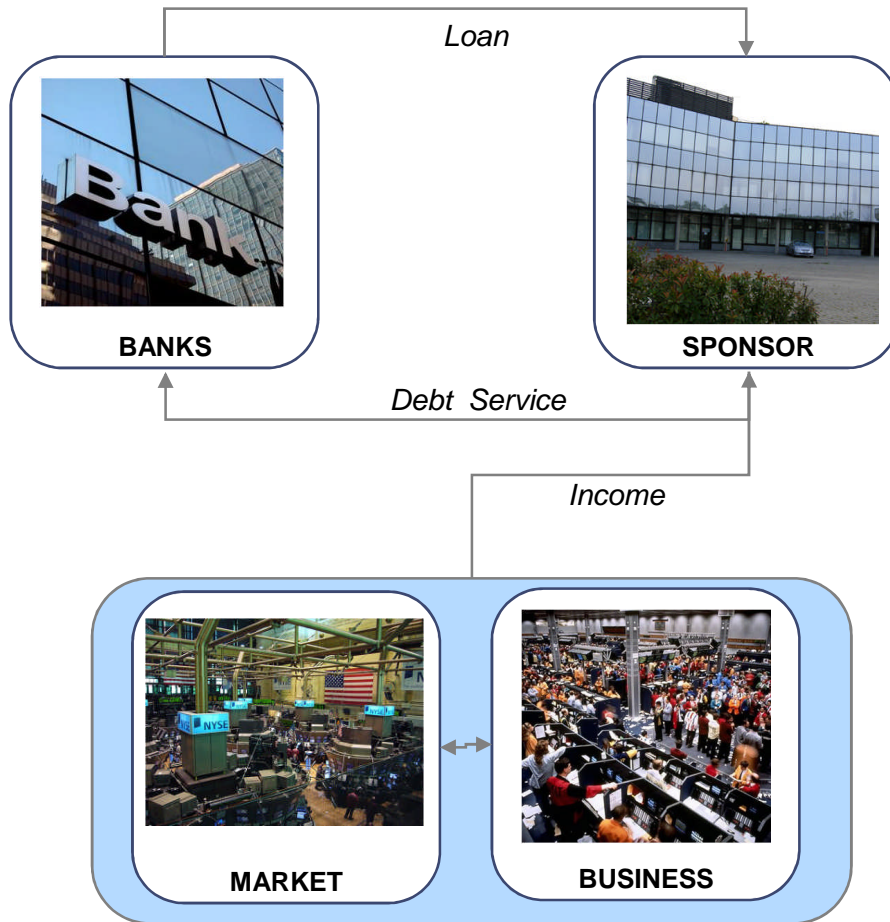


3 Key Types of Lending

Asset Based Lending



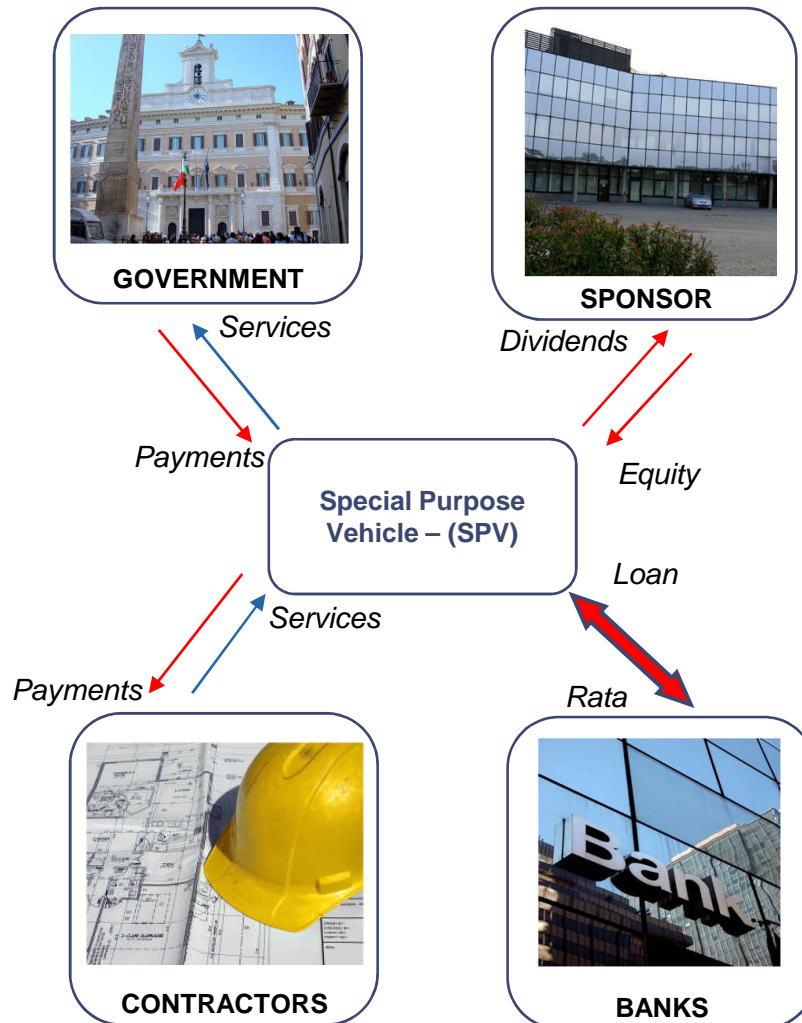
3 Key Types of Lending Corporate Based Lending



Bank takes **floating charge** over all the company's **assets**,
It is similar to personal loans/credit cards etc..

3 Key Types of Lending

Cash Flow Based Lending



Project Finance relies completely on cash flows.

A special purpose company is granted a concession to design, build, finance, operate and maintain infrastructure to provide a specified level of service

It earns income from:

- User charges
- A government payment subject to deductions for substandard services.

The special purpose company's only asset of significance is the concession value.

Example: PPPs, oil exploration



Project Finance Vs Corporate Finance Model

Criterion	Corporate Finance Model	Project Finance Model
Organisation	<ul style="list-style-type: none"> • Lending to the firm (<i>annual to 3 year horizon</i>). • Cash flows generated by different assets/projects (<i>many activities in many places</i>). • Few constraints on management action 	<ul style="list-style-type: none"> • Lending to the project (asset Lifetime perspective). • Assets and cash flows are separated from other sponsors' activities (<i>Usually single activity in a single place</i>). • Tight constraints on management action
Risk Allocation	<ul style="list-style-type: none"> • Creditors have full recourse to project sponsors • Risk diversified across sponsors' assets portfolio • Exposed to range of commercial risks 	<ul style="list-style-type: none"> • Limited or non recourse financing • Creditors exposure is project-specific • Contractual agreements signed in order to distribute project risks • Exposure to a few key risks
Financial Flexibility	<ul style="list-style-type: none"> • Financing can be arranged quickly • Internally generated funds can be used to finance other projects 	<ul style="list-style-type: none"> • Higher financing costs and time consuming • Internally generated funds are reserved for investors repayment
Free Cash Flows	<ul style="list-style-type: none"> • Under managers judgment • Cash flows mingled and then allocated as per the corporate policy 	<ul style="list-style-type: none"> • Generally free cash flows to equity are fully distributed to the equity investors
Debt Capacity	<ul style="list-style-type: none"> • Creditors look at sponsors' entire assets portfolio for debt service repayment • Low debt:equity ratios eg 3:2 	<ul style="list-style-type: none"> • Creditors look at specific project/assets for debt service repayment • Debt contracts tailored to specific characteristics of the project • High debt:equity ratios eg 9:1

Section 3

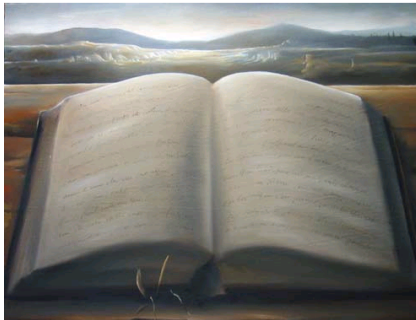
Public Private Partnerships

Public Private Partnerships

Introduction (1/2)

“A cooperative venture between the public and private sectors, built on the expertise of each partner, that best meets clearly defined public needs.”

- Canadian Council for Public-Private Partnerships



What is the Public Private Partnership

The Public Private Partnership (**PPP**) describes a government service or private business venture which is **funded** and **operated** through a **partnership** of **government** and one or more **private sector companies**.

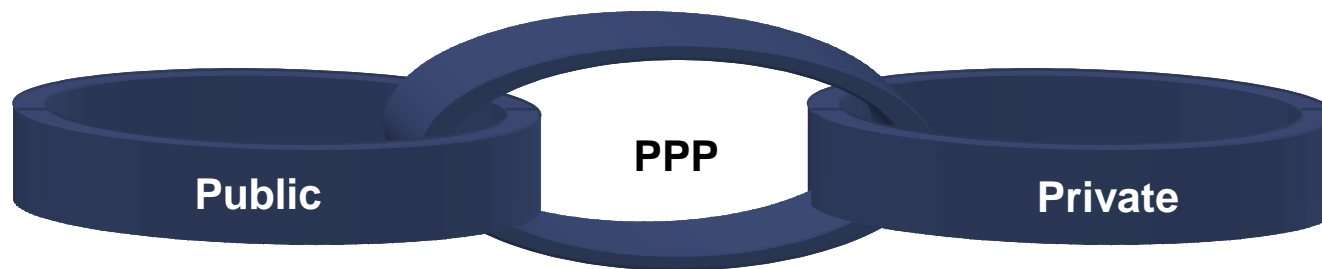
PPP involves a **contract** between a **public sector authority** and a **private party**, in which the private party **provides** a public service or project and **assumes** substantial financial, technical and operational **risk** in the project.

Public Private Partnerships

Introduction (2/2)

Key Differences between PPPs and Traditional Procurement:

- Transfer and sharing of risk;
- Private sector equity investments required;
- Single long-term Concession Agreement versus multiple contracts;
- Private sector returns and payments linked to satisfactory delivery of the asset and performance over the life of the contract;
- Timing of payments.



Public Private Partnerships

Main Area of Application

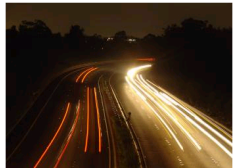
Public & Social Infrastructures



Prison



Hospital



Roads



Water Infrastructure



School

Traditional Infrastructures



Power&Energy



Construction



Public Transport



Airports



Sports Center

Project Finance

Key Drivers for PPP Development

Efficient procurement, design construction and operation	User Payments	Budgetary and Accounting
<p>Transfer of key risks - construction cost overruns, construction delays, commissioning problems, operating issues;</p> <p>Transfer of whole life cost risk produces better designed, optimised solutions;</p> <p>Transfer of cost/time risk improves costing of contracts and speeds up delivery of contracts;</p> <p>PPP concession contracts lock in quality and stop raids on maintenance budgets.</p> <p>Examples: <i>UK Private Finance Initiative Canada P3 programme PPPs in Holland and Norway</i></p>	<p>Creating a new charge for services usually leads to the government considering whether it needs private sector involvement.</p> <ul style="list-style-type: none"> ▪ Toll roads have been operated successfully by both government and private sector; <ul style="list-style-type: none"> ✓ Existing user paid government services may be privatised to free up investment. ▪ Airports have historically been more profitable in the private sector. <p>Examples: <i>Toll Roads in the USA, Spain, Italy Airport privatisations/commercialisations throughout the world</i></p>	<p>In most territories, PPPs can be deemed off balance for the government;</p> <p>In the eurozone, the key test is ESA 95 – “is construction and either availability or usage risk transferred?”;</p> <p>Opportunity for governments running deficits to defer the impact of new assets on their accounts;</p> <p>Not necessarily a bad thing – in growing economies can provide a better match between necessary investment and returns on such investment.</p> <p>Examples: <i>Hungarian and Slovakian Roads</i></p>

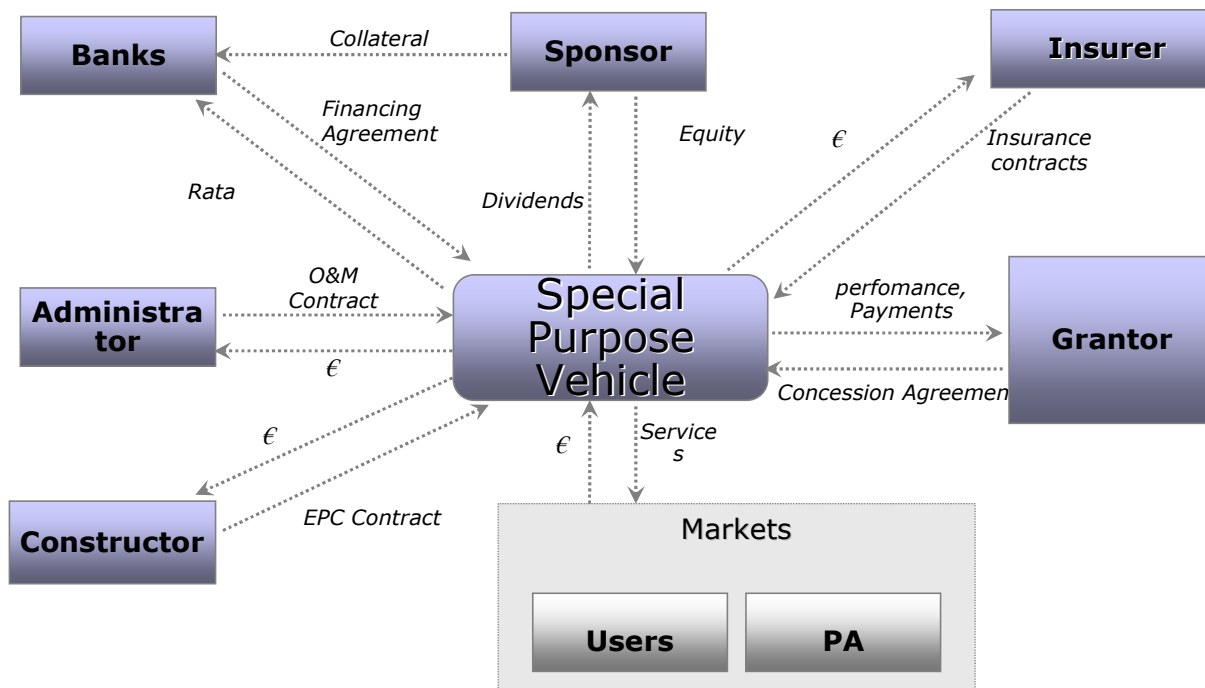
Public Private Partnerships

PPP schemes (1/2)

BOT

Build-operate-transfer (BOT) contracts are designed to bring private investment into the construction of new infrastructure plants. Under a BOT, the private sector finances, builds and operates a new infrastructure facility or system according to performance standards set by the government.

The government retains ownership of the infrastructure facilities and becomes both the customer and the regulator of the service.



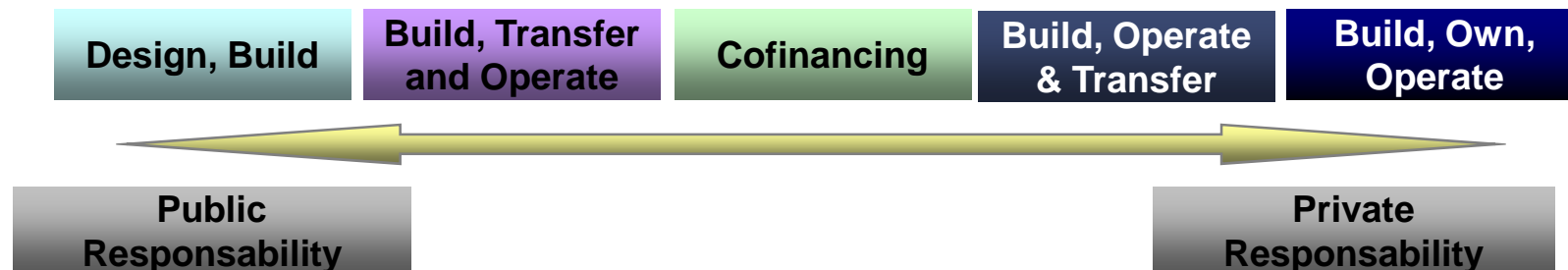
Other Concessions Schemes

- BOO (Build, Own and Operate)
- BTO (Build Transfer and Operate)
- BOST (Build, Operate, Subsidize and Transfer)
- BLT (Build, Lease and Transfer)

Public Private Partnership PPP schemes (2/2)

PPP's scheme						
	Property	Initiative	Design	Construction	O&M	Financial Responsibility
Design, Build	PA	PA	Private with contract	Private with contract	PA	PA
Build, Transfer and Operate (BTO)	PA	PA	Private with contract	Private with contract	PA PA/Private	PA
Cofinancing	PA	PA	Private with contract	Private with contract	Private with contract	PA/Private
Build, Operate and Transfer (BOT)	PA	PA o Privato	Private with contract	Private with contract	Private with contract	Private
Build, Own, Operate (BOO)	Private	PA / Private	Private with contract (Concession)			

The allocation of responsibility and risk is related to scheme selected.



PPPs Vs Property Finance

PPPs

- Schemes generated by government
- Fixed and fully specified end project.
- Guaranteed income from unitary charge.
- Product definition and pricing certainty provides refinancing opportunity and short term exit potential.

Property Finance

- Schemes generated by mixture of clients and developers
- Product not defined or specified, but determined by the market which changes over the life of the project - 5 years min.
- Income subject to market risk
- Nurture of market through up front capital investment provides limited opportunity to exit project before success is clearly established - @ 3 years min before exit.

Section 4

Credit Crunch

Credit Crunch

Impact on Infrastructure Finance

- The **liquidity constraints** have certainly impacted the appetite of lenders into infrastructure. Pre-credit crunch, **large banks** were willing to **enter** into **sole-underwrite** positions at a fixed price on large infrastructure deals.
- **Now** these same banks want one or more **co-underwriters** and require **market flex** (a right for lenders to increase interest rates) on pricing (and sometimes other terms).
- Credit committees want much higher comfort that they will be able to sell down debt through the syndication markets, to avoid holding significant debt on their balance sheets. In this context, banks decided to **“club”** together ahead of financial close to **remove** the risk of changes in terms that may otherwise arise from the market flex process.

“Raising PFI debt is a nightmare”

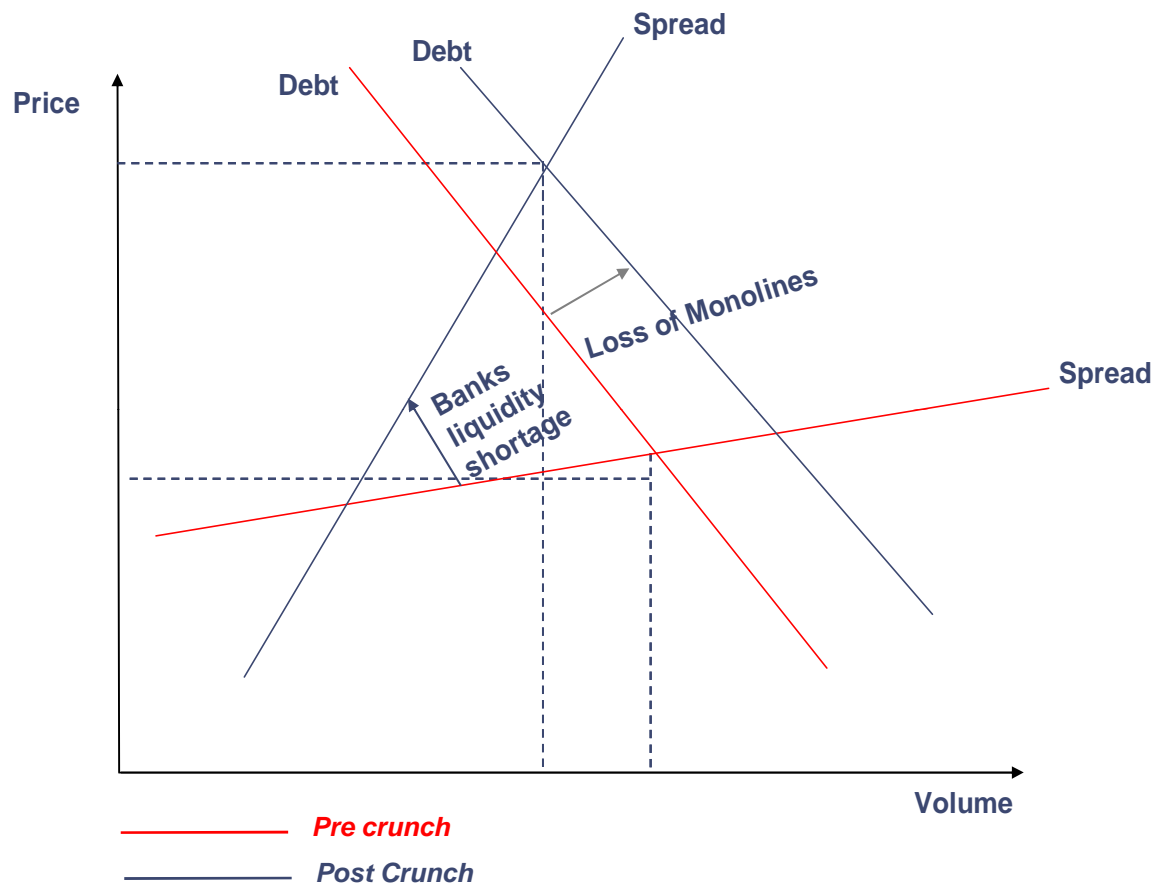
- Financial Times



Source: Bank of England, Financial Stability Report, April 2008

Credit Crunch

Demand/Supply for Project Finance Debt



- PFI is seen as a high quality product;
- Bond market has reduced with the collapse of monoline insurance;
- More demand for bank debt than before, but about 50% of top layer banks have gone;
- Bank debt available has reduced significantly (no banks willing to take on debt to sell down) - banks restructure their balance sheets and reduce lending ratios:
 - ✓ Maturity of debt has reduced (miniperm structures);
 - ✓ Margins have increased from 50 bps to 300 bps.
- Sources of debt for project finance banks much reduced due to reduction in interbank market.

Result: Increase in demand, reduction in supply

Section 5

International PPP Market

International PPP Market

Impact of Credit Crunch

Banks	Sponsors	Government
<ul style="list-style-type: none"> ▪ Although PPPs are high quality loans, capacity has shrunk like all other sectors ▪ Banks are charging far higher margins, and making more money providing less debt ▪ They believe that the door is closing on high margin deals as more banks reenter the market'. 	<ul style="list-style-type: none"> ▪ No shortage of equity available – too many infra funds prior to crunch. ▪ Sponsors now being pushed around by banks rather than vice versa ▪ In some cases sponsors asked to take refinancing risk 	<ul style="list-style-type: none"> ▪ Deals have taken longer to do or been cancelled ▪ Increased cost of financing is passed through to government.

International PPP Market

European Union



Costs of PPPs have risen

- ***Private financing margin over public debt has risen significantly***

PPPs are the only infrastructure some governments can afford

- ***Most PPPs do not count against government debt under Eurostat rules***

Governments' focus has moved from accounting rules to rating agencies

- ***Rating agencies will often count PPP debt as government debt***

Richer countries will use to improve value for money

Poorer countries will use to access capital

International PPP Market

North America



- **US Market on verge of explosion for last 5 years**
 - *Scheme development hamstrung by short termism linked to US political system*



- **Highly successful PPP programme**
 - *PPPs in health, transport, accommodation*
 - *Increased focus on water and energy*

International PPP Market

Rest of the World



- **Strong state level PPP programme**

- *Move away from user payments to government payments*
- *New roads, transit and environmental projects coming to market*



- **Enormous number of projects coming to market**

- *Projects in transport, water and accommodation*
- *Drivers for PPP very different from anywhere else in the world*

Section 6

Italian Infrastructure Market

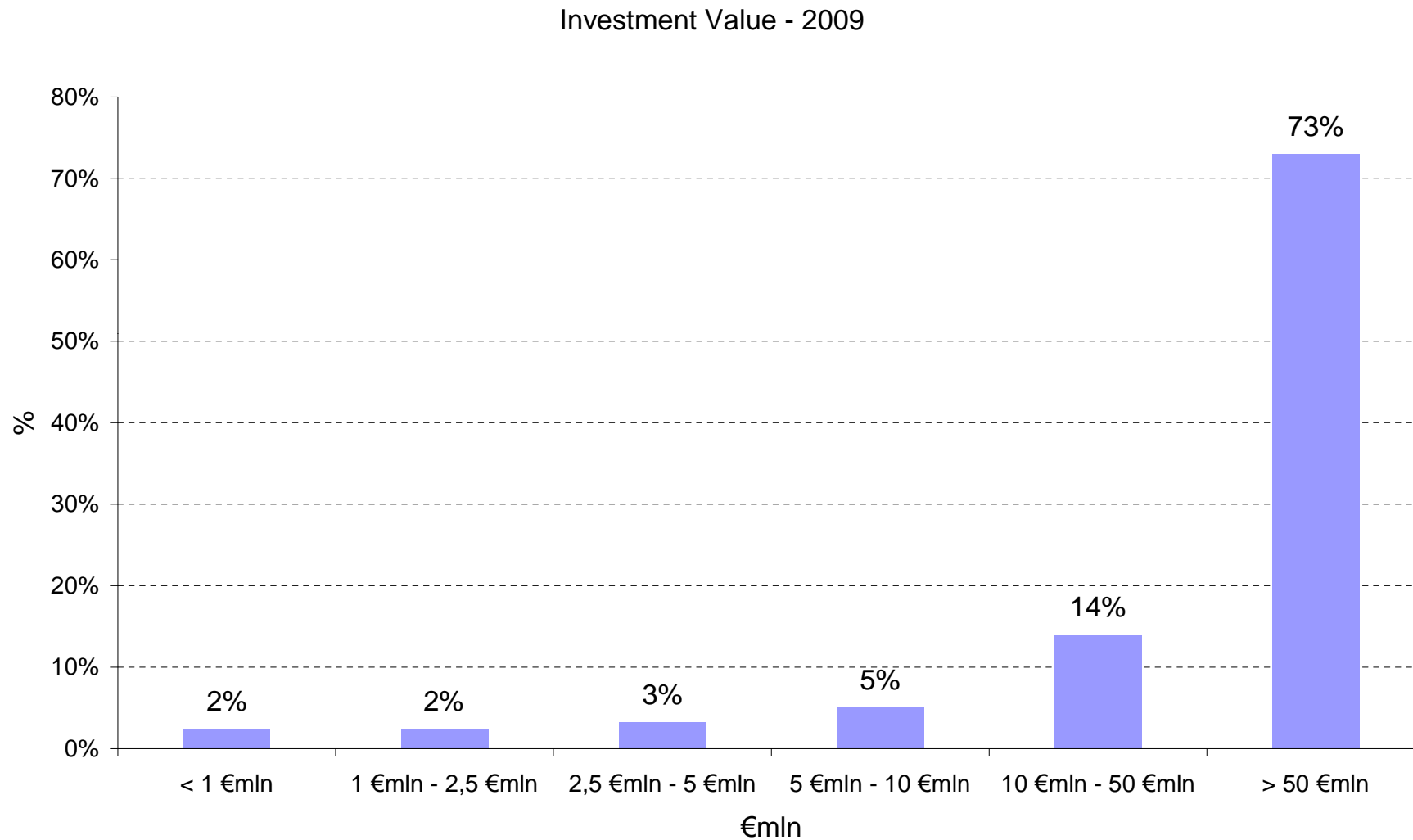
Italian Infrastructure Market

Project Finance market breakdown by business

Italian Project Finance market (2009)					
Business	N.	%	Value (€mln)	%	Average (€mln)
Water, gas, energy, telecom.	197	14,2%	1.202,1	11,5%	6,1
Marinas	15	1,1%	143,2	1,4%	9,5
Urban planning	211	15,3%	94,3	0,9%	0,4
Cultural heritage	3	0,2%	3,1	0,0%	1,0
All-purpose centers	5	0,4%	2,2	0,0%	0,4
Cemetery	54	3,9%	93,1	0,9%	1,7
Commerce	151	10,9%	222,8	2,1%	1,5
Directional	2	0,1%	11,1	0,1%	5,6
Public Health Service	11	0,8%	279,4	2,7%	25,4
Leisure Center	295	21,3%	276,7	2,6%	0,9
Parking	115	8,3%	232,9	2,2%	2,0
Urban division	25	1,8%	437,7	4,2%	17,5
Healthcare	58	4,2%	596,7	5,7%	10,3
Education & Social	50	3,6%	136,4	1,3%	2,7
Spare time (cinema..)	54	3,9%	103,7	1,0%	1,9
Transportation	26	1,9%	6.450,6	61,7%	248,1
Turism	85	6,1%	46,2	0,4%	0,5
Other	26	1,9%	124,9	1,2%	4,8
Total	1.383	100,0%	10.457	100,0%	7,6

(Source: osservatorio nazionale Project Finance)

Italian Infrastructure Market Investments Value



(Source: *osservatorio nazionale Project Finance*)

Italian Infrastructure Market

Project Finance market breakdown by Area

Italian Project Finance market (2009)			
Area	N.	Value (€mln)	% Value
North - Ovest	347	1.671	16,0%
North - Est	217	2.458	23,5%
Center	227	4.422	42,3%
South	397	1.286	12,3%
Sicily / Sardinia	196	619	5,9%
Total	1.384	10.457	100%

(Source: osservatorio nazionale Project Finance)

Section 7

Contact Details

Contact Details

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