



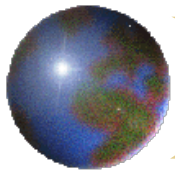
***Financing Infrastructure
in Developing
Economies: Options,
Innovations &
Opportunities for USAID***

by

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Session Overview

1. Brief History of Infrastructure Financing
2. Overview of Financing Options for Infrastructure
3. Lessons Learned from Innovations in Infrastructure in Developing Economies
4. Infrastructure Finance & Global Financing Crisis: Trends & Implications
5. Opportunities for Enhancing Infrastructure Financing in Emerging Markets: Potential Strategies for AID

1. Brief History of infrastructure investment

1600s- 1800s

- France: canals in 17th century
- Britain: turnpike trusts, bridge trusts in 1700s and 1800s
- US: Brooklyn Bridge in late 1800s

1900s- 1980s

- Early 20th century- concessions fade as role of state expands. French *affermage* continues in water
- Spanish toll road concessions structured (1960s-70s)
- Political will develops: Thatcher's UK PFIs in 1980s
- Regulation: Power Purchase Agreements after US PURPA Act of 1978
- Latin American (infrastructure-driven) debt crisis
- 1990s- UK electricity industry privatized
- Project finance: develops as discipline after Channel Tunnel

1990s

- ***Era of investing in the equity of infrastructure projects***
- Infrastructure funds emerge: Macquarie, Babcock gather pools of capital to invest in Australian infrastructure PPPs; Bechtel Enterprises in the US
- Mexican toll projects fail; Asian crisis exposes infrastructure deficits
- Korea passes PPI Act; Infra Mgmt Center reports to President; Infra Guarantee Fund provides debt
- Latin America: PPPs see-saw; slowly become very sophisticated
- PPP projects extend to Africa (South Africa, Mozambique, etc.)

1. Brief History of infrastructure investment **CONTD:**



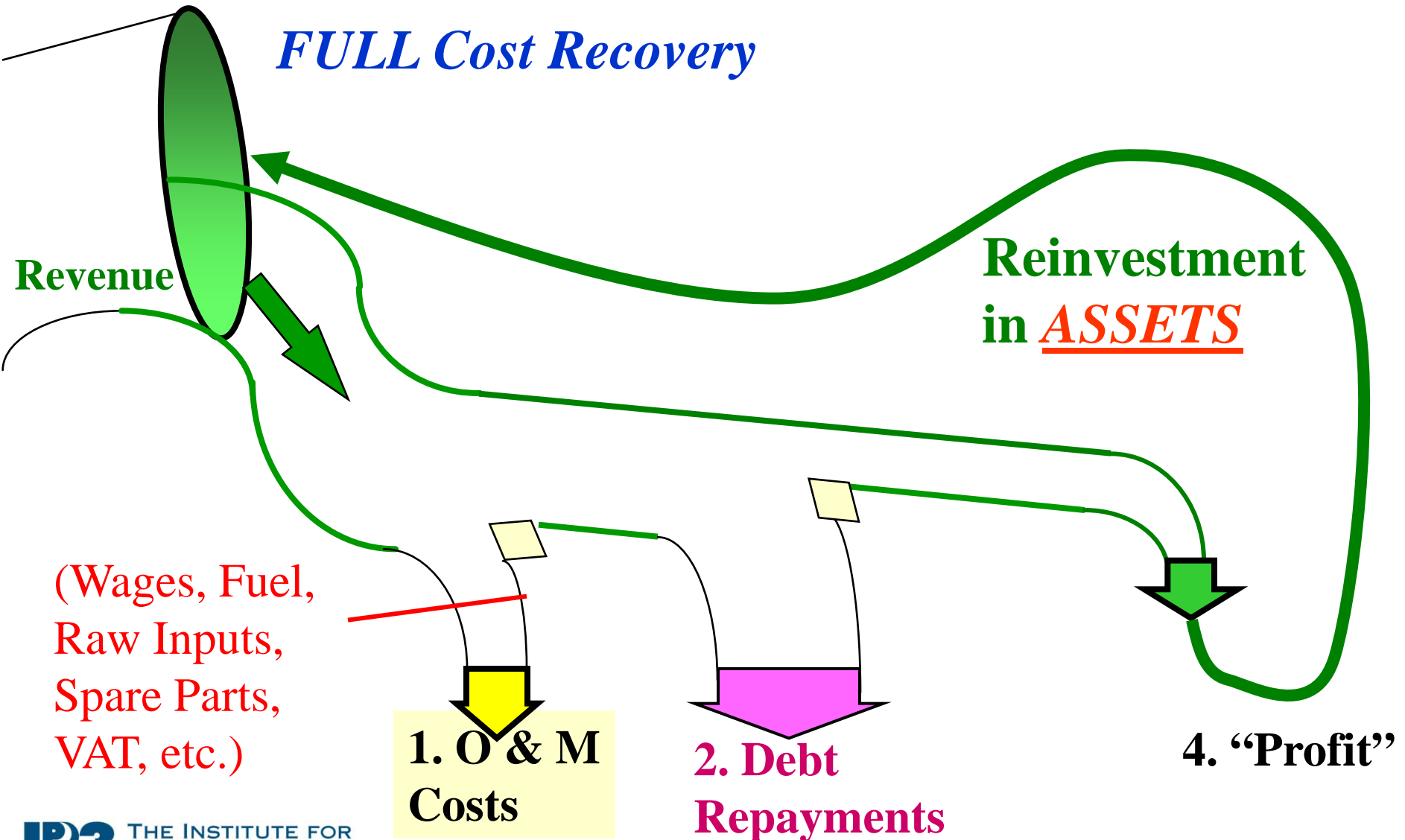
- Huge Canadian state pension funds start infrastructure investments. Target allocation 10-15% of portfolio
- Australian infrastructure funds expand to Europe
- Middle East/ North Africa- Dubai investors start acting as quasi-strategics (e.g., Dubai Ports World)
- India: IDFC, IL&FS, other government-supported vehicles enter market
- US: Chicago Skyway, Indiana Toll Road in 2005-06 sets off valuation frenzy / bubble
- Wall Street / private equity firms start infrastructure funds
- 2007 onwards: Several US, Europe, MENA and Asian infrastructure funds raised
- Political resistance to PPPs: E.g., failure of Pennsylvania Turnpike deal– “won’t sell crown jewels”
- Several overleveraged infrastructure funds collapse (Babcock & Brown, Allco); many remain stressed
- \$180 billion remains available to invest globally (in infra)
- 109 funds seeking over \$113 billion to invest in infrastructure.
- Financial crisis has had a severe impact on infrastructure– will be discussed later



2. Infrastructure Financing Strategies:

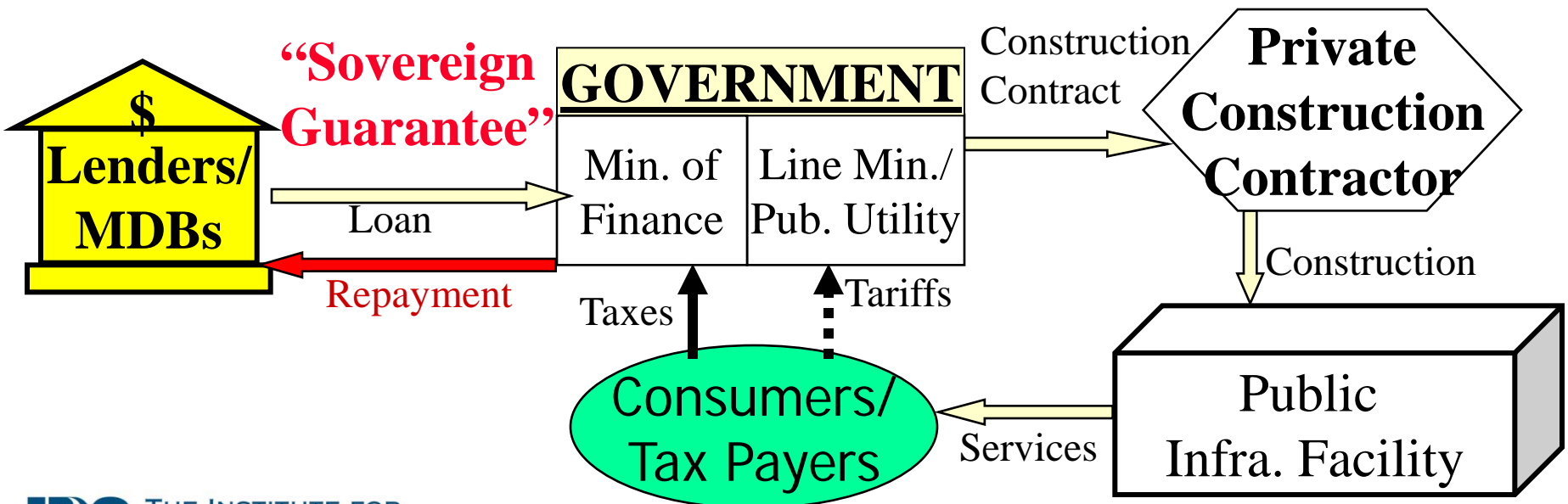
- ❖ **Public/Sovereign-Guaranteed Finance**
- ❖ **Corporate Finance**
- ❖ **Limited-recourse “Project Finance”**
- ❖ **Sub-Sovereign/Revenue-Backed Financing**

Understanding the challenge to public infrastructure financial performance:



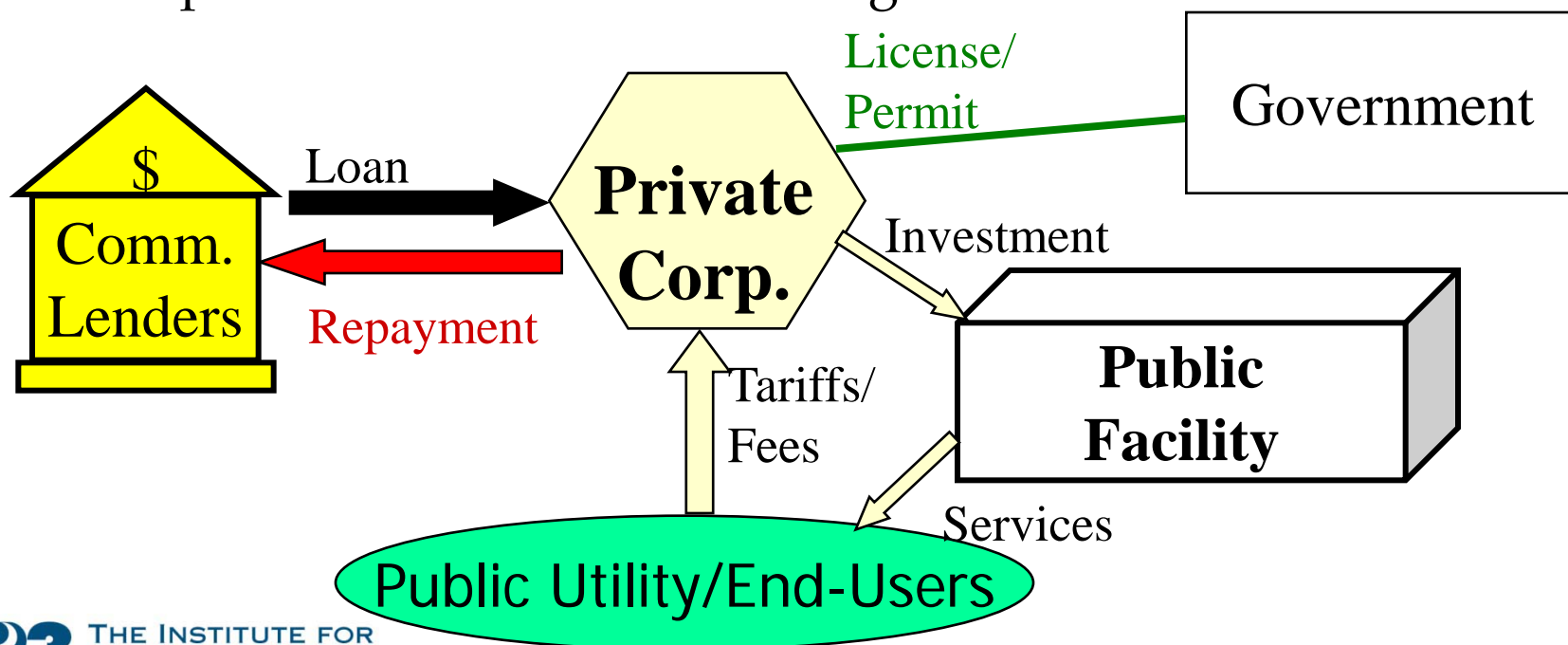
Sovereign Finance

- Government borrows funds to finance a new public infrastructure facility and provides a sovereign guarantee to lenders. Govt. may contribute its own equity in addition to borrowed funds
- Lenders analyze government's total ability to raise funds through taxation and general public enterprise revenues, including any new tariff revenue from the project
- Sovereign guarantee shows up as a liability on Government's list of financial obligations



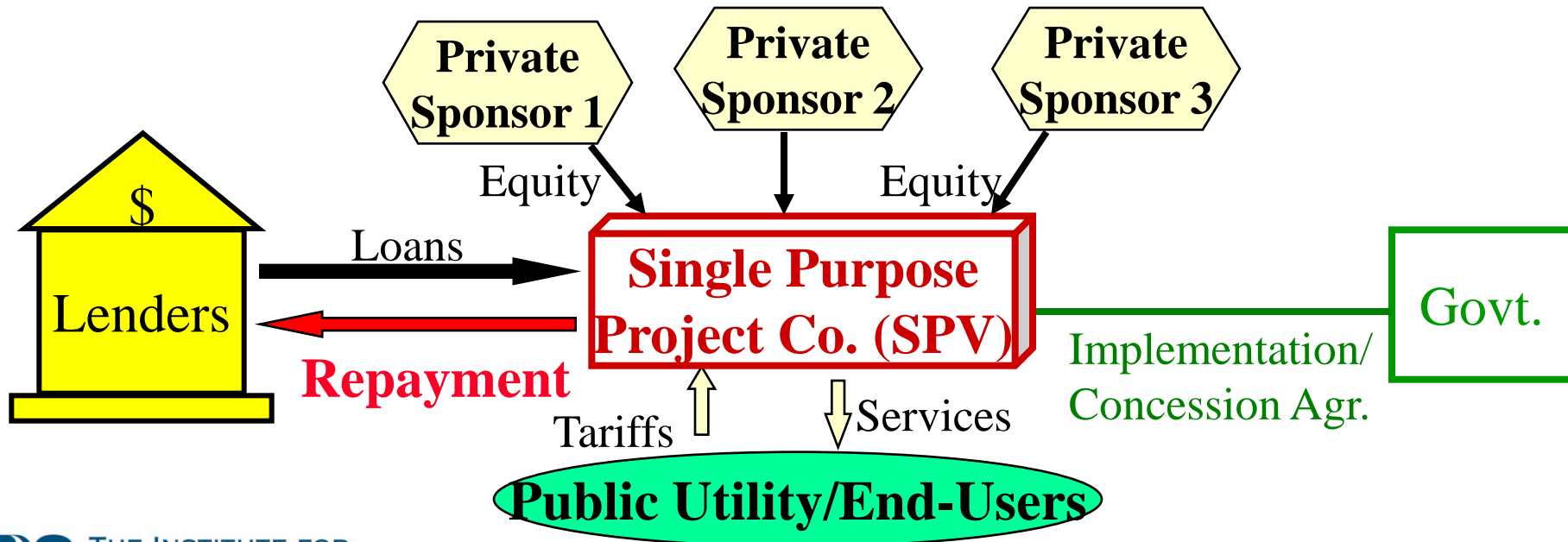
Corporate Finance

- ✦ A private corporation borrows funds to construct a new public facility/project and pledges its own private assets to lenders as collateral to guarantee repayment.
- ✦ Corporation carries this debt ON its own balance sheet (“Mining the Corporate Balance Sheet”)
- ✦ The corporation may choose to contribute its own equity as well.
- ✦ In performing credit analysis, lenders look at the assets pledged by the corporation as well as the strength of its other revenues.



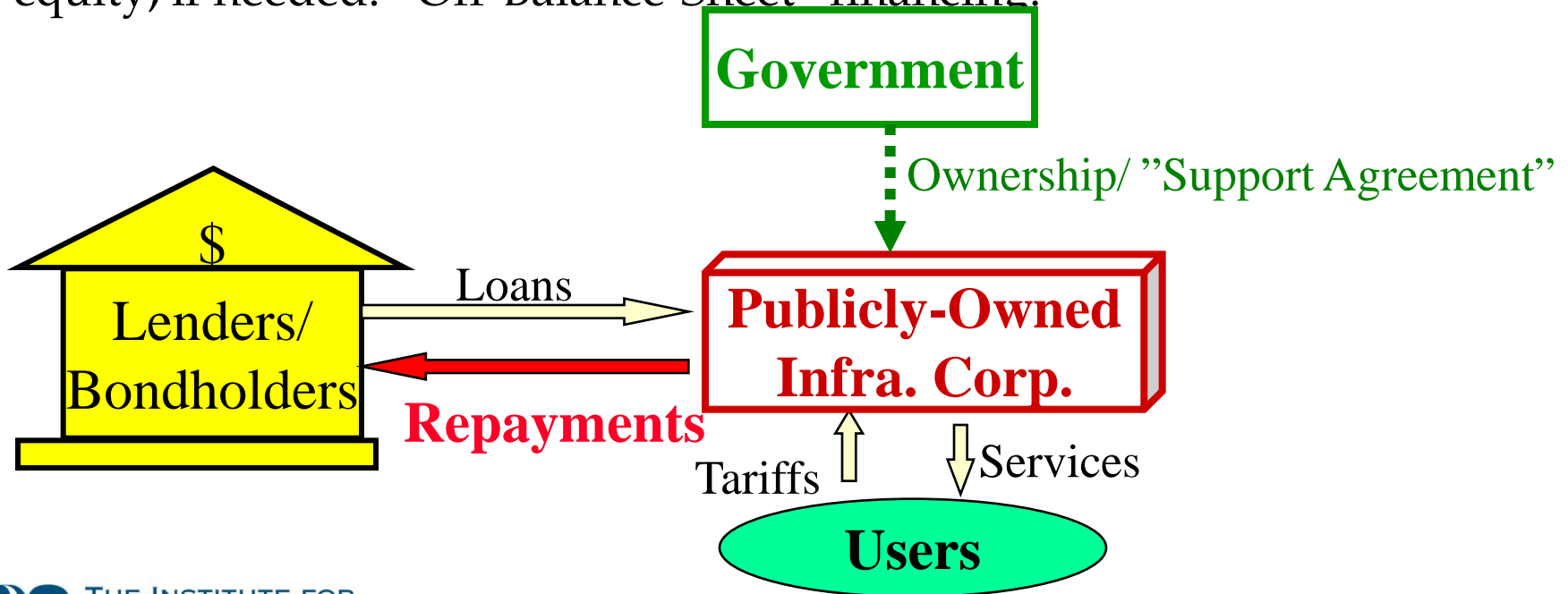
Limited-recourse “Project Finance”

- ✦ A Team or Consortium of private firms establish a new Single-Purpose Project Company (SPV) to Build & Operate a new public facility. This new company is capitalized with equity contributions from the sponsors.
- ✦ The Project Company (SPV) borrows funds from private commercial lenders. **The lenders look to the projected future revenue stream generated by the project (and it’s limited assets) to repay all loans.**
- ✦ The host country government does not provide a financial guarantee to lenders. Sponsors provide only limited guarantees to contribute more equity, if needed. “Off-Balance-Sheet” financing



Sub-Sovereign Finance

- ✦ A Sub-Sovereign Entity (Municipal Government or Public Special Purpose Vehicle [SPV]) develops a new infrastructure project.
- ✦ The Sub-Sovereign Project Company (SPV) borrows funds from commercial lenders or bondholders. The lenders look to the projected future revenue stream generated by the project (and its limited assets) to repay all loans.
- ✦ The sovereign government does not provide a financial guarantee to lenders. Sponsors provide only limited guarantees to contribute more equity, if needed. "Off-Balance-Sheet" financing.



Evaluation of Infrastructure Financing

Options:

⊕ Sovereign-Guaranteed Finance:

- ⊕ Sovereign borrowing limits
- ⊕ Public sector implementation constraints & risk management capacity
- ⊕ Declining attractiveness of official MDB borrowing by Govts.

⊕ Corporate Finance:

- ⊕ Limited application for stand-alone infrastructure projects

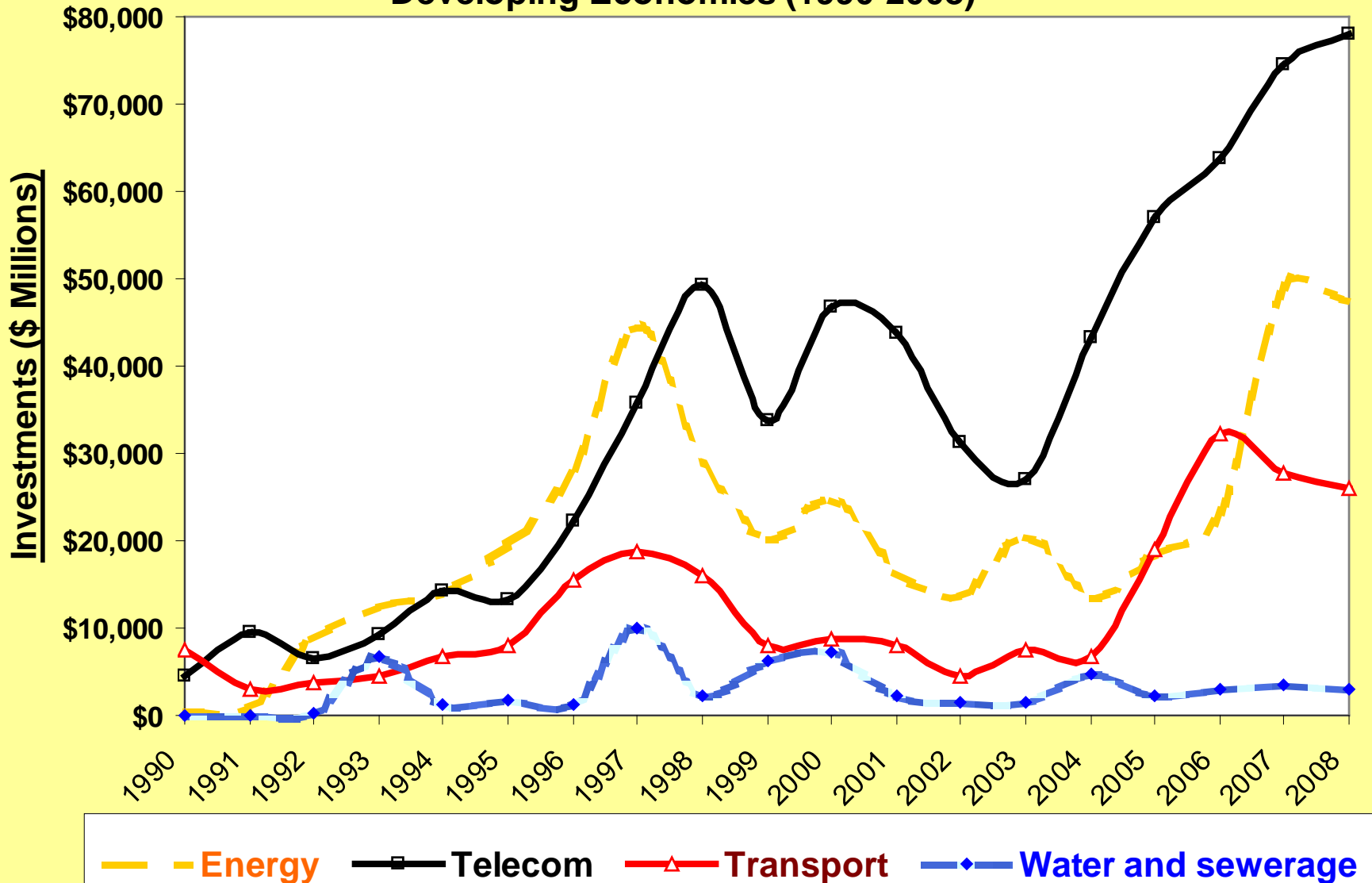
⊕ Limited-recourse “Project Finance”:

- ⊕ Significant increase since late 1980's for large, stand alone infrastructure projects
- ⊕ Challenging to structure partial guarantees/support agreements required
- ⊕ Recent scarcity of commercial debt financing available

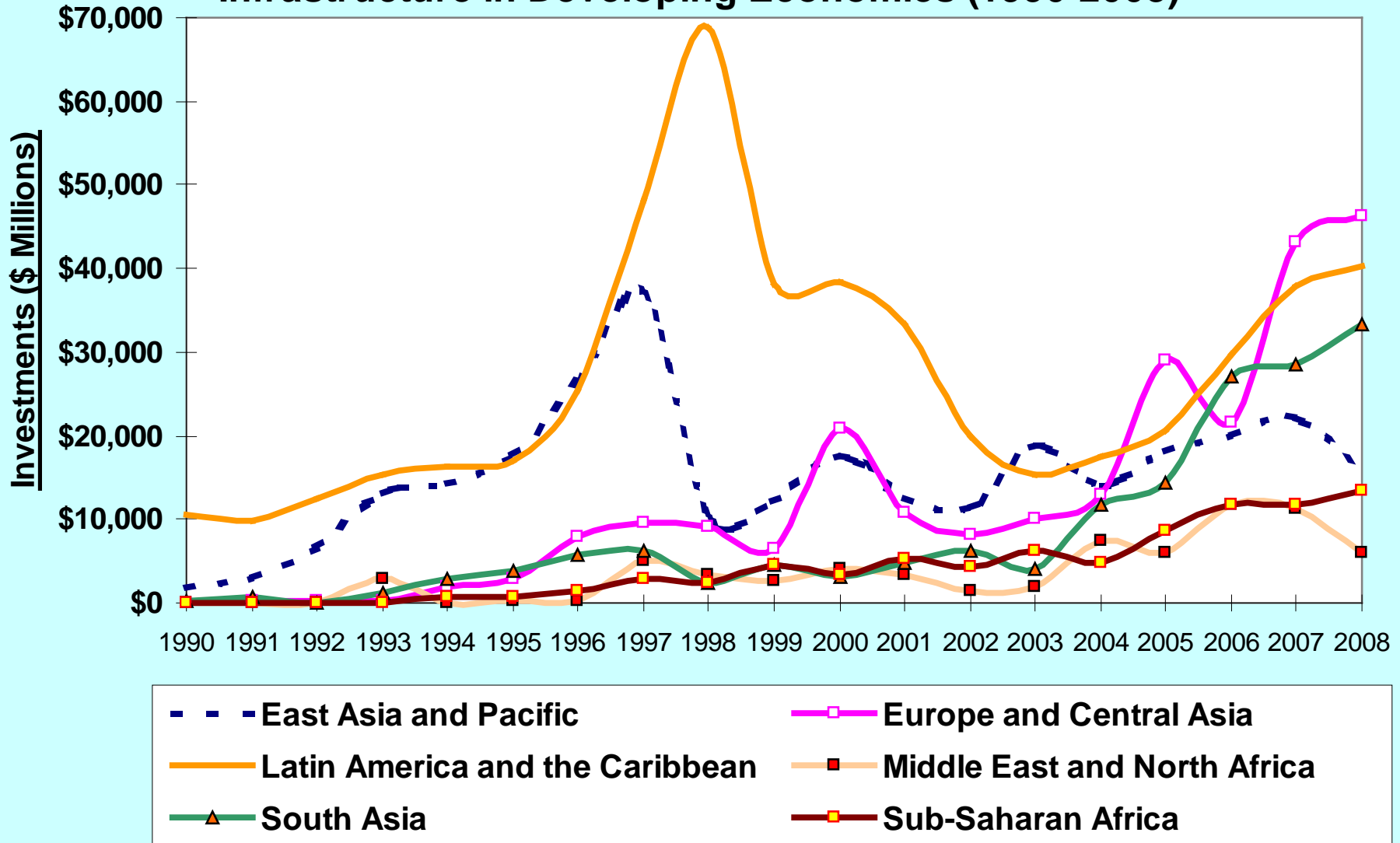
⊕ Sub-Sovereign, Revenue-Backed Financing:

- ⊕ Limited creditworthiness of sub-sovereigns
- ⊕ Legal framework on municipal tax revenues

World Bank PPI Database: Private Investments in Infra. in Developing Economies (1990-2008)



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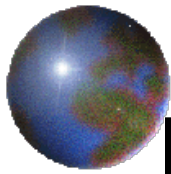
Infrastructure Financing Options Depend Heavily on the foundation of Infra. Sector Reforms

- ❖ Institutional unbundling of functions:
 - ❖ Policy-making & Planning = Ministries
 - ❖ Ownership of long-term infrastructure assets = Public Asset Holding Companies
 - ❖ Operation of infra. Assets & service delivery = Competitive (Private)
- ❖ Tariff reform: Non-Cost Recovering Tariffs discourage both private and public sector investments in infrastructure (eg energy)
- ❖ Market-based reforms (energy, telecom)

Improving Long-Term Infrastructure Project Financing

- What can the Government do to make long-term (10+ years) local currency financing more readily available to creditworthy infrastructure projects?
- Specialized Infrastructure Financing Funds have been designed and implemented in several similar developing economies with different results:

Country	PPP Financing Fund	Owership	Management	Total Capital
Sri Lanka	Private Sector Infra. Dev. Co. (PSIDC)	Public	Public (exempt)	\$84 million
Bangladesh	Infrastructure Development Compnay, Ltd. (IDCOL)	Public	Public (exempt)	\$225 million
Pakistan	Private Sector Energy Development Fund (PSEDF)	Public	Public	\$900 million
India	Infrastructure Development Financing Co., Ltd. (IDFC)	Public	Private	\$446 million
South Africa	Infrastructure Financing Company (INCA)	Private	Private	\$500 million
Thailand	Infrastructure Fund (Multi-sectoral)	Pub & Priv.	Private	\$150 million



World Bank

\$70 m

- IDA Loan
- 30 yr. Term
- 10 yrs. Grace
- 0.75% annual fee
- Proposed 4 yr. Project Term...

**KfW
(Germany)**

\$14 m

GoSL
Sovereign
Guarantees

**Govt. of Sri Lanka
(GoSL)**

Subordinated Debt
LIBOR + 300 bp
13 yrs.

\$ 84 Mn
Loan
Repayment

\$1.5 m/yr. Annual
Operating expenses

**PRIVATE SECTOR INFRASTRUCTURE
DEVELOPMENT COMPANY, Ltd.**

- Public & Private Board of Directors
- Own Corporate by-laws
- Autonomous Professional Management

**Local PPP
Project
Companies**

Loan

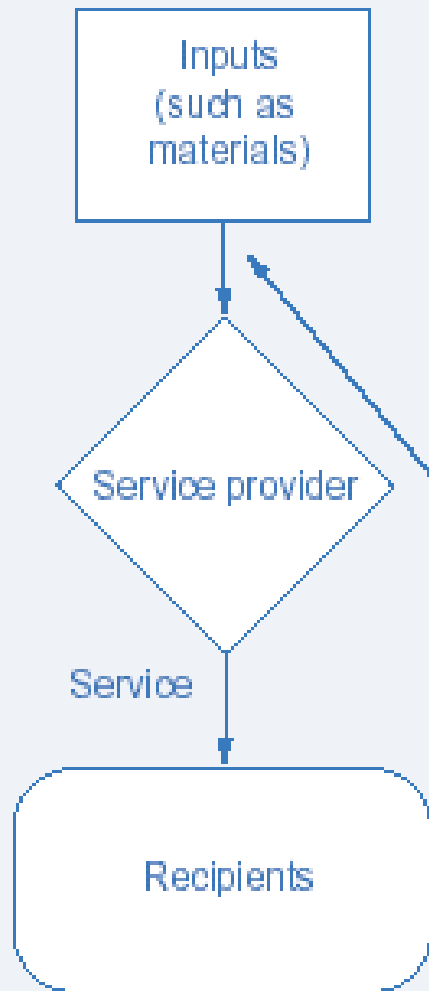
Repayment

Global Partnership for Output-Base Aid (GPOBA)

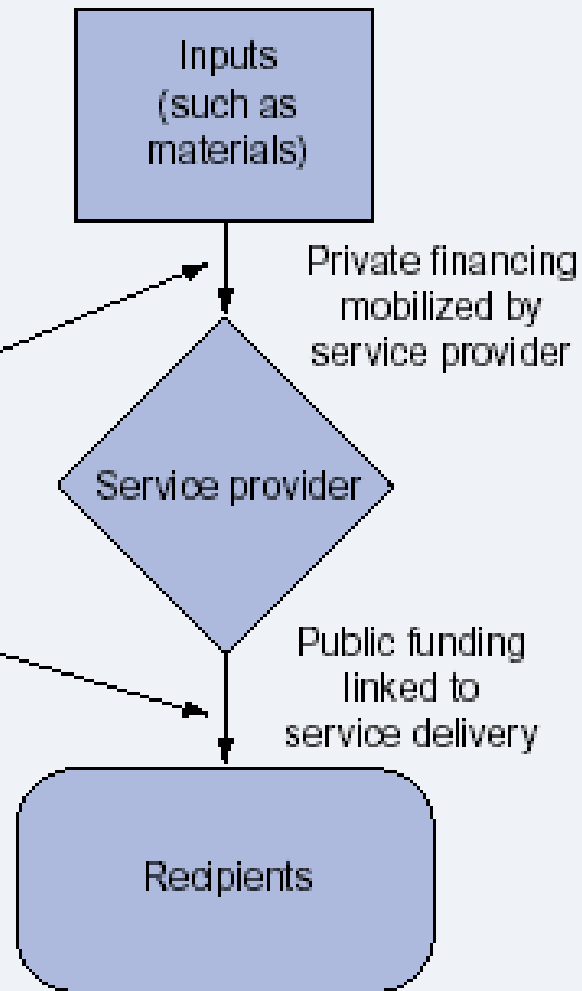
- ✦ Established in 2000 & funded by the World Bank with support from bilateral donors (esp. UK's DFID) www.gpoba.org
- ✦ Unlike traditional indirect subsidies, which pay public service agencies based upon their inputs, especially costs, OBA pays only based upon output levels of service achieved.
- ✦ OBA is
 1. Explicit – like a contract
 2. Performance-based
 3. Grant-based

Traditional and output-based approaches to service delivery

Traditional approach



Output-based approach





GPOBA's Record:

- Over 70 projects funded (health, water, energy, telecom, roads, transport, etc.)
- Over \$15 million in supporting Technical Assistance to prepare and support projects
- Over \$170 million in output-based subsidies paid to social services providers

Selected GLOBAL OUTPUT BASED AID PROJECTS		
Country	Sector	Project
Yemen	Gender & Health	Yemen Safe Motherhood Voucher Program
Uganda	Reproductive Health	Western Uganda Reproductive Health Vouchers Program
Lesotho	Hospital	Lesotho New Hospital PPP
Nigeria	Health	Prepaid Health Pilot Scheme in Nigeria
Uganda	Water	OBA in Uganda's Small Towns & Rural Growth Centers
Dem Rep. Congo	Health	Contractual Approaches for Improving Health Delivery Services in Congo
Uganda	Health	Output Based Aid for Health Services in Uganda
Philippines	Water	Manila Water Supply (MWC)
Ghana	Electricity	Solar PV to Increase Access to Electricity Services in Ghana
Philippines	Electricity	PSP in Non-Grid Power Supply in the Philippines

4. Opportunities for Enhancing Infrastructure Financing: Potential Strategies for USAID

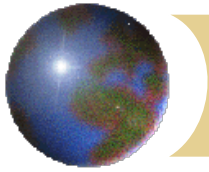
- ✿ Given USAID's mandate, resources, tools, and comparative advantages vis-à-vis other donors there are two primary areas of assistance to consider:
 - ▣ Institutional & Policy-Level Assistance:
 - ▣ Market & Transaction-level Assistance:

Institutional & Policy-level Assistance: Illustrative

- ❖ Support improvements in enabling environments (eg policies, laws, procedures)
- ❖ Support capacity-building and independence of infrastructure regulatory agencies

Market & Transaction-level Assistance:

- Assess strategies to liberate local pension assets to invest in infrastructure
- Establish & strengthen infrastructure finance corporations (public or private)
- Increase awareness of and generate demand for USAID's Development Credit Authority (DCA) guarantees
- Design & establish Infrastructure Project Development Funds (PDFs) to support the development of a greater pipeline of bankable infrastructure project candidates



Questions?