Part III
Chapter 3

Organization of Brazil's financial market

by Guilherme Binato Villela Pedras
Helena Mulim Venceslau

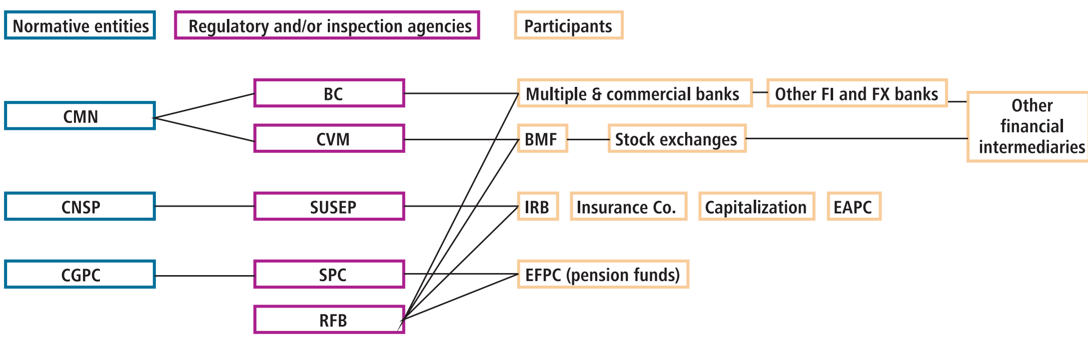
1 Introduction

This chapter will describe the role of private and public institutions in Brazil's public bond market. The rules that define their participation determine the ways that financial resources may and should be invested. In this regard, the efficient management of public debt is strongly correlated to a smoothly functioning domestic financial system.

Entities related to those institutions include, *inter alia*, the National Monetary Council (CMN), the National Private Insurance Council (CNSP) and the Complementary Social Security Management Council (CGPC), which set general guidelines for the regulatory agencies and evaluate/approve the standards they establish: For example, the CMN approves regulations proposed by the Central Bank (BC) and the Securities and Exchange Commission (CVM) regarding financial institutions' operations.

Each council is responsible for different agencies' operations. The CMN oversees financial institutions and other entities regulated by the Central Bank and the CVM. The CNSP governs private social security groups, insurance and re-insurance companies; and the CGPC regulates closed, complementary social security entities (pension funds).

Figure 1. Normative and inspection structure of the Brazilian financial system



IF: Financial institutions
BMF: Mercantile and Futures Exchange
IRB: Reinsurance Institute of Brazil
EAPC: Open complementary social security entities
EFPC: Closed complementary social security entities (pension funds)
SRF: Federal Revenue Secretariat

Source: Central Bank of Brazil website
Prepared by the authors

Regarding the primary market, federal public securities in auctions are sold mainly through a system managed by the Central Bank Within the secondary market, most securities are traded in the over-the-counter market and all participating institutions are subject to the rules established by the entities mentioned above. Primary and secondary market participants are important National Treasury partners in that they distribute bonds and set asset prices. So, in order to manage the debt optimally, there must be routine contact with financial market segments such as class associations, clearing and settlement houses and stock exchanges.

This Introduction describes the role of the main participants in the domestic financial market and their importance in developing the public security market. Section 2 examines the agencies responsible for regulating financial system participants. Section 3 covers the public security market participants that serve as intermediaries, as well as investors, i.e., the bondholders or end clients. Section 4 discusses the relevance and actions of class associations within the scope of market operations, examines the role of clearing and settlement houses as well as security trading systems, and also the relevance of assets traded through the stock exchange to public security price formation. Section 5 explores the issue of external debt, reviewing characteristics of the international market as well as the main agents involved in trading sovereign bonds.

2 Regulatory agencies

The role of these agencies is to regulate the norms issued by the councils and propose rules to improve the operations of institutions participating in the financial market. Since the National Treasury sells domestic public debt securities in the market where participants are regulated by different agencies, there must be good communication among them to guarantee that rules to develop and increase the safety of the financial market are consistent with the borrowing requirements of domestic public debt.

As mentioned above, the Central Bank (BC) and the Securities and Exchange Commission (CVM) regulate the entities that make up the domestic financial system, while the Complementary Social Security Secretariat (SPC) regulates the closed complementary social security entities (pension funds). The Private Insurance Superintendence (SUSEP) regulates insurance companies, open social security entities (private) and capitalization companies. The Secretariat for Social Security Policies (SPS) oversees actions related to both the General Social Security Regime and the one for civil servants at the Federal, state, Federal District and municipal levels. The Re-insurance Institute of Brazil (IRB) is responsible for standards in this area, and the Federal Revenue Secretariat (SRF), although not a regulatory agency of the financial system, issues tax rules that influence the decisions of economic agents in the financial market.

These agencies set the standards for the financial entities: By defining the investment framework for different types of assets in the financial market, they help determine which assets are in the greatest demand by those managing third party resources.

By regulating banks and establishing norms for the financial system,[1] Central Bank (BC) directly influences the amount of resources each financial institution can invest. Investment funds, where most domestic savings are invested, are regulated by the CVM, which determines the different types of funds and ceilings for the assets in which each can invest its resources. The SPC, SPS and SUSEP are charged with setting limits for (a) pension fund investments in general, (b) state and municipal civil servants' pension funds, and (c) insurance and private social security companies.

[1] The normative acts are associated to factors like adequate risk management, with regard to the Basle Accord, and the determination of VaR limits related to internal interest rates behavior.

The domestic financial market offers liquid assets in both the variable-income and fixed-income markets, with the latter including private and public securities. Since Federal public securities are defined by the BC as credit-risk-free assets, the rules for investing in them are less strict than for private assets.

The BC issues rules on the risk limits to which institutions must comply.[2] These include caps related to market risk and interest rate risk (Value at Risk - VaR), which directly affect the position of banks and other participants with respect to investments in fixed-rate assets. Federal public debt managers (PDMs) need to pay special attention to this aspect because, while the limits must be compatible with rules governing risk, they cannot be so restrictive that they will obstruct National Treasury sales of securities or be inconsistent with public debt medium- and long-term guidelines.

The tax rules set by the Federal Revenue Secretariat (SRF) affect financial market investments; and, joint National Treasury-RFB actions can change those rules to create a new culture in the public security market. For example, in 2006, a decrease in the tax rate on fixed-income securities gains (connected to the investments' maturities[3]) helped lengthen the term of the securities issued by the Treasury. Another important change related to public securities was exempting non-resident investors from income tax on capital gains: Since these investors have a longer-term investment profile and were taxed twice on their gains (in Brazil and in their countries), the exemption made Brazilian securities more attractive, lengthening the government debt and reducing its cost.

Table 1 shows the main acts/laws that directly affect the public security market and the form in which assets are invested.

Table 1. Main normative acts of the domestic financial system related to public securities

Type		Normative act	Subject	Impacts
Demand for securities	CVM	Normative Instruction (NI) no 409 of August, 2004, as amended by CVM instructions no 411/04, 413/04, 450/07, 456/07, 465/08	Information about investment funds	Defines the minimum investment percentage for each class of fund, with no limit for investment in Federal public securities
	CMN	Resolution no. 3,456 of June 2007	Guidelines for the investment of closed, pension funds	Defines the maximum investment percentages of the resources of closed pension funds, which can invest up to 100% in securities issued by the National Treasury
Improvement in debt structure (lengthening of average maturity)		Law no 11,033 of December 2004	Taxation in financial and capital markets	Decreases the income tax rate for longer-term investment terms; their respective rates are: up to 180 days: 27.5% 181-360 days: 20% 361-720 days: 17.5% above 720 days: 15%
	SRF	NI no 487 of December 2004, amended by NI 489/2005 and NI 822/2008	Income tax on gains from fixed-income and variable-income operations and investment funds	Defines long-term investment funds (for tax purposes), which have average maturities of over 365 days

[2] Regulatory acts are associated with factors such as adjustment of the entities' control risk regulations (within the scope of the Basel Agreement) and definition of VaR limits related to the behavior of domestic interest rates. For example, Resolution n° 3,464 of June 2007 provides for implementing a risk management framework.

[3] The rates used are as follows: Investments of up to 180 days: 22.5%; 181-360 days: 20%; 361-720 days: 17.5%; above 720 days: 15%.

Type		Normative act	Subject	Impacts
Improvement in debt structure (lengthening of average maturity)		Law no 11,312 of June 2006, which amends law no 9,311 of October 1996	Income tax for non-resident investors and provisional tax on financial transfers (CPMF)	Exempts non-resident investors from paying income tax on gains from investments in Federal public securities
Secondary market		Law no 10,892 of July 2004 amends Arts. 8 and 16 of Law no 9,311 of October 1996	Taxes on financial transfers (CPMF)	Creates the Investment Account, which allows investments to migrate between different financial instruments without paying CPMF*
	CGPC	Resolution no 21 of December 2006	Purchase and sale of securities and other financial assets in fixed income benefit plans	Requires closed pension funds to justify the purchase and sale prices of public securities, which are not traded through electronic systems

* CPMF was a tax on financial transfers in banking current accounts that was levied according to laws and constitutional amendments passed in 1996. The Executive Branch's last attempt to extend it was in December 2007, but the Federal Senate rejected the request and abolished it.
Source: Normative Acts
Prepared by the authors

3 Intermediaries and investors

The National Treasury sells Federal public securities in the primary market to institutions holding banking reserves as well as those authorized by the SELIC[4] to participate in auctions through banking reserve sub-accounts of financial institutions. Most often, these banks act as intermediaries for end clients. In the secondary market, the main institutions distributing public securities are responsible for providing prices and quotations and mediating operations.

3.1 Intermediaries

The main intermediaries of public securities between the National Treasury and end clients are banks and security broker-dealers/distributors[5] that participate in both the primary and secondary markets. Dealers[6] are classified in two groups: Those institutions that participate in primary acquisitions and those that perform in the secondary market.

Criteria to define and choose dealers are regulated by National Treasury and BC acts that stipulate their duties and rights. Primary dealers focus on the primary issuance of federal public securities[7] while specialist dealers focus on negotiating securities in the secondary market, publishing their prices and promoting liquidity. The National Treasury regularly consults with these dealers-institutions so as to better capture the demand for securities to be offered in auction. At least twice a day, both dealer groups provide the Treasury with

[4] The Special Clearing and Settlement Systems managed by the BC.
[5] Banks and broker-dealers/distributors also purchase securities for their own portfolios as well as for other purposes. However, this section will only address their roles as intermediaries.
[6] Banks and broker-dealers/distributors can be dealers. For more information, see the act regulating their participation in http://www.tesouro.fazenda.gov.br/legislacao/leg_divida.asp.
[7] For more details on security auctions and participants, see Part III, Chapter 4.

information on security rates in the secondary market, which are needed to monitor the market and set the price of securities offered in the Treasury Direct (TD) Program.[8]

Currently, Brazil has 156 banks, of which 136 are multiple banks[9] and 20 are either domestic commercial banks or branches of foreign banks; there are 107 securities broker-dealers and 133 securities distributors.[10]

Intermediaries are vital to distributing and pricing assets in the financial market. For investors, they identify the types of various instruments, yields and desired maturity, and provide them through the secondary market. They also inform the National Treasury about how a given instrument is perceived, as well as the demand for a type of security or maturity that is not yet being met - critical information for planning issuances.

In this regard, the banks and asset broker-dealers/distributors are seen also as National Treasury partners in promoting a well-operated Federal public security market.

3.2 Investors[11]

The main end clients of public securities in the domestic market are investment funds, banks,[12] pension funds, insurance companies and non-resident investors.

Investment funds (IF) are regulated by the CVM and classified as short-term, indexed, fixed-income, equity, exchange, external debt, and multi-market. They can be classified as long-term, meeting the conditions required to benefit from reduced taxes.

Public securities represent about 50% of the IFs' overall resources, distributed among different types of funds: They are the largest category of investors in Federal government securities, although the volume of bonds they negotiate in the secondary market is lower than that of the banks.

Banks differ significantly from the IFs,[13] as they are more dynamic, always watching market movements. Fixed-rate securities make up the largest share in their portfolios. They participate in the market as intermediaries between the National Treasury and other investors, alerting the Treasury about the demand for securities as well helping the Government to release its issuance strategy.

Pension funds, or EFPC (the Portuguese acronym), manage the complementary social security resources of public and private employees and state and municipal civil servants. The resources' minimum remuneration is determined by regulations provided in the entities' by-laws and the rules set by the SPCs and SPSs. Because of the characteristics of this type of liability, pension funds hold long-term public securities, particularly those linked to inflation rates.

Regarding the average maturity of investments, it is possible to separate pension funds into two groups: (a) those where contributors mainly withdraw their funds and (b) those where they begin their accumulation process. The latter are the main investors in long-term CPI-indexed securities, especially the NTN-B,[14] which mature in 2045.

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[8] This subject is explored in Part III, Chapter 7.

[9] Multiple banks are commercial banks authorized by the BC to perform multiple financial functions.

[10] Source: *Financial Stability Report*, November 2008, Central Bank of Brazil.

[11] This topic is discussed in Part III, Chapter 5.

[12] Banks are end clients when they purchase securities for their own portfolios.

[13] Except for Multimarket Funds, which have a more aggressive investment behavior.

[14] *Nota do Tesouro Nacional*, B series, CPI-indexed security with semi-annual interest coupon.

Insurance companies - part of the group of non-financial corporations authorized to participate in National Treasury auctions through the sub-custody account in the SELIC - also invest in public securities. Thus, they may manage their investment portfolios without intermediaries.

Non-resident investors are the main holders of long-term, fixed-rate securities. They participate mainly in auctions of NTN-Fs[15] and some NTN-B medium- to long-term maturities. Their presence helps lengthen debt maturity as they have a longer-term investment profile, which has helped change the culture of short-term investment.

4 Class associations

Class associations represent the main participants in the public security market and facilitate the debate among the National Treasury, intermediaries and clients. In this regard, they are important partners in disseminating public debt-related information and also contribute to changing the investors' culture. They also inform the Treasury about the difficulties investors face when trading public securities.

The main associations in the domestic market are the Brazilian Association of State and Municipal Social Security and Assistance Institutions (Abipem), Brazilian Association of Pension Funds (Abrapp), National Association of Investment Banks (Anbid), National Association of Financial Market Institutions (Andima), Brazilian Federation of Banks (Febraban), National Federation of Private Pension Funds and Life Insurance (Fenaprevi), and National Federation of Private Insurance and Capitalization Companies (Fenaseg).

Abipem, originally Abip, was created in 1980, when its only members were the state social security institutes. Later, when municipal institutes joined, it was renamed Abipem. It attracts member institutions by improving their technical-administrative knowledge, helping them share information, organizing national congresses and regional meetings, and discussing/disseminating the principles of the social security and welfare system. It communicates with government agencies, the National Treasury, and SPC, and also publishes information on the sector. In October 2008, the social security system included 369 pension funds.

Abrapp was founded in 1978 to represent pension funds. Its objectives are to:

> [...] collaborate with the public sector in all matters related to complementary social security, especially as regards its regulation and the implementation and enforcement of basic policies and guidelines for its activities, [...] organize, promote or carry out studies, analyses, research, courses, congresses, symposia, or other types of meetings on themes, problems and aspects related to complementary social security,[16] among others

At Abrapp's invitation, the National Treasury attends meetings and seminars where it presents the federal public security issuances and informs investors about the characteristics of securities offered in auction, attempting to change the large investors' preferences in Brazil's domestic securities market for CDIs.[17] The meetings also offer opportunities to discuss the aspects of the domestic market and role of pension funds within the Federal Public Debt.

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[15] *Nota do Tesouro Nacional*, F series, longer-term fixed-rate security (3, 5 and 10 years) with semi-annual interest coupons.

[16] Free translation of the Abrapp Bay-laws (in Portuguese). Excerpt from the document is available at http://www.abrapp.org.br.

[17] Interbank Deposit Certificates (CDI is the Portuguese acronym) are securities issued by financial institutions that back operations in the inter-bank market. Their trading is restricted to this market and their function is to transfer resources from one financial institution to another, improving the system's fluidity (among those with money to lend and those which do not).

Anbid was created in 1967 to represent investment banks. It has over 70 members, including multiple and investment banks, asset managers and financial consultant firms, which administer investment funds and other assets. In February 2009, there were 8,190 of these entities, with R$1,135.9 billion in net assets, all belonging to Anbid member institutions.

In 1999, Anbid issued its first code for public offers of securities, which launched its role as a self-regulating entity. It now has four more codes, for (a) investment funds, (b) capital market eligible services, (c) the continued certification program, and (d) private banking activity in the domestic market.

Anbid's aims include enhancing the capital market, strengthening the CVM as a capital market regulatory entity, adopting best practices among members, respecting investors' rights, and helping investors and market agents better understand the investment products available.[18]

The partnership between the National Treasury and Anbid serves to inform the latter's members about Treasury actions with respect to public debt management and issuance strategies, promoting measures that will lengthen the debt average maturity, reduce the risk and change the investment culture from CDI to longer-term investments.

Andima was created in 1971 to "strengthen the financial market, focusing on the fixed income market, establishing ethical and operational standards for participants and producing and disseminating technical information that contributes to its growth".[19]

It is the broadest among all the institutions, attracting banks, securities' broker-dealers and distributors, investment funds, and pension funds. It also provides services and offers technical/operational support to member institutions, fosters new markets and helps develop the domestic financial system. As a self-regulating entity, it has a Code of Ethics (CE) and a Market Operational Code (MOC), both adopted by Cetip, Sisbex and Abrapp.

Andima plays an important role by publishing daily prices for all securities issued by the National Treasury and held by the market, through the Price Consolidation, Dissemination and Monitoring Project, which improves market transparency. This makes Andima a vital institution for the entire market, which needs prices to correctly evaluate its portfolios.

In assembling all the prices, Andima meets statistical and classification criteria related to data frequency and dispersion regarding the sample, among others. Andima's activities focus on collecting and disseminating information, building price indicative intervals, and monitoring the prices negotiated.

Andima has several entities that review financial market operations, focusing on the fixed-income market of both public and private securities. Its most important committees include those that deal with Macroeconomic Follow-up, Monetary Policy, New Products, Operations/Ethics, Mixed Andima/Abrapp Operational and Ethics, Asset Pricing, and Securities. The Treasury participates in the committees' working groups, discussing the development of both the secondary and public bond markets.

Its Asset Pricing Committee is linked with the Benchmarks Commission, in which the National Treasury participates. The commission is responsible for publishing and following-up on studies that help improve Andima's fixed-income indices.

Each day, Andima develops and publishes the Fixed Income Market Index (IRFM) and the Andima Market Index (IMA).[20] The IRFM is composed of fixed-rate securities issued by the National Treasury, while the IMA is

[18] Free translation of the Anbid Bay-laws (in Portuguese). See htpp://www.anbid.com.br.
[19] Visit htpp://www.andima.com.br.
[20] To develop these indices, the National Treasury sends Andima a list of all outstanding securities each day.

composed of the (a) IMA-B, which includes CPI-indexed securities, (b) IMA-C by IGPM-linked federal public securities, and (c) IMA-S by floating-rate securities. The IMA-General is composed of all IMAs, including the IRFM. Inflation-linked IMAs (IMA-B and IMA-C) also include two intermediate classifications according to maturity: The IMA-5 group, which involves securities maturing in up to five years and the IMA 5+ group, for longer-term securities.

These indices are yet another step to providing a yield benchmark to investors other than the usual CDI. The aim is to give the lead investors public security-referenced indices so they can include different assets in their investment portfolios.

Established in 1967, Febraban, the official representative of Brazil's banks, helps communicate with these agents, besides submitting proposals to the authorities regarding market de-regulation and actions that could be adopted to modernize regulations. Its goal is to "represent its members at all levels - executive, legislative and judicial branches - to improve the legal system and reduce risk levels."[21] It is composed of 120 member banks out of the total of 156 that operate in Brazil.

The Code of Banking Ethics (CE) and the By-laws of the National Banking Ethics System elaborated by Febraban were adopted in January 1986. The first includes basic principles to guide banking activities while the latter enforces the CE principles, defends the markets where the banks operate and promotes the best market practices. Febraban has 25 technical commissions whose goal is to conduct studies and produce publications on topics related to banking activities carried out by the following commissions: the Economics Commission, Banking Services Commission, Banking Technology and Automation Commission, Risk Management Commission, and International Banking Affairs Commission.

Fenaprevi, created in 2007, is the successor to the National Complementary Social Security Association (Anapp)[22] and represents the Open complementary social security entities (EAPC). It provides services to its members, fosters new markets and helps develop complementary social security systems. Some Fenaprevi objectives are to:

> [...] defend the interests of the segments represented in the market, public authorities, civil society institutions and other class associations; develop and improve laws, rules and regulations that strengthen the efficiency of the economic segments it represents, by interacting and cooperating with authorities and civil society organizations [...].[23]

Fenaprevi member companies have a portfolio of R$139.34 billion and until the institution approves its own Code of Ethics, it still applies the one devised by the former Anapp. The entity has 11 technical-regulatory commissions whose objective is to coordinate activities related to legal, actuarial, financial, accounting and technological issues as well as to products in the social security and life insurance sector.

Fenaseg was founded in 1951 to develop the insurance and capitalization sector. It has 160 member companies of which 143 are insurance companies that account for 99.2% of the insurance market.[24] One of its many missions is "to cooperate with the government to develop rules that will improve the members' activities and solve problems related to the sector."[25] Fenaseg has six technical commissions and three working groups, one of which focuses on ethics and self-regulation.

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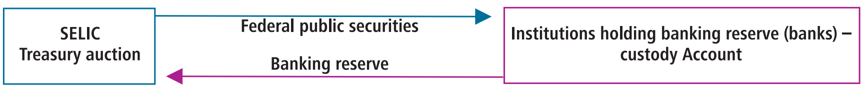
[21] Free translation of Febraban Bay-laws (in Portuguese). For more details, see htpp://www.febraban.org.br.
[22] Institution established in 1975.
[23] For more information, visit htpp://www.fenaprevi.org.br.
[24] In December 2008, it totaled R$67.8 billion. For more information, see http://www.susep.gov.br, Market Follow-up Report – August 2007.
[25] Free translation of Fenaseg Bay-laws (in Portuguese). For more information, see http://www.fenaseg.org.br.

All these institutions partner with public entities such as regulatory agencies and the National Treasury so as to develop and modernize Brazil's financial market, which, in turn, will improve the domestic federal debt profile.

5 Settlement infrastructure for operations with Federal public securities

Operations in the primary market

Figure 2. Operational cycle of public securities sold in the primary market

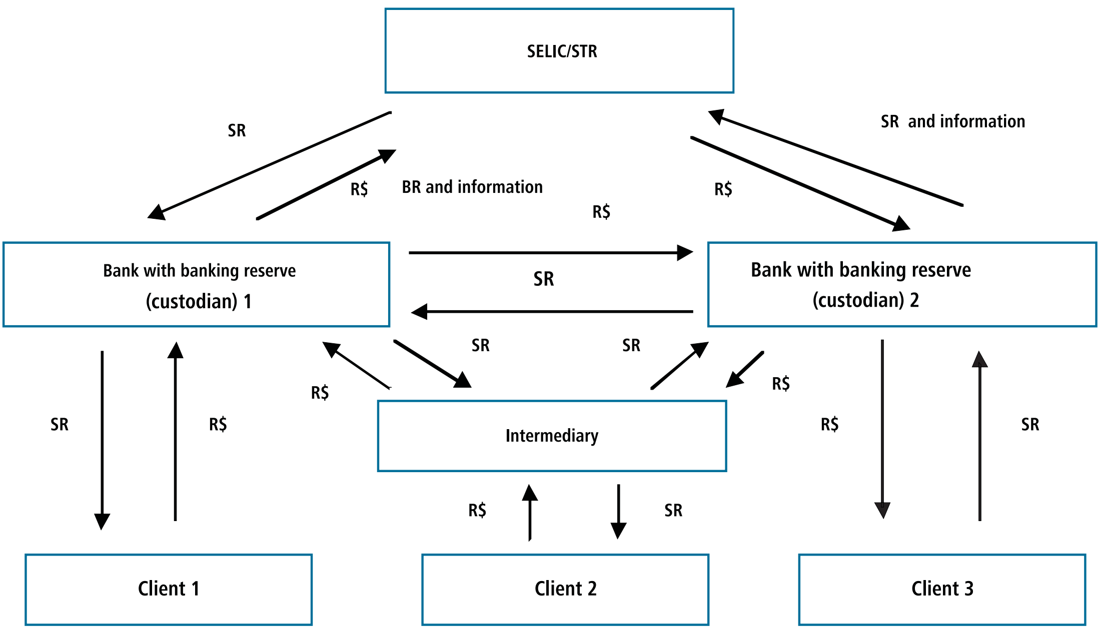


Source: Selic, Central Bank
Prepared by the authors

The National Treasury offers Federal public securities in the primary market through the SELIC system. Institutions holding banking reserves and contemplated in the auction will have, in the first day after the auction, their accounts debited for cash, being granted the certificate of bond ownership.

Operations in the secondary, over-the-counter market

Figure 3. Operational cycle of public securities traded in the secondary market



Source: Central Bank
Prepared by the authors

In the over-the-counter-market (conducted by telephone) with settlement and registration through Selic/STR, the custodian bank transfer reserve (BR) and has the security registered in its account (Security Register – SR). However, when the operation between two clients is performed by an intermediary, the custodian banks are notified so as to arrange the necessary transfers (of SR and BR) and inform the Central Bank (SELIC) of the change in the security holder position (information).

5.1 Custody and settlement systems

Four custody and settlement systems handle the operations involving public securities. These are the (a) Special Settlement and Custody System (SELIC), (b) CETIP Clearing and Settlement House, (c) BM&FBovespa Clearinghouse, and (d) Brazilian Settlement and Custody Company (CBLC).[26] BM&FBovespa has two other settlement systems for exchange and derivatives operations - the Foreign Exchange Clearinghouse and the Derivatives Clearinghouse, respectively.

SELIC. This entity, the first electronic securities registration system in Brazil, operates as the central depository for most Federal public securities issued by the National Treasury (96.3%[27] of the domestic debt in the market in December 2008). The system includes modules for Treasury primary auctions and for secondary market over-the-counter trades. This information can be found in the SELIC User's Manual (MUS).[28]

SELIC was established in 1979 through a partnership between Andima and the Central Bank to settle public securities' operations at the end of each day, based on the net result to the banks' reserves accounts. Since 1996, all procedures, including auctions,[29] have been processed electronically. In April 2002, with the new SPB (Brazilian Payments System), the settlement process was changed and carried out in real time gross settlement (LBTR), through several settlement windows that are open during the day. Under this process, the security seller's position is automatically registered and the account is debited at the purchasing end.[30]

This new process was introduced with the Reserve Transfer System (STR), which is linked to the SELIC. Besides the National Treasury, it includes commercial banks and clearinghouses that have special settlement accounts with the Central Bank. All resource transfers are settled and completed within the same day. Settlements in the SELIC or STR, when not honored by one of the parties, are cancelled.

In addition to the Treasury and Central Bank, other institutions in the SELIC system that serve as custody account holders include commercial and multiple banks, investment banks, savings banks, securities and financial assets distributors and broker-dealers, entities that offer clearing and settlement services, and several other institutions in the national financial system. Liquidators are participants that hold banking reserve accounts; non-liquidators are classified as autonomous or subordinate entities and settle their operations through liquidators.[31]

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[26] In December 2008, the BM&FBovespa and CBLC were merged.

[27] Source: *Relatório Mensal da Dívida Pública Federal*.

[28] Available at : http://www3.bcb.gov.br/selic/documentos/MusSpb.pdf.

[29] National Treasury auctions are carried out through the Electronic Formal Public Offer (Ofpub) module developed and managed by the Central Bank.

[30] The operation is held for 60 minutes or until 6.30 p.m., whichever occurs first. If, during this period, the balance is not sufficient to settle the operation, it will be rejected.

[31] Commercial banks, multiple banks with a commercial portfolio and savings banks must hold banking reserve accounts, while investment banks are not required to do so. Local security broker-dealers and distributors as well as entities responsible for clearing

Non-liquidators in the SELIC can hold individual accounts, which allow the Central Bank to identify some of the end clients of public securities.[32] The main holders of government bonds are the banks (treasury), the investment funds and the non-financial legal entities – PJNF[33]. In addition to non-financial companies, the PJNF account includes participants in the social security system (pension funds and open private social security funds), insurance companies, capitalization companies, and non-resident investors with securities registered in their own portfolios. However, debt distribution among investors according to the above description is not yet available to the public.

CETIP. This entity provides services in the areas of custody, electronic trades, business registrations, and financial settlements mainly for fixed-income securities. Created in 1984, also through a partnership between Andima and the Central Bank, CETIP's members include about 6,000 institutions such as leasing companies, investment funds and non-financial institutions (e.g. insurance companies and pension funds). Quota holders are restricted to settling their operations through financial institutions[34] while those without banking reserve accounts must settle through settlement institutions.

The few National Treasury securities not settled in the SELIC are registered and settled in CETIP, accounting for 3.7%[35] of domestic debt. The main ones include: CDP/INSS, CFT, CTN, FDS, TDA, JSTN, and securitized debts. These securities originated in National Treasury special operations;[36] most can be traded in the secondary market and some are accepted by the National Treasury in auctions in exchange for bonds registered in SELIC.[37]

Most private bonds and derivatives traded in the domestic market are also registered in CETIP,[38] such as certificates of bank deposits (CDs), debentures, fund quotas, derivatives (swaps and options) and agribusiness financing contracts and products.

CETIP offers four settlement options, depending on the type of transaction: (a) real time gross settlements in the STR, (b) real time net settlement transfers, (c) multilateral nettings and bilateral nettings. CETIP also offers trade facilities such as the CETIPNET electronic system, which is an electronic window for trading public and private securities and requesting quotes; this system also processes several types of fixed-income asset auctions.

The BM&F Asset Clearing System.[39] This entity, which was created in 2004 to develop electronic public securities' trades, settles operations contracted within the Sisbex system[40] as well as those in the over-

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and settlement systems are autonomous; investment funds, insurance companies, capitalization companies, open and closed entities of social security and re-insurance companies, are subordinates.

[32] The annex of the National Treasury's Federal Public Debt Monthly Report shows the main holders of domestic debt securities (Table 5.1). Also, it presents the status of the investors' portfolio positions in, inter alia, domestic and foreign banks (the latter are those that operate in Brazil but are headquartered overseas), domestic investment banks, and domestic and foreign broker-dealers/distributors (Table 5.2).

[33] Which can be public and private companies (including the ones from the insurance and capitalization sector), pension funds and open entities of complementary social security.

[34] These are commercial banks, multiple banks, savings banks, investment banks, development banks, asset broker-dealers, asset distributors, commodities and futures broker-dealers, leasing companies, insurance companies, stock exchanges, commodities and future contracts broker-dealers, institutional investors, non-financial corporations (including investment funds and private social security institutions), foreign investors, and other institutions authorized to operate in financial and capital markets.

[35] Source: Monthly Federal Public Debt Report, December 2008.

[36] For example, securities issued when rural land is expropriated within the agrarian reform program (TDA).

[37] Securities that can be traded are those that do not contain a non-negotiable clause. Securities accepted in exchange for floating rate securities (SELIC) are defined in the auctions' administrative rulings.

[38] For more information, see http://www.cetip.com.br.

[39] BM&F and Bovespa were merged in 2008, into BM&FBovespa (see Section 6 for details).

[40] This is the Electronic Negotiation and Registration System, originally developed at the Rio de Janeiro Stock Exchange (BVRJ), and

the-counter market; it serves as a central part of the operations. It also settles definitive (cash or forward operations) and repo operations, as well as short sales, with securities falling into the Security Loan Service (SET) or the SELIC securities loan program.

Public securities traded or registered in Sisbex are settled in the Delivery versus Payment System - DVP. The BM&FBovespa Asset Clearing System acts as the core counterpart of the operations. If a participant fails to make the payment, whether in cash or assets, the system uses the participant's guarantee to fulfill the settlement. In such cases, BM&FBovespa (a) lends the one in default the money to honor the operation; (b) offers equivalent assets to the participant that honored its part of the deal but did not receive the original asset; or (c) pays cash to the participant that fulfilled the operation delivering the asset.

Participants of the BM&F Asset Clearing System can settle operations through members (which, in general, are banks), or directly, when registered for this function: Besides banks, these include asset broker-dealers and distributors, investment funds, open and closed social security entities, and the insurance and re-insurance companies. All system liquidators deposit guarantees and are subject to the limits (set by the system).

This clearing system, which operates as the core feature of public security operations in the electronic system in Brazil's debt market, minimizes the risks associated with settlements; it is consistent with international best practices to reduce the risk that financial operations involving public securities will not be completed. Also, it allows for short-sale operations of the securities it offers, with the usual guarantees.[41]

CBLC.[42] This entity was originally responsible for the custody, clearance, settlement and management of the risks in Bovespa markets. When the Bovespa and BM&F stock exchanges merged, the CBLC was incorporated into the structure of BM&FBovespa. In January 2002, it established a partnership with the National Treasury to facilitate the sale of public securities to individuals over the internet (Treasury Direct Program[43]). In the current settlement structure, the system (which CBLC developed and operates) continues to work independent of the other two BM&FBovespa systems, although it is part of the new institutional structure. It is in this environment that Treasury Direct (TD) operations are settled.

5.2 Negotiation systems and environment

Public securities are negotiated in the stock exchange or in the over-the-counter market (by telephone), although the latter operations can also be made through an electronic system. This market allows liquidity for some securities, and price references are based on quotations. Despite the Treasury's efforts to promote the electronic system, the greatest number of secondary market trades is still made by telephone.

The electronic market, which, in Brazil, is still in its embryonic stage, has several advantages, particularly with respect to price transparency: Greater transparency leads to a larger number of quotations. This, in turn, increases the secondary market liquidity for securities, which translates into increased demand for Federal public securities in the primary market. For this reason, the National Treasury strongly supports its development. Two operational systems - Sisbex and CetipNet - can promote these negotiations.

later acquired by BM&F. More details on Sisbex are provided later in this chapter.

[41] For details, see http://www.bmf.com.br/portal/pages/Clearing1/Ativos/documentos/.

[42] For details, see http://www.cblc.com.br/cblc/Default.asp.

[43] Part III, Chapter 7 describes the Treasury Direct (TD) program.

The Electronic Negotiation and Registration System (Sisbex) negotiates and settles operations. As mentioned earlier, it was originally developed by Rio de Janeiro Stock Exchange (BVRJ) and acquired in 2002 by BM&F, remaining intact when the two stock exchanges (BM&F and Bovespa) merged. Only Federal public securities settled in the SELIC and other assets expressly admitted for trade and registration can be negotiated in Sisbex.[44]

Sisbex involves two functions: (a) an order matching module, where participants can enter or accept quotes electronically, and (b) a registration module, where they report transactions performed in another area (e.g. over-the-counter). In this way, the asset clearing system processes the settlements and custody procedures. In the first, where transactions are performed according to price and time priorities, all participants act anonymously. In the latter, participants can enter information and the registration is completed once the other counterpart confirms the transaction. Non-confirmed operations are not registered.

CetipNet was introduced in April 2002 by CETIP. The system was originally available only for trading assets registered in that system. Now, it can be used to purchase and sell securities registered in the SELIC, with the restriction that CETIP cannot settle the operation. Although CetipNet does not present a clearing-house or settlement chamber for SELIC securities, it performs on-screen operations and settles them in the SELIC.

More recently, electronic quotes gained greater importance in the secondary market, mainly with regard to operations involving pension funds. SPC's latest rules required fund managers to demonstrate that securities in their portfolios were acquired at market prices. As a result, electronic price platforms became more attractive because buying electronically is the easiest way for pension funds to prove that the prices of the bonds they bought were the fairest possible.

Bloomberg and Reuters agencies developed screens on which financial institutions post the prices at which they are willing to complete purchases and sales. These initiatives are very useful, given the importance that regulatory agencies attach to transparency of fixed-income asset prices. Most institutions use the posted prices as indicative; thus, transactions are confirmed by telephone and settled in the SELIC. While the agencies' screens cannot be used to close deals, they promote price transparency and help develop the secondary securities market in Brazil's domestic market.

Electronic screen systems for trading public debt securities are a significant advance in the domestic market, as they increased transparency and reduced the risk of an operation defaulting to nearly zero. To promote this market's growth, the National Treasury created rules to favor electronic operations (regarding quotes and trades).

5.3 The new Brazilian payment system

A fundamental requirement of a good public debt market is an efficient payment system in which the transfer of resources and assets among market participants occurs smoothly. Two imperatives are (a) processing information safely and rapidly and (b) minimizing financial risks.

By 2002, Brazil's payment system was considered quite advanced with respect to the first requirement. However, the second feature needed to be substantially improved, since problems in settling a financial operation usually create a lack of confidence in the system and generate losses. In extreme cases, this can

[44] The Sisbex by-laws are available at: http://www.bmf.com.br/portal/pages/Clearing1/Ativos/pdf/Sisbex_Regulamento.pdf.

cause systemic risk, when coupled with other institutions' increasing losses. To eliminate this risk, the Central Bank (which regulates and monitors the payment system) reformed the system that year.

In one move, it established the Reserve Transfer System (STR), a mechanism for inter-bank transfers of funds with real-time gross settlements. Similarly, the banking reserve accounts began to be monitored in real time, with fund transfers among different accounts requiring a sufficient balance in the account of the one placing the order. Thus, the SELIC, where transactions of public securities are performed and which is based on a Delivery versus Payment - DVP model, started to settle operations in real time, reducing the systemic risk and increasing participants' confidence.

The launch of the new Brazilian Payment System (SPB) in 2002 represented an important improvement in the financial market in general and to public debt, in particular. Today, the market for Brazilian securities depends on a very advanced operational framework.

Table 2. Main characteristics of the settlement systems

	SELIC/STR	CETIP	SISBEX	BM&FBOVESPA*
Market	Primary, secondary, loans, electronic (for primary only) and over-the-counter	Primary, electronic	Secondary, loans, electronic, over-the-counter	Primary, Treasury Direct
Assets	LFTs, LTNs and NTNs (all series)	Securitized debt bonds	LFTs, LTNs, NTN-Bs, NTN-Cs and NTN-Fs	LFTs, LTNs, NTN-Bs, NTN-Cs and NTN-Fs
Type of transaction	Cash (D0), forward (D1)	Cash (D0), forward (D1)	Cash (D0), forward (1-23 days)	Forward (D2)
Type and cycle of settlement	Real time gross	Real time gross	Net position (multilateral netting)	Gross position
Risk management	If funds or assets are insufficient, the operation is cancelled. Delivery versus payment system (DVP).	If funds or assets are insufficient, the operation is cancelled. DVP system.	Participants deposit guarantees that can be used to settle transactions	Intermediaries (banks and broker-dealers / distributors) are responsible for debiting the buyer's account in the DVP system
Direct participants	Banks holding reserves	Banks holding reserves and over 5,000 institutions other than liquidators	Banks and broker-dealers /distributors	Individuals
Start of operations	1979	1984	2004	2002

* Refers only to Treasury Direct-related operations
Prepared by the authors

6 Stock exchanges

Until 2008, the country had two markets for trading financial assets: the Brazilian Mercantile and Futures Exchange (BM&F) and the São Paulo Stock Exchange (Bovespa). At the end of 2007, the two entities decided to launch their Initial Public Offer (IPO) and in 2008, they merged into BM&FBovespa. However, the assets negotiated in each still belong to the same negotiation groups. Thus, interest rate and commodities derivatives as well as contracts in US dollars are negotiated in the assets sector (originally in BM&F), while the Brazilian stock market and some fixed-income assets are still handled by Bovespa.

Interest rate futures, known as One-Day Inter-Financial Deposits (DI Futures), are negotiated in BM&FBovespa. DIs are important for public debt management because they are very liquid and used as benchmarks for pricing government fixed-rate bonds. BM&FBovespa actions with the DI, regarding futures' interest rates and inflation, are important and need to be monitored closely by the National Treasury.

In partnership with the CBLC, the former Bovespa introduced the Bovespa Fix, a system for negotiations, settlements and custody of private fixed-income securities in a stock exchange environment, and the Soma Fix, for organized over-the-counter market trades. This initiative complements the private fixed-income market; currently, debentures, promissory notes and the FIDC (the Portuguese acronym for Investment Funds in Credit Rights), can also be traded within BM&FBovespa.[45]

7 Entities in the external debt market

Federal public securities issued outside the country are not as frequent or large as domestic issuances. To price them correctly, the institutions involved in the transactions must have a good client base and capacity to maintain liquidity for securities in the secondary market. In the international market, such intermediaries play a fundamental role in distributing securities: These include banks with experience in negotiating securities from emerging economies and corporations. They submit issuance proposals to the National Treasury on a regular basis, proposing a coupon interest rate and maturity for particular types of securities. If the Treasury agrees, the institutions charge fees to handle the operations and provide the documents required for issuing the securities.

The issuing format, fees charged, relationship between the banks and National Treasury, among other factors, are evaluated in order to choose the institution that will handle the sales.[46] Once these are completed, securities are registered in the clearing and settlement systems indicated by the buyers and are then negotiated in the secondary market. The market for sovereign bonds most often performs over-the-counter operations. Brazilian Eurobonds can be traded on MTS, an important electronic market for securities in Europe.

Three custody and settlement systems function in the international market where Brazilian sovereign bonds can be registered and settled: the Depository Trust Company (DTC), the Euroclear and the Clearstream Luxembourg.

The DTC, established in 1973 to generate electronic registers for financial assets traded on paper (physically), became the electronic clearing and settlement system for US assets and later, for international assets as well. It is one of the six subsidiaries of the Depository Trust & Clearing Corporation (DTCC), with 2.8 million assets issued in the United States and in another 107 countries. DTCC participants are banks, brokers-dealers, mutual funds and other financial institutions. It is regulated and follows rules established by the US Securities and Exchange Commission (SEC).[47]

Euroclear was created in 1971 by J.P. Morgan & Co. This Brussels-based financial company settles domestic and international transactions involving securities, private fixed-income assets and investment funds. Since 2000, it has been operated by the Euroclear Bank S.A. The system has approximately 2,000 participants from over 80 countries. The main participants include banks, broker-dealers and other financial institutions.

[45] For more details, see http://www.bmfbovespa.com.br/portugues/home.asp.

[46] Part III, Chapter 4 (item 3.2) provides more details on securities issued in the international market.

[47] For more information, see http://www.dtcc.com.

Euroclear is supervised by the Belgian Banking and Finance Commission (BFC), and is inspected by the National Bank of Belgium (NBB).

Luxembourg-based Clearstream Banking S.A. was established in 2000 from the merger of Cedel International and Deutsche Börse Clearing, and fully integrated in 2002. This settlement and custody entity is the repository of over 300,000 securities, equities and investment funds traded in domestic and international markets, of which 62% are fixed-income assets and 38% variable-income assets (related to equities).[48] Over 2,500 clients in 110 different countries interact with this institution, which performs an average of 250,000 transactions daily.

Brazilian global bonds issued in the international market can be registered and settled in any of the three major custody systems listed here;[49] negotiations for these bonds are bound by the rules established by the regulatory agencies of each country where the securities are registered.

The Securities and Exchange Commission (SEC) is the US government agency that regulates the fixed-income assets industry and the stock market; it was created by the Securities Exchange Act of 1934. Its Market Regulation Division establishes the norms for market operations and regulates brokers-dealers, self-regulatory organizations, as well as agencies involved with settlements, transfers (those with data on asset holders), the processing of asset information, and ratings. Its Investment Management Division inspects and regulates the funds industry and creates the rules for investment institutions (including mutual funds) and consultants.

With respect to self-regulatory entities, the National Association of Securities Dealers (NASD), which regulates transactions involving fixed-income assets, private securities, futures and options, and the New York Stock Exchange (NYSE) Regulation, Inc., which regulates the stock market, merged into the Financial Industry Regulatory Authority in 2007. This private entity is the financial market self-regulator.

While external debt now accounts for less than 10% of Brazil's Federal Public Debt, its existence ensures the country's participation in the international market; the reduced interest rates and high liquidity of Brazil's external securities promote the country's image and enable it to obtain good ratings from rating agencies. It is for this reason that National Treasury actions related to external debt have performed well; the Treasury has repurchased old debt that carries high interest rates and issued new securities at lower interest rates and longer terms.

8 Conclusion

Brazil has a well organized market structure, with legal and regulatory institutions to monitor all entities that participate in the domestic financial system. The regulatory environment is transparent and the effort to improve the quality of information on asset prices also has increased liquidity in the secondary market. The interaction among the agencies and entities described in this chapter helps develop the domestic financial market and minimize the risks of financial loss for society.

Asset liquidity, price transparency and lower risks positively affect public debt management and long-term planning. In this regard, the National Treasury routinely participates in working groups and discussions on developing the secondary securities' market, securities loans and short sales. The Treasury believes that improving these modalities involving public securities is pivotal for increasing their liquidity.

[48] Position in August 2007. Source: http://www.clearstream.com/ci/dispatch/en/kir/ci_nav/home.
[49] Eurobonds cannot be registered in the DTC.

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