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Meeting the Infrastructure Challenge:
The Case for a New Development Bank

Prepared for: Global Economic Governance Seminar

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Agenda

- **Infrastructure needs assessment**
- Global development financing architecture
- Potential role for a New Development Bank

Many emerging markets and all low-income countries require a major step increase in infrastructure investment

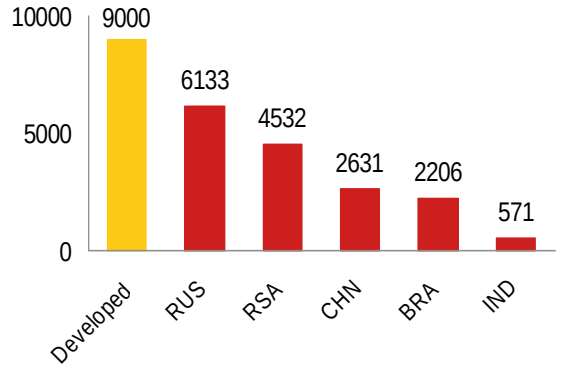
Driver	Description
Growth	• Emerging and developing countries (EMDCs) have high growth potential (~5-7% in non-OECD compared to 2% in OECD between 2010 and 2030) • Evidence shows that lack of infrastructure is a significant constraint to economic growth
Structural change	• An increasing percentage of growth in EMDCs is coming from industry and services, requiring substantial new infrastructure • With 2 billion people moving to urban centres in the coming three decades, there is a rapidly growing need to expand and upgrade urban infrastructure
Inclusion	• Infrastructure investment required to meet crucial development, inclusion and environmental goals • Several middle-income countries and most low-income countries have large existing infrastructure deficits (1.4 billion without access to electricity, 0.9 billion are without access to safe drinking water and 2.6 billion without access to basic sanitation)
Sustainability and resilience	• Ensuring the environmental sustainability and climate resilience of our economies requires new infrastructure and related networks

Source: OECD, Romani, Bhattacharya and Stern (2012)

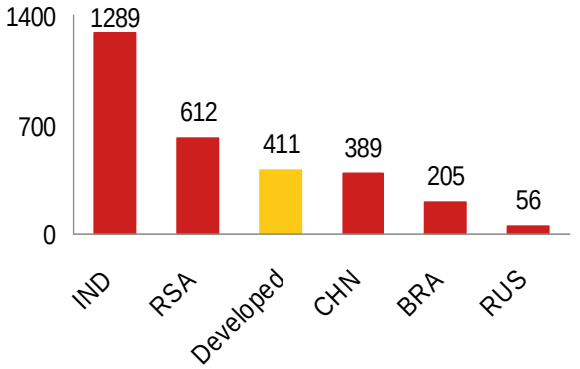
Large infrastructure deficits existing in many developing countries, which are slowing growth and development

- **Large infrastructure deficits** exist across EMDCs
- Inadequate infrastructure will increasingly become a constraint to **growth given stage of development of countries**, and importance of **network externalities** and **trade integration**
- **Ensuring environmental sustainability and resilience to climate change** will require a greater role for infrastructure
- Emerging and developing countries have **underinvested in maintenance and upkeep**
- Infrastructure needs vary across regions, but are **particularly high in South Asia and Sub-Saharan Africa**
  - Estimates of the total infrastructure spending need for Sub-Saharan Africa range between $75-100bn a year, **more than 12% of the region's GDP**
  - South Africa and oil-exporting countries could meet infrastructure requirements by investing ~10% of their GDP
  - Lower-income countries (such as Ethiopia) will need to invest 20+% of their GDP

Power
Electricity consumption (Kw h per capita)



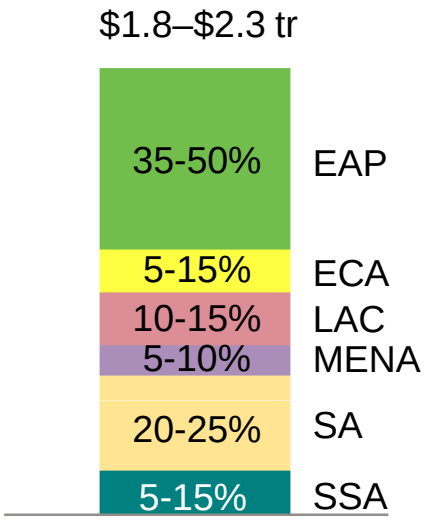
Transportation
Roads (km per 1000 square km of surface area)



Source: World Bank, GS Global ECS Research; G24, LSE and Global Green Growth Institute (GGGI) analysis

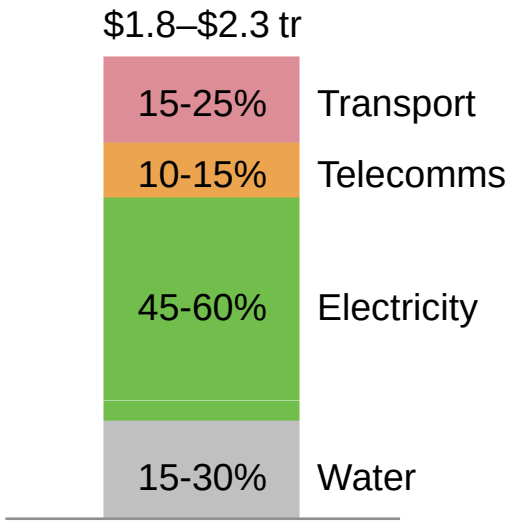
Need for investment across developing and emerging markets over the next decade is estimated to be around $2 trillion a year, ~$1 trillion more than what is currently spent

Annual needs by region



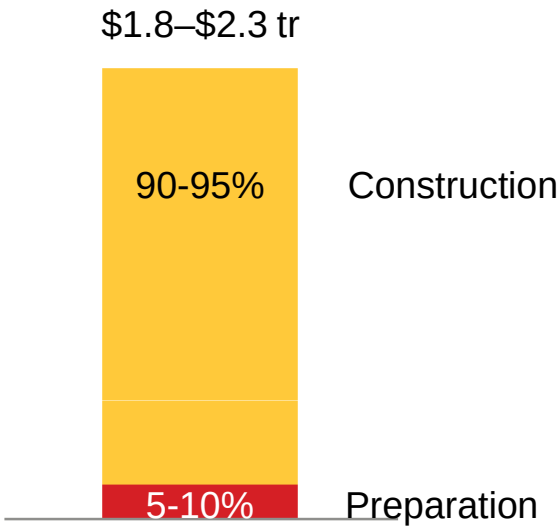
- East Asia (including China) will require the majority of investment
- Relative to its GDP, Africa will constitute a substantial share

Annual needs by sector



- 45-60% of investment requirement will be in the electricity sector, including generation capacity, transmission and distribution networks

Annual needs by phase



- Preparation costs, including costs of design and arranging financial support, can constitute up to 10% of overall costs

NOTE: $ trillion per year, (2008 real prices), capital investments only (excl. operation and maintenance costs); note the $200-300 billion annual requirement for sustainability is assumed split in the same ratio as the other investments across regions, sectors and phases

SOURCE: G-24 & GGGI analysis, based on Yepes (2008), MDB G20 working group on infrastructure (2011), and Foster and Briceño-Garmendia (2010);

Though sources of uncertainty regarding estimates remain

4 sources of uncertainty:

1. Scope for efficiency gains
2. Information on infrastructure requirements from the country and regional level (bottom-up analysis)
3. The role of project preparation in constraining infrastructure investment, relative to the role of financing
4. The requirements for environmental sustainability

Both top-down and bottom-up forecasts are important to realistically assess overall needs

'Top-down' forecasts

- **Microeconometric modeling** estimating the level of investment required to meet certain economic and social development goals, (e.g. access to clean water)
  - Includes literature review of current studies
- **Econometric modeling** that locates a historical correlation between factors such as per capita GDP and population and the level of infrastructure required first used by Fay (2000) and Fay and Yepes (2003)
  - Update includes additional decade's worth of data, **analyses the impact climate change** and examines the demand for internet connections, a critical new form of infrastructure

Investment needs – by region, country, sector

'Bottom up' forecasts

- **Forecasts obtained from country planning documents**
  - Includes consideration of the economic, social and political realities of the countries in question
- Case studies currently completed on Ethiopia (low-income), Nigeria (lower-middle income) and South Africa (upper-middle income)
- On-going process to develop bottoms-up projections for a wider set of EMDCs (e.g. China, India, Indonesia, Brazil) results to be available by June

This work is ongoing, and is the first attempt to compare econometric estimates with the political and budgetary reality of infrastructure planning (to be completed June 2013)

Source: G24, LSE and Global Green Growth Institute (GGGI) analysis, Fay (2000), Fay and Yepes (2003), country planning documents

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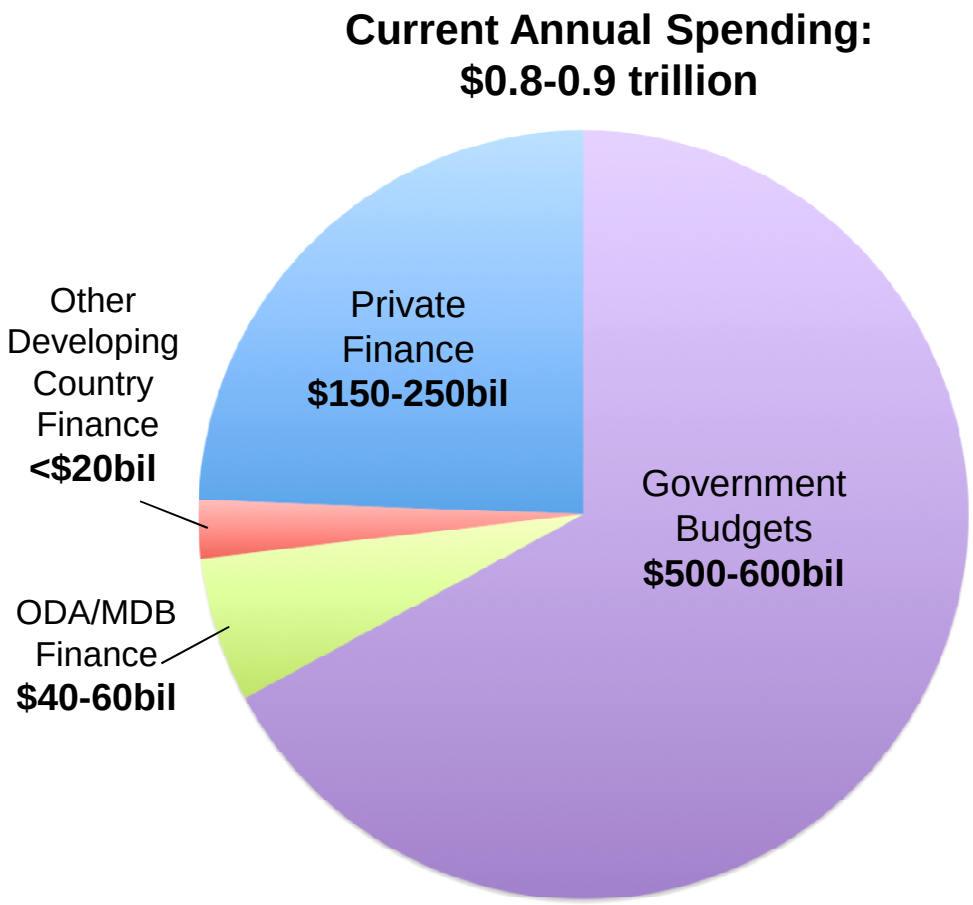
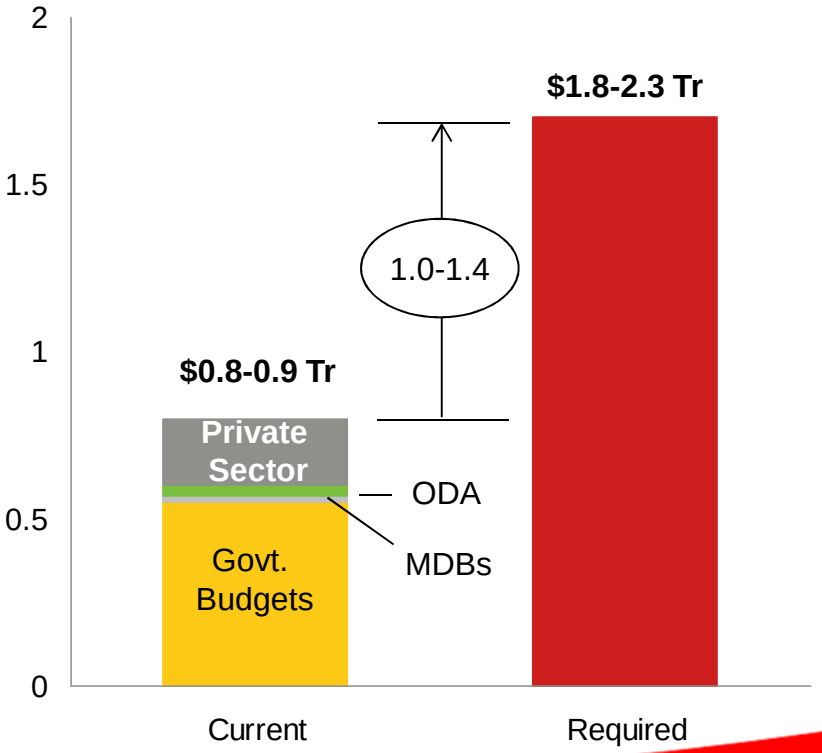
The existing global development financing architecture does not provide finance at a sufficient scale to meet infrastructure development needs



- Currently, an estimated $0.8-0.9 trillion is invested in infrastructure annually in EMDCs.
- This equates to a gap of approximately $1trillion annually in meeting infrastructure needs



Source: Split of current sources of finance own assessment based on various estimates including Estache (2010); MDB working group paper on infrastructure (2011); Macquarie (2009)

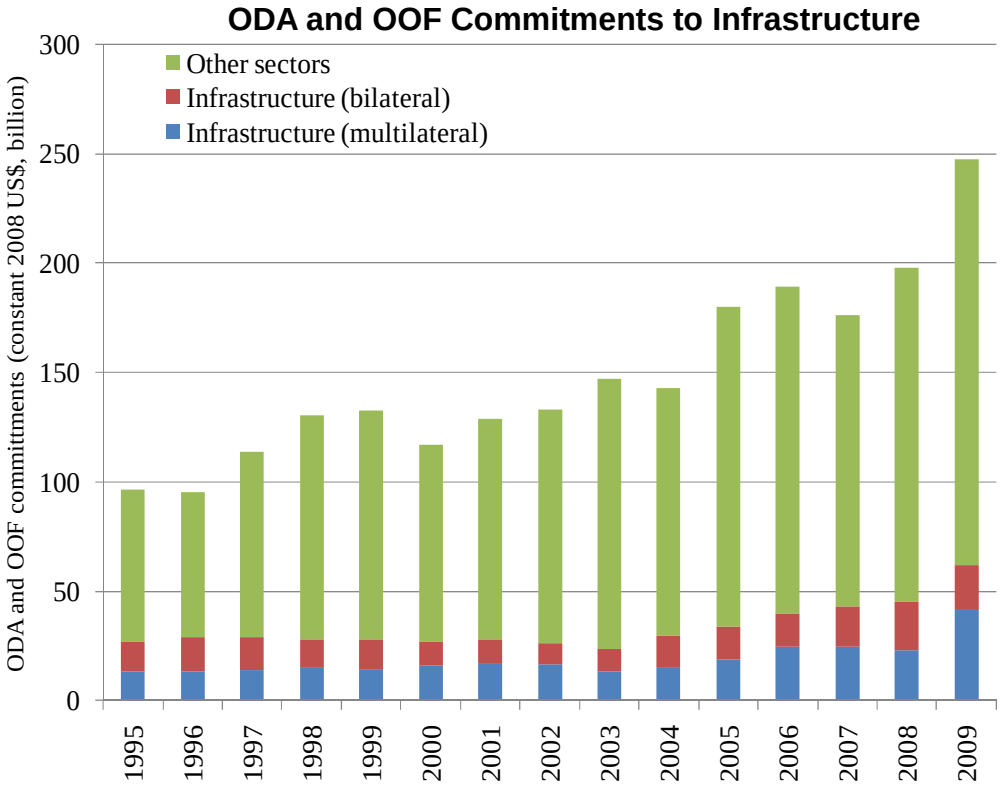
Public finance is important, but will be constrained going forward

- The majority of current spending is provided through public sector budgets, which account for approximately 55-75% of total investment, or around $0.5-0.6 trillion
- However, most governments have neither the resources nor the policy space to provide increased financing of the order of magnitude required to meet outstanding need
  - The current financial crisis will put further pressure on public budgets for years to come
- Public spending will necessarily form a big part of future infrastructure financing, BUT
  - Ability to borrow directly on the budget is limited
  - Political and budgetary factors influence long-term financing contributions
- A G30 sample of mature and emerging market economies suggests that the direct public provision varies by type of investment, averaging 60-65% of traditional infrastructure (bricks and mortar) spending
  - However, it needs to be kept in mind that the public sector spending is typically needed to “facilitate” private sector investment—ensuring that the critical facilities are available and providing linkages to markets

Source: G24, LSE and Global Green Growth Institute (GGGI) analysis, G30

ODA plays an important role, but is a small proportion of total spending

- While aid and concessionality are very important, they constitute very small proportions of total infrastructure spending
  - Financing from BRICS countries now dominates traditional ODA
- Donor preferences limit the role of ODA in infrastructure financing
- Role of ODA relative to the scale of needs will be inherently limited
  - Relevant for a subset of countries
  - Relevant for climate finance
  - Quantity should be increased
  - Better utilization of funds (to get the most out of it)

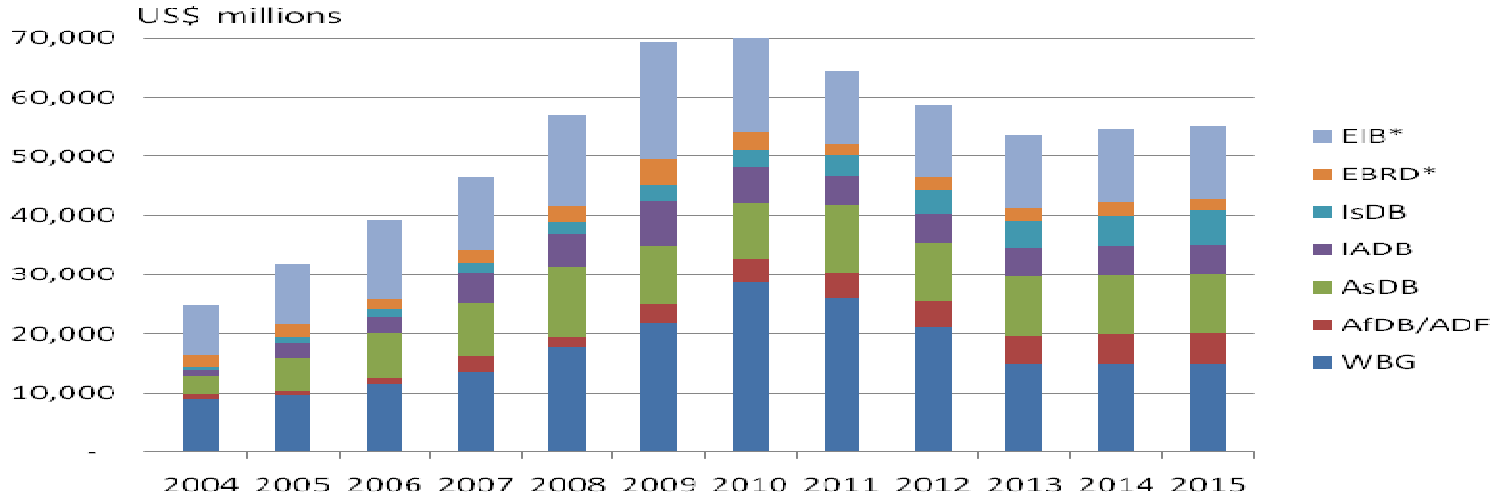


Source: OECD Stat Extracts, accessed in March 2011 in G20 MDB working Group on Infrastructure Report

MDB financing is modest and faces limitations

- While MDBs responded after the crisis in increasing the level of financing for infrastructure, a lot of this was replacement financing rather than Greenfield projects
- MDB lending is expected to level off in the coming years as need and impetus for increased, post-financial-crisis lending wanes
- In aggregate, the total amount of MDB financing is very modest compared to total financing
- Risk-aversion and cumbersome project preparation requirements have limited the scale and impact
- Lack of adequate financing instruments to crowd-in private investment or address project risks

Recent and projected MDB lending for infrastructure



Source: G20 MDB Working Group on Infrastructure, 2011

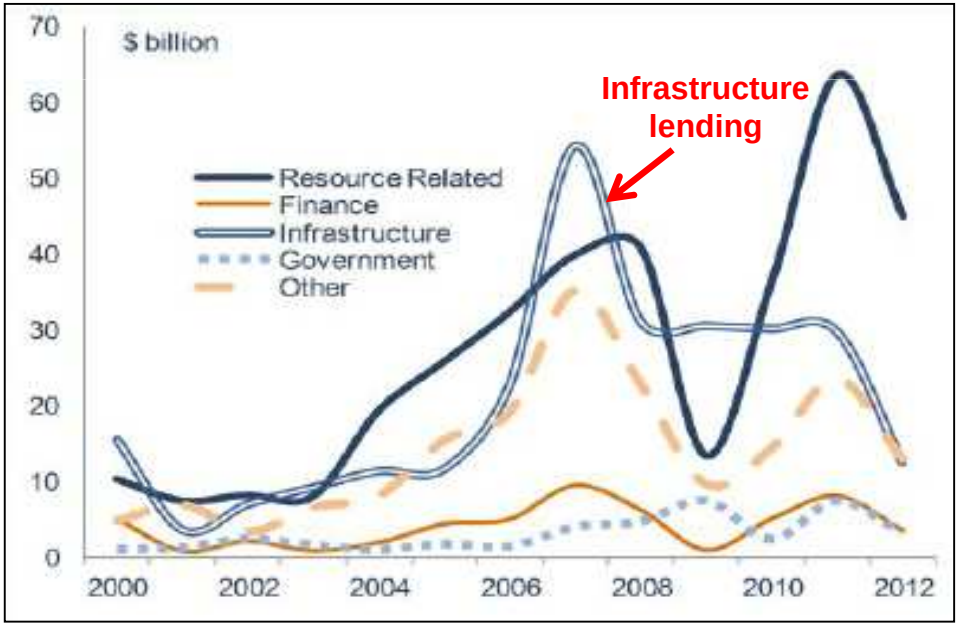
Note: EIB and EBRD projections assume reversion to 2007 levels, as no data was provided*

Private finance is profoundly under-utilized, and has decreased since the financial crisis

- Private financing constitutes up to a third of total spending, with an estimated $150-250billion in annual investment (20-30% of spending)
- Private sector investment heavily concentrated in the energy and transport sectors, with 95% of financed concentrated in middle-income countries (Estache, 2010)
- Public-Private Investments concentrated in ICT, other sectors investments dried up during the crisis

- Traditional forms of private financing (particularly bank finance) have declined very rapidly since 2008
  - Some of this is related to leveraging
  - Some is potentially regulatory (Basel III)
- New sources of long-term finance are available and will need to be tapped, including equity funds, pension funds and SWFs

Long Term Syndicated Bank Lending ($bn)



Source: World Bank DEC Prospects Group (based on World Bank and Dealogic data)

Financing of infrastructure is also often constrained by the nature of risks

Risk makes infrastructure a complex investment….

- **The nature of risk** for infrastructure makes it a complex proposition for investment.
- **Significant commercial and physical risks**
- **Large risk capital for upfront investment** associated with the development and construction phase.

… which implies it is hard to attract finance…

- **Nature of projects**, with high costs in early phases, requiring upfront, long-term equity stakes to take on substantial risks
- **Refinancing of projects,** requiring deep and liquid debt markets
- **Risks around revenue streams,** associated with policy uncertainties, project costs, technology, and affordability (e.g. ability to pay fees for infrastructure-related services).

…with significant constraints to investment

- **National policy and institutional frameworks** further constrain appetite to invest
- **Inadequacy of existing instruments** is often an impediment to the flow of funds
- **Lack of project preparation facilities** at scale inhibits the identification and development of a prioritized and viable pipeline of projects

Source: Research, interviews

There is a large variation in the provision of financing for infrastructure across developing and emerging countries

✓ = Yes, ● = Partial, X = No

Region	Provisioning of Financing	Adequacy
Latin America	• Public and private investment in infrastructure has been facilitated by deeper domestic financial markets, an active private sector, and a strong network of national and multilateral development banks	●
Asia	• Flows of private finance, often on the back of public-private partnerships or other forms of public co-investment, have increased significantly • Large gaps persist	●
MENA	• Oil-rich countries are well positioned to finance ambitious programs of infrastructure spending through their SWFs and large reserves • Non oil-rich countries face large infrastructure deficits	●
Sub-Saharan Africa	• Combination of infrastructure project risks and macroeconomic/policy risks has stifled investment • Public budgets are stretched with limited revenue potential • Regional, sub-regional and national financing architecture are less developed than other regions	X

Several key emerging countries have played a role in investing in other regions. Going forward, these investment flows could play a significant role in closing the financing gap for infrastructure.

Source: Research, interviews

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Improving the infrastructure financing architecture is necessary to meet the investment need

EMDCs require a major step-increase in infrastructure spending. The existing development financing architecture is constrained operationally, financially and politically from fulfilling this requirement.

Challenges with existing MDBs

- Limited lending capacity
- Risk-aversion
- Lack of flexibility with lending
- Lack of adequate financing instruments to crowd-in private investment or address project risks
- Limited project preparation facilities impeding creation of viable project pipeline
- Governance structures that impede decision-making flexibility

Opportunities for a new Institution

- Augmented direct lending capacity through utilization of global savings
- Specific focus on infrastructure investment and understanding of project risk
- Increased flexibility and wider scope for finance provision
- Appropriate financing instruments to address complex nature of investment risk
- Ability to assist in capacity-building for project preparation
- Modern governance structures that provide for equity of membership and strong borrower buy-in

The advantages of a new, modern infrastructure development bank would be substantial

1. Could significantly **augment the amount of long-term financing** available for infrastructure in emerging markets and developing countries
    a) By catalyzing private finance
    b) By directly adding investment volume
2. Over time, could **reduce perceived risk in transactions where it is involved**, as a result of its reputation and know-how
3. **Has the potential to reduce policy risk** in countries where it operates, thanks to strong collaboration between borrowers and lenders
4. Potential role as an **independent convenor of the global private and public sector** in order to share and manage the risks, as well as expanding the scale
5. **Could stretch and augment the frontier of finance instruments** through being innovative in the provision of stable, predictable and appropriately-scaled long-term supply of finance, particularly in early development phases
6. Could support the development of skills in **project preparation** and develop ad-hoc facilities at scale in order to contribute to building a strong pipeline of investable infrastructure projects
7. In addition to **focusing on projects, it could also usefully play a wider policy role.**

By being modern in its mandate, in its instruments and approaches and in its governance, a new institution could be a catalyst for change

To be a **catalyst for change**, the new institution would require:

1. **A modern mandate** with an emphasis on **sustainable infrastructure** and sufficient flexibility to involve existing national, regional and multinational development banks, as well as the private sector and other stakeholders (such as sovereign wealth funds and philanthropic organizations)

2. **Modern financing instruments that suit the diverse range of project needs** (examples include equity participation, insurance and credit enhancement, loan-guarantees, debt instruments, first-loss equity, challenge funds, grants and so on) and **facilitate risk management**, as well **as project preparation facilities at scale**

3. **A modern governance structure** and board competencies, which could help provide an example for the **reform of the governance structures of existing IFIs** as they struggle to adapt themselves to the profoundly changing reality of a new international economy