Infrastructure Financing in Asia and the Pacific

Status and Modalities

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Addressing the Transboundary Dimensions of the 2030 Agenda

Subregional Inception Meeting

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Almaty, Kazakhstan
The Importance of Infrastructure

Improving Infrastructure is vital for achieving multiple sustainable development goals

SDG 7
Affordable and Clean Energy

SDG 8
Decent Work and Economic Growth

SDG 9
Industry Innovation and Infrastructure

SDG11
Sustainable cities and communities

Improving Infrastructure is vital for achieving multiple sustainable development goals.
Composition of Infrastructure Financing

Asia

- 70% Domestic Public
- 20% Private
- 10% Multilateral agencies

Asian Countries with Special Needs

- 65% Domestic Public
- 15% Private
- 10% ODA
- 10% MDB

Source: Deutsche Bank, Asia infrastructure financing 2016
Source: ESCAP – Asia-Pacific Countries with Special Needs Development Report 2017
A gap between public and private sector financing

Infrastructure investments have traditionally been financed with public funds, given the inherent public good nature of infrastructure.

- Currently, the public sector funds 70% of infrastructure development in Asia.
- The private sector accounts for 20% of infrastructure financing.
- The remaining 10% are provided by multilateral agencies.

Public deficits and increased public debt to GDP ratios have led to reduction in the level of public funds for infrastructure.

As countries develop, official development assistance has less impact.

Private sector needs to step up.
To address infrastructure gaps, it is estimated that private investments should increase from around $63 billion a year to as high as $250 billion over 2016-2020.

Source: ADB Institute
Reasons for low private funding

Despite ample available capital...

Global institutional investors currently manage more than US$50 trillion

Investments in infrastructure assets, with theoretically stable cashflows over time, can still be unattractive even to investors with long-term liabilities

...Infrastructure investment is unattractive in both developed and developing countries

Infrastructure projects rarely rank as the most attractive option to deploy capital on a risk adjusted basis – Too much risk and uncertainty over investment returns. Investors have global alternatives which present higher return in other asset classes for the same level of risk

55% to 65% of infrastructure projects in emerging markets are fundamentally not bankable without government or multilateral development bank support*
Private Sector: Banking Sector Dominance

Conventional Commercial Bank Loans

- The banking sector has traditionally played a major role in financing infrastructure projects in the region.
- Banks take greater risks during the initial stage of construction, which only subside over time as projects become less risky.
- However, bank dominant system increase the risk of an overexposed banking system.

Syndicated Loans

- As infrastructure financing requirements are large, loans more often than not come under a syndicate of banks.*
- Syndicated loans have grown steadily since the global financial crisis.
- The US dollar is the predominant currency for syndicated loans, alongside local currencies.
Banks are challenged by the inherent asset-liability mismatch infrastructure finance generates. Banks typically have substantial short-term liabilities, but infrastructure financing often involves long-term assets.

Currency mismatch—the differences between project revenues generated in local currency for debt payments made in a foreign currency.

New regulations and Trends
- Large international commercial banks, which had previously provided a significant portion of infrastructure financing, have been deleveraging since the global financial crisis.
- Provisions in Basel III are limiting the role of Banks in Infrastructure financing.
Capital markets would reduce the pressure on the banking system while also making available fresh equity to finance/refinance infrastructure projects.

Asia is home to diverse financial systems that vary in depth and sophistication, ranging from developed countries with sophisticated financial markets to emerging markets and low-income economies where markets are still in their infancy.

Much attention is being focused on the institutional investor, given the long-term nature of the liabilities.

The long-term nature of infrastructure projects matches the long-term liabilities of institutional investors.

Most institutional investors, even those with long-term liabilities such as pension funds, life insurance companies continue to invest in liquid assets, often with a short-term investment horizon.

There is a high correlation between the size of the institutional investor base and the size of capital markets.*

Underdeveloped equity and bond markets prevent institutional investors to finance infrastructure investment.
Infrastructure Financing Modalities and Current State
Government Provision

- Tax Incomes
- Capital Recycling
- Public Borrowings and Budget Deficits
- Government Business Enterprises

Revenue for Infrastructure
Banks have provided most of the global finance since the 1960’s and syndicated project finance remains the most common finance for financing private infrastructure investment in the Asia Pacific region.

Syndicated loans to key infrastructure sectors in 12 Asian economies

Sources: ADB Institute, Deutsche Bank Research
Asian Stock Markets
Different level of Development

Stock Market Capitalization of Domestic Listed Companies To GDP%-2015

<table>
<thead>
<tr>
<th>Country</th>
<th>Stock Market Capitalization of Domestic Listed Companies To GDP%</th>
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</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td></td>
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<tr>
<td>USA</td>
<td></td>
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<tr>
<td>Philippines</td>
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<tr>
<td>Republic of Korea</td>
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<td>Thailand</td>
<td></td>
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<tr>
<td>China</td>
<td></td>
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<tr>
<td>India</td>
<td></td>
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<tr>
<td>Euro Area</td>
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<tr>
<td>New Zealand</td>
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<tr>
<td>Indonesia</td>
<td></td>
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<tr>
<td>Bangladesh</td>
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<tr>
<td>Mongolia</td>
<td></td>
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<tr>
<td>Russian Federation</td>
<td></td>
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<tr>
<td>Armenia</td>
<td></td>
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<tr>
<td>Georgia (2016)</td>
<td></td>
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<tr>
<td>Kazakhstan</td>
<td></td>
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<tr>
<td>Kyrgyz Republic</td>
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<table>
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<tr>
<th>Countries</th>
<th>Stock Market Turnover Ratio (2017)</th>
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</thead>
<tbody>
<tr>
<td>Kyrgyz Republic (2012)</td>
<td>3.3</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>1.628</td>
</tr>
<tr>
<td>Georgia (2012)</td>
<td>0.2</td>
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<tr>
<td>Armenia (2012)</td>
<td>0.8</td>
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<tr>
<td>Russian Federation</td>
<td>23.1</td>
</tr>
<tr>
<td>Indonesia</td>
<td>17.8</td>
</tr>
<tr>
<td>East Asia &amp; the Pacific</td>
<td>112.13</td>
</tr>
<tr>
<td>India</td>
<td>50.9</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>112.4</td>
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<tr>
<td>China</td>
<td>197.7</td>
</tr>
<tr>
<td>World</td>
<td>100.418</td>
</tr>
</tbody>
</table>

Source: CEIC 2017, World Bank/Financial Database
In recent years, bonds have outstripped syndicated loans as a source of infrastructure finance in Non-Japan Asian countries*

- The vast majority of infrastructure bonds have been issued in local currency (LCY).
- In some Non-Japan Asian countries where banking sectors are constrained by domestic factors such as deleveraging policies or legacy NPLs, such as China and India, many companies or state entities have increasingly turned to issuing bonds.

Source: Deutsche Bank Research, Asia infrastructure financing
Municipal Bonds

- With rapid urbanization, municipalities are under strong pressure to deliver infrastructure services.
- Municipal bonds are debt instruments issued by local governments to finance infrastructure projects.
- These bonds normally attract funding at low cost given the implicit government guarantee and are subject to less stringent level of oversight than the corporate bond market.

<table>
<thead>
<tr>
<th>Countries</th>
<th>Amount in US$ Billion</th>
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<tbody>
<tr>
<td>China</td>
<td>1964.87</td>
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<tr>
<td>India</td>
<td>75.1</td>
</tr>
<tr>
<td>Iran</td>
<td>0.87</td>
</tr>
<tr>
<td>Japan</td>
<td>62</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>0.59</td>
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<tr>
<td>Korea</td>
<td>18.11</td>
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<tr>
<td>Malaysia</td>
<td>1.15</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: CBonds
Private Company that operates infrastructure

Like all firms, infrastructure companies rely on equity and debt for financing. Infrastructure companies can be publicly listed.

Infrastructure companies are not SPVs: They make profit by operating the infrastructure they built or acquired.

Power company that maintains electrical generation and transmission lines

Energy company that runs a pipeline

Firm that operates a portfolio of toll roads
### Infrastructure Projects

#### SPV/SPE Listing
- Establish a dedicated project company known as a "Special Purpose Vehicle/ Entity (SPV/SPE) to acquire financing and implement project activities.
- This legally isolates the parent organization from direct exposure to the financial risks associated with a project.
- If the SPV is listed on the stock exchange, investors can invest directly in the project.

#### Project Bond
- Project bonds are debt instruments used for financing stand-alone infrastructure projects.
- The creditworthiness of this bond depends on the cash flow performance of the underlying infrastructure project.
- The volume of project bonds is $36 billion in world (2013). In Asia, the volume ranged between $1 billion and $3 billion.
- Average maturity of the bonds is 8 years in Asia, compared to 15 years in advanced economies.
Infrastructure Funds

Another intermediary mechanism between investors and infrastructure projects

Serve as a vehicle to pool resources, skills and experiences from different investors while achieving economies of scale

Specialized skills are required for structuring and assessing infrastructure investments
Public Private Partnerships (PPP)

"A long-term contract between a private party and a government agency, for providing public services and/or developing public infrastructure, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance."

- Long term relationship beyond construction phase
- Contract Based
- Different from privatization

Mobilize resources
Achieving a long term solutions
Transferring risks to the private sector

Source: PPP Reference Guide 2.0
Public and private sectors

Domestic public finance
- Traditional sources of finance
- Expected to remain a significant source
- Should be used to crowd in private investment

Private sector participation
- Concentrated in a few mega energy projects and privatization of ICT infrastructure
- Has potential to play a bigger role but requires a stable “investor-friendly” climate

PPP, 2006-2015, % of GDP

Source: ESCAP – Asia-Pacific Countries with Special Needs Development Report 2017
PPP Track record
Central Asia

Over $100 billion mobilized since 1995 (mainly driven by Russian Federation)... but limited deal flow in recent years

World Bank PPI Database
ESCAP PPP Survey 2018
(Example Results)
Survey Themes

- Legal and Regulatory Framework
- Institutional Framework
- PPP Unit Functions
- Challenge in PPP Implementation
- Existing Mechanisms
- Sustainable Development Goals in PPPs
- Needs and Expectations
Legal Framework

Existing Legal Document

- Law 58%
- PPP law 32%
- Other Law 26%
- No document 10%
- PPP policy and/or Guidelines 32%

Document under Development

- PPP law 9
- PPP Regulations 2
- No document 4
- Concession Law 2
- PPP policy and/or Guidelines 8

Source: ESCAP
Institutional Framework Staff Members

Source: ESCAP
PPP use by sector

In which sector are PPP used?

- Other
- Health
- Water
- Education
- Transport
- Energy

Source: ESCAP
Challenges in PPP implementation

1. Limited Experience
2. Weak Investment Climate
3. Lack of skills and technical capacity
4. Lack of legal framework
5. Lack of Bankable projects

Source: ESCAP
Existing Mechanisms Governmental Support

Source: ESCAP
PPP Funding Sources

1. Bank Loans
2. Equity
3. Foreign Direct Investment
4. Official Development Aid
5. Bonds

Source: ESCAP
SDG Concerns in PPP Projects

Environmental Concerns:
- Yes: 79%
- Under Development: 11%
- No: 10%

SME Involvement:
- Yes: 21%
- Under development: 16%
- No: 74%

Gender Equality Concerns:
- Yes: 21%
- Under Development: 37%
- No: 42%

Source: ESCAP
International Collaboration

- ESCAP is an active partner in the PPP Knowledge lab together with 11 international organizations.
- Experts contributing to the activities organized by the different partners.
- Joint research with the Korean Development Institute (KDI).
Experience sharing
PPP and infrastructure financing Network

- Promote exchange of information / best practices among the countries of the region

PPP Ministerial Conferences

Financing for Development,
(Yearly regional consultation since 2014)

Sub-regional and national workshops
Way forward: Private sector engagement

• Private sector engagement has been severely hampered
  – Risk-return profile needs to be adjusted by Government support measures

• Governments can also
  – Enhance coordination across Government agencies to establish a bankable infrastructure project pipeline
  – Facilitate innovative PPP
  – Develop capital market

• Governments and SDGs
  – Ensure infrastructure development gains are shared in an equitable and sustainable manner