Closing the Infrastructure Investment Gap
The Context for Investing

Shanghai
GIH/WEF
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Singapore Infrastructure & Urban Development Hub
World Bank
A tough stretch for EMDE markets, especially for infrastructure

Country Risk Ratings
end-2015 change since end-2010

EM Currencies vs USD
2010 - 2015

Market Conditions
- Currency devaluations
- Slowing growth
- Market volatility
- Worsening country risk ratings
- Rising interest rates
- New prudential/financial regulations

Sources: Euromoney, Thomson Reuters (2016)
Private infrastructure: Highly sensitive to risk perception and investment climate

- No correlation between level of Foreign Direct Investment and sovereign risk
- Strong direct correlation between PPI and sovereign risk
  - Link is especially strong for concessions

No Correlation between Country Risk and predicted value of FDI/GDP

Strong Correlation between the predicted value of PPI Greenfield/GDP and Country Risk

No Correlation between Country Risk and predicted value of FDI/GDP

Strong Correlation between the predicted value of PPI Concessions/GDP and Country Risk

Source: Araya, Schwartz & Andres (2013)
Despite the rhetoric, private flows into infrastructure are decreasing, not growing

**Investment in Private & PPP Energy, Transport and Projects in EMDE**

<table>
<thead>
<tr>
<th>Year</th>
<th>EAP</th>
<th>ECA</th>
<th>LAC</th>
<th>MNA</th>
<th>SAR</th>
<th>AFR</th>
<th># of Projects</th>
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*Source: World Bank, PPI Project Database*

*Adjusted by US CPI*
How much private investment in infrastructure is private?

**EMDE PPI**
- Telecoms $52b
- Divestitures $5b
- PPP $125b

**PPP Gearing**
- Equity US$37b
- Debt US$88b

**Public vs Private Finance**
- $26b Private
- $11b Public
- $30b Private
- $58b Public

Source: Author’s calculations, PPI Database, World Bank, sampling from 2014
Yearly Infra Finance + Finance Needs
Emerging Markets & Developing Countries

Infra Financing Gap

Private Infra = $160 billion
MDBs = c.$40-$60 billion

Infra Finance

Institutional Investors AUM
$80 to $100T

c. $1 - 1.5 trillion
- Lack of investment opportunities for private participants
  - 60 - 80 PPI projects in all of East Asia and Pacific a year, the fastest growing market globally
  - >$296b unlisted infrastructure funds under management globally, with $105 billion in dry powder
  - Only 13% of those funds invested in EMDE

<table>
<thead>
<tr>
<th>CATEGORY OF INVESTOR</th>
<th>AUM (US$)</th>
<th>CURRENT INVESTMENT IN INFRA</th>
<th>CURRENT INVESTMENT IN EMDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD Institutional Investors</td>
<td>80 trillion</td>
<td>Average: 1% of total portfolio, mostly in OECD (~$800 billion) Leading investors: 5-10%</td>
<td>Estimated 10% in EMDE, but little in infrastructure</td>
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<td>Emerging Market Institutional Investors</td>
<td>5 trillion (projected &gt;17 trillion by 2050)</td>
<td>Average: &lt;1% (0.5% translates to $25 billion)</td>
<td>High % in EMDE</td>
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<td>Of which: EMDE</td>
<td>1 trillion</td>
<td>Limited examples (up to 10%)</td>
<td>High % in EMDE</td>
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<td>Sovereign Wealth Funds</td>
<td>4 trillion</td>
<td>Unclear (2% translates into $80 billion)</td>
<td>Moderate % in EMDE</td>
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<td>Other global institutional capital (Asset/wealth managers)</td>
<td>20 trillion</td>
<td>[Assumed] 1% on average (translates to $200 billion)</td>
<td>Very small in EMDE</td>
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Infra Financing Gap

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Infra Finance

c. $1 trillion

c. $1 - 1.5 trillion

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$80 to $100T