Agenda

• Introduction
• Systemically Important Payment Systems
• Oversight Tools
• Current developments
Oversight objectives

- The BCB has an interest in the smooth functioning of payment systems and instruments
- Oversight aims at
  - preventing systemic risk
  - promoting efficiency of payment systems and instruments
  - safeguarding the transmission channel for monetary policy
Introduction – Brazilian Payment and Settlement Systems

- Bovespa
- BM&F OTC
- CBLC Clearing
- CBLC Depositary
- BM&F - D
- BM&F FX
- BM&F - A
- OTC
- CIP
- COMPE
- SELIC BCB
- CETIP
- STR
- BCB
- Bank
Systemically Important Payment Systems (SIPS)

- Use of *Core Principles for Systemically Important Payment Systems* as a guide for national payment system development
- Quantitative criteria for classification of SIPS
  - Value of individual transaction
  - Value of daily turnover
- Legislation and facilities for mitigating risk

<table>
<thead>
<tr>
<th>Risk</th>
<th>Legislation and devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal risk</td>
<td>Specific legislation supporting: finality, netting, collateralized transaction etc</td>
</tr>
<tr>
<td>Liquidity risk</td>
<td>Intraday repurchase agreements (government bonds)</td>
</tr>
<tr>
<td>Credit risk</td>
<td>Use of central bank money</td>
</tr>
<tr>
<td>Intraday finality</td>
<td>Real-time gross settlement system (STR)</td>
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</tbody>
</table>
Oversight Tools – Overview

Tools

- Authorizations
- On-site inspections
- Backtests
- Quantitative data
Oversight Tools – Authorizations

<table>
<thead>
<tr>
<th>Must be submitted for the authorization of the Banco Central do Brasil</th>
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<tbody>
<tr>
<td>- The creation of new payment and settlement systems</td>
</tr>
<tr>
<td>- Any change in existing payment and settlement systems involving the following aspects:</td>
</tr>
<tr>
<td>- The safety and integrity of the payment and settlement system</td>
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<tr>
<td>- The procedures for settling securities and derivatives operations or fund's transfer</td>
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<tr>
<td>- The credit and liquidity risk management</td>
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</table>

**Objective:**

*Verify the compliance with principles and the legal framework of payment and settlement systems*
Oversight Tools – On-site Inspection

• Partnership with the banking supervision team
• Focused on the IT systems responsible for the risk management, clearing and settlement processes
• Auditing of:
  – Internal controls
  – Information security procedures
  – Business continuity planning
  – Third-party services providers
## Oversight Tools – Backtests – Objectives

- **Assessment of credit and liquidity risk management procedures for the central counterparties**

<table>
<thead>
<tr>
<th>Counterparty credit risk</th>
<th>Liquidity risk</th>
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</thead>
<tbody>
<tr>
<td>• Risk of loss from a participant’s default</td>
<td>• Risk faced by clearing as it must fulfill its payment obligations to non-defaulting participants on schedule</td>
</tr>
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</table>
Oversight Tools – Backtests – Description

**Backtest Credit Risk**
- Simulate the costs associated with the close-out of default participant´s portfolio at prevailing market prices
- Calculate the risk (cost) not covered by the default participant collateral
- Compare this risk with the total CCP´s financial resources

**Backtest Liquidity Risk**
- Calculate the total amount of CCP´s liquid financial resources and credit lines
- Calculate the highest debit position among the participants
- Compare the highest debit position against CCP´s liquid resources and credit lines
Oversight Tools – Backtests – Examples

Backtest Counterparty Credit Risk

Backtest Liquidity Risk

R$/USD: 1,73
Oversight Tools – Quantitative Data

- **General data**: volume and value of payments and operations, intraday payments profile, etc.
- **Efficiency**: netting ratio, average queue time of payments (RTGS), etc.
- **Operational risk**: ratios of operational reliability, operational failures statistics, etc.
• Bulletin – Monthly Report
• Financial Stability Report – Half-year
Current developments – I

• Backtests improvements

Financial Risks

<table>
<thead>
<tr>
<th>Credit risk</th>
<th>Liquidity risk</th>
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<tr>
<td>Normal market conditions</td>
<td></td>
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<tr>
<td>Stressed market conditions</td>
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Compliance with RCCP 3, 4 and 5
Current developments – II

• Operational Risk

  Business Continuity Management
  • Development of an assessment framework for Business Continuity Plans
  • Tests results review

  Operational Reliability
  • Development of operational reliability ratios for the main macro processes of a deferred net settlement system
    – acceptance
    – clearing
    – settlement
Current developments – III

• Improvement of regulatory framework

<table>
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<tr>
<th>Governance</th>
<th>Business continuity management</th>
<th>Recommendations</th>
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<tr>
<td>• Segregation of risk management and non-risk management areas</td>
<td>• Minimum requirements</td>
<td>• Update to international best practices</td>
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<tr>
<td>• Ownership limits</td>
<td>• Accountability</td>
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</tbody>
</table>
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Annual Payments Week – 2008

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