

Brazil's experience in modernising the payment system to increase efficiency and reduce risks

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Introducing the Brazilian payment system

The main payment instruments and networks in Brazil are:

- cash;
- cheques;
- credit cards;
- debit cards;
- *bloquetos de cobrança* (bar-coded remittance documents used to pay bills);
- *documentos de crédito* (DOCs, used to make interbank credit payments);
- automated teller machines;
- home banking (including through the World Wide Web); and
- smart cards (only pilot projects).

Factors affecting the payment system

The principal factors affecting the Brazilian payment system are:

- the low proportion of consumers with cheque accounts compared with that in developed countries;
- the large size of the country and its many areas of difficult access. The country has a vast territory (8.5 million square kilometres), and some areas, such as the Amazon forest region or remote towns and villages in the countryside, have a poor telecommunications infrastructure and insufficient transportation facilities. Nonetheless, it is quite an accomplishment that no cheque takes more than six working days to be cleared (except in a very few remote areas). The country is divided into 32 regions for cheque clearing purposes. Cheques drawn and presented in some of these regions (a number of which are larger than some European countries) are cleared in 24 hours;

- all interbank settlements are made through central bank reserve accounts (because there is a regulatory restriction that prohibits banks from holding balances with each other);
- the post office service, unlike in other countries, is not widely used for financial transfers;
- cooperation between payment system participants, especially in cheque processing and transportation;
- the large number of banks, which necessitates a highly developed interbank clearing and settlement system, and a highly developed securities market; and
- a highly concentrated banking industry.

Framework of the Brazilian payment and settlement system

The Brazilian payment system has many specialised systems for clearing and settlement. All these systems are connected to the central bank's mainframe computer (SISBACEN), which provides 24-hour access. Since financial institutions are not allowed to hold balances with each other, the central bank provides interbank settlement services for all payments. It functions as a settlement agent since the financial settlement of all transactions is made against the banks' reserve accounts at the central bank.

Our main clearing and settlement systems are:

- (a) SELIC (Special System of Custody and Liquidation of Federal Securities) – an electronic system controlled by the central bank, which registers transactions and maintains in book-entry form federal bonds and bills issued by the central bank and the Treasury. It also maintains some state and local government securities. SELIC settles on a net basis;
- (b) CETIP (Central Custody and Financial Clearing of Securities) – a private securities trading and transfer system. It also provides settlement for stock and futures exchange trading and deals in public securities issued by states and local governments. CETIP also settles on a net basis;
- (c) COMPE – a system in which cheques, DOCs and bar-coded remittance documents are cleared. Almost 98% of the total value of these documents is processed electronically;

- (d) EXCHANGE SYSTEM – an electronic system controlled by the central bank whose transactions are input by the institutions directly into SISBACEN. Each operation is individually settled;
- (e) SISBACEN (Central Bank Information System) – this system provides 24-hour access to a vast amount of information produced by the central bank and operates currency exchange transactions with selected dealers in the domestic market. The system has links to both national (SELIC, CETIP) and international (S.W.I.F.T., CHIPS) systems.

Restrictions and challenges imposed on the Brazilian payment system

The major challenge facing the Brazilian payment system in recent years derives from the fact that it existed in an inflationary environment for at least 20 years. In such a situation, participants in financial markets had an incentive to keep monetary balances as low as possible. As a result, the income velocity of money rose along with inflation, forcing the payment system to catch up in terms of speed and efficiency. The successful stabilisation plan introduced in 1994 has focused attention on other issues:

- the need to modernise and improve risk control procedures as a result of market deregulation, financial innovation, fast technological advances and globalisation. The growth in the volume of international transactions and the greater interconnection between participants from different countries have increased credit and systemic risk;
- there is also room for improvement in the legal framework with a view to reducing systemic risk. Furthermore, the system rules should be clearer so that participants are able to assess exactly the risk they want to bear;
- currently, the Central Bank of Brazil is not prepared to monitor banks' intraday balances. None of the clearing and payment systems mentioned above has global caps for transactions to ensure interbank credit and liquidity risk exposure control;
- the payment system in Brazil is changing its focus from improvements in efficiency and cost reduction to an approach based on reducing credit and liquidity risk; and
- the development of a real-time gross settlement (RTGS) system is still

a challenge. A prerequisite for this is a solution to the intraday risk problem. Many aspects of this issue are under discussion, such as intraday liquidity requirements, central bank policy on the provision of intraday credit, etc.

Enhancing domestic payment system arrangements: accomplished and planned initiatives

Initiatives to reduce risk (mainly credit risk) in the payment system

Rules to strengthen the Brazilian legal and regulatory framework so as to reduce risk are being studied. One possibility is to shorten the time-lag between the conclusion of a transaction and its final completion in the securities market (SELIC and CETIP). Banks are expected to be critical of such a change because it implies less flexibility for them to arbitrage in the intraday securities market.

The Foreign Exchange Clearing House is in the course of implementation. The clearing will minimise the default risk in the foreign exchange market due to the time-lag between the completion of the two legs of the transaction. The default risk may originate from time differences between countries and/or from a bankruptcy, compromising the full value involved in a transaction. Initially, this risk will be borne by the Clearing House, which will deliver foreign exchange currency to the participants in the system and will share the loss among those who traded with the defaulting bank.

Initiatives to increase efficiency

The Brazilian banks have made an outstanding adaptation from the environment of high inflation – which lasted until mid-1994, when the Real Plan was launched – to one of low inflation. During this process, the Brazilian financial sector's percentage of GDP shrank from 13% to 6% (1994 and 1996, respectively). There were mergers, liquidations and transfer of control among some financial institutions. At the beginning of the Plan, 271 banks were operating. From July 1994 to September 1997, 76 underwent adjustments resulting in the transfer of control, intervention, liquidation or absorption by other financial institutions. Of those, 43 were subject to intervention by the central bank, 30 were

liquidated, seven failed, five were placed under special central bank administration and one is still under intervention. Of the country's top ten private institutions in June 1994, three were absorbed by other banks and one was shut down. This was a very important step towards increasing efficiency and reducing risks in the payment system.

During these disruptions in the Brazilian financial system, the central bank played a decisive role by establishing a mechanism to prevent clients from losing their savings, while control over troubled banks was transferred if necessary. These arrangements kept the payment system running smoothly and did not jeopardise public trust.

The Federal Government is now tackling the problem of the state-owned banks. These banks are to be liquidated, privatised, re-capitalised or turned into regional development agencies, which are non-financial institutions. At the federal level, the largest federal bank (in terms of net worth) has been re-capitalised; others have been sold. At the state level, one large and one medium-sized bank have been privatised, two (among the top 20 banks) have been restructured with a view to being sold and two have been liquidated. Once all state banks have been closed, privatised or re-capitalised, an important source of systemic risk will have ceased to exist.

In conclusion, the soundness of the payment system and of the financial system as a whole is of great concern. Brazil has signed the Basle Capital Accord and has imposed higher capital requirements during the restructuring process. Recently, the minimum capital requirement has been raised from 10% to 11% of risk-weighted assets, 3 percentage points higher than the Basle minimum standard.