“Brazil Pharmaceutical Market the Most Efficient Market in the World!”

- 9 months get the budget done!
...we should not forget the other 245 days of the year...

Brazil Pharmaceutical Market
Brazil is undergoing a period of economic recession coupled with political uncertainty

- Federal police investigations reveal corruption scandals involving politicians and private companies
- New temporary government after Dilma’s impeachment, bringing market uncertainty
- General paralysis in economic decision making, further hampering ability for any short term improvement in the scenario.

Source: IPEA (SCN/IBGE)  
Source: Unemployment rate (PNAD Contínua and Revista Exame); Job vacancies (Ministry of Labour and Folha de São Paulo). Unemployment rate  from 2015 Credit Suisse forecast (aligned with other sources)

Projections

Healthcare in Brazil is funded by private and public sources

| Public System | In theory, universal access to healthcare is provided by the government and services are free of charge through the SUS system |
| Private System | Roughly 25% of the population is covered by a private payer, which is heavily fragmented with more than 1,500 entities |
|               | 80% of the total coverage is driven by employer funded / co-funded plans |

Source: - Healthcare expenditure (WHO)  
- Drug expenditure (IMS databases: NRC + Retail, MAT 12/2015)  
- Credit Suisse forecast (aligned with other sources)
Ministry of Health budget shall not increase this year, but spends may likely shift towards drug purchases

- Ministry of Health Budget (2015 and 2016, US$ billion)

\[
\begin{array}{c|c|c}
\text{Category} & \text{2015} & \text{2016} \\
\hline
\text{Drugs & Programs} & 4.8 & 5.6 \\
\hline
\text{Basic care} & 5.5 & 5.7 \\
\hline
\text{Hospital and ambulatory care} & 13 & 11.8 \\
\hline
\text{Others} & 7.1 & 0.2 \\
\hline
\end{array}
\]

Source: PLOA 2015 e 2016

Pricing and reimbursement are independent processes in Brazil

- **Registration**
  - Registration process in Brazil may take as 4 years for reference and branded generic drugs
  - ANVISA is the government entity responsible for the registration process
  - FDA or EMA approval does not guarantee that a drug will be approved in Brazil
  - ANVISA has adopted positions of independence from other international regulatory agencies, e.g.: a drug without a phase III pivotal study is automatically denied
- **Pricing**
  - Maximum selling prices for all drugs (retail and non-retail) are set by a governmental entity called CMED (Drugs Market Regulation Chamber)
  - These prices are applicable for both private and public environment, independently of any kind of funding (i.e. maximum prices apply to the out-of-pocket market)
  - Unbranded generics must be sold at prices at least 35% below the level of the reference
  - Prices are adjusted annually, normally below the inflation level
- **Reimbursement**
  - The government dispenses a variety of outpatient drugs, which can be obtained in institutions covered by SUS
  - Inpatient treatments are also available, including high-cost drugs as listed
  - Drugs are generally included within inpatient procedures
  - Some payers demand prior approval for the usage of expensive drugs
  - Outpatient care is not covered by private payors, exception to a list of oral oncologics

- **Registration**: 4 years in average
- **Pricing**: 1 year in average
- **Reimbursement**: 3 years minimum

Minimum: 3 months

Applies for high-cost drugs’ list

Confidential – Not for Distribution
The Brazilian pharma market totals US$18.3 billion with an ~10% growth rate – institutional market decelerates

Market Leaders is a mix between multinational and local companies

<table>
<thead>
<tr>
<th>RK</th>
<th>Corp.</th>
<th>US$ MAT FEB 16 (MM=PPP)</th>
<th>RX Exclusive</th>
<th>RX Mature</th>
<th>RX Promoted</th>
<th>RX INN</th>
<th>RX Trade</th>
<th>OTC</th>
<th>Growth 2015 x 2015 (MAT Feb)</th>
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<tbody>
<tr>
<td>1</td>
<td>NC FARMA</td>
<td>1.068</td>
<td>4%</td>
<td>24%</td>
<td>43%</td>
<td>8%</td>
<td>21%</td>
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<td>93.1%</td>
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<tr>
<td>2</td>
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<td>3%</td>
<td>16%</td>
<td>14%</td>
<td>17%</td>
<td>50%</td>
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<td>141.7%</td>
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<tr>
<td>3</td>
<td>SANOFI</td>
<td>0.961</td>
<td>10%</td>
<td>31%</td>
<td>23%</td>
<td>5%</td>
<td>-</td>
<td>28%</td>
<td>103.9%</td>
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<tr>
<td>4</td>
<td>ACHÉ</td>
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<td>12%</td>
<td>10%</td>
<td>31%</td>
<td>23%</td>
<td>-</td>
<td>37%</td>
<td>140.0%</td>
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<tr>
<td>5</td>
<td>NOVARTIS</td>
<td>0.654</td>
<td>10%</td>
<td>12%</td>
<td>50%</td>
<td>42%</td>
<td>15%</td>
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<td>25.6%</td>
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<tr>
<td>6</td>
<td>EUROFARMA</td>
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<td>28%</td>
<td>28%</td>
<td>5%</td>
<td>-</td>
<td>7%</td>
<td>104.7%</td>
</tr>
<tr>
<td>7</td>
<td>BAYER</td>
<td>0.465</td>
<td>14%</td>
<td>42%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>28%</td>
<td>55.3%</td>
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<tr>
<td>8</td>
<td>GSK</td>
<td>0.396</td>
<td>14%</td>
<td>34%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>43%</td>
<td>50.8%</td>
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<tr>
<td>9</td>
<td>PFIZER</td>
<td>0.365</td>
<td>14%</td>
<td>59%</td>
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<td>-</td>
<td>-</td>
<td>25%</td>
<td>21.4%</td>
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<tr>
<td>10</td>
<td>TAKEDA</td>
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<td>31%</td>
<td>1%</td>
<td>12%</td>
<td>46%</td>
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<td>18.9%</td>
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<td>Total market</td>
<td>12.67</td>
<td>14%</td>
<td>37%</td>
<td>12%</td>
<td>5%</td>
<td>33%</td>
<td></td>
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</tr>
</tbody>
</table>

Source: IMS PMB, PPP, and NRC MAT February 2016.
Notes: (1) EMS Group
**Hospitals, Physicians and Pharmacies in Brazil**

**Brazil Overview**
- Southeast region has the highest concentration of hospitals, physicians, and pharmacies, followed by northeast and South.
- There are 70,836 pharmacies in Brazil – small independents are by far the most numerous.

<table>
<thead>
<tr>
<th>Region</th>
<th>Hospitals</th>
<th>Physicians</th>
<th>Pharmacies</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>709</td>
<td>11,624</td>
<td>6,102</td>
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<tr>
<td>Mid-West</td>
<td>922</td>
<td>24,157</td>
<td>8,937</td>
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<tr>
<td>Northeast</td>
<td>3,178</td>
<td>3,178</td>
<td>19,476</td>
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<tr>
<td>Southeast</td>
<td>1,249</td>
<td>1,249</td>
<td>9,996</td>
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<tr>
<td>South</td>
<td>1,343</td>
<td>49,506</td>
<td>14,274</td>
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</tbody>
</table>

**Brazilian market is influenced mainly by doctors**

**Physicians**
- There are approximately 293,235 physicians in Brazil – GPs are the most predominant, followed by Pediatricians and Gynecologists.
- Physicians are very important in driving adoption and uptake of drugs.

**Patients**
- Seek physician advice for therapy and brand choice for RX drugs and purchase OTC drugs based on brand awareness/preferences.
- Limited role on RX segment.
- Central role in OTC segment, where DTC promotion is allowed and patient is the key driver of purchasing decision.
- Highly influenced by price – some substitution occurs at the POS after physician prescription.

**PoS**
- Large number of PoS with broad distribution.
- 80% of the market.
- 20% of the market.

- 13% purchases when pharmacist offers 2nd drug spontaneously.
- 16% purchases when patient complains.
- 29% pharmacists that offer 2nd drug when patient complains.
Substitution rate in the retail market is about 30%

Source: IMS Database November/2014

Key Barriers to increase of generic medicines market share

- Approval times for generic medicines close to 46 months and growing, resulting in delays for patients to access affordable generic medicines
- Tax differentiation (business and import tax) between local companies and multinational companies endanger the introduction of new generic medicines in the market
- Brazilian pricing system (CMED) not increasing above inflation levels (previous 2016)
- Lack of incentives for physicians to prescribe generically and pharmacists in pharmacy chains to dispense generic medicines
- Patients lack information on generic medicines affordability and quality
• Thank you for your attention