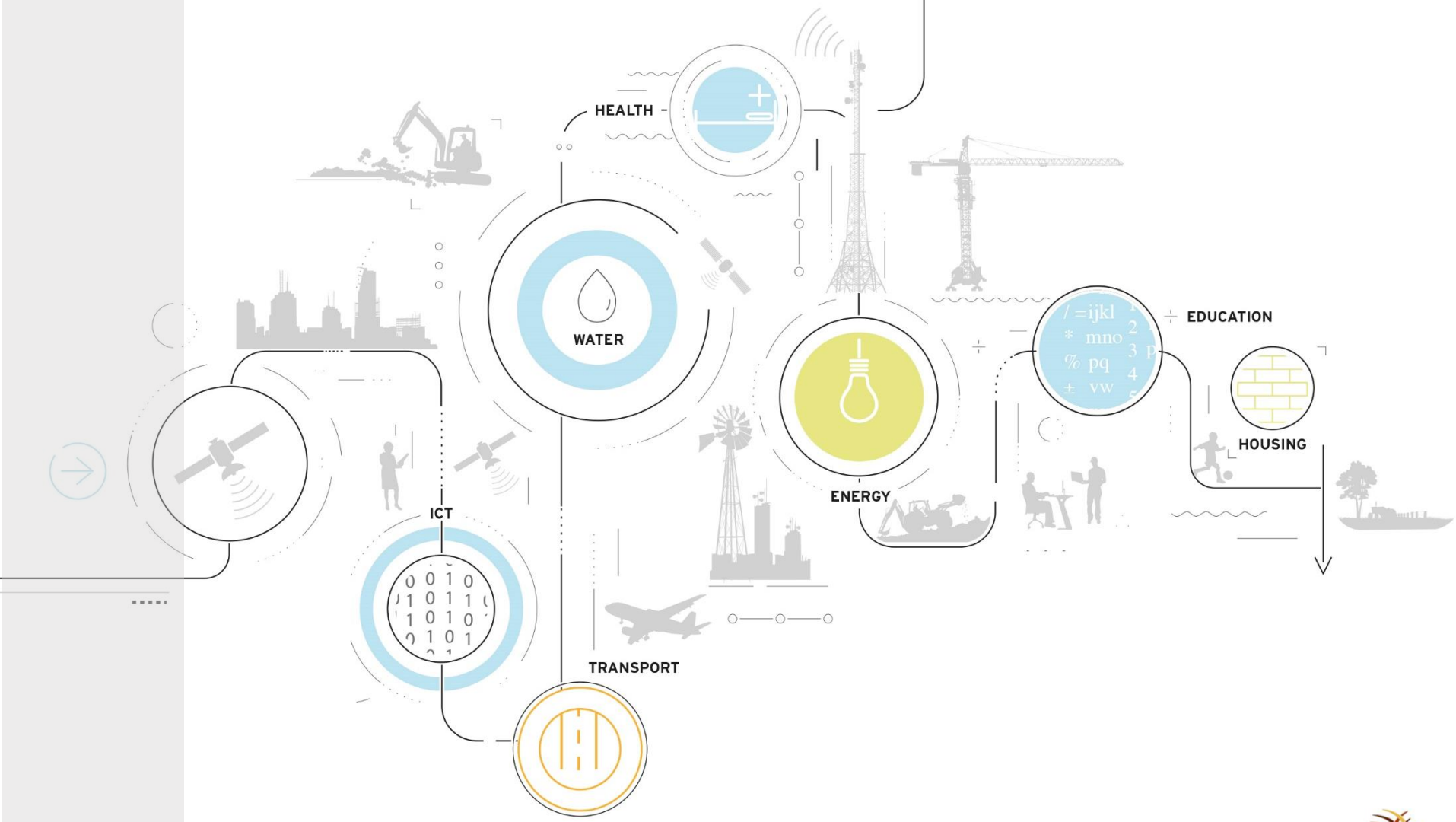
Options for Financing Infrastructure

CABRI Policy Dialogue 24-25 August 2017



DBSA
Development Bank of Southern Africa

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1 Financing is part of the Infrastructure Project Cycle

- Projects / public works to be financed have already progressed through budget submission (for routine capital works) or project development cycles (for large projects). They have passed go/no-go approvals involving prioritisation and appraisal processes for policy fit as well as positive financial and economic value.
- Capital budgeting takes place within a government policy framework that may follow prescribed stages, for example Infrastructure Delivery Management System (South Africa) or ex-anti evaluation (South Korea).
- Financing seeks to increase the value of a project through options that will both:
  - Increase the benefits delivered by the project
  - Increase government's fiscal space in order to be able to fund more infrastructure
- Financing activities 'inherit' project approval responsibility and must 'bequeath' financing to procurement, implementation, monitoring and evaluation responsible parties with proper documentation

2 Infrastructure Financing Options

- Infrastructure is challenging to finance: it can have high indirect externalities but direct payoffs that do not cover its costs; infrastructure projects can be complex , involve many parties and create natural monopolies; far out cash flows make the start up phase high risk.
- Financing is guided by principles for the optimal sources of funds to pay for the infrastructure but budget officials also work with constraints due to the quality of forecasts, existing financing commitments, uncertainty over the macroeconomic outlook and political cycles.
- Constrained fiscal sources compel budget officials to mobilise development finance and private capital to greatest extent possible.
- Finance can be raised from many sources: sovereign debt, SOE debt, Development Finance Institutions, commercial bank loans; project bonds, equity, Export Credit Agency backed funding and can be arranged through a range of structures e.g. corporate finance, project finance.
- Large economic infrastructure projects have phases that require different financing approaches.
- Public Private Partnerships are complex and costly to execute so they are only suitable for select projects.
- Low incomes make affordability critical for setting service levels and designing subsidies.
- DFIs are important to prepare projects, de-risk projects and facilitate finance from the private sector

2.1 Infrastructure Financing Theory

Public Good	Quasi-Public Good	Private Good
Large external relative to internal benefits Infrastructure that the private sector cannot provide because return on investment is non-existent or too low	Balanced external & internal benefits Infrastructure that the private sector would only provide to a limited pool of richer consumers at a price which would exclude the poor	Minimal external and large internal benefits The private sector is capable of delivering this infrastructure, can meet the entire social demand at an acceptable price and has done so in the past
Roads and bridges, basic health care, public education	Freight transport, power generation, electricity, bulk water supply	Mines, oil refineries, telecommunications
Financed largely on-budget with some cost recovery from users	**Financed largely off-budget by Government or State Owned Entities in partnership with the private sector**	**Financed by the private sector**

Boundaries between public and private goods are not rigid. Infrastructure financing is strongly influenced by local circumstances and by government powers and functions in each national jurisdiction. Ownership models and financing options can and do change over time it should be noted.

2.2 Principle Financing and Funding Options

		Infrastructure paid for by		
		Tax payer	**Users**	**Donors**
Infrastructure financed by	**Tax payers (on budget)**	Capital works financed by tax payers; tax payers pay for operations and maintenance	Capital works financed by tax payers; user fees pay for operations and maintenance	Capital works financed by tax payers; grants from donors used to pay for operations and maintenance
	Government borrowing (National, State, City), SOEs or PPPs (off budget)	Private investors finance the capital works ; tax payers repay loans/equity and pay for operations and maintenance	Private investors finance the capital works; user fees used to repay loans/equity and pay for operations and maintenance	Private investors finance the capital works; grants from donors used to repay loans/equity and pay for operations and maintenance
	Donors	Grant finance used to finance/reduce cost of the capital works; tax payers pay for operations and maintenance	Grant finance used to finance/reduce cost of the capital works; user fees pay for operations and maintenance	Grant finance used to finance/reduce cost of capital works; grants from donors used to pay for operations and maintenance

Financing and paying for infrastructure frequently relies on combining several sources

3.1 Advantages of on vs off-budget

On-budget

- Reduces the cost of infrastructure for all consumers, including poor consumers
- Helps to support projects with high benefit-cost ratios/positive externalities that are not captured through other types of financing
- Can be used to promote redistribution
- Subject to independent scrutiny by officials who are not part of project promotion team

Off-budget (and paid for through user charges)

- Amount paid by users related to benefits received
- Cost-reflective pricing promotes the economically efficient use of services supported by the infrastructure
- Fiscal allocations can be targeted to assist poor consumers and promote policy objectives e.g. regional development
- Some cross-subsidisation between consumer groups to meet policy goals e.g. reduce costs for poor consumers, or promote regional development
- Promotes inter-generational equity because long term infrastructure is paid off over its lifetime
- Increases access to a larger pool of financing which enables more infrastructure to be developed to meet the needs of the economy

3.2 Disadvantages of on vs off- budget

On-budget

- Crowds out other funding that could be raised from private sector
- Poor targeting of limited financial resources to support poor consumers
- Distorts the pricing of services the infrastructure supports away from cost-reflective levels promoting unnecessary, excessive and wasteful consumption (which can be exacerbated through poor planning)
- Reduced inter-generational inequity because long-term infrastructure is paid for up front by tax payers
- Uncertainty regarding long term funding may discourage long-term planning and projects where implementation takes place over a long period of time, so many high benefit-cost ratio projects may not be undertaken
- May promote a soft budget constraint on projects
- Benefits received by tax payers are not directly related to amount paid
- Paying for services can become fiscally unsustainable resulting in security of supply being compromised

Off-budget (and paid for through user charges)

- May lead to under-investment in projects with high benefit-cost benefits, but with low direct, private, commercial benefits, or where investment capacity is constrained by capacity to raise financing
- Large, sharp increases in user charges may choke economic growth
- Administrative failures in redistributive mechanisms may result in poor consumers still paying higher charges
- Redistribution and cross-subsidisation may be difficult where rich and poor consumers are served by different institutions
- Where infrastructure is a key enabler for the economy increased prices will increase the cost of goods consumed by the poor

3.3 Risks and their mitigation

- Risk is integral to any endeavor so risk must be brought to the forefront and actively managed
- Risk management must be performed across the entire project life cycle, critically at procurement, contracting and project management stages
- Risk management tools should be prepared before projects start

Risk type	Mitigation actions
Over optimistic forecasts for revenue or lead time to completion, under estimating costs	Review forecasts, stress test for adverse conditions
Exchange rate movement on foreign currency components	Currency hedging, raise local content, ECA payments in local currency
Revenue shortfalls or losses	Guarantees, debt ranking, first loss cushion
Breech of terms for investors	Risk transfer between funders, institutional process to manage multiple funders, MIGA insurance

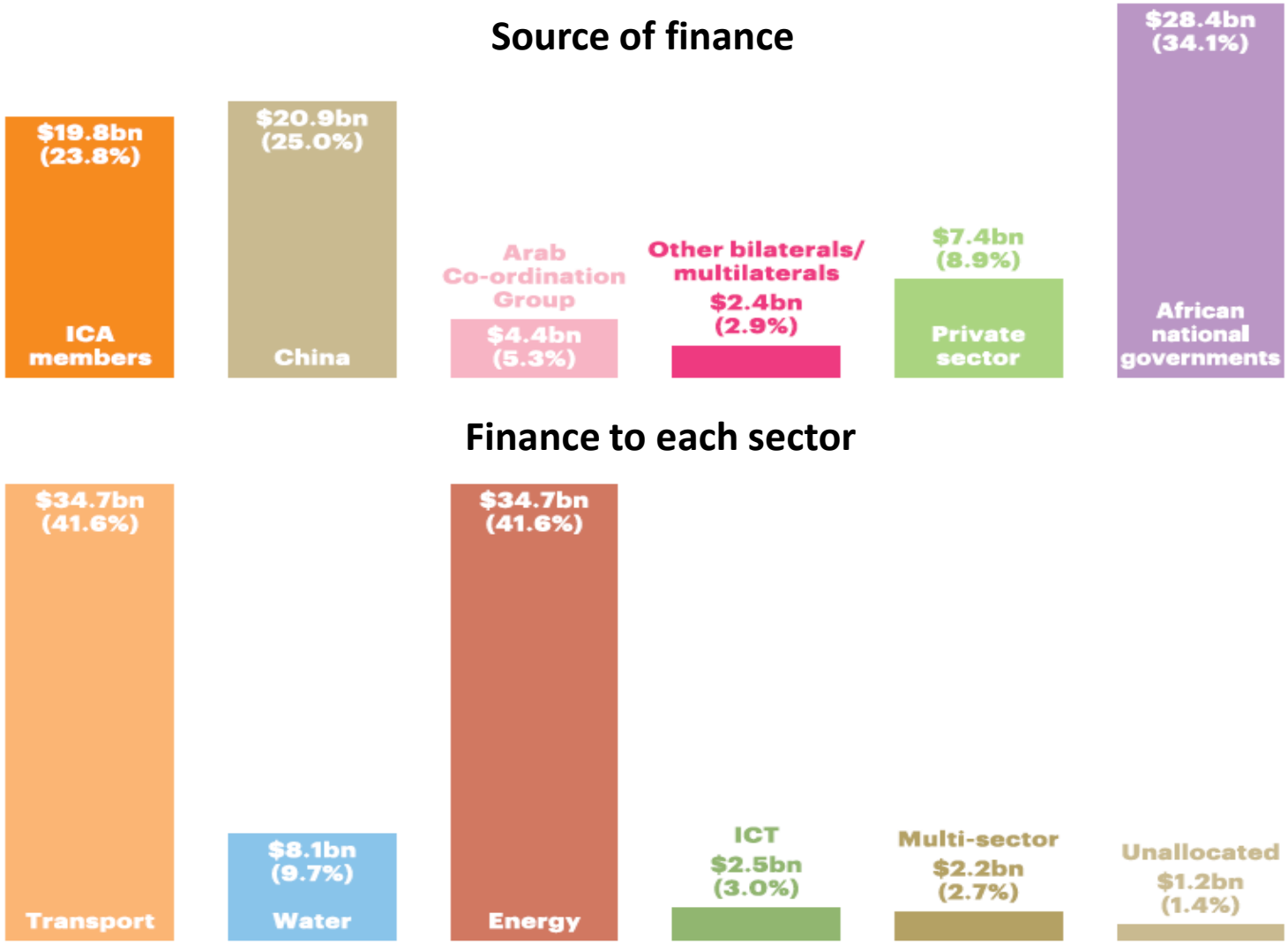
4 Key Factors that must be considered

- Risks and benefits of large scale ‘transformative’ projects compared to modular or incremental expansion options.
- Accounting for and managing cost escalation
- Managing exchange rate movements
- Affordability and subsidies for low income beneficiaries
- Alignment with government priorities and policy objectives
- Long lived projects working with the political cycle and dealing with change
- Development impact
- Sustainability, resilience and environmental performance

5 Summing up Infrastructure Financing

- Finance is one part of the project cycle
- Infrastructure is funded by taxes, user fees and (very limited) donor funds
- Infrastructure is financed through a combination of on-budget and off-budget methods that seek to increase the benefits generated by the project as well as giving the greatest fiscal space
- Risk mitigation should be proactively managed from the start of the project cycle
- Budget officials and infrastructure financiers have to meet multiple objectives

6 Sources of financing for African infrastructure ICA 2015



Thank you