



Brazilian Payment System Handbook

ANDIMA

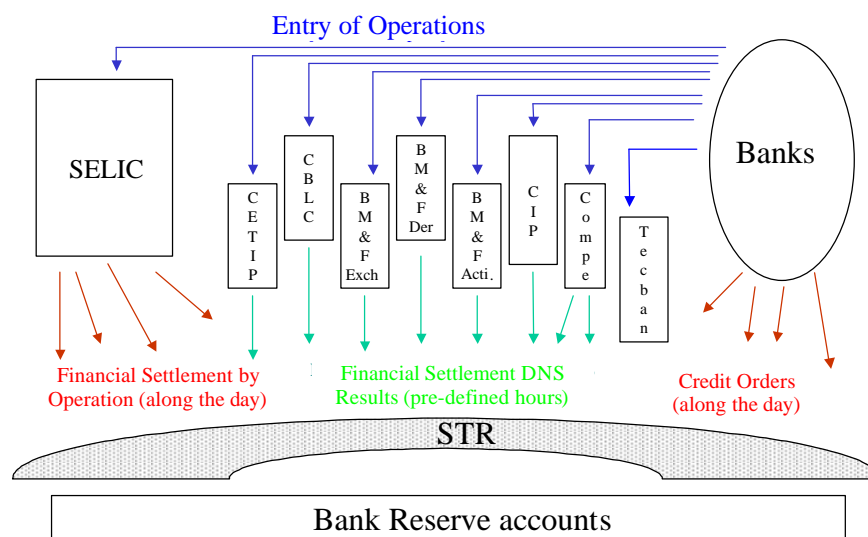
August / 2004

Introduction

As the result of an ample reformulation process of the model until then in effect, the new SPB – Sistema de Pagamentos Brasileiros (Brazilian Payment System) became effective on April 22nd, 2002, with the main objective of minimizing systemic risks, in accordance with the international recommendations concerning payment systems. Among the effected modifications, special attention should be given to the creation, at the level of the Banco Central do Brasil (Brazilian Central Bank), of a mechanism for the real time transfer of reserves - *STR* - *Sistema de Transferência de Reservas* (Reserve Transfer System), in which the settlements are irrevocable and unconditional; the adaptation and creation of compensation and settlement systems and clearing houses equipped with mechanisms and safeguards capable of guaranteeing the settlement process; and the constitution of a solid legal basis to support the functioning of said agencies. The main norms that discipline the operation of the new system are Law No. 10.214, dated 03/27/01; National Monetary Council Resolution No. 2.882 dated 08/30/01; and Central Bank Circular No. 3.057, dated 08/31/01.

The possibility of settlement throughout the entire day and in real time (*LBTR*) of operations commanded by the institutions in their Banking Reserves accounts constitutes a benchmark in the reform of the SPB, as so does the creation of new Deferred Net Settlement Clearing Houses (*Câmaras LDL - Liquidação Diferida Líquida*) - with specific hour grids for the settlement of their operations. The Clearing Houses, in turn, if considered systemically important, according to the criteria established by the Brazilian Central Bank, count on contingency and separation plans of Special Equity intended exclusively for the fulfillment of the obligations in each one of the systems, in addition to a series of risk management instruments. The following flowchart illustrates, in a simplified manner, the current design of the Payment System.

SPB - Brazilian Payment System



The modifications originating from the new BPS have implied in relevant changes to the modus operandi of its members, in addition to the incorporation of technologies that have led to greater System agility and security. An example of this was the creation of a proprietary data communication network, the RSFN - *Rede do Sistema Financeiro Nacional* (National Financial System Network), utilizing cryptographic messages and digital signatures.

ANDIMA - *Associação Nacional das Instituições do Mercado Financeiro* (National Association of Financial Market Institutions) actively participated in the remodeling process of the BPS, since the initial discussions way back in 1999, and effected, in conjunction with the Brazilian Central Bank, the necessary adaptations to the SELIC - *Sistema Especial de Liquidação e de Custódia* (Special System for Settlement and Custody), adopting the necessary measures in order to guarantee its timely entry into operation. In addition, it promoted various encounters among its members in order to guarantee that the model adopted would satisfy all of the different institutional profiles. It should be noted that, by means of a partnership with Embratel, the RTM - *Rede de Telecomunicações para o Mercado* (Market Telecommunications Network), created by the Association, became one of the two networks to operate the RSFN.

In March of 2002, right before the initial functioning of the new System, ANDIMA issued the “Economic Report - Brazilian Payment System”(“*Relatório Econômico - Sistema de Pagamentos Brasileiro*”), consolidating the information relative to the restructuring project, its new design and its impacts on financial assets and institutions, as well as its operational characteristics and those of its members.

Now, in August of 2004, the Association issued this Manual, whose objective is to present, in the form of summary charts, the main characteristics of the clearing houses and compensation and settlement systems in activity in the country, considered systemically important or not by the Central Bank. For such, the different systems were classified into two categories: those related to the transfer of interbank reserves and those involved with financial assets / operations (bonds, securities, foreign currency and derivatives). The first group includes the *STR- Sistema de Transferência de Reservas* (Reserve Transfer System), the *CIP – Câmara Interbancária de Pagamentos* (Interbank Payment Clearing House) including the *Sitraf* and the *Siloc*, the *Compe – Centralizadora da Compensação de Cheques e Outros Papéis* (Check and Other Financial Paper Settlement Centralizing Agency) and the *TecBan* Clearing Chamber. The second group includes the *SELIC* (Special System for Settlement and Custody), the *CETIP – Câmara de Custódia e Liquidação* (Custody and Settlement Chamber), the *CBLC – Companhia Brasileira de Liquidação e Custódia* (Brazilian Settlement and Custody Company) and the *BM&F* (Brazilian Mercantile & Futures Exchange) Houses for the Registry, Compensation and Settlement of Assets, Derivatives and Foreign Exchange.

With this initiative, ANDIMA hopes to facilitate the market’s adaptation to the new structure of the Brazilian Payment System.

We thank the representatives of the Houses and Settlement and Compensation Systems and the technicians of the Central Bank’s Banking Operation Department and Payment System, who kindly helped with verifying the technical content of this work.

I – Settlement Systems for Interbank Fund Transfers

- I.1.** STR - Sistema de Transferência de Reservas (Reserve Transfer System)
- I.2.** CIP - Câmara Interbancária de Pagamentos (Interbank Payment Clearing House)
 - Sitraf - Sistema de Transferência de Fundos (Fund Transfer System)
 - Siloc - Sistema de Liquidação Diferida das Transferências Interbancárias de Ordens de Crédito (Deferred Settlement System for Interbank Transfer of Credit Orders)
- I.3.** Compe - *Centralizadora da Compensação de Cheques e Outros Papéis* (Centralized Clearance for Checks and Other Documents)
- I.4.** TecBan Clearing House

II - Settlement Systems for Financial Assets and Operations

- II.1.** SELIC - *Sistema Especial de Liquidação e de Custódia* (Special System for Settlement and Custody)
- II.2.** CETIP - *Câmara de Custódia e Liquidação* (Custody and Settlement Chamber)
- II.3.** CBLC - *Companhia Brasileira de Liquidação e Custódia* (Brazilian Settlement and Custody Company)
- II.4.** BM&F (Brazilian Mercantile & Futures Exchange) Securities Clearinghouse
- II.5.** BM&F (Brazilian Mercantile & Futures Exchange) Derivatives Clearinghouse
- II.6.** BM&F (Brazilian Mercantile & Futures Exchange) Foreign Exchange Clearinghouse

I - Settlement Systems for Interbank Fund Transfers

I.1. STR - Reserve Transfer System

Main Characteristics	
Item	Description
Type	<ul style="list-style-type: none"> System designed for large amounts (orders of any size can be executed, but, by agreement among the participants, a minimum limit of R\$ 5 thousand is respected).
Operator	<ul style="list-style-type: none"> Banco Central (Central Bank).
Settlement Mode	<ul style="list-style-type: none"> LBTR – <i>Liquidação Bruta em Tempo Real</i> (Gross Settlement in Real Time)
Settlement Term	<ul style="list-style-type: none"> D0, in real time.
Types of Operations	<ul style="list-style-type: none"> Interbank operations effected in the monetary, foreign exchange and capital markets, including net results obtained in settlement and compensation systems.
Participants	<ul style="list-style-type: none"> Central Bank; Institutions holders of Bank Reserve accounts; Clearing Houses and providers of compensation and settlement services holding settlement accounts at the Central Bank; STN – <i>Secretaria do Tesouro Nacional</i> (National Treasury Department) (optional).
Operational Rules	<ul style="list-style-type: none"> Based on credit orders; Only the holder of the account to be debited can issue the transfer order (except when acting in partial contingency).
Available Mechanisms	<ul style="list-style-type: none"> Alignment: upon issuing the order, the participant determines the level of preference (from “B” to “D”), for the case in which there are insufficient funds (in the case of sufficient funds, FIFO criteria). If not indicated, = level “D”. Level “A” = money draft orders directed to clearing house settlement accounts or providers of compensation and settlement services; Optimization routine.
Costs	<ul style="list-style-type: none"> Fee established by the Central Bank. For each fund transfer order settled, a fee is charged from the issuing participant and from the receiving participant.
Business Hours	<ul style="list-style-type: none"> From 06:30 am to 06:30 pm, every business day; 05:30 pm is the limit for the settlement of client orders.

Detailed information relative to the STR can be obtained on the Central Bank website, www.bcb.gov.br. The System’s Regulations were approved by a Central Bank Circular, whose normative text can be found on the ANDIMA site, located on the RTM Network, under the option SPB - Legislation.

I.2. CIP - Interbank Payment Clearing House Sitraf - Fund Transfer System

Main Characteristics	
Item	Description
Type	<ul style="list-style-type: none"> System designed for large amounts (orders of any size can be executed, but, by agreement among the participants, a limit of R\$ 5 thousand is respected).
Operator	<ul style="list-style-type: none"> CIP – Interbank Payment Clearing House.
Settlement Mode	<ul style="list-style-type: none"> Hybrid - DNS and LBTR (settlement of interbank payments in real time with the transfer of the multilateral balances to the banks’ accounts at the Central Bank at the end of the day).
Settlement Term	<ul style="list-style-type: none"> D0, except for scheduling.
Types of Operations	<ul style="list-style-type: none"> Interbank transfer of funds (mainly Electronic Money Transfers - <i>TED</i>).
Participants	<ul style="list-style-type: none"> Institutions holders of Bank Reserve accounts, admitted as participants of the Sitraf by signature of a Service Rendering Contract.
Operational Rules	<ul style="list-style-type: none"> Based on credit orders; Only the holder of the account to be debited may issue the transfer order; The approved payment orders are final and, therefore, unconditional and irreversible; Two message processing cycles: <ol style="list-style-type: none"> 1) Main: Sitraf receives and processes payment messages; 2) Complementary: period after the main cycle, during which the messages that remained in line for regularization are settled.
Mechanisms and Safeguards	<ul style="list-style-type: none"> Mandatory Initial Deposit and Complementary Deposits (voluntary); Optimization of payments pending in line for regularization; Fund for the Provision of Coverage of Operational Risk.
Costs	<ul style="list-style-type: none"> Fee for the utilization of the System and Annual Contribution to the CIP.
Business Hours	<ul style="list-style-type: none"> From 06:30 am to 05:25 pm, every business day.

Sitraf Business Hours	
6:30 am	Opening and Request for mandatory initial deposit from participating banks.
6:30 am – 7:30 am	Period for the banks to effect the mandatory initial deposit.
7:30 am	CIP informs the operative and inoperative banks.
7:30 am – 5 pm	Period for the transmittal of payment orders.
5 pm – 5:10 pm	Processing of the multilateral algorithm without the upper limit of the account balance. Closing of the main cycle - CIP transfers the balance of the banks’ accounts to the Bank Reserve account, via the STR.
5:10 pm – 5:15 pm	Banks may cancel pending messages.
5:15 pm – 5:20 pm	Banks effect deposit equal to the gross value of the pending payment messages.
5:20 pm – 5:25 pm	CIP processes the multilateral netting of the pending payment messages. Closing of the complementary cycle - CIP transfers the balance to the Bank’s Reserve accounts at the Central Bank, via the STR.
5:25 pm	End of the payment cycle.

I.2. CIP (continuation)

Siloc - Deferred Settlement System for the Interbank Transfer of Credit Orders *

Main Characteristics	
Item	Description
Type	▪ Retail.
Operator	▪ CIP – Interbank Payment Clearing House.
Settlement Mode	▪ LDL (<i>Liquidação Diferida Líquida</i>) – Deferred Net Settlement
Settlement Term	▪ D+1.
Types of Operations	▪ Interbank transfers of credit orders (DOC- Credit Order Documents and, in implementation, collection documents).
Participants	▪ Financial institutions holders of Bank Reserve accounts, admitted as participants of the Siloc by signature of an Additive to the Service Rendering Contract.
Operational Rules	<ul style="list-style-type: none"> ▪ Based on credit orders; ▪ Only the holder of the account to be debited may issue the transfer order; ▪ Two settlement cycles: <ol style="list-style-type: none"> 1) First: credit orders originating on the previous business day; 2) Second: credit orders originating on the same day and the devolution of credit orders originating on the previous business day.
Mechanisms and Safeguards	<ul style="list-style-type: none"> ▪ Special Adjustment Session; ▪ Fund for the Provision of Coverage of Operational Risk.
Costs	<ul style="list-style-type: none"> ▪ Interbank fee – incident on DOC and paid by the issuing party; ▪ Processing fee – incident on the quantity of registers processed and paid by the issuing party; ▪ <u>Devolution Fee due to CIP</u> – incident upon the quantity of documents sent for devolution and paid by the issuing party.
Business Hours	▪ Refer to business hours in table below.

*Not a systemically important system.

Siloc Business Hours		
Events	1st Cycle	2nd Cycle
Processing Phase	From 09 pm of business day-1 to 12:30 am of business day. Partial results: 1st at 09 pm, 2nd at 10 pm, 3rd at 11 pm, 4th at 12:00 pm and 5th at 12:30 am.	From 01 pm of business day up to 02:30 pm of business day. Partial results: 1st at 01 pm, 2nd at 02 pm and 3rd at 02:30 pm.
Start of Clearing Phase	Up until 01 am of business day.	02:35 pm of business day.
Clearing Phase– Special Adjustment Session	From 01 am of business day to 05 am of business day.	--
End of Clearing Phase	Up until 05:10 am of business day.	02:40 pm of business day
Fund Transfer Phase – Deposit Period	From 07 am to 08 am of business day.	From 03:20 pm to 03:50 pm of business day.
Fund Transfer Phase – Settlement Time	At 08:20 am of business day.	At 04:10 pm of business day.

Detailed information on the CIP can be obtained on the website www.cip-bancos.org.br and, additionally, on the Central Bank website, www.bcb.gov.br.

I.3. Compe - Centralized Clearance for Checks and Other Documents*

Main Characteristics	
Item	Description
Type	▪ Retail
Operator	▪ Banco do Brasil.
Settlement Mode	▪ LDL (<i>Liquidação Diferida Líquida</i>) - Deferred Net Settlement.
Settlement Terms	▪ The interbank settlement is effected, in the STR, on D+1, based on the date of acceptance of the document. The checks superior to the limit established by the Central Bank (R\$ 299.99) are exchanged on D0, during the night session, and those inferior to the referred to limit are exchanged on D+1, during the night session. The settlement hours vary in accordance with the exchange session, as presented in the attached table.
Types of Operations	▪ Checks and collection documents.
Participants	<ul style="list-style-type: none"> ▪ Central Bank, commercial banks, multiple banks with commercial bank portfolios and <i>Caixa Econômica</i> (Federal Savings and Loan Bank); ▪ The admission of financial institutions to the Compe depends on prior authorization from the Central Bank's <i>Deban</i> (<i>Departamento de Operações Bancárias e de Sistema de Pagamentos</i>) –Banking Operations and Payment System Department.
Operational Rules	<ul style="list-style-type: none"> ▪ Composed of three Systems: <ol style="list-style-type: none"> 1) Local: exchange of checks drawn against bank branches located in the <u>clearing center</u> served by the agency; 2) Regionally Integrated (<i>SIRC</i>): exchange of checks drawn against bank branches located in the <u>clearing centers</u> served by the agency, linked to a centralizing clearing center (a state capital); 3) National: exchange of checks drawn against banks that are not present in the local and regional clearing centers; ▪ Two clearing sessions: day time and night time (exchange and devolution); ▪ The commercial banks, the multiple banks with commercial portfolios and the <i>Caixa Econômica</i> (Federal Savings and Loan Bank) are the holders, at the Central Bank, of accounts tied to the financial settlement of the interbank obligations determined by the Compe; ▪ The amounts deposited in checks become available for the compensation of debits, in the respective depositor's current account, on the night of the last day of the blockage period, and can be drawn, directly at the bank cashier, on the first business day following the last day of the blockage period (Refer to chart "Periods of Exchangeable Checks").
Mechanisms and Safeguards	▪ Prior deposit on checks of unitary amount equal or superior to R\$ 5 thousand (mechanism to induce the migration of payments of large amounts from the Compe to a more adequately protected settlement environment).
Costs	<ul style="list-style-type: none"> ▪ Interbank costs: check – bank against which check is drawn pays a fee per check settled; collection: receiving bank pays fee to the bank of issue for each collection received; ▪ Compe costs: remitting bank pays fee per thousand of (all) documents processed; drawee bank (which is returning the check) pays fee per check returned.
Business Hours	<ul style="list-style-type: none"> ▪ Physical exchange (checks): day time, from 02 pm to 04 pm; night time, from 10 pm to 11:30 pm; ▪ Electronic exchange (all documents): 24 hours a day.

* The analysis of the definition by Compe, as to the systemic importance or not, shall be conducted by the Central Bank in August 2004.

Business Hours for the Financial Settlement of the Compe Result		
Procedures	Night time (referent to the previous business day)	Day time (same business day)
Banco do Brasil informs the Central Bank and each participant of the bilateral and multilateral results.	Up until 8 am	Up until 5 pm
Institutions effect the transfer of funds to linked account for the financial settlement of their obligations.	8:30 am	5:30 pm
In case of an eventual lack of funds by the participant(s), the Central Bank excludes him/them from the result and informs a new multilateral net balance.		
In the case described in the previous item, the participants effect transfers, when necessary, to a linked account, in accordance with the newly identified multilateral net balance.	Up until 8:40 am	Up until 5:40 pm
If necessary, the procedures established in the two items above are successively repeated up until the moment in which the balance of the linked account is sufficient for the financial settlement of the result.		
Financial settlement of the obligations	9 am	6 pm

Terms for the Clearing of Checks by Compe – General Rules		
Local system and SIRC (Regionally Integrated Clearing Service)		
Terms (counted as from the first business day after the day of deposit).	Amount of Check Deposited	
	Above the amount limit	Below the amount limit
Blockage period of the deposited amounts.	1 business day	2 business days
Period for the delivery, to the depositor, of a returned check.	3 business days	4 business days
National Clearing System (<i>Sistema Nacional de Compensação</i>)		
Terms (counted as from the first business day after the day of deposit). Clearing center in which deposit was received	Location of Drawn Check	
	Integrated to the São Paulo SIRC	Not integrated to the São Paulo SIRC
Blockage period of the deposited amounts: - Integrated to the São Paulo SIRC; - Not integrated to the São Paulo SIRC.	Same as Local system and SIRC 3 business days	3 business days 4 business days
Period for the delivery, to the depositor, of a returned check: - Integrated to the São Paulo SIRC; - Not integrated to the São Paulo SIRC.	Same as Local system and SIRC Up to 5 business days	5 business days Up to 7 business days
Observation: Amount limit established by the Central Bank is R\$ 299,99. Some occurrences (foreseen by norms) may surpass the terms established above.		

Detailed information relative to Compe can be obtained on the Central Bank website, www.bcb.gov.br. The MNI - *Manual de Normas e Instruções do Banco Central* (Central Bank's Manual on Norms and Instructions) contains a specific section on the Compe (Title 3, Chapter 6). The ANDIMA website, on the RTM network, option SPB – Legislation, also presents norms relative to the subject .

I.4. TecBan*Clearing House

Main Characteristics	
Item	Description
Type	▪ Retail.
Operator	▪ TecBan – Tecnologia Bancária S.A.
Settlement Mode	▪ LDL (<i>Liquidação Diferida Líquida</i>) - Deferred Net Settlement
Settlement Terms	▪ D0 and D+1.
Types of Operations	<ul style="list-style-type: none"> ▪ Electronic transfers of funds related to the following products: electronic checks, withdrawals via shared networks, shared bank branches, payment of bills, direct debits and miscellaneous credits. ▪ Classified as: online debits (at sight and pre-dated), offline debits and offline credits. ▪ Categories: <ol style="list-style-type: none"> 1) Guaranteed transactions: for acceptance, the sufficiency of operational limits is required on behalf of the participant in charge of proceeding with the corresponding debit; 2) Non-guaranteed transactions: the result consists in an offline credit operation, whose acceptance does not depend on the sufficiency of operational limits.
Participants	▪ Financial institutions that are shareholders of or associated with TecBan.
Operational Rules	<ul style="list-style-type: none"> ▪ Four clearing and settlement cycles. The first two are for operations whose confirmation occurred between 2 pm and midnight of the previous day, in the case of transactions guaranteed by TecBan (1-A), and between 4 pm of the previous day and 8 am of the current day, in the case of transactions not guaranteed by TecBan, (1-B). The last two are for operations whose confirmations occurred between 00:00 am and 2 pm of the current day, in the case of transactions guaranteed by TecBan (2-A), and between 8 am and 4 pm of the same day, in the case of transactions not guaranteed by TecBan (2-B); ▪ The participants shall possess a Bank Reserve account with the Central Bank or indicate a participant holder of such account as their representative.
Mechanisms and Safeguards	▪ Prior deposit of guarantees and establishment of operational limits.
Costs	• Included in the transaction-processing fee (the participating bank has no direct cost).
Business Hours	▪ From 8 am to 6 pm every business day.

TecBan Operational Cycle	
8am	Opening
8:30 am – 10:10 am (Cycles 1-A and 1-B)	8:30 am: TecBan informs the participant's position relative to the cycle's clearing and settlement operations.
	9:40 am: time limit for the participants in debt to effect the deposit of the funds due in the TecBan settlement account.
	10:10 am: time limit for TecBan to credit the funds of the creditor participants.
4:10 pm – 5:10 pm (Cycles 2-A and 2-B)	4:10 pm: TecBan informs the participant's position relative to the cycle's clearing and settlement operations .
	4:40 pm: time limit for the participants in debt to effect the deposit of the funds due in the TecBan settlement account.
	5:10 pm: time limit for TecBan to credit the funds of the creditor participants.
6 pm	Closing.

*Not a systemically important clearinghouse.

Detailed information relative to TecBan can be obtained on the site www.tecban.com.br and, additionally, on the Central Bank site, www.bcb.gov.br

II - Settlement Systems for Financial Assets and Operations

II.1. SELIC - Special System for Settlement and Custody

Main Characteristics	
Item	Description
Types of Assets and Operations	<ul style="list-style-type: none"> ▪ Bonds issued by the National Treasury and the Central Bank; ▪ Operations subject to registration: issuance or write off of bonds; payment of interest, amortization or redemption; sale, purchase and repurchase/sellback transactions, with or without the free trade of securities; repurchase/sellback; registration of forward transaction; transfer of financial amount relative to taxes, interest and amortization; transfer of bonds, without the corresponding payment; commitment/un-commitment of bonds; split/union of interest coupons; various types of regularization; payment of the monthly amount due by the participant; and those relative to the clearing houses.
Operator	<ul style="list-style-type: none"> ▪ Central Bank – Open Market Operations Department (<i>Demab – Departamento de Operações de Mercado Aberto</i>).
Function	<ul style="list-style-type: none"> ▪ Central depository of Federal Government bonds (<i>TPFs</i>); ▪ Registration and settlement system of <i>TPF</i> operations; ▪ Complementary Modules: <i>Offpub – Oferta Pública Formal Eletrônica</i> (Electronic System for Formal Public Offer) and <i>Leinf – Leilão Informal Eletrônico de Moeda e de Títulos</i> (Informal Electronic Auction of Currency and Securities).
Settlement Modes	<ul style="list-style-type: none"> ▪ Real Time Gross Settlement (RTGS); ▪ Model 1 for delivery versus payment (DVP1).
Settlement Terms	<ul style="list-style-type: none"> ▪ D0, in real time.
Participants	<ul style="list-style-type: none"> ▪ Central Bank, National Treasury Department, banks, <i>Caixa Econômica</i> (Federal Savings and Loan Bank), security brokers and dealers, other institutions authorized to operate by the Central Bank, funds, open and closed complementary pension entities, insurance companies, local reinsurers, medical assistance plan operators, capitalization companies and Clearing Houses; ▪ For effect of the financial settlement of the operations, classified as: settlement institution (Central Bank and holders of Bank Reserve accounts) or non-settling (all others). In relation to the transmission of the commands of the operations, the non-settling participant is classified as: subordinate (when his commands are transmitted by the respective standard-settling participant) or autonomous.
Operational Rules	<ul style="list-style-type: none"> ▪ Double command input (for registration of operations); ▪ Once a command is transmitted, the remaining commands required for registration/settlement of the operation or of the associated/conjunct operations must be transmitted within 60 minutes*; ▪ Operational limit for non-settling participants; ▪ Types of accounts: “self” custody with free movement, custody for free movement clients (Clients 1 and 2), custody with special movement and brokerage; ▪ Specific Clearing House accounts: “self” custody with free movement, custody for free movement clients (among them, that of special equity) and guarantee. The Clearing Houses responsible for the clearing and settlement of securities in the custody of SELIC possess, in addition, deposit and settlement accounts.
Mechanisms and Safeguards	<ul style="list-style-type: none"> ▪ Associated operations (including those with repo or intraday rediscount), coupled operations (loan operations) and intermediation operations; ▪ Settlement pending due to insufficiency of securities (60 minutes*).
Costs	<ul style="list-style-type: none"> ▪ Adhesion cost (initial access) and monthly payment, relative to the custody of securities, in order to pay back the operational and investment expenses incurred by ANDIMA and the Central Bank.
Business Hours	<ul style="list-style-type: none"> ▪ From 6:30 am to 6:30 pm, every business day.

* The lapse of the aforementioned time period for cancellation of the respective commands shall be verified every 10 minutes, starting at 9:30 am.

SELIC Business Hours	
Business Hours	Description
6:30 am	Opening procedures (automatic transmission by SELIC): <ul style="list-style-type: none"> - Repurchase/sellback of securities to be redeemed on the same day; - Payment of interest, amortization and redemption due on the same day.
9am	Time limit for the transmittal of the commands issued by Demab relative to the settlement, on the same day, of: <ul style="list-style-type: none"> - Purchase or sale operation of securities contracted in public offering or in informal auction, in the hypothesis of the result having been disclosed on the previous day; and - Repurchase or sellback due to commitment assumed on the previous day. <p>Observation: the other party's command is transmitted up until 5 pm.</p>
9:30 am	Automatic transmission by SELIC, on the day of settlement, of the purchase and sale commands of forward operations, according to the chronological order in which they were registered.
1 pm	The clearing house's agreement to settle a repurchase/sellback operation originated from an intraday repo operation, not yet registered/settled in the SELIC, shall be considered revoked.
5 pm	Cancellation of forward operations pending settlement due to insufficiency of securities, relative to securities object of public offering that, at the time of registry of the operation, had already been disclosed, but not yet settled.
6:30pm	At closing: <ul style="list-style-type: none"> - The operations that are still pending securities are cancelled; - The clearing house's agreement to liquidate a repurchase/sellback operation originating from an operation committed for the following day, not yet registered/settled in the SELIC, shall be considered revoked.

Detailed information relative to the SELIC can be obtained on the Central Bank website, www.bcb.gov.br. The System Regulations were approved by a Central Bank Circular, whose normative text is available on the ANDIMA website on the RTM Network, under option SPB - Legislation.

II.2. CETIP – Custody and Settlement Clearing House

Main Characteristics	
Item	Description
Types of Assets and Operations	<ul style="list-style-type: none"> ▪ Issuer risk operations: issue/redemption of TVM; application/redemption of fund quotas; repurchase by the issuer and sellback of TVM issued by the same; payment of events; intermediation operations for the primary placement of TVM; maturity of a financial CPR; assignment/acquisition/retrocession of credit; and issuance of Conab option contracts; ▪ Derivatives: swap, currency forward and credit derivatives; ▪ Secondary market operations: final and repo purchase and sale; return of repo operation; repurchase/sellback of TVM through a negotiation system-blind screen; and intermediation operations; ▪ Registration operations: maturity of physical CPR; issuance/deposit of TVM and fund quotas, without financial settlement in the CETIP; transfer of securities given in guarantee of operations in other markets; operations with client 1 or 2 account of the same institution; linkage/ un-linkage to/from the Technical Reserve account; and the guarantee of assets.
Operator	<ul style="list-style-type: none"> ▪ CETIP.
Function	<ul style="list-style-type: none"> ▪ Depository of private fixed income securities, state and municipal government bonds and bonds representative of debts under the responsibility of the National Treasury; ▪ Supplier of an electronic environment for accomplishment of on-line operations and auctions, for the registration of business deals and financial settlement; ▪ Does not act as central counterpart in the operations that it settles.
Settlement Modes	<ul style="list-style-type: none"> ▪ Multilateral: Issuer risk operations (and those retaining income tax); ▪ Bilateral: rebates of insurance premiums paid and redemption of swap and currency forward contracts, and events relative to credit derivatives; ▪ Real Time Gross Settlement (via STR or at the settling bank): all operations subject to registration at the CETIP, except for the issuer risk operations with automatic return, including the settlement of premiums, anticipations and intermediation of swap and currency forward contracts (and of the CETIP costs); ▪ Models 1 (Gross) and 2 (Multilateral) of delivery versus payment (DVP1 and DVP2).
Settlement Terms	<ul style="list-style-type: none"> ▪ D0, except for the settlement of events relative to assets with issuance dates before that of 10/01/01, whose settlement occurs on D+1.
Participants	<ul style="list-style-type: none"> ▪ Multiple banks, commercial banks, investment banks, development banks, brokers, distributors, finance companies, real estate credit institutions, commercial leasing companies, mortgage companies, savings and loan associations, mutual investment funds and non-financial legal entities. ▪ Classified as: market members (may operate in the intermediation of assets) and special clients (all other).
Operational Rules	<ul style="list-style-type: none"> ▪ Double command; ▪ Types of accounts (5): own, Clients 1, Clients 2, Registrar and Specific Operations; ▪ Liquidating Bank: the participant must indicate at least one. Should there be more than one, the participant must indicate the main settling bank; ▪ The market member holder of a Bank Reserve account must, obligatorily, effect the settlement of its operations and that of its Clients (1 and 2).
Mechanisms and Safeguards	<ul style="list-style-type: none"> ▪ Availability of distinct settlement modes, as described above; ▪ Possibility of registering operations by file transfer.
Costs	<ul style="list-style-type: none"> ▪ Custody Fee (for the scriptural bookkeeping), registration fee (for the issuance of assets and contract registration), transaction fee (for each transaction effected) and monthly use fee (by quantity of transactions effected and by type of participant).
Business Hours	<ul style="list-style-type: none"> ▪ From 6:30 am to 8 pm, every business day.

Acronyms: TVM = securities. CPR = rural product note. Conab = National Supply Company

CETIP Business Hours	
Mode	Business Hours
CETIP (Multilateral)	Registry: 8:30 am – 11:30 am Confirmation: 11:35 am – 12:20 pm Payment by Debtor Banks : 8:30 am – 12:45 pm Settlement by CETIP: 1 pm
Gross (LBTR)	- Via STR Registry: 8:30 am – 5:30 pm Settlement: 8:30 am – 5:45 pm - Via Liquidating Bank (<i>Book-Transfer</i>) Registry: 8:30 am – 6:40pm Settlement: 8:30 am – 6:50 pm
Bilateral	Registry: 8:30 am – 11am Settlement: 11:05 am – 1:55 pm
Without Mode (Simple Registry)	Registry: 8:30 am – 6:40 pm

Detailed information relative to the Cetip can be obtained on the Cetip website, www.cetip.com.br and, additionally, on the Central Bank website, www.bcb.gov.br.

II.3. CBLC - Brazilian Settlement and Custody Company

Main Characteristics	
Item	Description
Types of Assets and Operations	<ul style="list-style-type: none"> ▪ Shares, derivatives and private fixed income securities.
Operator	<ul style="list-style-type: none"> ▪ CBLC.
Function	<ul style="list-style-type: none"> ▪ Custody, clearing and settlement services; ▪ Central counterpart for all clearing agents (except for Gross mode).
Settlement Modes	<ul style="list-style-type: none"> ▪ Multilateral netting (DNS), for financial obligations as well as securities movements. The calculation of the net balance includes all markets; ▪ Gross, in the case of special operations, being that the participant may determine the date of settlement (D0 or D+1); ▪ Model 3 for delivery versus payment (DVP3).
Settlement Terms	<ul style="list-style-type: none"> ▪ Shares: at sight (D+3), forward (D+n), future (D+3), option premiums and daily adjustments of future operations (D+1); ▪ Private fixed income securities (net module): D0 (operation specified up until 1 pm) and D+1 (operation specified up until 1 pm of D+1); ▪ Private fixed income securities (gross module): D0 (operation specified up until 5 pm) .
Participants	<ul style="list-style-type: none"> ▪ Natural person or legal entity related to the CBLC in the quality of: settlement agent (full and private), custody agents, special custody agents, negotiation participant, settling bank, investor or qualified investor.
Operational Rules	<ul style="list-style-type: none"> ▪ CBLC establishes operational limits for the clearing agents, who distribute to their clients; ▪ Settling Bank: the indication of a settling bank is obligatory for the settlement of operations and payment/receipt of custody events; ▪ Settlement Accounts: at the STR (financial funds) and at the CBLC Custody Service (for assets).
Mechanisms and Safeguards	<ul style="list-style-type: none"> ▪ Asset Delivery Service that allows the delivery of assets between the participants of the settlement chain of responsibility, by means of internal settlement accounts; ▪ Asset delivery restriction mechanism; ▪ Minimum requirements for participation; ▪ Hybrid model for the coverage of risks (collateralization and mutualization): collateral, which define the operational limits, and contribution to the Settlement Fund; ▪ Asset loan service (BTC – CBLC Securities Bank); ▪ Position limits (by investor, by intermediary and for the market); ▪ Margin calculation (for premium and risk).
Costs	<ul style="list-style-type: none"> ▪ Bovespa (São Paulo Stock Exchange) and CBLC fees: variable income (based on financial amount, according to the type of operation – for investors in general and investment funds/clubs); fixed income (issuer and taker of offer on screen, direct deal and minimum fee – last two charged from the buyer and from the seller); Sectorial Fund auction and auction of securities not quoted at the the Stock Exchange (both charged based on the auction value); ▪ SOMA and CBLC fees: variable income (based on the financial amount, according to the nature of the operations); fixed income (issuer and taker of on screen offer, direct deal, registry of over the counter operations and minimum fee – last three charged from the buyer and from the seller); ▪ CBLC Securities Bank - BTC (upon settlement of the contract to the taker): based on the financial amount.
Business Hours	<ul style="list-style-type: none"> ▪ From 8:30 am to 9:30 pm, every business day.

CBLC Business Hours	
8:30 am	Clearing House communicates opening.
9 am	Clearing House informs net balance of negotiations – fixed income and variable income (previous).
9:30 am	Clearing House informs settlement of events and issues.
10 am	Time limit for the delivery of variable income assets to the CBLC Custody.
10:30 am	Time limit for the financial institution to request transfer for settlement of events and issues
12:30 pm	Clearing House effects the transfer of events and issues.
12:45 pm	Time limit for the financial institution to transfer government bonds to the CBLC guarantee account at the SELIC for margin reversal.
2:30 pm	Clearing House informs the net result of the negotiations to the Central Bank.
2:45 pm	Time limit for the request for delivery restriction.
3 pm	Time limit for the financial institution to confirm or disagree with the net negotiation results
3:10 pm	Time limit for eventual settlements due to disagreements with net negotiation results.
3:30 pm	Time limit for the financial institution to request transfer for settlement of the net negotiation results.
3:45 pm	Time limit for eventual settlements due to cases of default.
3:55 pm	Clearing House effects the settlement of creditor results (Processing of Delivery Versus Payment).
6:30 pm	Clearing House communicates closing.
7 pm	Time limit for the liberation of delivery restrictions.

Detailed information relative to the CBLC can be obtained on the CBLC website, www.cblc.com.br and, in addition, on the Central Bank website, www.bcb.gov.br.

II.4. BM&F Securities Clearinghouse

Main Characteristics	
Item	Description
Types of Assets and Operations	<ul style="list-style-type: none"> ▪ Operations with federal government bonds effected in the <i>Sisbex</i> (Trading System of Public Bonds and other Assets) - Negotiation or registered at the <i>Sisbex</i>-Registry; ▪ Operational Modes: definitive operations (at sight and forward), repo (specific and generic collateral), forward of securities to be auctioned, migration between SELIC and Clearing House (specific committed operations) and <i>SET</i> - <i>Serviço de Empréstimo de Títulos</i> (Securities Loan Service).
Operator	<ul style="list-style-type: none"> ▪ BM&F – <i>Bolsa de Mercadorias & Futuros</i> (Brazilian Mercantile & Futures Exchange)
Function	<ul style="list-style-type: none"> ▪ Registry, clearing and settlement operations effected in the <i>Sisbex</i>; ▪ Acts as guaranteeing central counterpart of the operations in relation to the MC and the PLC (except in the case of gross settlement).
Settlement Modes	<ul style="list-style-type: none"> ▪ Multilateral: balances compensated in securities and financial funds of each MC (Settlement Member) and PLC (Centralized Settlement Participant) (Model DVP3); ▪ Gross: SET (Securities Loan Service) operations (with the option of gross settlement) and special operations.
Settlement Terms	<ul style="list-style-type: none"> ▪ Definitive operations: D0 (at sight) and D+N (forward); ▪ Repo: purchase/sale (D+M) and repurchase/sellback (D+N), N>M; ▪ Forward of securities to be auctioned: D+N (on the date of settlement of the public offer); ▪ Migration between the SELIC and the Clearing House: purchase/sale (D0) and repurchase/sellback (D+N); ▪ SET (Securities Loan Service): operation on D0 and maturity on D+N.
Participants	<ul style="list-style-type: none"> ▪ Categories: Settlement Member (<i>MC</i>), Centralized Settlement Participant (<i>PLC</i>), Participant in Negotiation of Assets (<i>PNA</i>), Final Client (<i>CF</i>), Settling Bank (<i>BL</i>), Custodian (<i>CST</i>), Non-Member (<i>NM</i>) and Messenger (<i>MSG</i>).
Operational Rules	<ul style="list-style-type: none"> ▪ The <i>MCs</i> and <i>PLCs</i> deposit guarantees with the Clearing House and receive in turn operational limits; ▪ Each <i>MC</i> or <i>PLC</i> effects the movement of financial funds with the Clearing House by means of a <i>BL</i>, with which it maintains a contractual relationship; ▪ Each <i>MC</i>, <i>PNA</i>, <i>PLC</i> or <i>CF</i> effects the movement of securities with the Clearing House by means of a <i>CST</i>, with which it maintains a contractual relationship; ▪ Asset accounts: Guarantee type (with SELIC and with banking institutions), Deposit type (at SELIC) and Mutualized Fund type; ▪ Settlement accounts: at the STR, SELIC and internal.
Mechanisms and Safeguards	<ul style="list-style-type: none"> ▪ Available resources: association with the settlement of auctions, tie-in to same day rediscount and transfer of securities between the Clearing House and the BM&F guarantee accounts; ▪ Safeguards: <ol style="list-style-type: none"> 1) Deposit of guarantees; 2) Operational Fund and Guarantor Fund; 3) Hybrid mechanism for the partition of losses; 4) Pre-approved liquidity assistance funds.
Costs	<ul style="list-style-type: none"> ▪ To be defined (during the first three months, the Clearing House is not charging the participants).
Business Hours	<ul style="list-style-type: none"> ▪ From 8am to 6:30 pm, every business day .

BM&F Securities Clearinghouse Business Hours	
Business Hours	Description
8:00 am	- Clearing House opening; - Request for the recomposition of guarantees.
8:30 am	- Time limit for the recomposition of guarantees (in function of the night time processing); - Transfer of the events of securities deposited in the Guarantee and Deposit Accounts; - Start of acceptance of repo operations.
9:00 am	- Start of acceptance of other operations.
11:00 am	- Time limit for the debtors of previous day operations to regularize their delivery and/or payment obligations.
1:00 pm	- Time limit for the acceptance of operations: with settlement on D0, except for gross settlement SET operations; and repo for D0/D+N.
1:05 pm	- Time limit for: request for cancellation of D0 settlement operations; reallocation of operations and rejection of telephone orders for operations with D0 settlement; specification of operations covered with settlement on D0 and of collateral for generic repo; - Settlement of participant's duty to deliver securities in covered operations.
1:10 pm	- Start of period for the request for use of financial resource guarantees for the fulfillment of payment obligations in the "Settlement Window".
1:25 pm	- Information, disclosed by the Clearing House, relative to the net financed and financing positions.
1:45 pm	- Time limit for the specification of collateral of the net financed positions by the participants.
2:10 pm	- Distribution of generic collateral and request for recomposition of guarantees.
2:25 pm	- Time limit for compliance with the request for recomposition of guarantees (in function of operations with settlement on D0).
2:45 pm	- Time limit for: compliance with the request for recomposition of guarantees (in function of operations with settlement on D+N, N>0); and other specifications with settlement on D0.
2:50 pm	- Time limit for: request for the use of financial fund guarantees for the fulfillment of payment in the "Settlement Window" and acceptance of instructions.
3:00 pm	- Disclosure of information relative to the net multilateral result; - Start of period for the request of command numbers for the parceled delivery of securities.
3:30 pm	- Time limit for the confirmation of the settlement bank.
3:50 pm	- Time limit for the request of command numbers for the parceled delivery of securities.
4:00 pm	- Time limit for the delivery of securities and payment of financial funds by the participants.
4:30 pm	- Time limit for the request of delivery restriction by the participants.
5:00 pm	- Payment and delivery of securities by the Clearing House.
5:45 pm	- Time limit for security creditors to effect the receipt commands at SELIC; - Time limit for the cancellation at SELIC, by the Clearing House, of its commands for delivery of securities to creditors and for the transfer of securities from its Settlement Account to their Guarantee and Deposit Accounts.
6:00 pm	- Time limit for: acceptance of operations with settlement on D+N, N>0; acceptance of gross settlement SET operations; confirmation/liberation of the delivery of securities by participants; and request for the movement of securities and financial resources.
6:05 pm	- Time limit for: request for the cancellation of operations with settlement on D+N, N>0; and reallocation of operations and rejection of telephone ordered operations with settlement on D+N, N>0.
6:30 pm	- Closing of Clearing House activities for the day.

Detailed information relative to the BM&F can be obtained on the BM&F website, www.bmf.com.br, and, in addition, on the Central Bank website, www.bcb.gov.br.

II.5. BM&F Derivatives Clearinghouse

Main Characteristics	
Item	Description
Types of Assets and Operations	<ul style="list-style-type: none"> ▪ Contracts: farming and cattle-raising, over the counter (<i>swaps</i> and flexible options) and financial (gold, indexes, foreign exchange rates and foreign debt bonds).
Operator	<ul style="list-style-type: none"> ▪ BM&F – <i>Bolsa de Mercadorias & Futuros</i>. (Brazilian Mercantile & Futures Exchange)
Function	<ul style="list-style-type: none"> ▪ Registry, clearing and settlement services for operations with derivatives; ▪ Acts as central counterpart, for the settlement of operations, in relation to the MCs (except in operations “without guarantee”).
Settlement Modes	<ul style="list-style-type: none"> ▪ Multilateral; ▪ Physical settlement; ▪ Model 3 for delivery versus payment (DVP3).
Settlement Terms	<ul style="list-style-type: none"> ▪ D+1.
Participants	<ul style="list-style-type: none"> ▪ Direct: Members of Compensation (MC), Direct Settlement Participants (PLD), Settling and Intermediary Banks (Commodities Brokerage Houses; Special Operator and Agricultural Goods Operator); ▪ Indirect: Principals and other agencies/institutions that render instrumental type services.
Operational Rules	<ul style="list-style-type: none"> ▪ The intermediaries must indicate at least two MCs (main and secondary) for clearing and financial settlement; ▪ The MCs that do not possess Bank Reserve accounts should indicate a BL (principal) to receive and transfer funds via STR. The Clearing House shall indicate a secondary BL.
Mechanisms and Safeguards	<ul style="list-style-type: none"> ▪ Safeguards: <ol style="list-style-type: none"> 1) Minimum criteria for acceptance of MC; 2) Risk coverage system (D0, same day MC risk limit, on a net basis; and D+1, guarantee margin system, on a gross basis, client by client); 3) Position concentration and price oscillation limits; 4) Call for additional guarantee margins (D0 or D+1); 5) Risk monitoring and guarantee valuation system; 6) Value-at risk system; 7) Funds: MC Special, Operation Settlement and Guarantee; 8) Pre-approved Liquidity Assistance Funds.
Costs	<ul style="list-style-type: none"> ▪ Exchange fees: emoluments, registry fee, permanence fee and settlement fee.
Business Hours	<ul style="list-style-type: none"> ▪ From 8 am to 8 pm, every business day, excluding holidays.

BM&F Derivatives Clearinghouse Business Hours	
Business Hours	Description
6:30 am – 6:45 am	Opening of the BM&F Derivatives Clearing House.
7 am – 7:30 am	Provisory Netting.
7:30 am – 1 pm	Deposit of Guarantees for D0.
2:10 pm – 2:15 pm	Definitive Netting.
2:15 pm – 2:30 pm	Confirmation of the Settling Bank.
Up until 2:50 pm	Receipt of Payments.
3:25 pm	Settlement of Payments.
1 pm – 5:30 pm	Deposit of Guarantees for D+1.
5 pm	Closing Message.

Detailed information relative to the BM&F can be obtained on the BM&F website, www.bmf.com.br, and, in addition, on the Central Bank website, www.bcb.gov.br.

II.6. BM&F Foreign Exchange Clearinghouse

Main Characteristics	
Item	Description
Types of Assets and Operations	<ul style="list-style-type: none"> ▪ Interbank foreign currency trade operations, effected between the Clearing House participants.
Operator	<ul style="list-style-type: none"> ▪ BM&F – Bolsa de Mercadorias & Futuros (Brazilian Mercantile & Futures Exchange).
Function	<ul style="list-style-type: none"> ▪ Registry, analysis, acceptance, contracting, netting and settlement services for foreign exchange operations by its participants.
Settlement Modes	<ul style="list-style-type: none"> ▪ Settlement of bilaterally netted amounts between the Clearing House and its participants (DNS); ▪ Payment versus Payment Principle (<i>PVP</i>).
Settlement Terms	<ul style="list-style-type: none"> ▪ D+1 (one business day) and, at maximum, D+2 (two business days).
Participants	<ul style="list-style-type: none"> ▪ Banks and brokerage companies authorized by the Central Bank to celebrate and/or intermediate foreign currency trade operations, when certified by the Clearing House to use its systems; ▪ Classified as: participating member (holder of patrimonial membership) and non-member.
Operational Rules	<ul style="list-style-type: none"> ▪ Clearing House accounts: settlement in local currency with the Central Bank and in foreign currency with the foreign banks; ▪ Counterpart for all the operations contracted by its participants and registered, analyzed and accepted by its systems; ▪ Operational limits, in netted amounts (in US\$), are attributed to the certified banks. The limits have two levels (being that for the second an additional guarantee is required).
Mechanisms and Safeguards	<ul style="list-style-type: none"> ▪ Prior deposits of guarantees; ▪ Establishment of operational limits for participants based on proprietary rating system; ▪ Participation Fund and Operational Fund; ▪ Hybrid mechanism for the partition of losses; ▪ Clearing House counts on operational limits for purchase/sale of foreign currency established with its clearing banks, in Brazil.
Costs	<ul style="list-style-type: none"> ▪ Divided in: Basic (for the use of the Clearing House's conventional processing systems) and Extra (extraordinary services requested by the participants); ▪ Cost of the operations registered directly by the banks: 0,0005 to 0,0009% of the sum of the values, in local currency, of all the operations registered by participant.
Business Hours	<ul style="list-style-type: none"> ▪ Every business day (including state and municipal holidays), from 7am to 6 pm; ▪ Business hours for registry are subject to the confirmation of the operation by Sisbacen (Brazilian Central Bank Information System) -transaction PCAM383-, which closes at 5 pm for registry by the buyer at 5:15 pm, for confirmation by the seller, and at 5:30 pm for confirmation by the Clearinghouse.

BM&F Foreign Exchange Clearinghouse Business Hours	
Business Hours	Description
0h – 6 am	Clearing House sends Payment Requests (in local or foreign currency) to members with debt positions to be settled on the same day .
Up until 9 am	Confirmation by the banks of the receipt of the Request for Payment.
9 am – 1:05 pm	Members with net debt positions (in local or foreign currency) effect the transfer of funds.
1:05 pm – 2:05 pm	Clearing House effects eventual cash adjustments, by means of its Clearing Banks.
2:05 pm	Clearing House processes the payments to its members holding credit positions.
3:30	Time limit for the operational debtors to conclude the payment of their debts.

Detailed information relative to the BM&F can be obtained on the BM&F website, www.bmf.com.br, and, in addition, on the Central Bank website, www.bcb.gov.br.