SESSION 4 – INFRASTRUCTURE

Mauricio Endo
Country Overview

Regionalization of the Brazilian GDP (Presented in %)

- North Region: GDP 5.3%
- Northeast Region: GDP 13.9%
- Midwest Region: GDP 9.4%
- Southeast Region: GDP 54.9%
- South Region: GDP 16.4%

Government
- Presidential Republic

Area
- 8,515,767 km²

GDP 2017
- USD 1.969 trillion

Coastline
- 7,367 km

GDP per capita
- USD 9,490

Population
- 208 million

Risk Brazil (S&P)
- BB

(1) Oxford Economics estmative for 2017;
Source: Oxford Economics Database, Reuters and CIA Factbook
According to the Global Competitiveness Index (GCI) Infrastructure quality ranking of WEF in 2017 - 2018, Brazil ranks 73th out of 137 countries. The ranking evaluates:

- The extent and efficiency of the transportation infrastructure capable of providing easy and safe movement of goods, services and people in airports, highways, railways and ports.

- The power supply quality, free of interruptions and faults.

- A solid and extensive telecommunication network that allows a fast and free flow of information.

Source: WEF.
Quality of Infrastructure in Brazil (2)

Highways - 103rd place in 137 countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Rank</th>
<th>Rank in 137 countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>6th</td>
<td>6th</td>
</tr>
<tr>
<td>United States</td>
<td>10th</td>
<td>10th</td>
</tr>
<tr>
<td>Canada</td>
<td>22nd</td>
<td>22nd</td>
</tr>
<tr>
<td>Chile</td>
<td>24th</td>
<td>24th</td>
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<tr>
<td>Australia</td>
<td>35th</td>
<td>35th</td>
</tr>
<tr>
<td>China</td>
<td>42nd</td>
<td>42nd</td>
</tr>
<tr>
<td>Mexico</td>
<td>52nd</td>
<td>52nd</td>
</tr>
<tr>
<td>World median</td>
<td>69th</td>
<td>69th</td>
</tr>
<tr>
<td>Argentina</td>
<td>96th</td>
<td>96th</td>
</tr>
<tr>
<td>Brazil</td>
<td>103rd</td>
<td>103rd</td>
</tr>
<tr>
<td>Peru</td>
<td>108th</td>
<td>108th</td>
</tr>
<tr>
<td>Colombia</td>
<td>110th</td>
<td>110th</td>
</tr>
</tbody>
</table>

Source: WEF.
Quality of Infrastructure in Brazil (3)

Airports - 95th position in 137 countries

United States | Canada | Japan | Australia | China | Chile | Mexico | World median | Argentina | Colombia | Peru | Brazil
9th | 12th | 26th | 36th | 45th | 62nd | 67th | 69th | 78th | 81st | 85th | 95th

6.0 | 5.9 | 5.6 | 5.2 | 4.9 | 4.5 | 4.4 | 4.3 | 4.2 | 4.1 | 4.1 | 3.9

Source: WEF.
## Quality of Infrastructure in Brazil (4)

### Railways - 88th place in 101 countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Rank</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>2nd</td>
<td>6,6</td>
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<tr>
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<td>5,5</td>
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<tr>
<td>Canada</td>
<td>16th</td>
<td>4,9</td>
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<tr>
<td>China</td>
<td>17th</td>
<td>4,8</td>
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<tr>
<td>Australia</td>
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<tr>
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<tr>
<td>Chile</td>
<td>74th</td>
<td>2,5</td>
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<tr>
<td>Argentina</td>
<td>83rd</td>
<td>2,1</td>
</tr>
<tr>
<td>Peru</td>
<td>87th</td>
<td>2,0</td>
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<tr>
<td>Brazil</td>
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<td>2,0</td>
</tr>
<tr>
<td>Colombia</td>
<td>96th</td>
<td>1,5</td>
</tr>
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</table>

Source: WEF.
## Quality of Infrastructure in Brazil (5)

### Ports - 106th position in 137 countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Rank</th>
<th>Quality Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>9th</td>
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<tr>
<td>Canada</td>
<td>19th</td>
<td>5.4</td>
</tr>
<tr>
<td>Japan</td>
<td>21st</td>
<td>5.3</td>
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<tr>
<td>Australia</td>
<td>35th</td>
<td>4.9</td>
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<tr>
<td>Chile</td>
<td>36th</td>
<td>4.9</td>
</tr>
<tr>
<td>China</td>
<td>49th</td>
<td>4.6</td>
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<tr>
<td>Mexico</td>
<td>62nd</td>
<td>4.3</td>
</tr>
<tr>
<td>World Median</td>
<td>69th</td>
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<tr>
<td>Colombia</td>
<td>77th</td>
<td>3.8</td>
</tr>
<tr>
<td>Argentina</td>
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<td>3.7</td>
</tr>
<tr>
<td>Peru</td>
<td>83rd</td>
<td>3.7</td>
</tr>
<tr>
<td>Brazil</td>
<td>106th</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Source: WEF.
Quality of Infrastructure in Brazil (6)

Eletcricity and telephony infrastructure – 72nd position in 137 countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Rank</th>
<th>Median Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>5th</td>
<td>6.6</td>
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<tr>
<td>United States</td>
<td>18th</td>
<td>6.0</td>
</tr>
<tr>
<td>Canada</td>
<td>31st</td>
<td>5.8</td>
</tr>
<tr>
<td>Australia</td>
<td>41st</td>
<td>5.4</td>
</tr>
<tr>
<td>Chile</td>
<td>43rd</td>
<td>5.4</td>
</tr>
<tr>
<td>World median</td>
<td>69th</td>
<td>4.6</td>
</tr>
<tr>
<td>Brazil</td>
<td>72nd</td>
<td>4.5</td>
</tr>
<tr>
<td>Peru</td>
<td>75th</td>
<td>4.4</td>
</tr>
<tr>
<td>Colombia</td>
<td>76th</td>
<td>4.4</td>
</tr>
<tr>
<td>Argentina</td>
<td>79th</td>
<td>4.3</td>
</tr>
<tr>
<td>China</td>
<td>80th</td>
<td>4.3</td>
</tr>
<tr>
<td>Mexico</td>
<td>84th</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Source: WEF.
Contract Legal Framework

- **Law No. 8,666/93 (Bidding Law):** Regulates art. 37, item XXI, of the Brazilian Federal Constitution; establishes rules for bids and contracts of the Public Administration.

- **Law No. 8,987/95 (Concession Law):** Provides for the regime of Common Concession (non-subsidized concession) and permission of the provision of public services provided in art. 175 of the Brazilian Federal Constitution.

- **Law No. 11,079/04 (PPP Law):** Provides for the contracting of Public-Private Partnership (subsidized concession) within the scope of public administration.
Regulatory Agencies

Power

Telecommunications

Transport

Civil Aviation and Airports

Waterway and Ports

Water
Timeline of Federal Privatization and Concession in Brazil

**Privatization:**
- TELEBRAS (Telecommunication)
- ELETROBRAS (Distribution)
- EMBRAER (Aircraft)
- VALE (Mining)

**Railway Concession:**
- RFN (Federal Railway Network)

**Highway Concession:**
- BR 040
- Juiz de Fora – Rio de Janeiro
- BR – 116 – RJ
- Paraíba - Teresópolis
- BR 290/ RS (Osório- Porto Alegre)
- Northeast’s Rail Network
- BR 116/ RS
- São Paulos’s Rail Network
- BR 116 Bahia
- Bahia
- Indigenous’s Rail Network
- Steel Road

**Airport Concession:**
- Brasilia Airport
- Guarulhos Airport
- Viracopos Airport
- Galeão Airport
- Confins Airport


**Highway Concession:**
- BR-101 RJ- ES
- Rio-Niterói Bridge
- Transbrasiliana
- Steel Road

**Highway Concession:**
- BR-050 MG – GO

**Railway Concession:**
- São Paulos Rail Network
- RFN (Federal Railway Network)
- Indigenous’s Rail Network

**Highway Concession:**
- Florianópolis’ Airport
- Salvador’s Airport
- Fortaleza’s Airport
- Porto Alegre’s Airport

**Port Terminal Concession:**
- 2 Ports terminals: Santarém and Rio de Janeiro Wheat Terminal
Private investments added up to more than US$ 500 Billion from 1990 to 2016

Source: World Bank
Investments through PPPs (BRL billion)

PPP contracts investments added up to more than BRL145 billion (US$ 40 billion) since 2015

Source: Diário Oficial da União. Elaboração GO Associados.
Investments in Infrastructure in Brazil (2003-2017)

Need for investment: 5%

Note: Includes Energy, Transportation, Sanitation and Telecommunications. Oil and Gas not included. 2017 = Forecast

Source: ABDIB.
Infrastructure investments in other countries

Annual Infrastructure Investments in developing countries as % of GDP

- China: 13.4%
- Vietna: 11.4%
- Chile: 6.2%
- Colombia: 5.8%
- India: 4.5%
- Filipinas: 3.6%
- Brasil: 2.1%

Source: ABDIB, World Economic Forum, Credit Suisse e International Institute for Management Development.
Total investment need forecast for Brazil 2018-2038
(US$ billion)

Infrastructure investment needs for the next 20 years add up to more than USD 3 trillion in Brazil

Source: GIHub
Investment Partnership Program (PPI – Programa de Parcerias de Investimento), also named as Growth Project or “Avançar Parcerias” to incentivize and increase private investment through Privatization, Concessions and PPPs

**PPI Objective:**
- Expand opportunities for investment and employment
- Ensure the expansion and quality of public infrastructure
- Promote full and fair competition for the partnerships
- Ensure stability and legal certainty, guaranteeing minimum intervention in business and investments
- Strengthen the regulatory environment and the autonomy of regulatory agencies
- Encourage Privatization, Concessions and PPPs (Public-Private Partnerships)

**PPI To define:**
- The long term federal policies for the investments in federal public infrastructure through partnerships and privatizations
- The federal public infrastructure projects/assets qualified for the partnerships and the strategic guidelines for structuring, tendering and contracting
- The federal policies to support partnerships in public infrastructure projects/assets in States, Federal District (Brasilia) and Municipalities.
## PPI Growth Project Progress

<table>
<thead>
<tr>
<th>18 months</th>
<th>Qualified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of program</td>
<td>145 projects</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Completed</th>
<th>Investment of</th>
</tr>
</thead>
<tbody>
<tr>
<td>70 projects</td>
<td>BRL 142 billion (US$ 40 billion)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Airport</th>
<th>Port</th>
<th>Oil and Gas</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 International Airports Concessions</td>
<td>7 Terminal Operations Concessions</td>
<td>4 Rounds of Auctions</td>
<td>4 Power Transmission and Generation Auctions</td>
</tr>
</tbody>
</table>

**In progress**

75 projects

Source: Special Secretariat of the Investment Partnerships Program.
As for the auctions held and contracts signed in 2017, it is worth highlighting the investment forecast about BRL 142 billion (US$ 40 billion) over the next decades.

Source: Special Secretariat of the Investment Partnerships Program.
### PPI - Pipeline of projects for 2H2018

<table>
<thead>
<tr>
<th>#</th>
<th>Project Description</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PPP Communications Network Management Aeronautics Command - COMAER</td>
<td>3rd quarter 2018 to 4th quarter 2018</td>
</tr>
<tr>
<td>2</td>
<td>Bidding rounds of oil and gas fields exploration</td>
<td>3rd quarter 2018 to 4th quarter 2018</td>
</tr>
<tr>
<td>3</td>
<td>Railway Concessions – EF 151 SP/MG/GO/TO (North-South), EF 170 MT/PA (Ferrogrão) and EF 334 BA (Fiol)</td>
<td>3rd quarter 2018 to 4th quarter 2018</td>
</tr>
<tr>
<td>4</td>
<td>CPRM mining rights</td>
<td>3rd quarter 2018 to 4th quarter 2018</td>
</tr>
<tr>
<td>7</td>
<td>Port Terminal Concessions – Cabedelo, Santos and Suape.</td>
<td>3rd quarter 2018 to 4th quarter 2018</td>
</tr>
<tr>
<td>13</td>
<td>Airports Concessions – AL, CE, ES, MT, PB, PE, RJ, SE.</td>
<td>4th quarter 2018 to 4th quarter 2018</td>
</tr>
<tr>
<td>24</td>
<td>Power Transmission and Distribution Concessions</td>
<td>4th quarter 2018 to 4th quarter 2018</td>
</tr>
</tbody>
</table>

### Source: Programa de Parcerias para Investimentos
The fiscal crisis in Brazil brought back the subject of privatization on the political and economic agenda, and as a result, states have 104 projects under study and to be tendered throughout the next years.

The majority of these projects will be either concession or PPP, but a few state companies will be sold.

The 5 most common sectors: Ports, Airports, Public Services, Tourism/Events, and Roads.

**Opportunities**

- Jericoacoara Airport (CE);
- Aracati Airport (CE);
- Highways GO-010/020/060/070/080/139; E213 (GO);
- Highways MT-100, MT-246 and MT-320 (MT);
- Highway ERS-324, ERS287 e ERS020 (RS);
- Industrial Complex and Port of Pecém (CE);
- Port of Luis Correia (PI);
- Sapucaia do Sul Zoologic (RS);
- Ceará Convention Center (CE).
Municipalities, like the States, also have 59 projects under study to be tendered throughout the following years.

The majority of these projects will be PPP and a couple state companies may be Privatized.

The 2 most common sector: Public Services and Tourism/Events.

### Opportunities

- Teresina Airport (PI);
- Salvador Convention Center (BA);
- Porto Alegre Convention Center (RS);
- Public illumination in Porto Alegre (RS);
- Public Illumination in Teresina (PI);
- Public Illumination in São Paulo (SP);
- Pacaembu Stadium (SP);
- Lindolfo Monteiro Stadium (PI);
- Waste management in Teresina (PI).
Thank you

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