Agenda

• **Description and History**
  - Outsource or Insource?
    - Structure of the Brazilian Retail Program
    - Systems and technology

• **Competition from bank saving products**
  - Competing financial products
  - Brazilian investors profile
  - Improvements
  - Results

• **New technologies applied to retail programs**
  - APP – iOS, Android

• **Lessons Learned**

• **Financial Innovation**
  - Fixed Income ETF
Description and History

Main objectives and some history aspects

• In 2002, Tesouro Direto was launched by the Brazilian Treasury in partnership with CBLC (BM&FBOVESPA’s clearing)

• Aiming at increasing access and investment in Government Bonds
  • Mature wholesale debt market
  • Mutual funds industry charging high fees but delivering a quite passive management
  • Improving financial education – transparency
  • Minimum ticket is just USD 10

• Encouraging the establishment of long term savings
  • Local investors’ strong preference for floating rate instruments linked to the overnight rate and with daily liquidity
Description and History

Features

- The Brazilian Treasury guarantees the Bonds liquidity by reacquiring them every weekday
  - The Treasury repurchases the securities at market prices
  - There is no secondary market for TD securities
- Financial intermediation was adopted
- No funding purpose (1% of total outstanding debt)
- Using roughly the same on-the-run instruments for debt roll-over
  - One exception tailored for retailers: Zero-coupon inflation-linked bonds (our best-seller)
- No intention to create special products
  - Our experience shows that the investor feels more comfortable to invest when he has less choices to make.
- Full web-based application
- Improving the language used in the communication to make it more didactic and clear
Outsource or Insorce?

**Structure of the Brazilian Retail Program**

- **Brazilian Treasury**
  - issues bonds, defines strategies and innovation

- **BM&FBOVESPA (stock exchange)**
  - custody, system maintenance, investors support (contact us)

- **Bank or Broker A**
  - transfer of resources, tax procedures, investors registration and support

- **Bank or Broker B**

- **Investor 1**

- **Investor # 930,196**

**Step-by-Step**

Steps an investor has to make to buy Government Securities through the internet:

1. Access the Treasury website
2. Choose one bank or broker to operate the system
3. Enroll and send the documents - regulator
4. Bank/broker plugs him into the system
5. BM&FBOVESPA (Stock Exchange) e-mails a password
6. Investor is OK to buy and sell government bonds

Investor #930,196 is OK to buy and sell government bonds.
Outsource or Insourcing?

**Advantages of this model (outsourcing)**

- **Low cost**: use of existing infrastructure (technology, human and physical resources – Treasury and BM&FBOVESPA).
  - Marginal Cost is very low

- **Greater capillarity**: multiple agents distribute government bonds.

- **Performance gain**: competition among banks and brokers stimulates improvements of procedures, services and technology.

**Disadvantages**

- **Need of coordination among various actors**: the banks and brokers’ sales efforts are crucial to the performance of the program.
  - Financial Institutions need to see value in the product.

- **Absence of budget for communication actions and other improvements**:
  - Dependence on funds from the BM&FBOVESPA (Stock Exchange). Fees are segregated.
Systems and Technology

- **Context:** Under the partnership, the BM&FBOVESPA is responsible for the stability, maintenance and improvements of the program’s technological platform. It also coordinates the integration and qualification of systems of banks and brokers.
  
  - Clearing Systems integration within BM&BOVESPA segments and the wholesale market – SELIC system

- **Technological and other improvements** => consequence of Treasury’s permanent assessment of the Program:
  
  - **Pricing System:** IT solution to enhance securities pricing.
  - **New website:** integrated navigation experience, next to the reality of e-commerce. => Treasury’s initiative
  - **SMS:** improved feedback to investors about their transactions – safety and self-monitoring .
  - **APP:** early studies for development of an official APP.
  - **Simulator:** creating a new robust tool able to orientate investors to the most appropriate bonds according to their profile, while allowing comparisons with other fixed income products in the simulations.
  - **Qlikview:** periodic survey tool for gathering information about the program (stock, number of investors, investment preferences, among others).
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## Competing financial products

<table>
<thead>
<tr>
<th>Products</th>
<th>Av. Fee</th>
<th>Withholding Tax</th>
<th>Minimum Ticket</th>
<th>Av. Yield</th>
<th>Av.Maturity</th>
<th>Liquidity</th>
<th>Outstanding (BRL billion) Jan/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Savings Account</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>0.5% p. m. + referential rate (TR), <em>If Selic</em> rate &gt; 8.5% 70% of Selic rate + referential rate (TR), *if Selic rate &lt; 8.5%</td>
<td>∞</td>
<td>daily</td>
<td>503.00</td>
</tr>
<tr>
<td>Fixed Income Mutual Funds</td>
<td>2% p.y. - for retailers</td>
<td>regressive table</td>
<td>BRL 100.00</td>
<td>100% of CDI* (interbank deposit rate)</td>
<td>∞</td>
<td>daily</td>
<td>1,439.00</td>
</tr>
<tr>
<td>Bank Deposit Certificate &quot;CDB“</td>
<td>no</td>
<td>regressive table</td>
<td>BRL 500.00</td>
<td>83% of CDI</td>
<td>∞</td>
<td>daily</td>
<td>502.00</td>
</tr>
<tr>
<td>Letters of Credit &quot;LCI/LCA&quot;</td>
<td>no</td>
<td>no</td>
<td>BRL 3,000</td>
<td>80% of CDI</td>
<td>3y</td>
<td>from 90 days</td>
<td>192.00</td>
</tr>
<tr>
<td>Tesouro Direto</td>
<td>0.3% -2.3% p.y.</td>
<td>regressive table</td>
<td>BRL 30.00</td>
<td>Fixed rate (zero and coupon) Inflation linked (zero and coupon) Floating rate (zero coupon)</td>
<td>3y – 40y</td>
<td>daily</td>
<td>25.00</td>
</tr>
</tbody>
</table>

*CDI – Interbank Deposit Rate (floating) - high correlation with Policy Rate (Selic)*

Source: BVMF, Treasury, Anbima
Brazilian investors profile

- **Dependent on their investment manager:** seeks to share responsibility for their choices - passive behavior, convenience, lack of time or fear.

- **Culture:** high returns with little effort and daily liquidity. Strong culture of savings account.

- **Low financial education:** little financial planning. Poor understanding of basic concepts: interest accrual, volatility. Back-looking behavior to make decisions.

- **Lack of confidence in the government:** investors rely more on banks and on their account managers.

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**Target of Tesouro Direto**

- Seek convenience
- Higher level of education
- Internet banking user
- Class A / B = 15 million Brazilians
- 26-39 years
- Workers in the beginning of their career
**Improvements**

- We’d realized the need to adopt a more aggressive sales strategy and tackle gaps in order to reach a greater number of investors.

- Enhancing the Program:

<table>
<thead>
<tr>
<th>First wave</th>
<th>Second wave</th>
<th>Third wave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intuitive names of securities</td>
<td><strong>New tool “Simulator”</strong></td>
<td>• New navigation closer to e-commerce experience – integrated website</td>
</tr>
<tr>
<td>New bond “long term fixed rate”</td>
<td>• Improvements in the short message service (SMS) system</td>
<td>• Official APP</td>
</tr>
<tr>
<td>Website upgraded</td>
<td>• Reformulation of investor’s statement</td>
<td></td>
</tr>
<tr>
<td><strong>Daily liquidity</strong></td>
<td>• Online Tesouro Direto course</td>
<td></td>
</tr>
<tr>
<td>New Tesouro Direto brand</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>New tool “Financial Advisor”</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Videos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication makeover</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
After the launch of the first wave of improvements, the Tesouro Direto reached a new level of performance.

Results

- Competition from bank saving products

Outstanding: BRL 35 bn

- Number of registered investors: 930,196
- Number of investors positioned: 335,167
- Average amount invested: R$ 10,175.96
- Number of sales transactions: 151,609

Outstanding’s composition:
- Fixed rate: 17.2%
- Inflation linked: 62.2%
- Floating rate: 20.6%
Competition from bank saving products

Results

• The number of investors has increased significantly
## Results

- ... a series of record highs were reached.

<table>
<thead>
<tr>
<th>Indicators which have been breaking records</th>
<th>Best Number</th>
<th>Average over the 6 Months following March 2015 (inclusively)</th>
<th>Average over the 6 Months preceding March 2015 (exclusively)</th>
<th>Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Sales (BRL Million)</td>
<td>2,411.0 (May/15)</td>
<td>1.331,40</td>
<td>464,00</td>
<td>186,9%</td>
</tr>
<tr>
<td>Net Sales (BRL Million)</td>
<td>1,246.5 (December/15)</td>
<td>585,15</td>
<td>183,69</td>
<td>218,6%</td>
</tr>
<tr>
<td>Number of Sales</td>
<td>155,442 (July/16)</td>
<td>83.702</td>
<td>40.290</td>
<td>107,7%</td>
</tr>
<tr>
<td>Registred Investors Added per month</td>
<td>66,218 (June/16)</td>
<td>13.410</td>
<td>8.778</td>
<td>52,8%</td>
</tr>
<tr>
<td>Positioned Investors Added per month</td>
<td>14,809 (July/16)</td>
<td>8.650</td>
<td>3.184</td>
<td>171,7%</td>
</tr>
</tbody>
</table>
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  • Fixed Income ETF
New technologies applied to retail programs

APP – trend of the moment

• The market has taken the lead to provide itself a solution for the Tesouro Direto APP.

Features

✓ General information/tools
  • FAQ
  • monitor rates
  • graphics
  • calculator
  • simulator
  • financial advisor

✓ Private area
  • investor’s statement
  • setting purchase or sale alerts
  • purchase and sale transactions

✓ Interactive area
  • investor’s chat
  • forum for discussions on different topics (politics, economy, ...)

TesouroDireto
Lessons Learned

• Devising new functionalities that have met investor’s needs
• Strong sponsorship from the Treasury’s main authorities
• Spontaneous publicity
• Close contact with the specialized press
• Improved communication with the investors
  • Clearer language
  • Tools to support decision
• Improved relationship with the distributors, specially brokerage firms
• Financial education is a permanent challenge

Source: BVMF, Treasury, Anbima
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Background on Traditional Bond ETFs

“An exchange-traded fund (ETF) is an investment fund traded on stock exchanges, much like stocks” (source: Investopedia)

- Bond ETFs hold securities that usually track an index, while shares are traded in the exchange.

- Authorized Participants buy underlying securities (basket) and create ETF units. They monitor arbitrage opportunities between ETFs and underlying securities

- ETFs usually charge lower fees than regular mutual funds.
Financial Innovation

Constraints on Bond ETFs in EMs

Main drawbacks of traditional EM Bond ETFs:

× Difficult to track the index: high cost to launch and manage portfolio

× Inability of authorized participants to effectively support fund manager and exploit arbitrage opportunities

× Greater use of synthetic instruments and sampling to replicate index

× Higher management fees and tracking error
Fixed Income Exchange Traded Funds (ETF) – Big Picture

- Index Funds Market is still small in Brazil
- Currently there are only 14 ETFs, all equity ETFs and dominated by institutional investors.

### Investment Funds Industry - Net Worth (%)

<table>
<thead>
<tr>
<th>Type</th>
<th>Net Worth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETF (equity)</td>
<td>0.1</td>
</tr>
<tr>
<td>FX Funds</td>
<td>0.2</td>
</tr>
<tr>
<td>Equity Funds</td>
<td>4.5</td>
</tr>
<tr>
<td>Others</td>
<td>11.5</td>
</tr>
<tr>
<td>Pension Funds</td>
<td>16.6</td>
</tr>
<tr>
<td>Multimarket Funds</td>
<td>19.7</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>47.4</td>
</tr>
</tbody>
</table>

### Volume of Trading on the Stock Exchange (%)

- Spot Market: 96.5%
- ETF (equity): 2.11%
- Options Market: 2.49%
- Forward Market: 0.98%

Source: Anbima and BM&F BOVESPA
What is an Issuer-Driven ETF?

A World Bank Group initiative to support the development of local currency bond markets via an innovative Government Bond ETF structure.

Key Innovation: Direct involvement of the issuer in the ETF structure which:

- facilitates efficient tracking and rebalancing,
- assures liquidity
- allows government to design ETFs that are aligned to development goals
How is the project supporting local financial market development?

**↑ Development**
- Consolidation of price references aligned with market development objectives

**↑ Transparency**
- Daily underlying portfolio valuation (Price discovery mechanism)

**↑ Liquidity**
- Increased market making activity on ETFs and underlying instruments
- Launched with larger size than traditional ETFs

**↑ Diversification**
- Additional vehicle for investment in fixed income
- Enhances competition in asset management business

**↓ Costs**
- Direct involvement of the issuer reduces costs, fees may be reduced to final investor
## Implementing New Products

### Fixed Income Exchange Traded Funds (ETF) – Main Differences Compared to Other Products

<table>
<thead>
<tr>
<th>Products</th>
<th>Av. Fee</th>
<th>Av. Minimum Ticket</th>
<th>Withholding Tax/moments deduction</th>
<th>Quota Tax Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tesouro Direto</td>
<td>0.3% - 2.3% p.y.</td>
<td>BRL 30.00</td>
<td>regressive table</td>
<td>only for bonds that pay coupons</td>
</tr>
<tr>
<td>Fixed Income Exchange Trade Funds (ETF)</td>
<td>0.5% p.y.</td>
<td>BRL 200.00</td>
<td>taxes varies according to the duration</td>
<td>no</td>
</tr>
<tr>
<td>Fixed Income Mutual Funds</td>
<td>2% p.y. - for retails</td>
<td>BRL 100.00</td>
<td>regressive table</td>
<td>yes</td>
</tr>
</tbody>
</table>

Source: BVMF, Treasury, Anbima
To further information, see:

Or contact the Investor Relations Office:
brazildebt@fazenda.gov.br