Pension Funds and Infrastructure in Brazil
A Proposal for Standardized Infrastructure Bonds

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World Bank Group
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### Latin America: Holdings of government bonds and bank deposits by pension funds, 2015

<table>
<thead>
<tr>
<th>Country</th>
<th>US$ million</th>
<th>% GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>250,528</td>
<td>12</td>
</tr>
<tr>
<td>Mexico</td>
<td>181,881</td>
<td>16</td>
</tr>
<tr>
<td>Chile</td>
<td>165,432</td>
<td>68</td>
</tr>
<tr>
<td>Colombia</td>
<td>63,742</td>
<td>20</td>
</tr>
<tr>
<td>Peru</td>
<td>38,360</td>
<td>20</td>
</tr>
<tr>
<td>Uruguay</td>
<td>10,957</td>
<td>21</td>
</tr>
<tr>
<td>El Salvador</td>
<td>7,993</td>
<td>32</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>6,892</td>
<td>11</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>5,846</td>
<td>12</td>
</tr>
<tr>
<td>Panama</td>
<td>384</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: National sources.
Pension Funds Investments in Infrastructure

<table>
<thead>
<tr>
<th>Country</th>
<th>Equity</th>
<th>Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>0.1%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Mexico</td>
<td>&lt;2.0%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Brazil</td>
<td>&lt;0.5%</td>
<td>&lt;0.2%</td>
</tr>
<tr>
<td>Peru</td>
<td>2.9%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Colombia</td>
<td>0.6%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>
Promoting Investments in Infrastructure

PPP Framework

Infrastructure project

30% Equity

70% Infrastructure Bond

Pension Fund

Pension Fund

Pension Fund
Pre Financial Crisis

PPP Framework

Infrastructure project

Equity

30%

Infrastructure Bond

70%

Full wrap

Monoline

Pension Fund

Pension Fund

Pension Fund
Pre Financial Crisis

PPP Framework

Infrastructure project

Equity

30%

70%

Infrastructure Bond

Full wrap

Monoline

Pension Fund

Pension Fund

Pension Fund
Post Financial Crisis: Back to the drawing board

PPP Framework

Infrastructure project

- Equity: 30%
- Infrastructure Bond: 70%

Pension Fund

Pension Fund

Pension Fund
What do pension funds want for investing in infrastructure?

• High returns
• Low risk
• Liquidity
• Fair pricing

Really???
Challenges for engaging institutional investors from the construction phase

• Government incentives to projects supported by private financiers
  • Retail sector unable to supply the volume of necessary resources

• Infrastructure projects characterized by the J curve
  • DB pension funds want to receive interest payments during the life of a bond

• Pension funds unwilling to take construction risk
  • Guarantees (market price)

• Pension funds as minority stakeholders
  • Limited monitoring capacity of the projects
Standardized Infrastructure Bonds

PPP Framework

Infrastructure project

- 30% Equity
- 70% Infrastructure Bond

Infrastructure Bond
- Brady type of guarantees
- Interest payments during the construction phase

- Pension Fund
- Pension Fund
- Pension Fund
Standardized Infrastructure Bonds

* Ramp up Phase

Construction Phase

High Risk
Negative Cash-flow

Medium Risk
Low Cash-flow
Low Return

Low Risk
High Cash-flow
High Return

* In some projects, ramp up phase may overlap with the operational phase

Resources from...

- Project Bond
- BNDES

Outline – Pay back by...

- Financial Institution
- Concessionaire
- Principal + Interests repayment
- Interests repayment

Principal guaranteed

Data

- Principal
- Guarantee
Thanks!

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