BRAZILIAN SUGAR / ETHANOL MARKETS

Tefla’s India Sugar Summit

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Brazil’s macroeconomic current situation

Petrobras new fuel policy and the new federal taxation

Basics scenarios for ethanol/sugar

Costs and Margins

The indebtedness and real value of sugar/ethanol Assets

Forecast for brazilian season 18/19
Brazil | Main Economic Indicators

GDP Evolution and Forecast (%)

- 2011: 4.0%
- 2012: 1.9%
- 2013: 3.0%
- 2014: 0.5%
- 2015: -3.8%
- 2016: -3.6%
- 2017: 1.1%
- 2018: 2.6%
- 2019: 3.0%

Official Inflation Evolution and Forecast (%)

- 2011: 6.5%
- 2012: 5.8%
- 2013: 5.9%
- 2014: 6.4%
- 2015: 10.7%
- 2016: 6.3%
- 2017: 2.9%
- 2018: 3.8%
- 2019: 4.3%

Source: IBGE (GDP and IPCA Inflation index). Forecast: Focus Report from BACEN
Brazil | Main Economic Indicators

Interest Rate – SELIC (%)

Net of Jobs creation and forecast (million)

Source: IBGE (GDP and IPCA Inflation index). Forecast: Focus Report from BACEN
Brazil | Main Economic Indicators

Exchange Rate – REAL x Dollar

Main Questions for 2018:

• Pension Reform
• Congress Renewal
• Presidential Election
• Privatization Agenda
• Tax Reform

Dollar lost 20% value against Real in the last 24 months

Source: BACEN
Brazil  | New Policy and taxes for Wholesale Gasoline Prices

New taxes on gasoline are favoring ethanol consumption

IPO of Petrobras subsidiary “BR Distribuidora” BRDT3 in December 2017

Gasoline Prices at refiners and Federal Tax

Petrobras’ Shares at B3 (PETR4) - BRL

Source: EIA, Petrobras and B3 (PETR4)
OIL/ETHANOL | Brent prices and E100 Market Share in Brazil

BRENT OIL Prices

Ethanol E100 Market Share in Brazil

Source: ICE NY. ANP Brazil
Brazil | Sales of New Cars and Total Fleet

**Million of Cars**

**Sales of New Cars**

- 2012: 3.63
- 2013: 3.58
- 2014: 3.33
- 2015: 2.48
- 2016: 1.99
- 2017: 2.17
- 2018: 2.38

+9.4% growth in 2017 compared to 2016.

**Fleet by type of Fuel**

- Frota Total Leves:
  - 2012: 43
  - 2013: 45
  - 2014: 48
  - 2015: 50
  - 2016: 51
  - 2017: 52
  - 2018: 53

- Frota Flex:
  - 2012: 16
  - 2013: 19
  - 2014: 22
  - 2015: 25
  - 2016: 27
  - 2017: 29
  - 2018: 31

Source: Anfavea and Denatran
Sugar/World | Scenario for 2018/19

Supply and Demand (mmt)

Output
Consumption

NY Prices (U.S. ¢/pound) and Stock/Use Ratio

Supply and Demand (mmt)

Output
Consumption

NY Prices (U.S. ¢/pound) and Stock/Use Ratio

Center-South | Cost of Production

Sugar Costs – São Paulo (US¢/pound)

- 2016/17: 11.8
- 2017/18: 12.9
- 2018/19: 12.5

Ethanol Costs in Sugar Equivalent (US¢/pound)

- 2016/17: 13.4
- 2017/18: 14.6
- 2018/19: 14.2

Source: Agroconsult. (Exchange Rate 18/19: BRL 3.20/USD)
Center-South | Sugar Logistics Costs for Export

Sugar Transportation Costs – 17/18 (US¢/pound)

Evolution of the Transportation Costs in São Paulo (US¢/pound)

Source: Agroconsult
Brazil | Sugar / Ethanol Price Parity in domestic market

Source: Ice Futures, Cepea.
Brazil | Mix of Production and Ebit Margin

Mix of Production

Theoretic Ebit Margin

Source: Agroconsult.
Brazil | Mills Net Revenues and EBIT Margin

Sugar/Ethanol Net Revenues – Sector’s Average

USD / t of cane crushed

EBIT – Sector’s Average
USD / t of cane crushed

Source: Agroconsult. Margem Ebit: (Net Revenues / Operational Costs including depreciation)
Administrative, Sales and General expenses are not included. Electric energy not included.
**Brazil | Indebtness Evolution of the Companies Listed at B3**

**Exposure to foreign currency**
- 48% Dollar
- 52% Real

**Debt Profile**
- 68% Short
- 32% Long

**Total Gross Debt**
- 2016/17 = USD 6.7 bi
- USD 61 / t of cane

Source: Companies balances sheets.
Brazil | Market Value of Sugar/Ethanol Producers

*Companies listed on B3 represents 20% of the sector*

<table>
<thead>
<tr>
<th>Year</th>
<th>Market Value</th>
<th>Revenues (USD/t of cane)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>86</td>
<td>48</td>
</tr>
<tr>
<td>2014</td>
<td>88</td>
<td>45</td>
</tr>
<tr>
<td>2015</td>
<td>49</td>
<td>37</td>
</tr>
<tr>
<td>2016</td>
<td>43</td>
<td>38</td>
</tr>
<tr>
<td>2017</td>
<td>57</td>
<td>44</td>
</tr>
</tbody>
</table>

Value of Assets under recovery with more transparency on fuels market

Source: Agroconsult. With data from listed companies on BM&FBovespa (CSAN3, SMTO3, BSEV3).
Center-South | Margins of Sugarcane Suppliers against competitors crops (R$/ha)

Source: Agroconsult
Sugarcane Fields | Average Age

Source: Agrosatélite, based Canasat 2017/18 data. Microrregions with planted area higher than 1000 ha.
Center-South | Sugarcane Yield, Expansion and Renewal Rates

Yield (t/ha) | Expansion Rate (%) | Renewal Rate (%)
--- | --- | ---
09/10: 86 | 8% | 6%
10/11: 81 | 6% | 4%
11/12: 69 | 4% | 4%
12/13: 72 | 9% | 5%
13/14: 77 | 11% | 12%
14/15: 72 | 7% | 9%
15/16: 80 | 9% | 8%
16/17: 75 | 7% | 4%
17/18: 74 | 9% | 1%
18/19: 76 | 10% | 1%

-12 t -14%

Source: Conab. Expansion and Renewal Rates: Agroconsult based Canasat data.
Brazil | Sugarcane Crushing. Sugar/Ethanol Output

**Source:** CONAB. Agroconsult. 18/19: Another 0.5 billion liters will come from corn (MT and GO states)
• Long-term plan (2030) to incentive the use of renewable energy in the light fuels market, with emphasis on ethanol.

• Brazilian commitment to the COP21 Climate Agreement, which aims to reduce CO2 emissions by 43% (on a 2005 basis) until 2030.

• The proposal predicts the need for 54 billion ethanol by 2030.

• Plan Guidelines:
  1. Maintain the gasoline price policy in line with the international market
  2. Recognition of the positive externalities of ethanol with clear environmental taxation on fossil fuels (CIDE)
  3. Implementation of an emission certificate system (CDBios - Fuel Savings Credit - Similar to US RINs)
Agribusiness services for banks, investment funds, M&A operations.

- Market analysis and sizing
- Analysis of Investments
- Assets and Land Valuation
- Due Diligences (Agricultural and Industrial)