

Plenary 5: Sources of finance

Tuesday, 9:00 to 10:15



Session agenda

1. Financing PPPs
2. Investor perspective
3. South Asian experience
4. IFIs
5. Government support
6. Summary and further reading

Financing PPPs – project finance recap

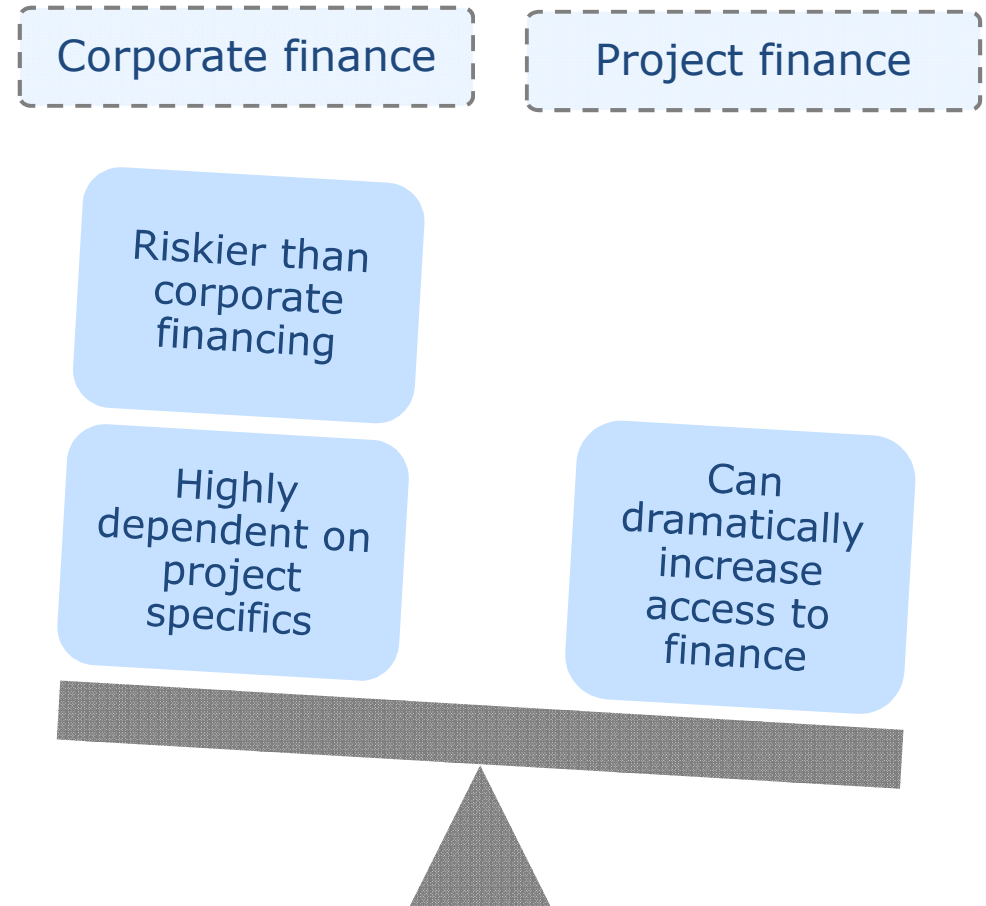
• There are two main routes to finance PPPs:

- **Standard corporate finance**

companies use their corporate balance sheet to fund investments; and

- **Project finance**

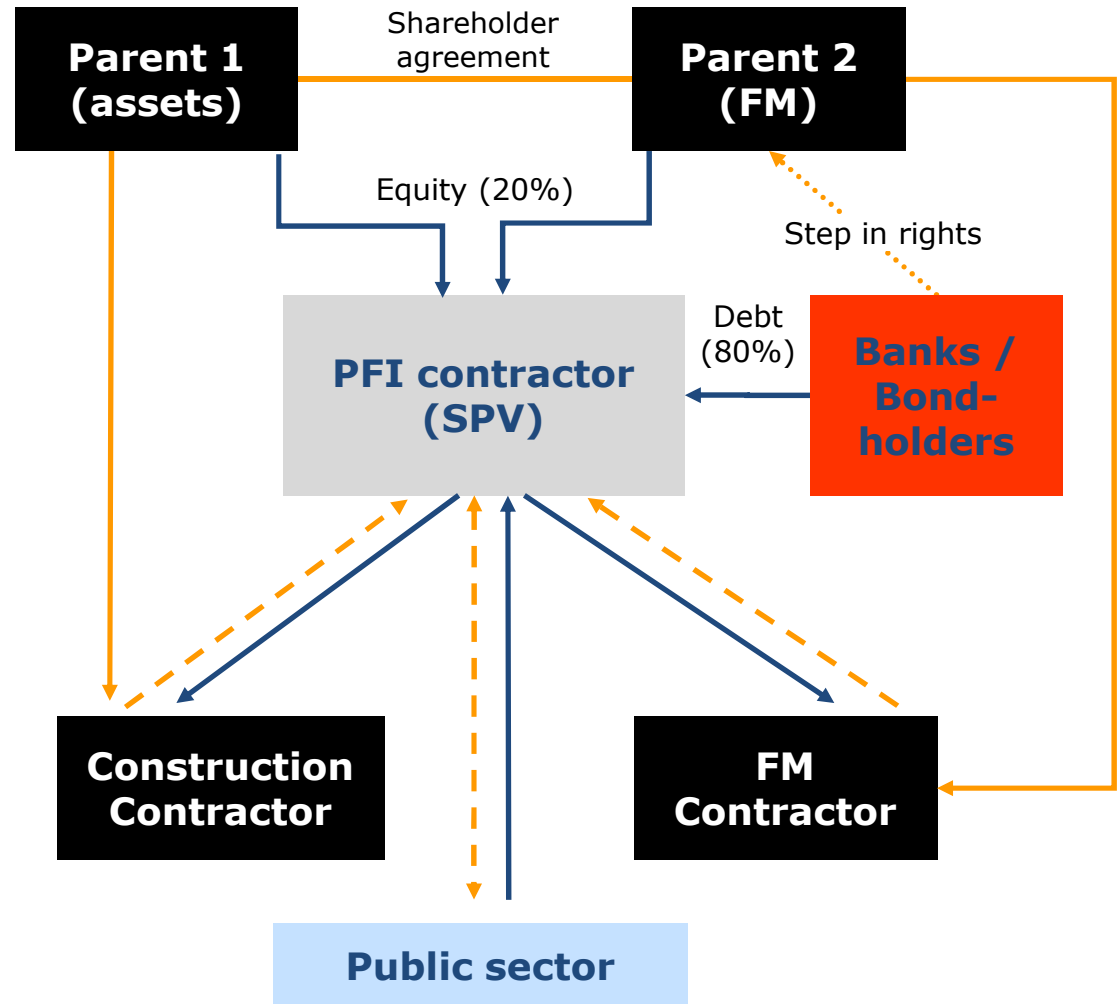
company uses the cash-flows of the investment to fund the project without recourse to the parent company balance sheet.



Project finance structure example

This example builds on the financing structure shown in Plenary 1 yesterday

Key:
- - -> Contracts & services
-> Cashflows



Session agenda

1. Financing PPPs
2. Investor perspective
3. South Asian experience
4. IFIs
5. Government support
6. Summary and further reading

Investor perspective – overview

- Key objective of investors is return for considerable effort and expense.
- Free cash flows (FCF) must meet annual obligations. If it falls below this, can only be met by:
 - recourse;
 - standby banking facilities; or
 - retained cash liquidity from previous years.
- Once sure FCF can meet obligations, we can calculate an IRR.
- Calculate NPV using an appropriate discount rate to give investor comparisons.

Investor perspective – Sponsors – Project IRR vs. Equity IRR

- Project IRR is an incorrect measure for investors as sponsors are only entitled to cashflow after flows to debt holders (project IRR does not necessarily = Equity IRR).
- Equity IRR captures all flows to sponsor:
 - dividends and other flows to equity;
 - management and technical support fees; and
 - flows due as supplier or contractor.
- When can equity obtain cash flow?
 - post construction completion;
 - control accounts full;
 - financial covenants met;
 - cash sweep rules met; and
 - no default on project docs.
- Improved structuring means Equity IRR can beat Project IRR.

Investor perspective – lenders a

- In corporate financings, debt might grow with business.
- In project financing, refinancing risk is not acceptable as the finite lifespan of projects requires full repayment of principal well before maturity of key project contracts → project financing looks at forward cash flows.
- Debt Service Reserve Accounts (DSRA) could be used to cover temporary disruption rather than triggering default.
- Financier instruments differentiated by:
 - holders tolerance of risk;
 - cash required for service;
 - ranking;
 - conversion rights;
 - redemption; and
 - consequences.

Investor perspective – lenders b

Once amount and volatility of FCF understood, we can assess appropriate debt and equity financing features

Debt

- Grace periods
- Covenants
 - Loan life cover
 - Project life cover
 - Drawdown cover
 - Repayment cover
 - Debt service cover ratio

Equity

How is surplus (i.e. post scheduled senior debt payments) FCF allocated?

- Escrow accounts (to preserve liquidity)?
- Debt repayment (acceleration)?
- Distribution to sponsor?
- Mezzanine debt service ?

Private providers of finance

Private finance	Features
International sponsors	<ul style="list-style-type: none"> Departments of larger established utilities with long-term 'strategic' investment policies <p>However: Large withdrawal following Asian crisis and recession in USA and Europe</p>
Regional and local investors	<ul style="list-style-type: none"> Filling gap left by international sponsors and less risk averse <p>However: also less experienced in project structuring</p>
International lenders	<ul style="list-style-type: none"> Large-scale projects (Typically minimum US\$100m); prefer off-shore. Lend in strong international currency (US\$, €, £) Prefer more economically and politically stable countries (Korea, Taiwan, Malaysia)
Local and regional lenders	<ul style="list-style-type: none"> Consider smaller projects, but prefer 'named', well-known borrowers Capacity for due diligence limited, particularly for infrastructure and greenfield investments Tenor and currency constrained for large projects, with very high interest rates
Private equity funds	<ul style="list-style-type: none"> Higher expected rates of interest Very restricted interest in greenfield projects, particularly small ones Prefer sectors with stronger off-take potential: IT, manufacturing, airports
International sponsors	<ul style="list-style-type: none"> Departments of larger established utilities with long-term 'strategic' investment policies <p>However: Large withdrawal following Asian crisis and recession in USA and Europe</p>

Public providers of finance

Public Finance	Features
<p>Bilateral and multilateral lenders (World Bank, IFC, ADB, JBIC)</p>	<ul style="list-style-type: none"> • ‘Social focus’ and less constrained by market forces than private sector • Able to provide longer tenor, with concessional components, for small projects in difficult sectors and countries <p>However, constraints include:</p> <ul style="list-style-type: none"> • Often not willing to take majority stake • Less experienced working with the private sector – can be seen as bureaucratic • Can still be restricted to certain project size (i.e. IFC always >US\$10m)
<p>‘Public’ Private Equity Funds (Actis, Aureos, Globeleq, OPIC Funds)</p>	<ul style="list-style-type: none"> • BSet-up specifically to encourage PPI using a more commercial focus • Take on further risk than purely private equity, and are designed with certain social objectives in mind. <p>However, these funds are still restricted:</p> <ul style="list-style-type: none"> • Prefer well-proven concepts, foreign currency provision, close-to commercial rates of return, and less risky countries and sectors. • Pro-poor component is often explicit, but highly indirect

Session agenda

1. Financing PPPs
2. Investor perspective
3. South Asian experience
4. IFIs
5. Government support
6. Summary and further reading

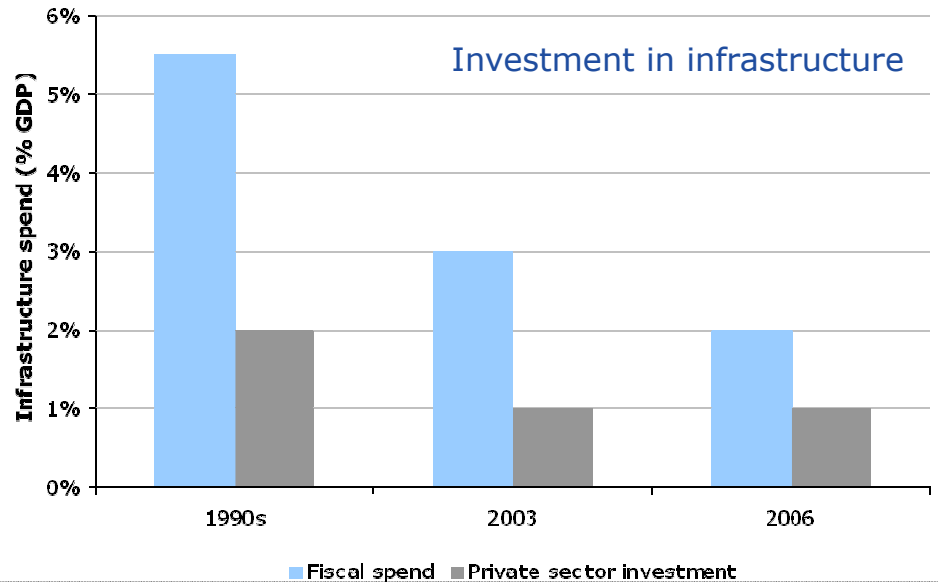
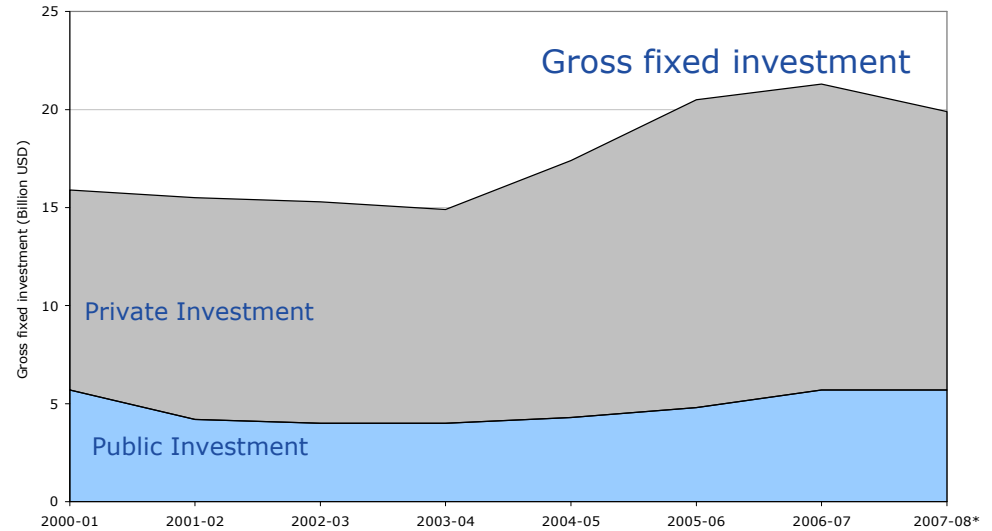
PPPs in Pakistan

- From 2003-2006 Pakistan’s annual GDP growth averaged at 7.5%.
- To sustain a similar level of growth over forthcoming years Pakistan must invest around 7.5% of its GDP per annum into infrastructure.
- The GoP estimated that public funding can meet less than 50% of investment necessary
- Private sector involvement in infrastructure represents 1.4% of GDP in Pakistan.
- Below are the estimated infrastructure investment figures required to meet this target.

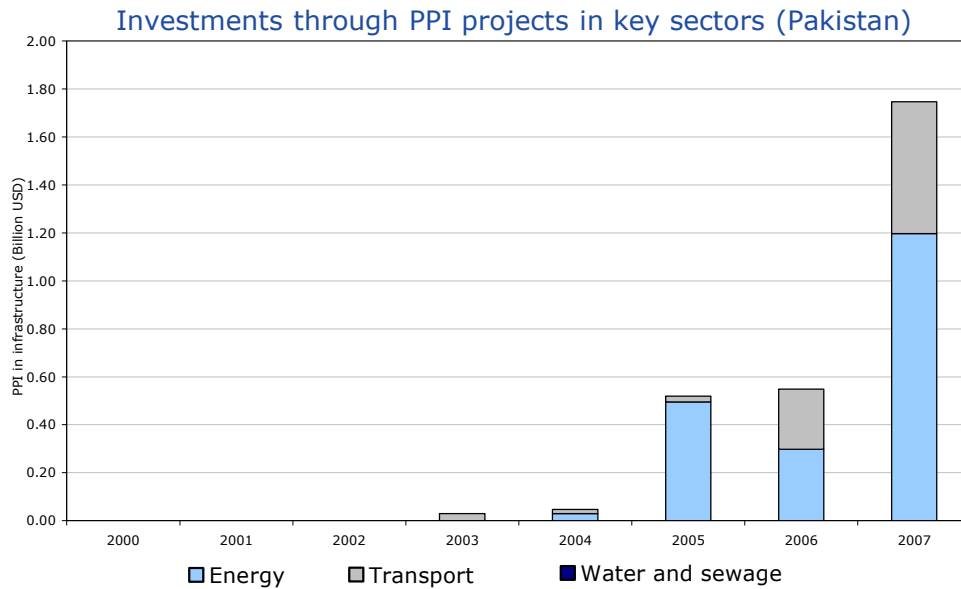
Broad Infrastructure Needs	
Throw-forward of infrastructure projects (PSDP)	US\$20bn
Maintainance backlog (estimated)	US\$10bn
Multipurpose water reservoirs	US\$22bn
Other energy projects	US\$18bn
Transport and communication (NTC, shipyards, NHA, railways)	US\$16bn
Urban mass transport – Karachi and Lahore Metro	US\$4bn
Municipal services (water, sanitation, solid waste)	US\$2.5bn
Health and Education (physical infrastructure)	US\$4-5bn
Total requirement (approx)	£100 billion or US\$20bn per year
Last years PSDP on infrastructure	US\$4bn – US\$5bn

Distribution of gross fixed investment in Pakistan

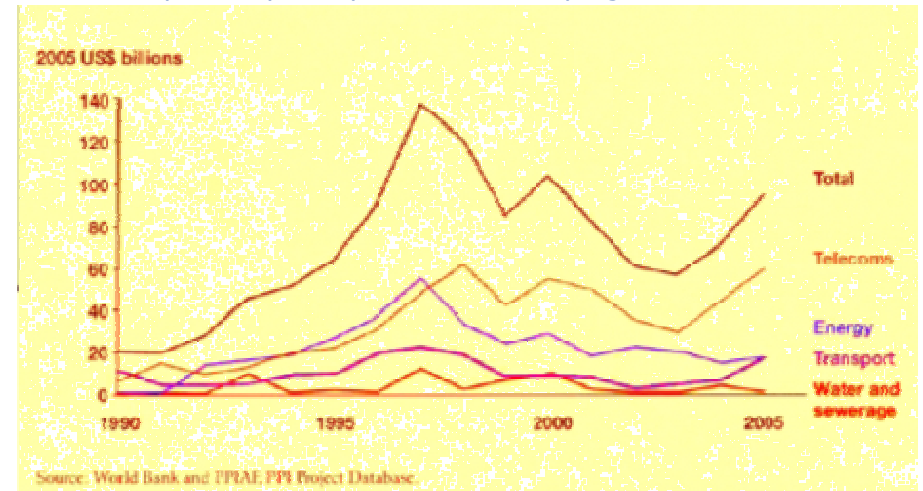
- The majority of gross investment in Pakistan is private investment, however while private investment fell from 2006 to 2008, public sector investment steadily increased by 15.7% per annum over 2004-08 and is still seeing growth despite the turbulent economic climate.
- Investment specifically in infrastructure in Pakistan is very different, with funding for infrastructure largely coming from government spending, though falls in this type of spending has seen the gap between public and private investment in infrastructure narrow.



Recent history of private investment in infrastructure



Global investment commitments to infrastructure projects with private participation in developing countries



- PPI in Pakistan has grown rapidly since 2003. The fastest growing (and largest) sector has been energy (though it should be noted that in addition to the sectors shown on the graph, there has also been PPI investment of US\$11bn in telecoms since 2004).
- PPI sectors such as power and transport have increased since 2003, including a dramatic rise in energy investments in 2007. While in 2005, the majority of PPP investments in energy involved payment commitments to the government, since then, all private investment has been in physical assets.

Breakdown of PPP investment in Pakistan

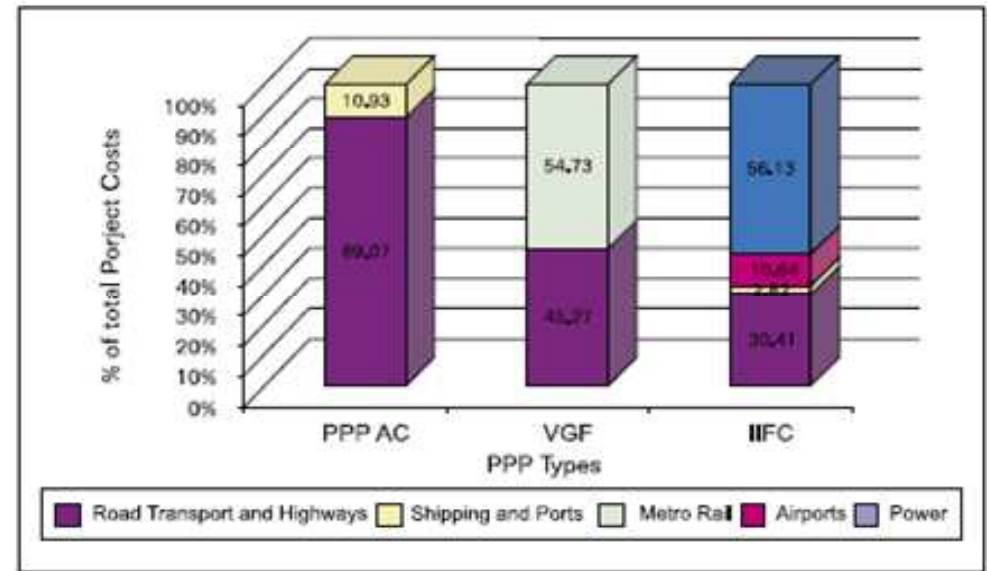
Featured Indicator, 1990-2008	Value
Infrastructure sectors reported	Energy, Telecom, Transport
Projects reaching financial closure	53
Sector with largest investment share	Telecom
Type of PPI with largest share in investment	Greenfield project
Projects cancelled or distressed	2 (3% of total investment)

Sector	Sub-Sector	Number of Projects	Total Investment (US\$m)
Energy	Electricity	36	8,861
	Natural Gas	2	30
	Total Energy	38	8,891
Telecom	Telecom	6	15,121
	Total Telecom	6	15,121
Transport	Airports	1	40
	Seaports	8	1,459
	Total Transport	9	1,499
Total		53	25,510

Indian experience

- According to the ADB, 86 PPP projects totalling about Rs340bn (just under £5bn) were awarded till October 2006 in three central agencies. During the same time period, 31 proposals were received under the VGF, of which twelve proposals were given in-principle approval.
- The majority of PPP projects approved in India (in terms of volume and revenue) included roads and bridges, followed by ports, particularly Greenfield ports.
- Varied policy in the different states in India has resulted in differing variables of PPP projects, for example funding, where the state of Maharashtra (among others) largely finances it's PPP projects through municipal bonds, particularly in water supply projects.

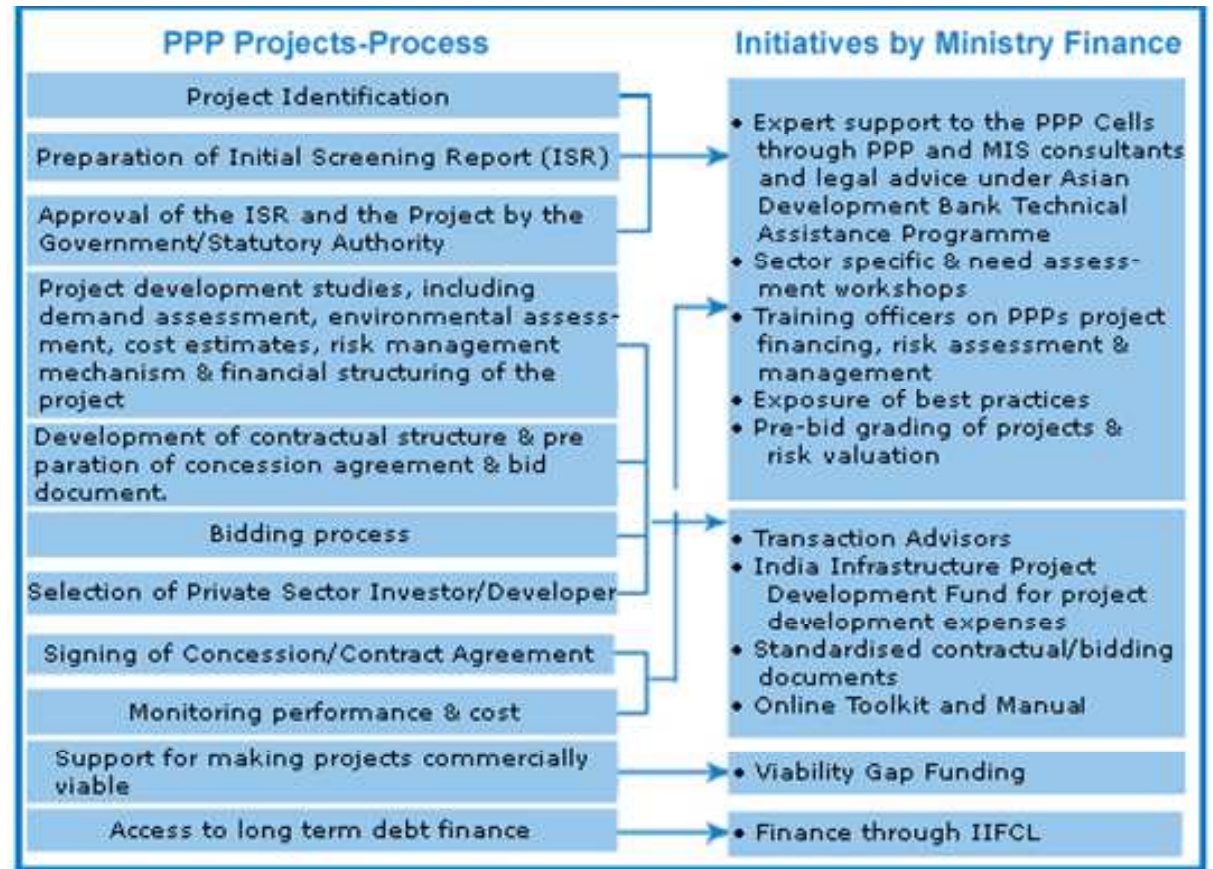
PPP Funding Types (India)



Source D&B

Indian PPP Projects Management Process

- The main initiatives put into action by the Indian government include the devising of standardised contractual documents for laying down the terminologies related to risks, liabilities and performance standards.
- Approval schemes for PPPs in the central sector have been streamlined through Public Private Partnership Appraisal Committee (PPPAC).
- Also a database for past and proposed PPP projects has been published online, which forms part of an information website solely dedicated to PPPs in India.



Financial structure – Experience from PPPs in India

	Senior Debt (%)	Pure Equity (%)	Sub Debt (%)	Grant (%)
Power Transmission	70.0	30.0	0.0	0.0
Roads	68.2	21.8	4.6	5.4
Airports	70.8	24.3	0.0	4.8
Ports	63.0	36.1	0.9	0.0
Water supply	65.8	28.8	0.0	5.4
Solid Waste	46.4	33.8	10.6	9.2
Railways	47.9	41.3	10.8	0.0
Total	68.0	25.0	3.0	4.0



Most projects outside railways and solid waste are highly geared. Subordinated debt has a limited role and grants are limited to certain sectors.

Haripur Power Project, Haripur, Bangladesh

- Built in 2000 and encouraged by the government as a scheme which would increase energy supply in Pakistan at a low cost.
- The project cost US\$183m, largely sponsored by AES, an American global independent power producer, and the International Development Association provided US\$60.9m of support for commercial debt financing.
- The IDA part financed the project and created a framework for attracting private investments by offering partial guarantees to commercial lenders.
- The Private Sector Infrastructure Development Fund worked to reduce financial market constraints in Bangladesh by making long-term debt available for infrastructure projects with private participation. In addition to establishment of a financing facility, the project also assisted Bangladesh with the crafting of transparent procurement procedures, regulatory frameworks, and risk-sharing mechanisms for private sector infrastructure promotion and operation.
- Haripur is also now one of the most reliable and greenest plants in Bangladesh. The plant was online more than 96% of the time in 2008, and has received the highest level of ISO certificate in terms of environmental impact.

Combined Cycle Power Plant, Kelanitissa, Sri Lanka

- The Combined Cycle Power Plant was completed in 2002 and cost around US\$104m.
- It was intended to help reduce the cost of power shortages in Sri Lanka, as well as reducing reliance on hydropower.
- The project is the largest ever independent power project in Sri Lanka with a non-recourse debt financing package and was sponsored by AES Kelanitissa Ltd, a subsidiary of the AES Corporation, an established investor in power in developing countries, on a build own operate transfer (BOOT) scheme, with electricity being sold to the Ceylon Electricity Board (CEB, an enterprise of the Government of Sri Lanka) under a 20 year power purchase agreement, and CEB will supply low sulphur diesel fuel to the power plant in return.
- Private financing of the project was largely split between the AES Corporation, the Asian Development Bank (providing \$25 million as a direct loan) and Australia and New Zealand Banking Group (underwriting \$52 million of commercial loan).
- By request of the Sri Lankan government, the project was awarded and developed in a very transparent manner, and the plant will have a very low environmental impact due to the thermal, steam based method of generation.

Session agenda

1. Financing PPPs
2. Investor perspective
3. South Asian experience
4. IFIs
5. Government support
6. Summary and further reading

Product offering from IFIs

- This section looks at three project offerings from International Financial Institutions (IFIs) in four areas:
 - development credit;
 - capital and operational grants;
 - the financing gap; and
 - currency instruments.

Product offering from IFIs – development credit

- Highly concessional loans usually provided to national governments even when they are on lent to specific projects.
- Project appraisal often relates to the wider economic and social impacts of the infrastructure project as opposed to pure creditworthiness.
- As compared to public sector loans, development credits are normally characterised by:
 - A longer loan tenor: that is, the maturity of the loan is much longer (sometimes up to 40 years).
 - An extended grace period: the period of time during which the loan principal does not have to be repaid (which can typically be up to eight years).
 - A lower rate of interest and in some cases no interest is charged at all.
 - Lower or no fees being charged.
- They can be either “tied” or “untied.”

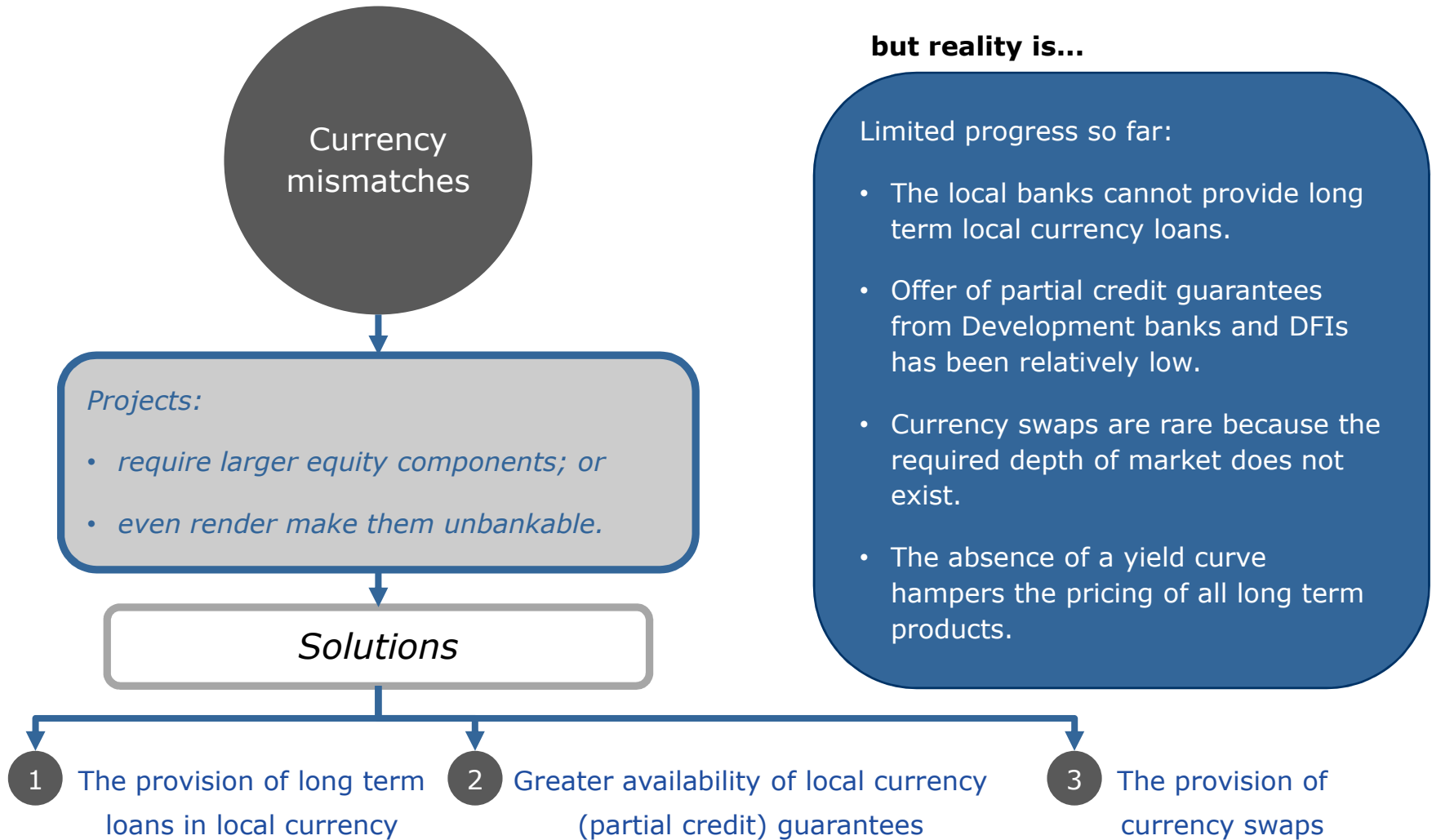
Product offering from IFIs – capital and operational grants

- Grants are subsidies disbursed with no repayment conditions. Donors provide grants to support different developmental activities, including those associated with infrastructure provision.
- It is possible to distinguish between:
 - grants provided to fund the preparation phase of projects and
 - capital and operational grants aimed at funding the purchase of capital goods and the provision of infrastructure services.
- Operational and capital grants are mainly provided by development agencies. Whilst, by definition, grants do not require repayment, the amount made available is typically smaller than the disburseable amount of development credit.
- The provision of a grant means that a subsidy is typically more explicit than when it is incorporated into a development credit. Its impact is usually to lower the tariff that users need to pay for infrastructure services.
- Grants can be either “tied” or “untied.”

Product offering from IFIs – financing gap

- The range of financial products offered by IFIs is largely fine as they go, but two main gaps remain:
 - First, **local currency finance** which matches financing obligations with revenue streams, much reducing project risk, would lead to both more efficient financing and a greater number of projects that could be financed.
 - Second, whilst many projects are partially financeable by the private sector, there is a fundamental **need for softer money** to fill the financing gap, both in terms of addressing affordability issues and risk sharing, in terms of absorbing risks that neither the private sector nor poorer governments can do.

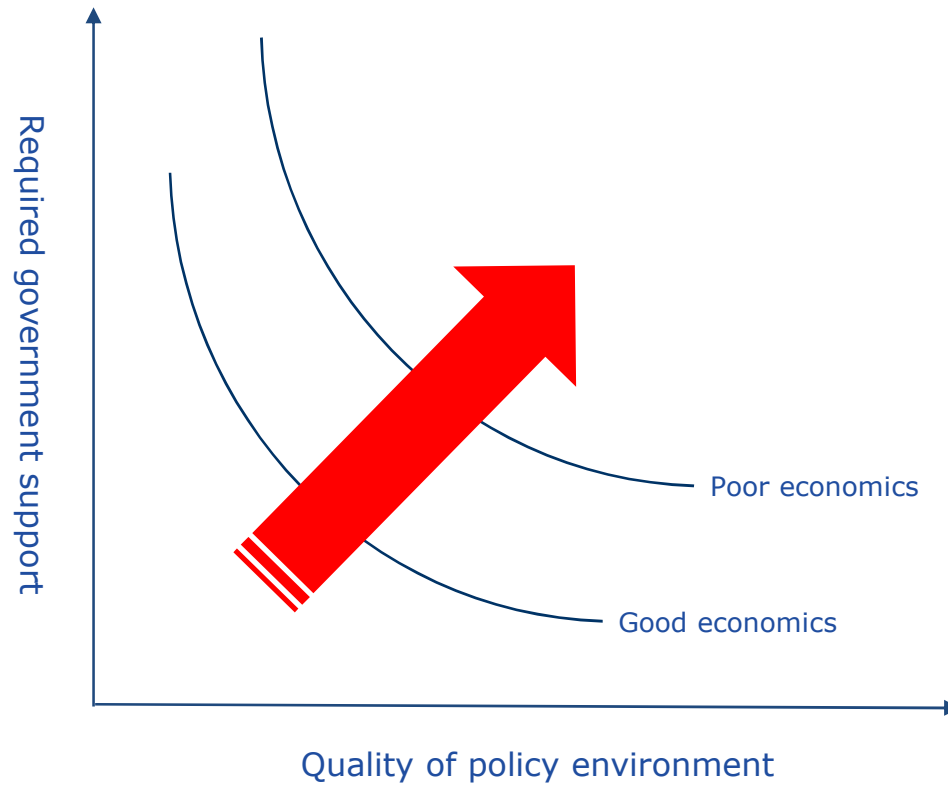
Product offering from IFIs – local currency mismatch



Session agenda

1. Financing PPPs
2. Investor perspective
3. South Asian experience
4. IFIs
5. Government support
6. Summary and further reading

Type of support in private infrastructure



Objectives

Government support to address:

- Market failure
- Government failure and Political Constraints
- Poverty Alleviation

Instruments

Different forms of support:

- Cash subsidies
- In-kind Grants
- Tax breaks
- Grants of monopoly
- Capital contributions
- Risk-bearing

Which instruments are likely candidates for each objective?

Government support

Criterion	Cash subsidies	In-kind grants	Tax breaks	Grants of monopoly	Bearing risks	Subsidised capital
Market failure	If well targeted, may counteract negative externalities	Risk of poorly targeted support higher	Risk of poorly targeted support higher	No compatible efficiency goals	Possible, but unclear how effective. Transparency risk	Possible, but unclear how effective. Transparency risk
Gov failure / political constraints	May transfer transition to cost-covering prices	Lack of transparency and control	Same as above	Same as above	Same as above	Same as above
Alleviating poverty	In practise poorly targeted	High risk of poor targeting	Not well targeted support	High risk of poor targeting	High risk of poor targeting	High risk of poor targeting

- Decisions to provide support require analysis of the costs and benefits of each instrument.
- Fiscal cost of up-front cash subsidies are clear but other instrument are less certain.
- Risk-bearing generates contingent liabilities that are difficult to value.
- Capital contributions have known short-term costs in but generate uncertain future returns.
- Part of the challenge is to assess the cost of each option in a comparable way.

Session agenda

1. Financing PPPs
2. Investor perspective
3. South Asian experience
4. IFIs
5. Government support
6. Summary and further reading

Summary

- Project finance is when a company uses the cash-flows of the investment to fund the project – without recourse to the parent company balance sheet
- This makes project finance:
 - riskier than corporate finance (since no averaging of risk); and
 - very dependent on the characteristics of the project.
- The range of financial products offered by IFIs is largely fine as they go, but...
 - local currency finance and need for softer money are still financing gap issues; and
 - different options to address them... in theory.

Further sources

Online

1. PPIAF & ICA (2007) "Donor Debt and Equity Financing for Infrastructure"
http://www.ppiaf.org/documents/other_publications/equityfinancingbookeng.pdf
2. Klingebiel & Ruster (2000) "Why Infrastructure Financing Facilities Often Fall Short of Their Objectives"
http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2000/07/07/000094946_00062305373440/Rendered/PDF/multi_page.pdf
3. Commonwealth Secretariat "Municipal Infrastructure Financing: Innovative Practices from Developing Countries" ed. Alam, M. (2009)
<http://publications.thecommonwealth.org/municipal-infrastructure-financing-686-p.aspx>
4. Peterson "Unlocking Land Values to Finance Urban Infrastructure"
<http://www.ppiaf.org/content/view/479/485/>
5. Matsukawa (2007) "Review of Risk Mitigation Instruments for Infrastructure Financing and Recent Trends in Development"
http://www.ppiaf.org/documents/trends_and_policy/Riskmitigationinstruments.pdf

Books

1. Yescombe (2008) "Public-Private Partnerships: Principles of Policy and Finance," Chapter 9