

**BANCO CENTRAL DO BRASIL**

# Oversight of Systemically Important Systems

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**Annual Payments Week – 2007**

**Bahia, Brasil**

**November 27-30, 2007**

# Agenda

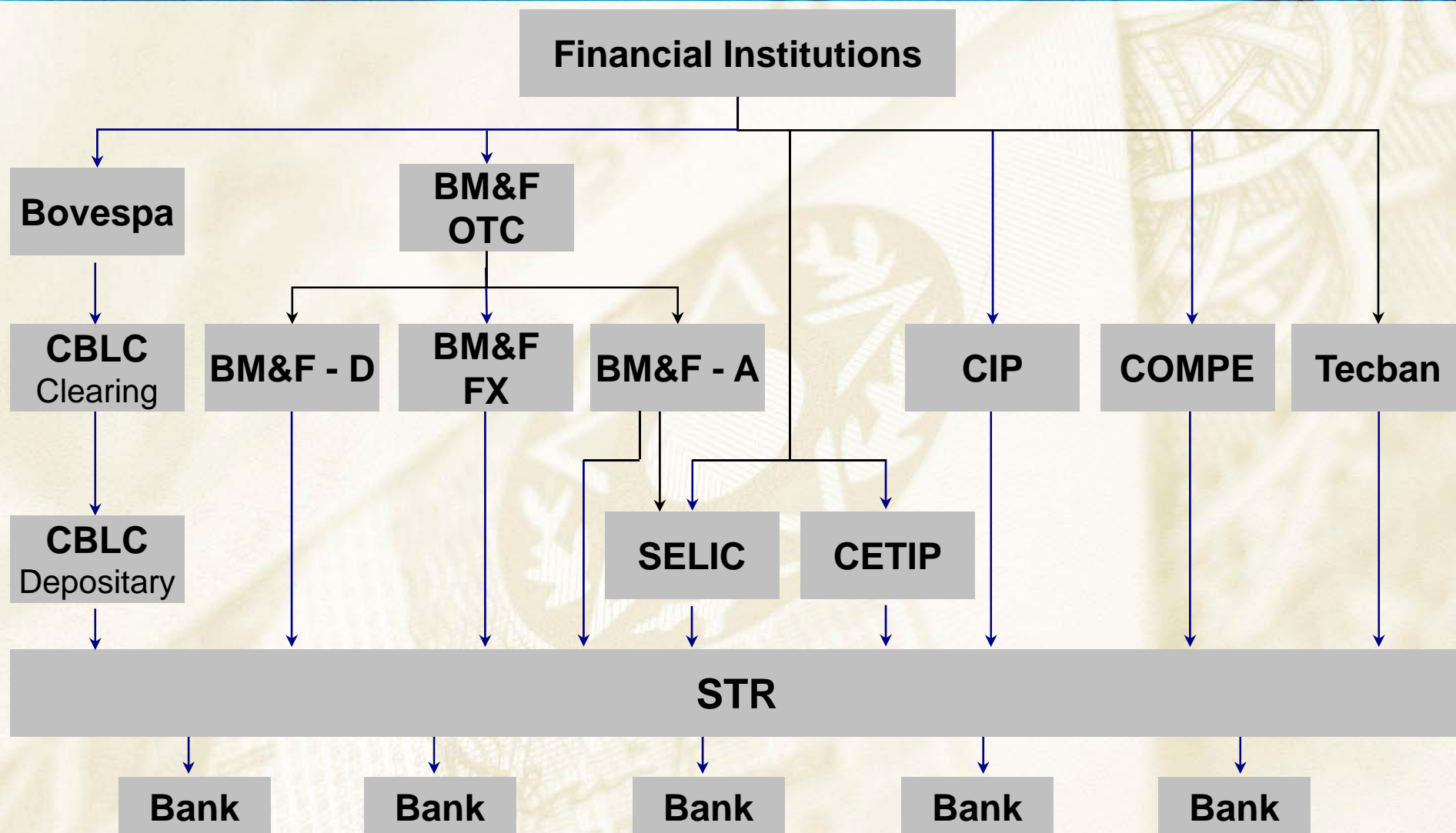
- Introduction
- Oversight Tools
- Ongoing and Next Steps

# Introduction

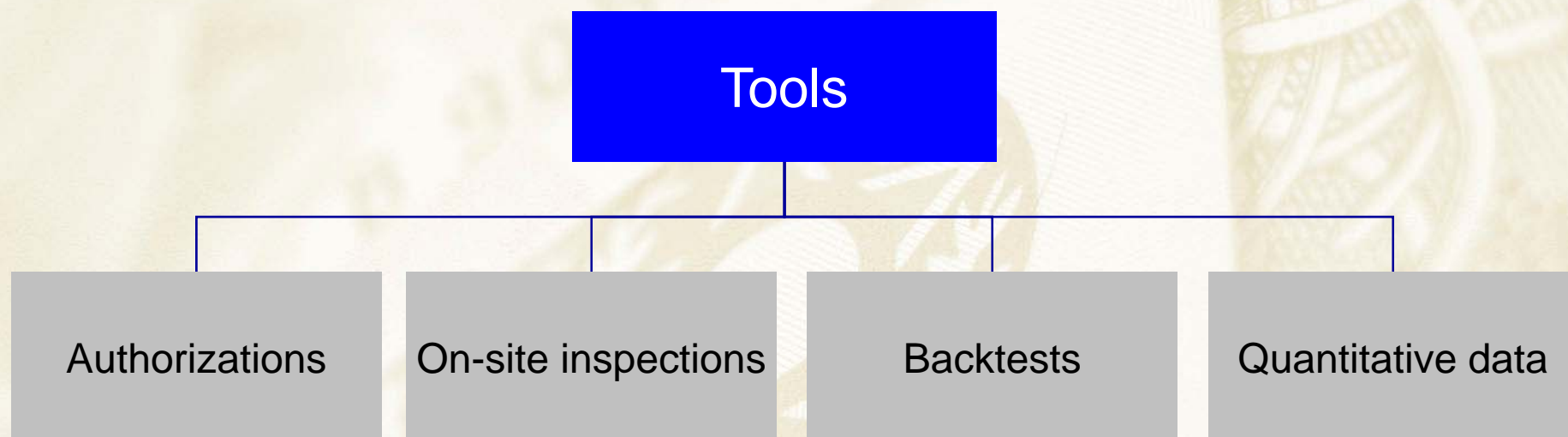
## Oversight objectives

- 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



# Oversight Tools – Overview



# Oversight Tools – Authorizations

Must be submitted for the authorization of the Banco Central do Brasil

- The creation of new payment and settlement systems

- Any change in existing payment and settlement systems involving the following aspects:
  - The safety and integrity of the payment and settlement system
  - The procedures for settling securities and derivatives operations or transferring funds
  - The credit and liquidity risk management

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 central counterparties credit and liquidity risk management procedures**

## Counterparty credit risk

- Risk of loss from a participant's default

## Liquidity risk

- Risk faced by the clearing as it must fulfill its payment obligations to non-defaulting participants on schedule



# 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

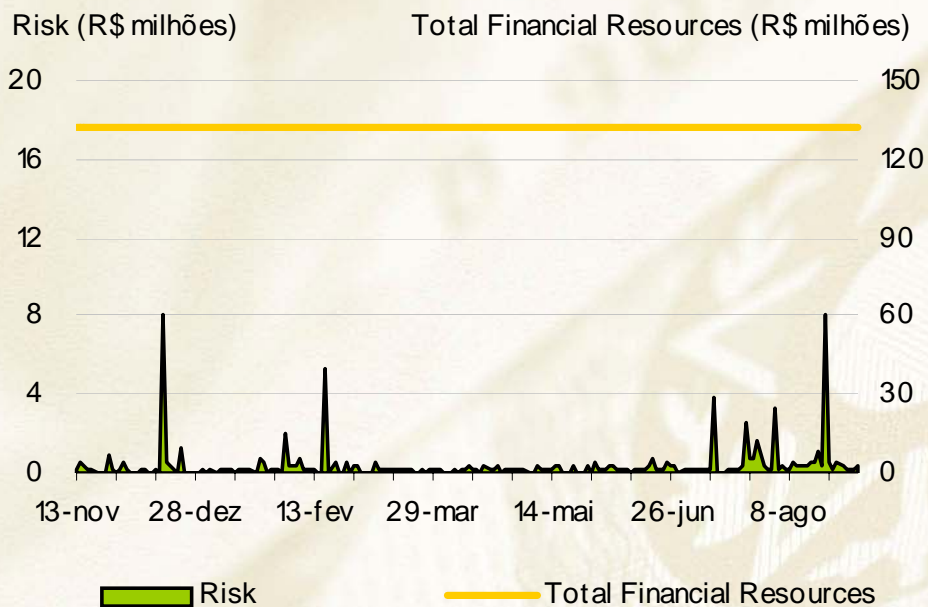
Calculate the total amount of CCP's liquid financial resources and credit lines

Calculate the highest debit position among the participants

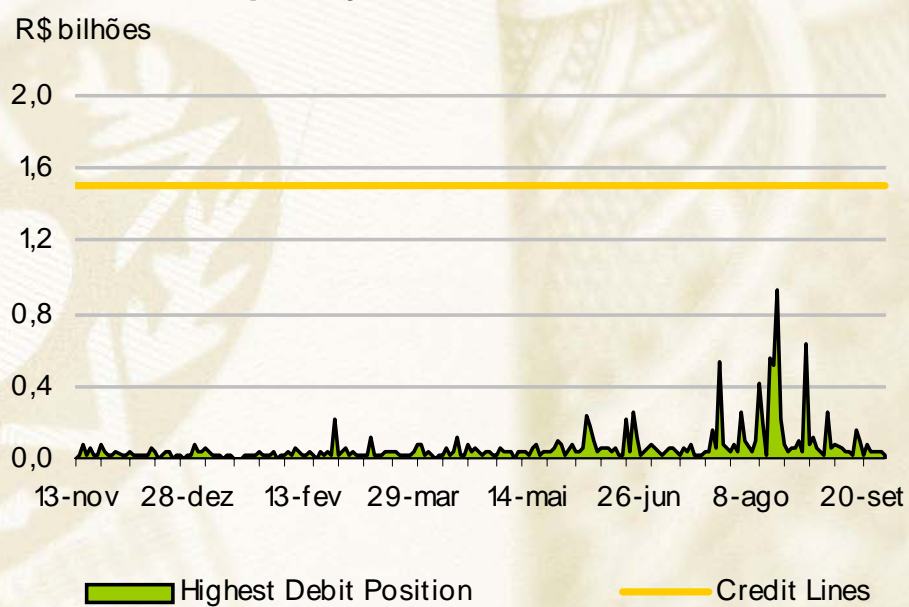
Compare the highest debit position against CCP's liquid resources and credit lines

# Oversight Tools – Backtests – Examples

## Backtest Counterparty Credit Risk



## Backtest Liquidity Risk

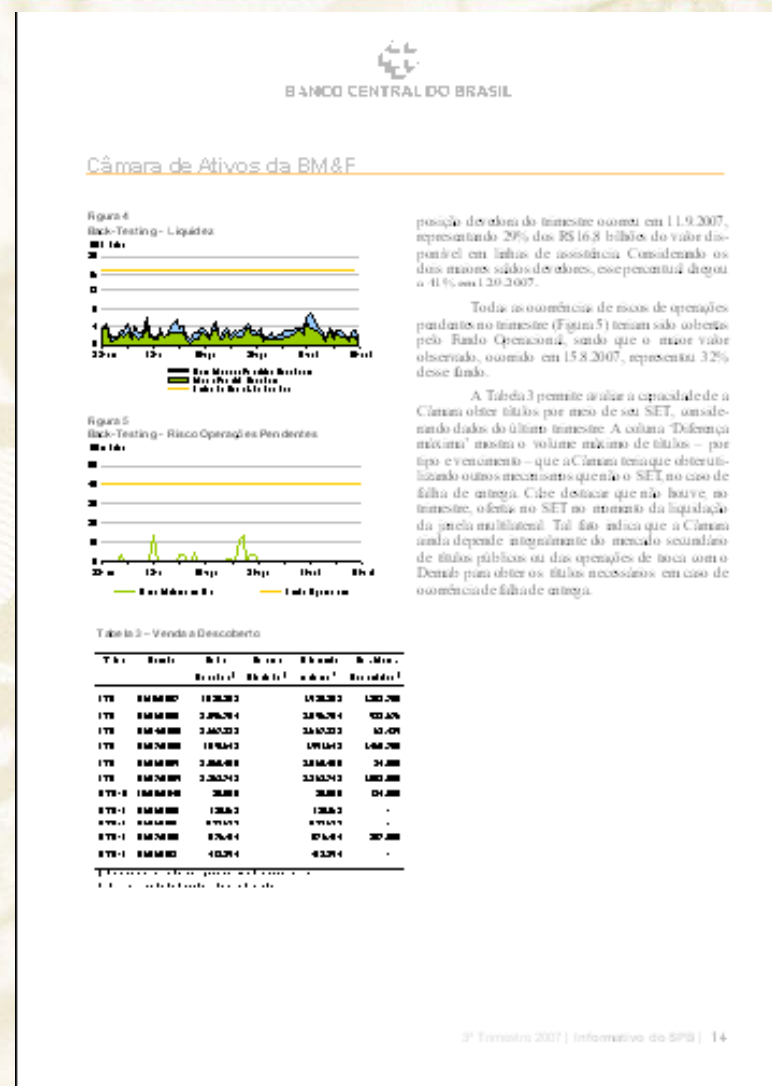


R\$/USD: 1,764

## 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.

# Oversight Tools – Oversight Report – Example



# Ongoing and Next Steps – I

- Assessment of SSS against RSSS and RCCP



# Ongoing and Next Steps – II

- Backtests improvements

## Financial Risks

Credit risk

Liquidity risk

Normal market conditions

Stressed market conditions

*Compliance with RCCP 3, 4 and 5*

# Ongoing and Next Steps – III

- 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

# Ongoing and Next Steps – IV

- Improvement of regulatory framework

## Regulation Improvements

### Governance

- Segregation of risk management and non-risk management areas
- Ownership limits

### Business continuity management

- Minimum requirements
- Accountability

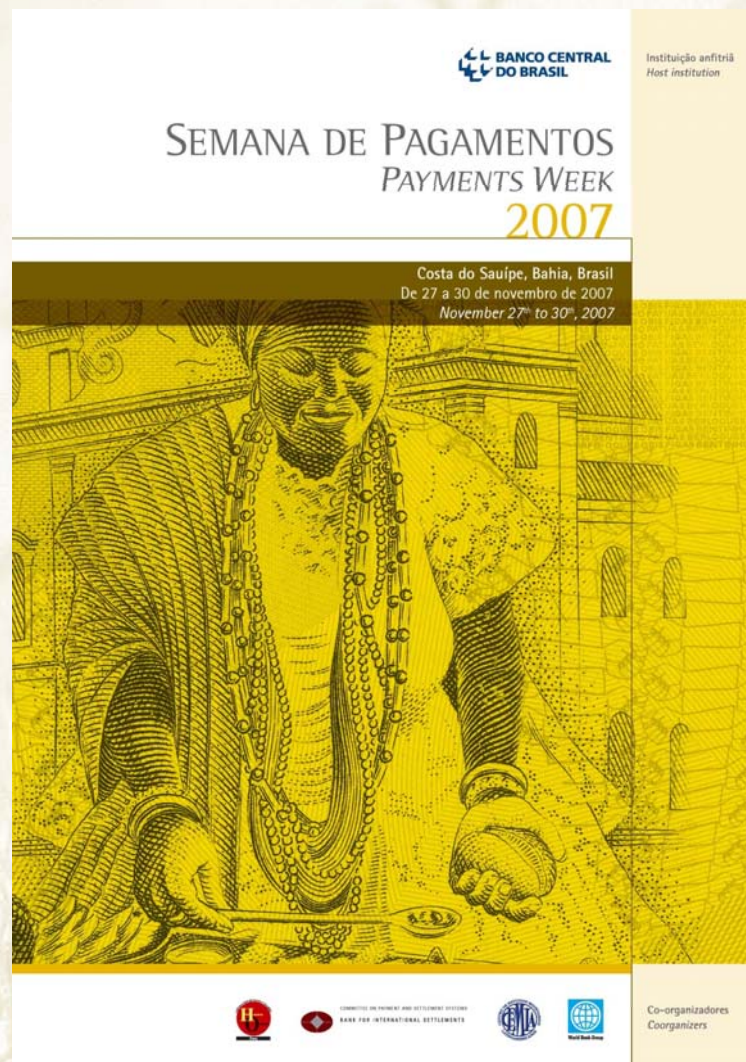
### Recommendations

- Update to international best practices



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