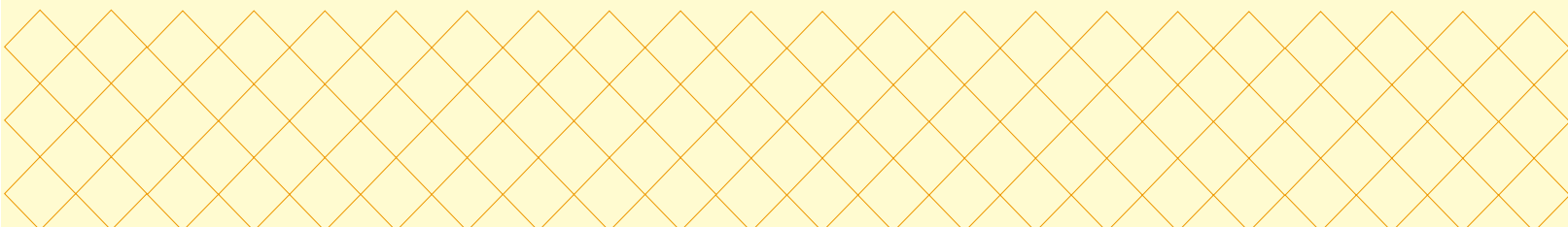


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CENTRE FOR LATIN AMERICAN MONETARY STUDIES

**PAYMENTS AND SECURITIES
CLEARANCE AND
SETTLEMENT SYSTEMS
IN ARGENTINA**

AUGUST 2000



PAYMENTS AND SECURITIES CLEARANCE AND
SETTLEMENT SYSTEMS IN ARGENTINA

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**PAYMENTS AND SECURITIES
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SETTLEMENT SYSTEMS
IN ARGENTINA**

WORLD BANK
CENTRE FOR LATIN AMERICAN MONETARY STUDIES
WESTERN HEMISPHERE PAYMENTS AND SECURITIES CLEARANCE AND
SETTLEMENT INITIATIVE

Foreword

Following a request from the Western Hemisphere Finance Ministers, the World Bank launched in January 1999 the *Western Hemisphere Payments and Securities Clearance and Settlement Initiative*. The World Bank (WB) in partnership with the Centre for Latin American Studies (CEMLA), leads this Initiative. Its objective is to describe and assess the payments systems of the Western Hemisphere with a view to identifying possible improvement measures in their safety, efficiency and integrity. To carry out this mandate an International Advisory Council (IAC) was established in March 1999 comprised of experts in the field from several institutions. In addition to representatives from the WB and CEMLA this Council includes members from the Secretariat of the Committee on Payment and Settlement Systems (CPSS, Bank for International Settlements), Bank of Italy, Bank of Portugal, Bank of Spain, Council of Securities Regulators of the Americas (COSRA), European Central Bank, Federal Reserve Board, Federal Reserve Bank of New York, Inter-American Development Bank, International Monetary Fund, International Organization of Securities Regulators (IOSCO), Securities Commission of Spain and U.S. Securities Commission (SEC).

To assure quality and effectiveness, the Initiative includes two important components. First, all studies are conducted with the active participation of country officials and the project builds on the existing work being undertaken in the respective countries. Second, the Initiative draws on international and national expertise on the subject, through the IAC, to provide guidance, advice and alternatives to current practices.

The Initiative has undertaken a number of activities in order to respond to the Western Hemisphere Finance Ministers' request. These include: the preparation of public reports containing a systematic in-depth description of each country's payments, clearance and settlement systems; the delivery of recommendations reports to country authorities on a confidential basis; the organization of IAC meetings to review country studies and provide input for future work; the organization of workshops focusing on issues of particular interest; the creation of a web-page (www.ipho-whpi.org) to present the outputs of the Initiative and other information of interest in the payments systems area; and the promotion of working groups to ensure a continuation of the project activity.

CEMLA has been acting as Technical Secretariat of the Initiative and is playing a major role in making the process sustainable and capable of extension to all the countries in the Hemisphere. To this end, the Initiative has helped strengthen CEMLA's in-house expertise. Additionally, practitioners in payments and securities clearance and settlement in some countries in the Region have participated in the studies under the Initiative, through CEMLA coordination, and this has contributed to the broadening of knowledge and the transfer of know-how within the Region. The endeavors of the working groups in coordination with CEMLA will maintain the infrastructure created under the Initiative and provide a permanent forum for the countries in the Region to discuss, coordinate, and add a collective impetus to the work in the area of payments and securities clearance and settlement systems.

This Report "*Payments and Securities Clearance and Settlement Systems in Argentina*" is one of the public reports in the series and was prepared with the active support of the *Banco Central de la República Argentina* (BCRA) and the *Comisión Nacional de Valores* (CNV). The *Banca d'Italia*, the US Federal Reserve System and the Interamerican Development Bank participated directly in its preparation.

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1 ECONOMIC AND FINANCIAL MARKET OVERVIEW

1.1 OVERVIEW OF RECENT REFORMS

The economic and financial system of Argentina has experienced several structural changes during the past ten years as a result of the reforms and the process of economic stabilization promoted to face, first, hyperinflation in the late 1980s and, second, financial instability in the mid-1990s.

The process of economic stabilization started with the launch of the Convertibility Plan in 1991 which introduced a currency board-like system. It mandated, at a minimum, a 100 per cent international reserve requirement for the monetary base, thereby denying the use of discretionary monetary or exchange rate policy and severely restricting the Central Bank's lender of last resort capacity (see Annex).¹ The Convertibility Plan gets its name from the Convertibility Law of April 1991 which, first, fixed the rate at 10,000 Austral to one US dollar, and, second, established, from 1 January 1992, the replacement of the Austral with a new currency (the *Peso*) which would be exchanged at the fixed rate of one *Peso* equals one US dollar.

The bank panic in Argentina following the Tequila Crisis² in 1994-1995 was the first challenge for the currency board. The reduction of the fiscal deficit and support for Argentina's new economic program by multilateral organizations helped to restore confidence in the peso and the banking system. Following the crisis, the Central Bank took a number of other important additional measures to maintain confidence in the system. For example, the liquidity in the financial system was increased by: (i) requiring banks to hold liquidity reserves up to 20% of deposits, and (ii) establishing a contingent repo facility with international banks, covering about 10% of all domestic deposits.

Other measures included establishing a privately managed deposit insurance scheme, continuing reform of the banking supervisory process, including setting capital requirements at levels even higher than those recommended by international standards, and reform of the payment system infrastructure. Reform of the payment system, in particular, was an important part of building a foundation critical for achieving monetary and financial stability.

Argentina was affected also by the Asian crisis of 1997-98 and, more recently, by the devaluation of the Brazilian currency (early 1999). Contrary to the experience of the mid-nineties, the soundness of the Argentine financial system in the late 1990's helped the country to face international instability without the implementation of highly restrictive measures.

¹ Beyond the monetary reform, the Convertibility Plan represents a much wider set of measures such as: (i) Fiscal Reform, including the administration of the tax system and a redefinition of tax instruments and rates; (ii) State Reform, through privatization and deregulation of factor and product markets; (iii) Social Security Reform, with a new capitalization mechanism operated by the private sector; (iv) Trade Reform through the elimination of export taxes and most quantitative restrictions on imports, and the reduction of the level and range of import tariffs.

² Tequila Crisis is the name commonly given to the financial crisis that spread across financial markets in Mexico at the end of 1994. As a result, a wave of financial instability spread across the entire region of Latin America in 1995.

1.2 MACROECONOMIC BACKGROUND

The successful fight against inflation, a strict control of the public budget and the opening of many sectors of the economy to domestic and international competition have paved the way for sustained growth throughout the decade.³ Productivity has been increasing due to the broad liberalization of the economy. Also, the consumption-led boom that followed the launch of the Convertibility Plan matured in recent years into a healthy pattern of investment and export-led growth. Argentina's economy slowed somewhat following the Tequila Crisis, but subsequently recovered some of its previous dynamism. In more recent months a new contraction of economic activity has been observed.⁴

Argentina's main economic and financial indicators are summarized in Table I below.

Table 1: Argentina's Macroeconomic and Financial Indicators⁵
(1995-1999)

	1995	1996	1997	1998	1999
GDP at market prices (billion dollars) (1993 prices)	243.2	256.6	277.4	288.2	279.2
GDP at market prices (annual growth rate, %)	-2.8	5.5	8.1	3.9	-3.1
Consumption (annual growth rate, %)	-3.6	5.9	7.9	3.1	-3.5
Gross investment (annual growth rate, %)	-13.1	8.9	17.7	6.6	-7.5
Imports (annual growth rate, %)	-10.0	17.4	26.6	8.4	-10.9
Exports (annual growth rate, %)	22.6	7.8	12.0	10.1	-1.2
Consumer Price Index (annual rate (average), %)	3.4	0.2	0.5	0.9	-1.1
Unemployment rate ^(a)	18.4/16.6	17.1/17.4	16.1/13.7	13.2/12.4	14.5/13.8
Public surplus/deficit (% of GDP)	-0.6	-2.3	-1.8	-1.7	-2.0
Current account balance (% of GDP)	-1.9	-2.4	-4.1	-4.8	-4.3
Public debt (millions of pesos)	87,091	97,105	101,101	112,400	121,877
Public securities issued (millions of pesos)	58,340	68,841	74,054	81,507	89,978
In local currency (millions of pesos)	5,882	8,168	9,500	7,801	83,588
In foreign currency (millions of dollars)	52,458	60,673	64,554	73,706	6,390
Money and quasi money (M1, in millions of pesos) ^(b)	18,262	21,121	24,285	25,918	25,546
Broader bimonetary aggregate (M3, in millions of dollars)	51,050	60,531	73,391	85,450	90,765

Source: Instituto de Estadísticas (INDEC), Ministerio de Economía y Hacienda, Banco Central de la República Argentina.

^(a) May/Oct., Encuesta Permanente de Hogares (Semi-annual Survey).

^(b) Includes peso and dollar denominated assets, as in the case of M3. It does not include dollars in circulation.

³ The average annual rate of growth of GDP from 1993 to 1998 has been 5%.

⁴ See Table A1.

⁵ The GDP figures differ slightly from the ones of Table A1 due to the different sources used.

1.3 THE FINANCIAL SECTOR

Hyperinflation in the 1980s reduced the deepening of the financial system to levels below those found in the lowest-income countries. In the most recent years, Argentina's financial system has been growing significantly, reflecting the remonetization of a growing economy.⁶ With international reserves of the financial system⁷ reaching US\$33.6 billion at the end of December 1999, the broader bimetary aggregate (M3) was US\$92.4 billion (32.6% of the GDP). Of this figure, US\$46.3 billion (50.1%) are denominated in pesos and the rest (49.9%) in US dollars. On the other hand, the bimetary aggregate M1⁸ was US\$23.9 billion at the end of 1999⁹, accounting for 25.9% of M3.

In the last five years, Argentina's banking and financial system has experienced a number of important changes such as: more pro-active regulation and supervision, substantial consolidation, privatization, increased presence of foreign banks and significantly higher percentages of US dollars in the total investment and payments flows. However, the market for banking services is still underdeveloped by international and even regional standards. The sector is expected to grow at a faster rate than the underlying economy over the short to medium term.

The number of financial institutions in Argentina was 115 in December 1999.¹⁰ Of this amount, 93 are banks (15 State-owned banks and 78 private banks) and 22 non-bank financial institutions (financial companies, both foreign and domestic, and credit houses). The consolidation in the financial sector, shown by the continuous decrease in the number of financial institutions throughout the decade (see Table B1), is an important feature of the system. This consolidation combined with an increase in financial deepening, due to the growing confidence of the population in banking services, is a consequence of the stability. The number of checking accounts, savings accounts and time deposits has increased significantly (Table B2). However, access by the population to banking services, often referred to in Argentina as "*Bancarización*", is still low relative to other industrialized countries.

Growth and development of domestic private banks have been affected by external crises, including the Mexican crisis and the Asian crisis. Private domestic banks' market share was also affected by mergers, closures and takeovers by foreign-owned banks and a shift in depositors' preferences to foreign-owned banks following the Tequila Crisis. Foreign acquisitions in 1996 and 1997 contributed heavily to the latest period decline in the number of private domestic banks. The private domestic

⁶ Argentina's financial services sector employs currently around 4% of the economically active population.

⁷ The aggregate includes international reserves of the Central Bank (US\$27.8 billion at end-1999) plus liquidity requirements compliance abroad.

⁸ Notes and coins in pesos and checking accounts in dollars and pesos.

⁹ Of this figure US\$26,180 millions are denominated in pesos (94%).

¹⁰ The number of financial institutions was 205 in December 1994. The restructuring process induced by the Tequila Crisis, including the privatization of provincial banks and mergers and acquisitions among private banks, has contributed to this sharp decline.

banks that were acquired recently were relatively large ones, while those in the post-Tequila shake-out were smaller banks.¹¹

Forty-one foreign-owned banks¹² held 47% of total assets, 46% of total deposits and 40% of total equity in December 1999 (Tables B3, B4, and B5). There is a high concentration of domestic banking activity as the smallest 25 private domestic banks represented only about 2% of the system's assets. The concentration is also high in the banking system as a whole as the 10 largest banks held 46% of total assets. Public banks have also decreased in number and in market share. In December 1996 there were 20 public banks with 35% of total assets. In December 1999, the 15 public banks held 27% of total assets, as a consequence of the process of bank privatization. In addition, bank loans were increasingly granted in foreign currency.

Aggregate loans reached \$77.2 billion pesos in December 1999 (see Table B6). Extension of credit was distributed in the following manner: 16% to public sector, 83% to non financial private sector and less than 1% to non residents. Approximately 67% of loans were made in foreign currency and mainly in US dollars.

The importance of the non-banking sector, financial companies and credit houses, is very limited as shown by the figures of Tables B1 to B5. Banks, at present, hold 98.7% of total assets. On the other hand, institutional investors are emerging as an important force in the Argentine financial markets. At the end of September 1998, institutional investors handled around \$19.3 billion pesos in investment assets, of which \$10 billion were handled by the Pension Fund Administrators (AFJPs), \$5.7 billion by Mutual Investment Funds (MIFs) and \$3.6 billion by insurance companies. In sum, they represent a figure close to 13% of the banks' total assets.

1.4 THE CAPITAL MARKETS

The capital markets in Argentina have developed significantly in recent years as a consequence of economic and financial stabilization and the growing role of other market participants, such as institutional investors.¹³ There has been a growing trend by the private sector to seek financing through the capital markets.

The equity and bond markets have developed unevenly. The growth of the capital markets has been mainly due to the sale of equities of large companies and government bonds. Small companies rely

¹¹ A process of provincial bank privatization was forced by the Tequila Crisis. The banks of those provinces with poor performance and a bad fiscal balance suffered a liquidity crunch precipitated by depositors' flight to stronger banks. In this sense, the privatization process eliminated a series of weaker banks.

¹² This figure includes 20 foreign capital banks and 17 local branches of foreign banks.

¹³ Since 1994, the emergence of institutional investors has been spearheaded by the new capitalized private pension fund system and, more recently, by a growing participation of mutual funds. In the future, these investors are expected to play a vital role in narrowing the gap between Argentine markets and more developed markets in the region and in the world.

on the banking system for financing, although an increasing number of companies are participating in the debt market.

The bond market has grown continuously over the past years. Although the public sector continues to play the dominant role, the private sector has increased its participation in a significant way throughout the decade. Larger companies have been issuing the bulk of bonds in the market. Nevertheless, small and medium companies have started to participate in the bond market more recently, probably encouraged by a tax incentive, lower costs to trade, and the lack of rating requirements.

The source of funds to finance the public debt is changing from loans to the public debt market. At present, public debt is mainly financed through issues of government securities, especially long term public securities denominated in foreign currency. During 1999, US\$11.9 billion were placed in the international markets (see Table B9).

In the equity market, market capitalization and trading activity are concentrated in a small number of large firms. Moreover, large Argentine companies normally trade in American Depository Receipts (ADRs) in New York, where trading activity is substantially higher than in Buenos Aires (see Table B8).¹⁴ Market capitalization over GDP and value traded over GDP have increased (to 16.3% and 2.3% respectively, at end-1998), although the value traded has experienced high fluctuations. The number of listed companies has decreased and market capitalization over the stock market index has increased (Table B7).

The structure of the brokerage industry has changed over the past years with the entry of new players. Traditional brokers have been squeezed by the entry of large international investment firms and local commercial banks, the emergence of mutual funds, and competition from the market for ADRs.

The development of Argentina's equity market lags that of other emerging economies. Market capitalization over GDP and the number of listed companies is higher in many of the other emerging countries in Latin America, Asia and Europe.

1.5 MAJOR TRENDS IN PAYMENT SYSTEMS

In recent years, enhancements to the stability and efficiency of the payment system in Argentina have been a policy priority on the premise that these reforms would also serve to promote the stability of financial markets and the broader economy. The structure and operation of the current system take into account, inter alia: (i) the bi-monetary nature of the economy; (ii) the monetary regime stemming from the Convertibility Plan, which severely restricts money creation by the central bank; and (iii) the supervisory regime, which requires banks to comply with high liquidity requirements. Up to the mid-nineties, the payment system was relatively underdeveloped. There were two main interbank procedures a check clearing arrangement, and a procedure for interbank

¹⁴ This implies that Argentine equity prices tend to move together with those of foreign markets and, consequently, external shocks have a strong impact on equity prices in the domestic market.

funds transfer system, both managed by the central bank (the latter through the Buenos Aires Clearinghouse).

In 1996, after conducting a study cooperatively with the banking sector, the Argentine central bank, the *Banco Central de la República Argentina* (BCRA), redefined the regulatory and operational framework for payment systems and took the lead in implementing payments reform. The primary structural changes include:

1. A real-time gross settlement (RTGS) system owned and operated by the central bank, the Electronic Payment Means – *Medio Electrónico de Pagos* (MEP);
2. A consolidation and privatization of low value automated clearinghouses across the country;
3. The development of large value automated clearinghouses managed and owned by the private sector.

Both US dollar and peso denominated payments can be processed through the interbank clearing and settlement systems. Even though the RTGS system does not provide queuing mechanisms or intra-day liquidity facilities, the large amount of liquidity banks hold in compliance with liquidity requirements facilitates the fluidity of payments executed through the system. Cross-border payments may also be executed through the MEP system. Both low value and large value clearinghouses settle their net balances on the RTGS system toward the end of the operating day and are subject to stringent risk measures.

These reforms meant a growing involvement by the private sector in the direct management of payment systems and, conversely, a new role for the BCRA. The central bank is now active in the payment system through the provision and management of the MEP system and through the ex-ante definition of the regulatory framework and the overseeing of private clearinghouses. In addition, a co-operative body, the *Comisión Interbancaria de Medios de Pago de la República Argentina* (CIMPRA), in which the central bank and the commercial banks are represented, was formed in 1996 to support payment system reform.

1.6 MAJOR TRENDS IN SECURITIES CLEARANCE AND SETTLEMENT SYSTEMS

A key reform initiative in the securities settlement context has been the push toward eliminating credit risk in the settlement of government securities transactions. An approach to eliminating the most significant form of credit risk, termed principal risk in the settlement context, is the development of delivery versus payment mechanisms that ensure payment is made if and only if delivery occurs.

In December 1995, the Ministry of Finance led the way for an electronic system that would settle government securities in book-entry form within a delivery versus payment environment. The Ministry requested the central bank to develop a settlement system for short-term Treasury securities that would include a delivery versus payment mechanism. In 1996, the BCRA developed an electronic system for the settlement of certain short-term government securities—*Letes* and *Bontes*—that settles

securities on a delivery versus payment basis (*Central de Registración y Liquidación de Instrumentos de Endeudamiento Público*, CRYL). It is anticipated that the private sector will develop a more long-term solution by establishing a private sector managed delivery versus payment settlement arrangement for a broader number of government securities and for corporate securities. A new arrangement has been put forth by the private sector; however, it is not yet operational (See Box VII).

For corporate securities, currently the Mercado de Valores de Buenos Aires (Merval) maintains and operates the principal clearance and settlement system for equity and debt transactions in Argentina. This is a single clearing system for transactions executed in both systems: (a) the continuous trading system for bilateral telephone execution of trades in which only public securities and corporate bonds are traded, and (b) the concurrent market where trades are executed in an automated order-matching system or the traditional open outcry mode on the floor of the stock exchange. The clearing and settlement system used by the Merval operates on a multilateral net settlement basis and generally resembles a Model 3 approach to delivery versus payment, as defined by the Bank for International Settlements (see Chapter 6).

The *Caja de Valores* is the country's central securities depository for both government and corporate securities.

2 INSTITUTIONAL ASPECTS

2.1 GENERAL LEGAL FRAMEWORK

2.1.1 Payments

The legal framework for payments consists primarily of the Law of Financial Institutions¹⁵ (Law 21,526, February 14, 1977), the Charter of the BCRA, the Law of Checks¹⁶ (passed by Law 24, 452, February 8, 1995 and amended by Law 24, 760 on December 11, 1996) and the by-laws issued by the BCRA.

The Law of Financial Institutions is the legal framework that governs the financial and banking system as a whole. In particular, it grants the *Banco Central de la República Argentina* (BCRA) broad enforcement authority over entities participating in financial intermediation. The BCRA's authority over clearinghouses and similar entities that perform payment settlement functions stems indirectly from this law and it is formalized in the Charter of the BCRA (*Carta Orgánica*, see Section 2.4).

The Law of Checks is the comprehensive body of law for the transfer and payment of checks and the rights and remedies of the parties related to payment transactions involving checks. For payments transactions, the check law has important implications for financial markets. Checks play a significant role as a payment instrument for the settlement of financial market and interbank transactions.

a) Key Aspects of the Check Law

Two kinds of checks are recognized by the check law in Argentina: ordinary checks and post-dated checks (*cheques de pagos diferidos*). The key difference between the two types is that a post-dated check is an order of payment for a date subsequent to the date on which it was issued. Some of the main requirements pertaining to ordinary and post-dated checks are described below:

- The amount to be paid must be stated in words and figures, specifying the kind of currency. When the amount in words differs from that in figures, the amount described in words prevails.
- A check that does not bear the payee's name is deemed a bearer check.
- An ordinary check is always payable on demand. The check may not be accepted for later payment.

¹⁵ Ley de Entidades Financieras.

¹⁶ Ley de Cheques.

- The term for submitting a check drawn on a bank within Argentina is 30 days as of the issue date. The term for submitting a check drawn outside of Argentina and payable within Argentina is 60 days as of the issue date.¹⁷
- The drawee is liable for the consequences resulting from honoring a check in the following cases: (i) whenever the drawer's signature is noticeably forged; (ii) if the instrument does not contain the following information: (a) a serial number, (b) place and date of issue, (c) name of the financial institution upon which the check is drawn and place of payment, (d) an order to pay a certain amount, and (e) the drawer's signature.
- A checking account holder is liable for damages whenever the signature has been forged and is not "noticeable", or where, in case of loss or theft of a blank check-book, the checking account holder fails to provide notice to the drawee.¹⁸
- The drawee must serve notice for a check rejected on account of insufficient funds to the central bank, to the drawer and to the holder stating the check number and date. Otherwise, the drawee is bound to pay the check amount jointly and severally with the drawer, up to a maximum of \$5,000 pesos.
- The drawer of a rejected check on account of lack of funds or authorization to overdraw will be fined the equivalent of four per cent of the check amount, with a minimum amount of \$100 pesos and a maximum of \$50,000 pesos.¹⁹
- The drawee has to debit the fine amount from the drawer's account. If the fine is not honored within 30 days from the check rejection, the account will be closed.
- Financial institutions which do not close checking accounts in compliance with the check law will be subject to a daily fine of \$500 pesos up to a maximum of \$15,000 pesos for each checking account in this situation, in addition to their responsibility to pay checks rejected on account of lack of funds (up to a maximum of \$30,000 pesos).

Post-dated checks must present the expression "post-dated" check stated in the wording on the instrument. They can be used in a number of circumstances, including in cases with creditors and bankruptcy.

The BCRA is authorized by law to regulate the terms and requirements for the opening and closing of accounts with ordinary and post-dated checks, regulate check forms and decide upon matters

¹⁷ If the term expires on a banking holiday, the check may be submitted for collection on the first day subsequent to the expiration date.

¹⁸ Forgery is deemed noticeable when it can be seen at the time the check is submitted for collection or at the moment the signature on the check is compared with that recorded with the drawee.

¹⁹ If the check is rejected due to some formal imperfection (missing signature, missing date, etc.), the drawer will be fined the equivalent of two per cent of the check amount, with a minimum amount of \$50 pesos and a maximum of \$25,000 pesos.

concerning effective rendering of check services, including the rejection of checks, accounts denominated in foreign currency, and the operation of electronic systems to clear checks.²⁰ When a check is rejected, banks have to notify the BCRA, which is responsible for imposing and collecting the fines and for enforcing the exclusion of the drawer from the system. When a drawer reaches the total of 5 checks without funds or does not pay the fine, he or she is suspended from emitting checks for a period of 5 years.

b) Electronic Payments

At this time, Argentina does not have a law specifically governing electronic payments (e.g., wire transfers). However, the BCRA has authority under the Law of Checks to regulate operations of electronic systems to clear checks.

c) "Zero Hour" rule

The "Zero Hour" rule, in the context of a payment system, implies that in case of bankruptcy of a participant all transactions by that participant are considered null from the start (zero hour) of the day of the bankruptcy (or similar judicial event). In this case, in a netting system, all net calculations must be unwound.

In Argentina, according to the Circular 2534 of the BCRA, in order to participate in the MEP system, financial entities must sign an agreement with the BCRA. This agreement covers all transactions (net or gross, low or high value) that are settled in the MEP. Article 3 of the Agreement establishes that all messages emitted by financial institutions to move their funds deposited at the BCRA have the nature of irrevocable payment instructions. In addition, Article 4 of the agreement states that the accounts are debited when there are sufficient funds and in absence of a judicial order (for example in case of bankruptcy), which has to be communicated to the BCRA beforehand. This implies that when the BCRA has received notice of the court order, it applies it immediately without any retroactive effect. In this case, therefore, the zero hour rule should not apply.²¹

d) Regulation issued by the BCRA

The electronic clearing and settlement of payment instruments is regulated by a number of operating circulars issued by the BCRA; the main ones are:

- Circular "A" 2557, which defines the operating rules of the clearinghouses.
- Circular "A" 2559, 2621, 2622, 2623, 2723, and 3014, which define the operating instructions for payment instruments (checks, direct debit and credit transfer).
- Circular "A" 2575 and 2699, which defines the technical requisites with which the clearinghouses must comply.

²⁰ The BCRA is also permitted to authorize the use of electronic systems to reproduce signatures to draw checks.

²¹ It must be noted, in fact, that the agreement may have a lower legal status than the bankruptcy law and that such a situation has never been tested in court.

- Circular "A" 2579, 2585, 2681, 2692, which define the operating rules of the MEP.
- Circular "A" 2610, which defines the rules for the constitution of guarantees and other risk control measures in clearinghouses.
- Circular "A" 2721, which establishes the operating rules for the *Comité de Cámaras* (see Chapter 4).
- Circular "A" 2724, which defines the rules for the "other compensable documents".

Box 1 Money Laundering

In May, 2000, a new anti-money laundering law (Law n. 25.246 of 05/05/2000) was promulgated in Argentina. The law is applicable to all accounts held at financial institutions. The law provides for a constitution of a new body (Unidad de Información Financiera, UIF) responsible for collecting and processing anti-money-laundering information.

2.1.2 Securities

The Public Offering of Securities Act (Law 17.811) of 1968 is the comprehensive body of law for securities market activities, the public offering of securities, the organization and operation of stock market institutions and the acts of brokers and others engaged in securities trading. The *Comisión Nacional de Valores* (CNV), the national securities supervisor in Argentina, is created by this law and is given broad supervisory authority over securities market activities, including supervising securities market institutions, regulating public offerings of securities and trading of securities issued by private and partially government-owned companies.

The CNV also has supervisory authority over self-regulatory organizations (SROs), including stock exchanges, stock markets and central securities depositories (see Chapter 9). There are several principal institutions that are especially important in this context:

- The *Bolsa del Comercio de Buenos Aires* (BCBA) (Buenos Aires Stock Exchange) authorizes the listing of corporate securities in Argentina.
- The *Mercado de Valores de Buenos Aires S.A. (Merval)* is the place where securities trades are executed. The *Merval* also maintains a securities clearing and settlement system. The *Merval* has been rated BB+/B by Standard & Poor's.
- The *Caja de Valores S.A.* is the country's main central securities depository and is authorized by law to act as the central depository for certain government and corporate securities.²²
- The *Mercado Abierto Electrónico S.A. (MAE)* is the self-regulatory institution authorized by the securities commission to facilitate over-the-counter trading of government securities and corporate bonds. The MAE does not settle or guarantee trades executed there.

²² Law No. 20643 authorizes the *Caja de Valores* to act as a Central Securities Depository for government and corporate securities.

Chapter 5 presents in more detail some of the key aspects of the securities laws, and other relevant laws, including the following: Law 17.811 (Public Offering of Securities), Law 19.550 (Business Companies Act), Law 20.643 (Registered Nature and rules of the *Caja de Valores*), Law 21.382 (Foreign Investment), Law 24.083 (Mutual Funds), and Law 24.441 (Financial Trust).

2.1.3 Derivatives

On July 15, 1999 the CNV approved General Resolution (RG) 337/99 for Futures and Options, thereby repealing CNV General Resolution (RG)194/92 and 294/97. This new law addresses the following issues:

- requirements that futures exchanges and clearinghouses must fulfill for CNV approval as self-regulatory organizations (SROs);
- requirements for futures exchanges and clearinghouses regarding their member requirements for registration, trading, and conducting business for their account and for clients' accounts;
- requirements for supervising and monitoring of futures and options trading and execution;
- terms and conditions for new futures and options exchanges;
- requirements regarding public disclosure of trading information;
- procedures for disciplinary actions;
- requirements with which exchanges and clearing houses must comply regarding initial and replacement margins on futures and options contracts;
- exchange and clearing house and regulatory authority for the transfer and close of open positions for customer protection during emergency market situations or intermediary default;
- protection of customers' properties and positions;
- the relationship between the CNV and the Secretary of Agriculture regarding futures and options contracts on underlying assets under the Secretary's authority.

The new law contains minimum capital requirements for futures exchanges as well as clearinghouses. Futures exchanges must have a minimum net worth of US\$500,000. Independent clearinghouses for the settlement of futures and options must have a minimum net worth of US\$300,000.

RG 337/99 also reflects the principal issues included in the Futures Industry Association (FIA) Task Force Recommendations on Financial Integrity for Futures and Options for Exchanges, Clearing Houses, Regulators, Intermediaries and Customers, dated June 1995.

2.2 THE ROLE OF FINANCIAL INTERMEDIARIES: PAYMENTS

2.2.1 The Banking Sector

The primary participants in the Argentine payments system are banks. Banks are regulated by the Law of Financial Institutions, which defines financial entities as commercial banks, investment banks, mortgage banks, financial companies, savings and lending institutions for housing or other real estate and credit unions (*cajas de crédito*). The law may also cover other entities not explicitly enumerated in the definition, if they are deemed to be acting as financial intermediaries.

The BCRA is the regulatory and supervisory authority of these institutions. The central bank regulations mainly refer to authorization and revocation to operate, the definition of minimum capital, minimum liquidity and solvency requirements, the reduction of systemic risks and the supervision, external auditing and qualification of financial entities (see Sections 2.4 and 2.5).

The banks fulfill the typical financial intermediation activity in the short, medium and long term. Banks offer payment services to their customers that range from checking accounts facilities both in pesos and foreign currency to the issue of plastic cards. In addition, banks offer a service of direct debiting as well as bank-to-bank transfers. Cross border payments are also possible through the standard mechanisms (correspondent banking, SWIFT, etc.).

Banks can do all the operations and provide all the services not explicitly forbidden by the law or regulations issued by the BCRA. Investment banks are more oriented to the corporate market and to the medium and long term. They can receive term deposits and have a limited capacity to provide short-term loans. The mortgage banks are mainly limited to operate in their specific market. The rest of the entities also have a limited scope on their operations.²³

As mentioned in the overview (Section 1.2), the Argentine banking sector has experienced important changes in recent years. The consolidation in the system and the entrance of large foreign banks have both widened the range of services offered and raised the confidence of the public. As a consequence, the total amount of deposit and the number of checking accounts have increased throughout the decade, especially in more recent years.²⁴ For example, the total amount of deposits in the banking sector rose by 12 % in 1998 as opposed to 28 % in 1997; it slowed its growth in 1999 (4.1 %) as a result of the contraction of economic activity. The number of banking accounts ²⁵ increased from around 10 million at the end of 1996 to 16.8 million in December 1999. However, these figures are still lower than in other industrialized countries. The deposit/GDP ratio in Argentina is relatively low (around 29% at the end of 1999)

²³ For a detailed list of the operations permitted to the different types of financial entities see Law of Financial Entities, art. 21-29.

²⁴ This process had a dramatic stop only in 1995 as a consequence of the Tequila crisis when the total amount of deposits in the system dropped by US\$7.5 billion.

²⁵ Checking, savings and time deposit accounts.

compared not only with a country such as the U.S. (over 60 %) but also with neighbors such as Chile (around 65 %). In addition, the share of the population that have access to banking services is still far from international standards: it is estimated that only 38 per cent of Argentines have accounts with banks. This is partly due to the relatively high cost of holding accounts and to the relatively poor stage of development of some areas of the country. However, public authorities and some banks have undertaken some initiatives to address the problem (see Chapter 3).

Box 2 **Banco de la Nación**

Banco de la Nación Argentina (BdNA) plays a special role in the financial system and in the payment system in particular. The BdNA is a state-run entity, having budgetary and administrative autonomy from the government. It was created by law in 1981 with the intention to re-establish services in a market that had seen the collapse of practically all previous financial institutions. The BdNA is involved in a wide range of activities to sustain development in all sectors of the economy. Despite its public status, in recent years Banco de la Nación has had a significant role in the implementation of policies related to privatization and trade developments. BdNA's privatization is also on the government's agenda. BdNA's participation in the banking sector is significant with 14.5 % of deposits and 11.5 % of loans in the banking system at the end of 1998. The bank has 574 branches located throughout the country. This circumstance gives BdNA a significant role in the payment system. It has managed the local clearinghouses on behalf of the BCRA before the beginning of the reform. In the reformed system, the BdNA will share the management of local clearinghouses with other banks on a rotating basis (3 months). If the area is not covered by other banks, the BdNA will continue managing the clearinghouse (see Chapter 4).

The BdNA is also the fiscal agent of the government and manages the account of the Treasury (see Box 6).

2.2.2 Other Institutions that Provide Payment Services

There are several other institutions outside the banking sector that provide payment services. The most relevant are:

a) Private clearinghouses

As a result of the payment system reform launched in 1996 new private clearinghouses have entered the payment system. They are classified as low-value and large-value clearinghouses.

Since end-1997 two private low-value automated clearinghouses have been authorized by the BCRA: *ACH, S.A.* and *Compensadora Electrónica, S.A. (COELSA)*, both owned by several of their member banks. *COELSA* processes operations for 70 member banks whose headquarters are located in the area of Buenos Aires. Thirty-nine banks spread throughout the country take part in *ACH*. The two low-value clearinghouses together process an average of 9.3 million transactions per month (respectively, 6 million *COELSA* and 3.3 million *ACH*).

A private large value clearinghouse, *Interbanking*, started its operations in April 1998. It is owned by 12 of its 40 member banks. *Interbanking* provides multilateral net settlement services for banks, as well as electronic funds transfer services to corporate firms.

A new large-value clearinghouse, *Provincanje*, owned mainly by provincial banks, was authorized by the BCRA in 1999 and started operating at the beginning of the year 2000.

b) Payment cards operators

Several entities are active in the payment cards market. A consistent number of credit and debit card operators manages payment transactions at both the national and regional level. Seven of them (*Visa, Mastercard, Credential, Cabal, Carta Franca, American Express, Diners*) operate at the national level; the first five are owned by groups of banks.

Two institutions (*BANELCO* and *LINK*), owned by groups of banks, manage and process ATM operations.

c) The Postal Administration

The Postal Administration (*Correo, S.A.*) plays an important role in Argentina's payment mechanism. In fact, its widespread presence (more than 6,000 branches, of which 1,500 directly operated)²⁶ gives the public easy access to a convenient payments delivery system. The recent privatization of the *Correo* in September 1997 and the subsequent restructuring of its activities will expand the range of its payment services. At present, the *Correo* is active in the payment system mainly with two services: postal giros and recurrent payments to utility providers and the government (see Section 3.2.3).

2.3 THE ROLE OF FINANCIAL INTERMEDIARIES: SECURITIES

2.3.1 Securities Market Participants

The following are the key securities transaction intermediaries in Argentina:

Stockbrokers or brokerage firms registered with a stock market

- These intermediaries may be individual stockbrokers, brokerage firms or an association of both. They must all meet a series of requirements related to capacity, solvency, morals and net worth. In addition, these intermediaries are required to own at least one share of the stock exchange (i.e., one share in the *Merval*), which is listed on the stock exchange and traded in the market.

²⁶ The rest are operated through an agreement with a different entity. For example, in some remote areas, postal services are offered by local food supermarkets on behalf of the *Correo*.

*Agents of the Mercado Abierto Electrónico (MAE)*²⁷

- Registered agents of the *Mercado Abierto Electrónico* (MAE), which include financial institutions and pure OTC market agents regarding off-exchange trades executed through the MAE, may act as a securities intermediary.

Financial Institutions

- Financial institutions engaged in the placement of securities on the market and in portfolio management activities may also act as securities transaction intermediaries.

Mutual Funds

- Mutual fund firms in the context of the full range of their legally permissible activities may act as securities transaction intermediaries.

2.3.2 Stock Exchanges

There are seven stock markets in Argentina.²⁸ However, over 95% of securities trading takes place at the *Merval*. Trades may be executed either through a screen based system (SINAC) or the traditional open out-cry (floor trading). In the case of corporate and government bonds, they are not only traded through these two systems but also through the *Merval's* Continuous Trading System. Trading in the over-the-counter market in government securities and corporate bonds takes place at the MAE.

Stock markets are self-regulatory organizations (SROs), and accordingly, their members are regulated by the rules of the exchange in which they participate. The stock markets themselves are directly regulated and supervised by the securities commission, the CNV. Investment funds, on the other hand, are directly regulated by the CNV. (See Section 2.6 and Chapter 9).

2.3.3 Securities Clearing and Settlement Institutions

a) MERVAL

The *Merval* maintains and operates the principal settlement system for equity transactions (see Chapter 6).

b) Banco de Valores

Founded in 1978, the *Banco de Valores* acts as a primary settlement bank for the *Merval* (see Section 5.8 and Chapter 6).

²⁷ The MAE is the market for over-the-counter government securities; the MAE does not perform any settlement functions for the transactions executed in its market.

²⁸ Including the stock market La Rioja S.A., which at present is not operating.

c) Caja de Valores

The *Caja de Valores* is the single central securities depository in Argentina. The securities law permits other securities depositories.

The Caja holds “collective deposits” in the names of participating financial institutions. Participants enter into a collective deposit agreement with the *Caja de Valores*. The deposit itself is made in the name of both the participant (e.g., a bank) and its customer (i.e., the beneficial owner of the securities). By the agreement, participants are required to return upon request to the beneficial owner an identical amount of securities of the same issuer, class and issue entrusted. However, the depository is not required to deliver the same securities to the participant.

d) Central de Registración y Liquidación de Instrumentos de Endeudamiento Público (CRYL)

In 1996, the BCRA developed an electronic system for the settlement of certain short-term government securities—*Letes* and *Bontes*—that settles securities on a delivery versus payment basis (*Central de Registración y Liquidación de Instrumentos de Endeudamiento Público*, CRYL, see Chapter 7).

2.4 THE ROLE OF THE CENTRAL BANK

The *Banco Central de la República Argentina* (BCRA) was created on May 31 1935 by the Law 12.155. Its role has changed in recent years, as a consequence of the Convertibility Plan. Previously, the central bank was not independent from the government and it was required to finance the government debt. Today, the BCRA is an autonomous and independent National State entity governed by the dispositions of the Central Bank Charter (*Carta Orgánica del B.C.R.A.*) issued in 1992 and by its modifications, promulgated in 1995.²⁹

The main objective of the central bank is to preserve the value of the national currency. The functions performed by the central bank are the following:

1. Issuing banknotes and coins;
2. Regulating the amount of money in circulation and observing the evolution of credit in the economy;
3. Applying the *Ley de Entidades Financieras*, and other resulting norms which may be derived;
4. Managing financial market stability and encouraging the development and strengthening of capital markets;

²⁹ The BCRA is governed by a Board of Directors comprised of a president, a vice-president and eight directors, each of whom must have proven aptitude in monetary, banking or legal matters related to the financial area. Members of the Board are appointed by the President of the Republic with the agreement of the Senate. Their terms last six years, with half being renewed every three years, and the posts of president and vice-president are renewed jointly. The members of the board can be appointed again indefinitely.

5. Regulating the creation and functioning of clearing organizations for checks and other operations managed by financial entities;
6. Acting as Financial Agent to the national government, and as depository and agent of the country before the international monetary banking, and other financial organizations the country has joined; and
7. Managing the country's gold reserves, foreign currency, and other external assets.

2.4.1 Monetary Policy

Under the Convertibility Law, there is a fixed exchange rate regime in which the Argentine peso is held in a 1:1 parity with the US dollar. This quasi-currency board approach to monetary policy and financial stability requires that the monetary base cannot exceed the dollar value of international reserves held by the BCRA (see Annex). In this sense, there is a mandate by the Central Bank to hold 100% international reserve requirement for high powered money. However, the Central Bank Charter permits a maximum of 1/3 of reserves backing the monetary base to be in dollar-denominated government bonds issued by the Republic of Argentina. In December 1998 international reserves of the BCRA (which include gold) amounted to US\$26.524 million dollars vis-a-vis liabilities amounting to \$24.693 million pesos; dollar denominated government bonds represented 6% of overall international reserves.

Within the framework established by the Convertibility Law and the central bank charter, the BCRA provides lending to commercial banks through a few mechanisms: repurchase agreements against dollar-denominated government bonds, overdrafts and liquidity rediscount facilities, to cope with situations of temporary lack of liquidity, collateralized either by securities or loans to the private sector and for amounts not exceeding the net patrimony of the bank concerned (see chapter 8). In addition, in case of emergency, the Central Bank can provide, for limited time, liquidity up to 100% of a bank's capital.

In the attempt to effect the smooth functioning of financial markets the BCRA can require that financial entities hold at its disposal a pre-determined proportion of their deposits and other liabilities, denominated in local or foreign currency. As already mentioned, in 1995 the BCRA availed of such a possibility by increasing mandatory liquidity requirements up to 20% of the amount of deposits in order to enhance confidence in the banking system.³⁰

Furthermore, in order to provide the financial system with additional liquidity for a brief (but sufficiently long) period during an international liquidity crisis, the BCRA has established a contingent financing facility with some of the major international banks. The facility gives the BCRA the option

³⁰ As this instrument is presently used for supervisory purposes, rather than in a monetary control perspective, it is dealt with in greater detail in Section 2.6, devoted to banking supervision.

to sell dollar denominated government bonds and mortgage bills to international banks subject to a buy-back clause (see Box 3). The contingent repo facility was launched in December 1996 for an amount of US\$6.1 billion. In December 1997, it was raised to US\$6.7 billion accounting for 9% of overall deposits.

The possibility for the BCRA to back the monetary base through dollar denominated government bonds and to provide emergency liquidity to banks, even if severely constrained, shows that the BCRA cannot be considered as an orthodox currency board and that it may play, to a limited extent, a role of lender of last resort. However, the high liquidity requirements applied to the banking system and the contingent repo facility tend to limit the need for money creation by the central bank.

However, the Central Bank Charter prevents the BCRA from:

- Giving loans to the government, companies or persons. The central bank can finance the National government only through the acquisition of negotiable securities at market prices issued by the National Treasury through the *Tesorería General de la Nación* (Treasury Department, controlled by the Ministry of Economy). The growth of government securities held by the central bank in nominal value may not be larger than 10% a year;
- Paying interest on deposits; and
- Guaranteeing commercial bank deposits.

Box 3 Contingent Repo Facility

The conditions of the contingent repo facility are:

- Program Duration: 2 to 5 years. Extensions to the agreements (beyond the contracted duration) can be negotiated every three months.
- Operations term: depending on the needs of the BCRA, but under the limits of the contract signed with each international bank.
- Haircut: 20-28% of the market value, depending on the security.
- Market value fluctuations margin: if the market price falls more than 5%, the BCRA should compensate the difference with securities of the same nature or US dollars up to 125% in the case of public securities and 140% in the case of mortgage bills. If the price fell under the repurchase price, the BCRA would have to pay the difference in cash (US dollars).

2.4.2 Involvement in Payment Systems

The Central Bank Charter gives the Board of Directors the capacity to regulate the creation and functioning of clearing organizations for checks and other operations managed by financial entities.³¹

Beyond an oversight/regulatory role (see Section 2.5.2) the BCRA is also involved in the payment system through the direct provision of services.³² In particular, the BCRA manages: (i) cash distribution throughout the country (see Chapter 3); (ii) banks' current accounts through which interbank payments and clearing systems' balances are settled (see chapter 8); (iii) a real-time gross settlement system (*Medio Electrónico de Pagos - MEP*) (see Chapter 4).

The BCRA also plays an important role in the field of cross-border payments by: (i) providing cross-border payment services which enable banks to transfer liquidity between the US dollar accounts they hold in New York and the current accounts at the central bank; (ii) managing cross-border payments as financial agent of the State; (iii) handling payments originating by import/export transactions in the context of the ALADI (*Asociación Latinoamericana de Integración*) (see Section 8.5).

2.5 THE ROLE OF BANKING SUPERVISORY AUTHORITY

The BCRA supervises the financial sector through the Superintendency of Financial and Exchange Institutions (*Superintendencia de Entidades Financieras y Cambiarias, SEFyC*). The SEFyC reports directly to the President of BCRA; it is a decentralized body and it is administered by a Superintendent. The Superintendent has to make available for the Board of Directors of the BCRA and the other competent authorities any collected information concerning financial entities as well as the criteria utilized to gather this information.

2.5.1 Supervision of Financial Entities

Bank supervision in Argentina has changed significantly in recent years. BCRA's activity as supervisor of the banking sector has been re-organized and new supervisory rules have been introduced. The new rules are often stricter than in the majority of other countries, but tend to combine supervisory discipline with market discipline. In particular, in recent years the BCRA has introduced a new system of banking supervision, new capital standards and liquidity requirements. Moreover, a private deposit insurance scheme was created.

The new system of banking supervision, the BASIC (Bonds, Auditing, Supervision and Financial Institutions' Ratings), was introduced by the BCRA at the end of 1996:

³¹ Ex art. 14, point J of the *Carta Orgánica*. It states literally that the Board of Directors of the BCRA is responsible for "reglamentar la creación y funcionamiento de cámaras compensadoras de cheques y de otros valores que organicen las entidades financieras".

³² The BCRA reports on a regular basis on payments systems matters to the Congress and the public through a payment systems chapter in the *Informe al Congreso de la Nación*.

- The “Bonds” component establishes that all financial institutions must issue and place subordinated debt annually for an amount equal to 2 per cent of their total deposits, either in domestic or in foreign currencies.³³ These debts have a maturity greater than or equal to two years. The purpose of this is to ensure that all banks are subject to market scrutiny on an annual basis.
- “Auditing” is related to the requirement that each bank must appoint certified public accountants (out of a list approved by the BCRA) for external auditing. The accountants have to report details of the main debtors of the bank on a quarterly basis. In addition, they are required to report on the risk deriving from operations with derivatives and with foreign entities not subject to a regime of consolidated supervision.
- “Superintendency” of the system is based on the “CAMEL” method of rating the solvency of the bank. This model evaluates, with a grading mechanism, each bank’s capital, assets, management, earnings and liquidity.
- The “Information” element refers to the obligation for financial institutions to submit to the BCRA monthly consolidated balance sheets including data on “significant subsidiaries”.
- Finally, the “Ratings” requirement require financial institutions to be rated by at least one of the internationally recognized ratings agencies.

The capital adequacy requirements over risk weighted assets for banks in Argentina are set at 11.5 per cent, significantly higher than the 8 per cent ratio recommended by the Basle Committee. Furthermore, they can be raised to a level significantly above 11.5 per cent in response to increases in bank risk, therefore entailing significant incentives for banks to limit risk. In particular, the interest rate charged for each loan is also taken into account to determine assets at risk.³⁴

The applicable liquidity requirements were established in August 1995. They are high by international standards ranging between as much as 20 and 10 per cent in case of liabilities with a maturity under one year whereas no liquidity requirement is applied to deposits with a maturity beyond one year (see Box 4).

Banks can hold liquidity in the form of low-risk remunerated assets of various kinds, thereby limiting the opportunity cost associated with the high liquidity requirements. Eligible assets include, *inter alia*: (i) *pases pasivos* with the BCRA;³⁵ (ii) remunerated deposits held by the commercial banks at international financial institutions (at present, *Deutsche Bank* in New York); (iii) OECD government

³³ Except branch offices of foreign banks with investment grade ratings.

³⁴ The higher the interest rate a loan has, the larger the weight used to compute assets at risk. The weights run between 0.8 and 6.0. The minimum weight (0.8) is applied to loans granted to clients with an international rating at least as high as that of Argentina bonds and bearing an interest rate not higher than two percentage points above the prime rate published by the BCRA. The maximum weight (6.0) is applied to loans in foreign currency bearing interest rates of 74% or more and to loans in pesos with a 78% or more interest rate.

³⁵ For a description of the functioning of *pases pasivos*, see Annex and Sections 2.4 and 8.3.

bonds; and (iv) standbys issued by foreign banks. The composition of their liquidity reserves among the various eligible assets may vary within certain limits; *inter alia*, the external component may not exceed 80 per cent of the total liquidity requirements.

Box 4 Liquidity Requirements

Liquidity requirements are based on the residual term to maturity of the liabilities in the following way:

Maturity less than 89 days: 20%; between 90 and 179 days: 15%; between 180 and 365 days: 10%; more than 365 days: 0%.

The qualifying assets are:

- (i) "Pases pasivos" (reverse repos) to the BCRA.
- (ii) Deposits in an international custodian.
- (iii) Argentine public or private bonds so long as the local Argentine bank retains a put option, within 90 days, against an A-rated foreign bank on those bonds.
- (iii) Argentine mortgage-backed securities, so long as the local bank retains a put option against them with an A-rated foreign institution.
- (iv) Certificates of deposits held in "AA"-rated banks, so long as the local bank retains a put option deposited with the international custodian.
- (v) OECD government bonds rated "A" or above, maintained in the same custodian.
- (vi) International organizations, with a rating "AA" or above.
- (vii) Bonds or equities with OECD companies or banks rated "AA" or above.
- (viii) Mutual funds of OECD securities admitted by the BCRA, so long as they are deposited with the custodian.
- (ix) Standbys issued by foreign banks A-rated or above, with a minimum maturity of 180 days and no conditional use.

There are some limits in the use of these assets as liquidity requirements:

- "Pases pasivos" (reverse repos): up to 100%.
- Standbys: up to 20%.
- Other foreign assets: up to 80%.
- Within the previous limits:
 - Up to 10% with domestic securities.
 - Up to 5% with mortgage securities.
 - Up to 30% securities issued by companies or banks of the OECD or international organizations.

Box 5
Deposit Insurance: El Sistema de Seguro
de Garantía de los Depósitos Bancarios (SEDESA)

The deposit insurance (SEDESA), created by the Law No. 24,485 of 1995, is a private deposit insurance. Revenues of the fund are used to cover the necessary expenses of operations. Any change to the fund's charter or capital requires the approval by the BCRA.

The entities authorized to operate in Argentina pay into the fund through a monthly contribution normally representing a percentage –between 0.015 and 0.06– of the average daily balances of deposits in pesos and foreign currency and other additional amounts that the BCRA may establish according to risk indicators. The amount is given in cash or a commitment in cash. In order to participate in the fund a prior deposit must be made in any of the two ways established by the law.

If the fund has \$2 billion pesos or more than 5% of total deposits of the financial system (if this figure is superior to \$2 million pesos) the BCRA can suspend or reduce the contributions, re-establishing them when the fund is again under these figures. In this case the BCRA should take into account only the effective contributions.

The resources of the fund are placed in a way similar to the international reserves of the BCRA. Nevertheless, the BCRA could determine to place up to 50% of the fund in domestic public securities. The returns will be reintegrated to the fund.

The resources of the fund could be used for the following operations:

(i) to cover the guarantees to depositors, according to the conditions established in the law and regulations.

(ii) to increase capital or concede loans to financial institutions that:

- are subject to special plans of recovery,
- have acquired assets and assume responsibility to re-pay the deposits of another entity that BCRA has authorized for restructuring, with the provision that the license to exercise the financial activity can be revoked,
- have acquired or absorbed other institutions of a restructuring and recovery plan.

There are other cases related to the recovery of institutions with problems that are listed in the article 10 bis of the law.

SEDESA covers pesos and foreign denominated deposits in the form of checking accounts, savings accounts and time deposits accounts or any other form established by the BCRA. Article 12 of the law presents a list of uncovered deposits. SEDESA will cover \$10,000 pesos in the case of checking deposits, savings deposits and time deposits with a maturity of less than 90 days. If the time deposits maturity is 90 or more days the amount covered is \$20,000 pesos.

The form of Argentina's liquidity requirements make them flexible and remunerative, and they effectively vary with the risk of the bank's liabilities. Banks that are perceived as low-risk by international banks can use standbys as an alternative to other means of satisfying liquidity requirements. Thus, banks face an incentive to limit their default risk from the opportunity to substitute standbys for other reserves.

The deposit insurance (SEDESA), created by the Law No. 24,485 of 1995, is a private deposit insurance aiming at covering banking deposits risks in a subsidiary and complementary way to the protection and privilege system provided by the Financial Entities Law and without committing the resources of the BCRA or National Treasury. It covers \$10,000 pesos in the case of checking deposits, savings deposits and time deposits with a maturity of less than 90 days, and \$20,000 pesos if the time deposits maturity is 90 or more days (see Box 5).

2.5.2 Oversight of the Payment System

The BCRA is involved, through its banking supervision function, in the oversight of the private sector clearinghouses. The control of technical and operational aspects of the clearinghouse, both before it is authorized to operate and subsequently, is managed by the banking supervisor (SEFyC). The SEFyC is also involved in the management of abnormal situations in the clearinghouse through the *Comité de Cámaras* (see Chapter 4).

The *Carta Orgánica* also gives the SEFyC the responsibility to enforce the legal provisions on the functioning of plastic cards and e-money issued by the Congress or by the BCRA.³⁶

2.6 THE ROLE OF THE SECURITIES REGULATORS

The *Comisión Nacional de Valores* (CNV), established in 1968 by the Public Offering of Securities Law (Act 17.811), is the national securities regulator. It is charged with ensuring transparency in the capital market, overseeing appropriate and correct price-formation and protecting investors. The CNV is also responsible for supervising and regulating institutions issuing securities that are distributed in the secondary market.

Some of the key functions of the CNV are as follows:

- To authorize the public offering of securities;
- To advise the Executive on requests related to the operation of stock exchanges;
- To encourage appropriate record-keeping by market participants, including the general list of stockbrokers registered with stock markets;

³⁶ Ex. Art. 47, point H, *Carta Orgánica*.

- To keep a register of the physical and legal persons authorized to make public offerings of securities, and to make the rules to which they must abide as well as to whom they will apply;
- To approve regulations of stock exchanges concerning the public offering of securities, and those of the stock markets; to control fulfillment of legal, statutory and regulatory rules included in the scope of the present Act; and
- When necessary, to obtain approval from the Executive authority to cancel operations of a market participant that fails to meet the requirements of the Public Offering of Securities Law and other pertinent laws.

Section 7 of the Public Offering of Securities Law authorizes the CNV to make rules aimed at verifying fulfillment of the requirements set forth in this law. In this context, the CNV may:

- demand reports and make inspections and investigations of the physical or legal persons subject to its oversight;
- request cooperation from law enforcement personnel;
- commence legal actions; and
- report frauds or act itself as complainant.

Section 10 of the Public Offering of Securities Law grants the CNV enforcement powers, including the following: (1) censure; (2) fine; (3) suspension of up to two years as to the making of public offerings of securities; and (4) prohibition against making public offerings of securities.

In addition, under General Resolution No. 337/99, the CNV is also empowered to rule on the public offering of forward and futures and options contracts, their markets and clearinghouses, and their intermediaries.

2.7 THE ROLE OF OTHER PUBLIC AND PRIVATE SECTOR ENTITIES

2.7.1 The Ministry of Economy

The Ministry of Economy (*Ministerio de Hacienda y Obras Públicas*) has a role in the payment system as regulator and as a participant in the payment system. As regulator, through a Secretariat (*Secretaría de Hacienda*) it oversees the clearing and settlement process of government securities issued on the primary market that takes place on the CRYL.

As a participant, through the Treasury Department (*Tesorería General de la Nación*), the Ministry sends out and receives a large number of payments for the entire public sector. *The Administración*

Federal de Ingresos Públicos, a separate body also controlled by the Ministry, administers the collection of taxes. Both the *Tesorería General* and the *Administración Federal de Ingresos Públicos* use the banking and the postal system to operationally manage these transactions, with a particular involvement of the *Banco de la Nación Argentina* (see Box 6).

2.7.2 The Banker's Associations

Banks are organized in four banker's associations. They are: ABA (*Asociación de Bancos de la República Argentina*); ABAPPRA (*Asociación de Bancos Públicos y Privados de la República Argentina*); ABM (*Asociación de la Banca Minorista*) and the IMFC (*Instituto Movilizador de Fondos Cooperativos*). The bankers associations play a role in the payment system through an apposite co-operative body, the *Comisión Interbancaria de Medios de Pago de la República Argentina* (CIMPRA).

2.7.3 The Comisión Interbancaria de Medios de Pago de la República Argentina (CIMPRA)

At the end of 1995, the BCRA and the bankers' associations formed the *Comisión Interbancaria de Medios de Pago de la República Argentina* (CIMPRA), a cooperative effort on payment issues. In particular, CIMPRA was formed to provide private sector input on the modification and modernization of existing payment media, the creation of innovative instruments, and the improvement of clearing and settlement systems in line with the evolution of communication means and the new international standards of safety and finality of the operations.

In addition to the BCRA and the bankers associations, two other institutions are represented in the CIMPRA, the *Banco de la Nación Argentina* and the *Banco Ciudad de Buenos Aires* that form the so called *Banca Oficial*. The BCRA holds the presidency of the CIMPRA.

The CIMPRA can issue recommendations through its bulletins, which, although they do not have a mandatory nature of BCRA's circulars, represent a framework for financial entities' activities in the payment system. These recommendations are often followed by formal BCRA issued regulation (see Section 2.1).

The CIMPRA has mainly focused its efforts on the retail sector, in particular on matters related to 1) check clearing; 2) direct debit; 3) electronic funds transfer. The CIMPRA represents an important forum for the implementation of the reform in the payment system and guarantees that the decisions made are implemented by the entire banking sector.

3 PAYMENT MEDIA USED BY NON-FINANCIAL ENTITIES

3.1 CASH

In Argentina, the use of cash is widespread. The total amount of pesos in circulation amounted to around \$16.5 billion at the end of 1999, equivalent to 5.8 per cent of GDP. Of this amount, \$14.3 billion are held by the public, about 43 per cent of M2, which includes in addition to cash, current and savings accounts in pesos. No precise information is available on the stock of dollars in circulation in the economy. However, evidence suggests that this amount can be between two and three times as high as the stock of pesos in circulation.³⁷ A recent IMF paper estimates that, at the end of 1996, the stock of dollars in circulation in Argentina exceeded \$34 billion.³⁸ Consequently, it can be concluded that cash in circulation in Argentina, including dollars and pesos, might be a figure around \$50 billion or over 17 % of GDP.

Cash is widely used also for large value transactions, including financial market and real estate transactions. In recent years, the percentage of cash balances in pesos in M2 decreased as a result of the financial deepening in the country.³⁹ A regulation issued in 1997 by the BCRA requiring companies to pay their employees via bank automated payroll deposits rather than in cash is an example of policy initiatives in Argentina to modify this cash figure.

The BCRA is the exclusive issuer of legal tender coins and notes in the country. Actually, there are in circulation coins and notes of the following denominations: a) Coins: 1,5,10,25 and 50 cents and 1 peso; b) Notes: 2,5,10,20,50 and 100 pesos.

In the past, the BCRA distributed cash through 22 "Regional Treasuries" located throughout the country and managed by provincial banks. The process of consolidation of the banking system resulted in a decrease of the number of provincial banks. This consolidation activity had an impact on the BCRA distribution channel. Consequently, the BCRA reorganized this activity by replacing the "Regional Treasuries" with "Regional Agencies" directly managed by the personnel of the central bank. On average, 3-4 people work at each "Regional Agencies".

The BCRA bears the cost of transportation of cash to the "Regional Agencies". Banks are charged no fee; however, they bear the cost of transportation of cash from the "Regional Agencies" to their own branches.

In order to reduce custody safekeeping and transportation costs, the BCRA has promoted an "Interbank Clearing of Cash" (*Compensación Interbancaria de Billetes*). Banks holding surpluses of cash may

³⁷ See, for example, Villar, Augustin, (1996), *Sistema de Pagos en la Economía Argentina*, BCRA, Buenos Aires, paper presented at the *Jornadas Monetarias y cambiarias del BCRA*, 21/22 August 1996.

³⁸ See, Balino, Tomas J.T. and Adam Bennett, Eduardo Borensztein, (1999), *Monetary Policy in Dollarized Economies*, IMF Occasional Paper n.171, Washington DC. The authors get the data from the flows of U.S. currency to other countries, collected from U.S. Customs for transfers of cash in amounts of \$10,000 or higher. However, as the authors point out, this figure has many potential shortfalls, including the most evident one that dollars moved to Argentina may have been transferred subsequently to other countries.

³⁹ At end-1996, cash balances in pesos represented more than 45 % of the broader aggregate M2.

hold them on behalf of the central bank and then distribute cash to banks located in their area which need it, instead of returning such surpluses to the BCRA. These balances are accounted separately from the bank's own holdings of cash. In addition, this procedure is used only with banks that are located in the vicinity of the BCRA or the National Agencies.

A revision of the procedures by which commercial banks acquire cash from the BCRA is underway. According to the procedure still in place, banks communicate requests for cash to the BCRA through the telematic communication system in place between the banking system and the central bank (STAF system). At the same time, they send a check, for the amount of cash required, to BCRA headquarters in the Federal Capital. The BCRA puts the required cash at disposal of the banks only after having debited their accounts. This operation may require some time. The new procedure under implementation will allow banks to send to the BCRA in real time, via the RTGS system managed by the central bank, the funds for the amount of cash required. Consequently, the requests of cash should be promptly and efficiently satisfied.

3.2 NON-CASH PAYMENTS

3.2.1 Paper Checks

In Argentina the check is the most common non-cash instrument. Cashier's checks and bankers drafts can be denominated in pesos and dollars or in any other foreign currency. Checks can be issued also with a deferred date for the payment (*cheque de pagos diferido*).

Checks are presented in significant values and volumes: 10 million units are exchanged on a monthly basis with a value of almost \$27 billion pesos. Checks are used also for relatively large value payments. Almost 25 per cent of the total amount of checks have a value of more than \$1,000 pesos (dollars). The average amount of these large value checks is around \$9,700 pesos.⁴⁰ The amount of checks rejected in 1999 for insufficient funds or any other formal reasons totaled 2.2 million.

The legal framework for checks is described in Section 2.1.1.

Checks are cleared in the two low value clearinghouses and in the local clearinghouses that are not yet connected with them. In 1999, the financial entities signed an agreement for the implementation of a check-truncation mechanism (see Chapter 4).

3.2.2 Direct Debits

Direct debits have grown in Argentina in recent years. This has been made possible by new procedures for processing and clearing these items through an electronic clearinghouse (see Chapter 4). In addition, customers can now reject payments in the 30 days following the operation. This helped to increase the degree of confidence in the instrument from the customer perspective. However, the use of this instrument is still limited (with a monthly volume of around 100,000 transactions and a value of \$100 million from January to November 1998).

⁴⁰ The estimate is based on the plausible assumptions that 50 per cent of the checks have an average value of 200 pesos and the other 25 per cent an average value of 700 dollars.

3.2.3 Payment Cards

a) Credit and debit cards

The use of payment cards, especially credit cards, in Argentina is widespread. In fact, Argentina presents the most developed market for payment cards in Latin America. There are seven credit card networks that are active at the national level. Five are owned by banks and operate in an open scheme (*Visa, Mastercard, Credencial, Cabal, Carta Franca*).⁴¹ The other two are the Travel and Entertainment circuits (*American Express, Diners*) that operate in a closed scheme. There are several other credit card companies that are active at the regional or even municipal level. Some of them are not directly owned by banks. Together the latter represent almost 8 per cent of the market. Debit cards are issued mainly by the two main international brands (*Visa with Electron and Mastercard with Maestro*) that manage their operation through *BANELCO* and *LINK*. Almost all of the 9.5 million ATM cards issued by the latter organizations can be used as debit cards for payments. The debit card market is in an early stage of development: the average monthly volume of operations is around 200,000 operations, with an average value of \$100.

Payment card operations for national cards are cleared at the network level and settled through banks on the accounts held at the BCRA (see Section 4.6).

The number of credit cards in circulation is estimated at 15 million units at end of 1998. Since many customers hold more than one card, it is estimated that not less than 8 million people hold at least one credit card. The number of credit card transactions is 15 million per year with an aggregate value of almost 15 billion dollars. Almost eighty per cent of these operations are processed electronically through the 72,600 POS (end-1998). An agreement signed in 1994 by all card operators has guaranteed the interoperability of all circuits, therefore a single POS is able to process all debit and credit card operations.

b) ATM cards

In recent years, the use of ATM cards has also increased as a result of the rise in checking and savings accounts. In addition, the variety of services that have been added to the ATMs (deposits, withdrawals, balance inquiry, payment of bills, etc.) has created a demand for cards. In addition, payroll funds directly credited into bank accounts can be accessed via ATMs. Finally, banks provide a disincentive for the use of cashiers at the counter by charging a fee for the service.

BANELCO and *LINK* are the two networks managing ATM operations. At mid-1999 the number of ATMs reached around 6,000 units, distributed throughout the country, with over 60% of them concentrated in the capital and in the Province of Buenos Aires.

The number of ATM cards in circulation exceeded 9.5 million at mid-1999. These cards are used for an average of 22.6 million transactions per month with an average unit value of \$200 pesos. Only an average of 150,000 withdrawals of US dollars per month are effected.

⁴¹ In an open scheme, banks are able to offer cards from different issuing companies and the relation with the merchant is not exclusive. The opposite occurs in a closed scheme when the issuer places its own cards and maintains an exclusive relation with merchants.

c) Retailer cards and pre-paid cards

There are several retailer cards in Argentina, some of them with a significant number of cards in circulation.

Some mono or limited purpose pre-paid schemes are active (e.g. Telephone cards, an association between VISA and McDonald's) but no multi-purpose pre-paid cards circulate in the country.

3.2.4 Postal Instruments

The Postal administration (*Correo, S.A.*) does not offer account facilities but manages two types of payment instruments: postal money orders and recurrent payments operations.

The postal money orders can be compared to a check. The sender comes to the post office to transfer money to the receiver and pays in cash or with a bank check.⁴² The post office sends a check to the receiver immediately if the payment is in cash or after the check is cleared in the other case. The receiver has the option of presenting the check for payment to the post office or to a bank. In the latter case, the check is cleared in the clearinghouses as a normal bank check. The Postal Administration has an account at the BCRA for final settlement. The *Correo* operates in the payment system also through one of the electronic clearinghouses (*COELSA*). Postal giros are in the range of 400,000/500,000 per year for an average daily value of \$200,000 pesos.

The *Correo* is used extensively for recurrent payments (utilities, tax duties, etc.). The network for these payments, named SEPSA, is managed by an external company and operates with bar code instruments. Payments are received at the Post Office only in cash and are transmitted on the following day to SEPSA, which distributes them to the final beneficiary. The system is efficient and manages millions of operations per month.

The *Correo* has several projects under way to extend its activity in the payment system. The main projects refer to the possibility of accepting payment cards for its payment services and acting as an exchange bureau for foreign currencies.

3.2.5 Recent Developments

A key project that recently became operational is the implementation of the procedures for the management of electronic funds transfers that are managed by the low value clearinghouses. The BCRA specified the operational procedures and the scheme started in April 2000. The credit transfers are executed for:

⁴² The Post Office accepts the check only from customers who have passed a preliminary scrutiny in terms of credit worthiness.

a) Payment of payrolls (when the employer and the employee hold accounts at different banks). In this case, payment instructions are cleared and settled on the same day by the low value clearinghouse in a newly created procedure in the MEP system.

b) Payment to suppliers.

c) Interbank wire transfers for clients and non clients of the bank (in the latter case the operation must be started at the bank teller and the recipient must have a bank account). These operations are cleared and settled in 48 hours.

In addition, banks are adding new services to their ATM's operability, through BANELCO and LINK, and are launching new services for home and tele-banking, as a consequence of the improved efficiency of telecommunication systems in Argentina.

Box 6 **Non-cash Government Payments**

The public sector is a heavy user of the national payment system. For example, in 1997, the public sector disbursed almost \$54.7 billion and received \$53.7 billion pesos. In this process many public and private sector bodies are involved. From the public sector, the Ministry of Economy operates through the Secretaría de Hacienda that coordinates the Tesorería General de la Nación (Treasury Department) and the Dirección General Impositiva, which is responsible for fiscal matters. A role is played by the BCRA, as financial agent of the State, and, particularly, by the Banco de la Nación that manages the central account of the Tesorería General de la Nación (Cuenta Única del Tesoro, CUT). On the private side, the banking system and the Correo offer payment services to the public sector. From the operational point of view, the Tesorería General de la Nación sends to Banco Nación daily a file with the payments to be made on behalf of the public sector. Banco Nación credits the accounts of beneficiaries on the same day, if they are held at branches of the same Banco Nación and on the following day, if they are held at other banks. It is worth noting that while on the debit side of the CUT the process is centralized at Banco Nación, on the credit side the system is more fragmented and it is administered from Secretaria de Hacienda that sends payments to the CUT after having collected in various forms. A new model for the latter process is under study.

Tax collection is administered by the Administración Federal de Ingresos Públicos and is operationally managed in different ways according to the nature of the payers.

The majority of the payers use a standardized system and can make payments through the banking sector and the Post office. The system has gained in efficiency in recent years and it is technologically advanced. For example, taxes can be paid using ATMs.

A small group of payers (for example big companies) pay taxes at dedicated points.

Customs duties are paid at the borders of the country through a system managed by Banco de la Nación, in approximately 60 locations.

4 PAYMENTS: INTERBANK EXCHANGE AND SETTLEMENT CIRCUITS

4.1 THE REFORM OF THE INTERBANK CIRCUIT

4.1.1 The "Old" Interbank Circuit

Before the payments reform of the mid-1990s, two main interbank procedures were operational: the clearinghouses for checks and a procedure for interbank transfers. Both systems mainly relied on manual procedures. Settlement procedures at the central bank were cumbersome. As a result, certainty about the settled payments and the exact definition of bank balances were achieved only on the day after the settlement had occurred. Furthermore, no interbank procedure was in place for credit transfers. Those payments could be executed only between customers of the same bank.

Throughout the country checks were cleared through 84 clearinghouses which operated on the basis of semi-manual procedures. The Clearinghouse of Buenos Aires was managed directly by the BCRA and operated on a 48 hours cycle; 6 clearinghouses were connected to the clearinghouse of Buenos Aires and permitted the clearing of checks among different clearinghouses through the same 48 hours cycle. The remaining clearinghouses were managed by the *Banco de la Nación* in the name and on behalf of the BCRA. Settlement was executed through the accounts banks held with the BCRA. If a bank was not able to meet its final balance, a procedure was established that required the bank to return the amount of checks necessary to reduce its balance to the extent necessary to enable it to settle.

Interbank payments were processed through the Clearinghouse of Buenos Aires. They were sent to the BCRA, in paper form, by 8.00 p.m. The BCRA processed these operations and sent the records back to financial institutions that had a half hour reviewing time. The operations were then taped in electronic form and inserted in the current accounts held by banks at the BCRA. If a bank did not have sufficient funds on its account, three options were available: (i) access to the discount window at the BCRA; (ii) cancellation by the concerned bank of a number of its transfers to reduce the debit balance; (iii) cancellation by the BCRA, at its discretion, of a number of the transfers sent by the concerned bank. Because this process was completed within the BCRA around 11.00 p.m., only in the morning of the following day were banks informed about which of their payments had been executed and the funds available on their settlement accounts at the BCRA.

Such a structure of the interbank circuits had a number of disadvantages:

- It adversely affected the overall efficiency of the payment services provided to final customers, as it was based on the use of traditional technologies and allowed for the clearing of only a limited range of instruments (checks).
- Banks could not efficiently manage their liquidity due to the uncertainty about their positions. On the other hand, banks had no incentive to control effectively their exposures in the payment system and relied widely on the intervention of the central bank in critical situations.

- Operational inefficiencies in the settlement of funds payments promoted potential risks in the settlement of securities related transactions. The funds aspect of securities settlement might not be final until the day following securities settlement.
- Reversal of payments as an ordinary mechanism for managing inability to settle final balances by one or more banks was a potential source of settlement risk.
- The emergence of balances of increasing amounts raised the concern that the credit extended by the BCRA to ensure the smooth functioning of the payment system might, in perspective, become incompatible with the constraints stemming from the Convertibility Law and from the *Carta Orgánica*, namely the impossibility for the central bank to provide credit directly through current account overdrafts.

4.1.2 The Guidelines of the Reform

In order to overcome such a situation, a thorough overhaul of the interbank settlement circuit was promoted. The central bank and the banking associations established a working group in 1995⁴³ which worked out the general lines of the reform.

A number of guidelines were established:

- Widespread adoption of new technologies, both for customers and interbank payments.
- Creation of interbank nation-wide systems specialized by the types of payments processed (e.g., large or low-value). Unlike some other countries, in Argentina the distinction between large value and low-value systems is mainly based on the length of the interbank clearing and settlement procedures of the various transactions: interbank procedures in which settlement occurs within 24 hours from the presentation of transactions are considered as large-value, those which provide for settlement beyond 24 hours from the presentation are considered as low value ones.
- Enhancement of the financial soundness and the operational reliability of systems by the enforcement of risk control measures in the clearing systems and the implementation of a real-time gross settlement system.

Another main outcome of the reform was the growing involvement of the private sector in the direct management of payment systems. The central bank, on the other hand, limited its role in the payments mechanism to fewer operational functions, and emphasized its oversight responsibility.

The structure of the new interbank systems consists today of the following:

⁴³ Transformed in the CIMBRA in 1996.

- Two low value automated clearinghouses (*ACH* and *COELSA*), which are gradually absorbing the activity of the local clearinghouses.
- Two automated large value clearinghouses (*Interbanking* and *Provincanje*).
- The RTGS system (*MEP*), managed by the BCRA.

In addition, there are procedures for the clearance and settlement of ATM and debit/credit card transactions that are not yet connected to the new systems.

4.2 THE NEW REGULATORY FRAMEWORK FOR PRIVATE CLEARINGHOUSES

As mentioned in Section 2.4, the *Carta Orgánica* gives to the Board of Directors of the BCRA the authority to regulate the creation and functioning of clearing organizations for checks and other operations managed by financial entities. In 1997, the BCRA established, through specific provisions, the regulatory framework governing the structure and operation of private automated clearinghouses.

According to such regulations, the clearinghouses (*Cámaras Electrónicas Compensadoras, CECs*) must assume the legal form of public companies with a mandate restricted to clearing activities.

Only financial institutions may hold shares of the clearinghouses but no entity may control directly or indirectly more than 10% of the company. Members of clearinghouses can be financial entities and other institutions, public or private, explicitly authorized by the BCRA. The BCRA is also a member and intervenes in the system to process its own operations. The admission requirements must be non discriminatory and all the entities that meet the requirements become full members with the same rights and without differences in the prices charged for the services or in any other operational aspect. Participation in the system may take two forms: 1) direct, as full member of one or more clearinghouses; 2) indirect, through the designation of another member as representative.

Settlement is to be executed via the *MEP* system through the current accounts that clearinghouses hold at the BCRA. Balances are settled by the clearinghouses and the participants by transferring funds through such accounts via the *MEP* system. Banks with net debit balances transfer funds to the clearinghouse's accounts and, subsequently, the clearinghouses transfer funds to banks with net credit positions.

Authorization to create a clearinghouse requires the submission of a project of self regulatory statute (*Reglamento de Gestión*) to the BCRA. This project proposal must establish, *inter alia*: (i) the cases in which a participant may be excluded from the clearinghouses; (ii) risk control measures and management of situation of crisis; (iii) contingency plans. Furthermore, the start of the operation of the clearinghouses is subject to the assessment of their technical reliability by the *Superintendencia de Entidades Financieras y Cambiarias*, which analyses the operational capability, the security requirements, the telecommunication infrastructure and the contingency plans. Each CEC has to appoint an external auditor to be chosen among those included in a list of auditors approved by the BCRA.

The risk control measures defined by the clearinghouses must at least comply with minimum requirements established by the BCRA. These measures are different for low-value and large value clearinghouses which, as already mentioned, are established depending on the length of the clearing cycle.

For low value clearinghouses, whose operational cycle lasts more than 24 hours (e.g., checks), guidance issued by the BCRA is extensive. The amount of collateral held by participants must, at minimum, be equivalent to the simple average of the five maximum negative net balances of the last quarter. Balances are to be communicated to the members early in the morning of the settlement day in order to give enough time to cover possible debit balances exceeding the amount of the guarantees.

For large value clearinghouses, whose operational cycle lasts less than 24 hours, net debit balances must not exceed the amounts of the guarantees deposited even on an intra-day basis; with this view, queueing mechanisms are to be implemented.

According to the regulations, the assets presented as guarantees must present a high degree of liquidity; the list of assets is the same used for the calculation of the Minimum Liquidity Requirements (*Requisitos Mínicos de Liquidez*). As guarantees, government securities denominated in foreign currency can be presented. In this case, the BCRA is asked to authorize special custodian accounts held by the clearinghouses and the financial institutions at the *Caja de Valores S.A.*

In the management of critical situations emerging within clearing systems (low value as well as large value) a relevant role is played by the *Comité de Cámaras* which is composed of one member from each of the clearinghouses, one from the Banking Supervision, two from the BCRA. In case of settlement problems emerging in a clearinghouse, the *Comité de Cámaras* analyzes the situation and submits its findings to the Superintendent. It also monitors the operational phase of rejected checks (*rechazados*) in order to prevent banks in settlement difficulties from trying to solve their problems by returning "good" items (e.g., covered checks).

4.3 LOW-VALUE CLEARINGHOUSES

Since 1997 two private clearinghouses have been authorized by the BCRA to process electronically low value payments: *ACH, S.A.* and *Compensadora Electrónica S.A. (COELSA)*. Seventy banks, mainly located in the area of Buenos Aires, are members of *COELSA* whereas 39 banks, mainly from other areas of the country, take part in *ACH*. At present, all members participate as direct participants.

The creation of the low-value automated clearinghouses is leading to the gradual consolidation of the local clearinghouses in the provinces and to the creation of a national automated clearing system.

(a) Operation of the systems

The two clearinghouses handle the following payment instruments: 1) checks (cashier's, *de pagos diferido* and banker's draft); 2) letters of credit; 3) certificates of deposit at fixed-time; 3) banking

payment orders; 4) postal and bank giros and transfers; and 5) sight bills of exchange drawn against quotas of a mutual fund.

Checks denominated both in pesos and in US dollars are handled through the clearinghouses. Even if they are processed separately, a unique balance per bank is calculated.

Since the beginning of the year 2000, the limit for truncated checks was raised from US\$700 to US\$1,000 (it was US\$300 until October 1999). Consequently, approximately 75% of checks in circulation are truncated. Also for high value checks the relevant information will be exchanged through automated procedures but their physical transmission to the payer's bank will be still required. At present, approximately 9.3 million checks are processed through the two clearinghouses on a monthly basis. The daily average debit balance amounts to US\$1.7 billion. The percentage of unpaid items amounts to 3.5%.

Moreover, direct debit operations (less than 100.000 monthly transactions) are processed. A new procedure which will be used to credit current accounts payrolls, payments to suppliers and transfers among clients of different entities was recently implemented (see Section 3.2.5).

The two clearinghouses are interconnected to exchange transactions that are presented from the member of one in favor of a member of the other. This procedure is applied to each session and to all compensated instruments. The structure of the archives and of the messages between entities and the clearinghouses have been developed following the standards of the *National Automated Clearinghouse Association (NACHA)*.⁴⁴ Through this mechanism, the entities send data to the chosen clearinghouse and the latter takes care of the transfers to the other institutions.

(b) Risk control measures

Participation is open to all banks; no additional membership requirements are established. According to the regulations of the BCRA, each member is required to hold, on its guarantee accounts at the BCRA, an amount of funds equivalent, at the minimum, to the simple average of its own maximum five net debit balances in the clearinghouse during the last quarter. At present, all guarantees are held in cash.

The normal operational cycle of low value clearinghouses is organized as follows:

- In the evening of day 1, participants send checks to be cleared to the clearinghouses.
- On day 2, early in the morning, each clearinghouse communicates to its participants, and to the other clearinghouse, their respective net balances resulting from the clearing process.
- Before 12:00 a.m. of day 2 financial entities which have negative net balance exceeding their guarantee have to transfer the difference to the current account of the CEC at the BCRA.

⁴⁴ The *NACHA* formulates and promulgates rules and standards for processing ACH transactions throughout the United States. *NACHA* standards are frequently applied internationally.

At 5:30 p.m. of day 2 the session of rejected checks (*rechazados*) starts; the return of unpaid items may modify the net balances.

- Banks are required to make their deposits by 7:30 p.m. Each member with a debit position has to transfer funds, through the *MEP*, to the account of the respective clearinghouse. If the entity does not pay, the clearinghouse will debit the guarantee account, which, as mentioned above, must be reconstituted before 12 hours of the following day.
- After having received the funds from the entities with net debit balances, the CEC credits via the *MEP* system the participants with net credit balances.
- An inter-clearinghouse settlement also takes place: the clearinghouse that has a negative balance will pay the other one that will proceed to distribute this amount to its members according to the respective balances.

A situation may occur when the guarantee held by a financial institution is lower than its net debit balance and the institution is not able to transfer the necessary amount to the account of the clearinghouse before 12:00 a.m. In this case, the CEC informs the BCRA and the *Comité de Cámaras* of the situation. The rejection of checks and other documents, in case of a common rejection cause (insufficient funds, formal problems, etc.) may provide the financial institution with an additional chance to meet its balance. If the problem persists the CEC will proceed to inform the other entities that a process of unwinding will be started.

A common Guarantee Fund, separate from the collateral pledged by individual participants, (US\$1.5 million) has been created with equal contributions by all the members. The fund is intended to meet situations in which one or more of the banks are unable to settle.

(c) Pricing policies

Both the clearinghouses pursue pricing policies mainly aimed at recovering costs. Both charge their members a fixed monthly fee and fees per transaction. Higher fees are applied to payments which are to be cleared with members of the other clearinghouse.

4.4 LARGE VALUE CLEARINGHOUSES

4.4.1 Interbanking

Interbanking is a private sector for-profit clearinghouse owned by 12 of its 40 member banks, and which officially started operations in April 1998.⁴⁵ The clearinghouse provides multilateral netting services to banks settling their money payments, as well as electronic funds transfer services to private firms for intercompany payments. A key motivation for the system was to provide a private

⁴⁵ Owner-members do not receive additional benefits in terms of services; however, they gain an economic benefit in the form of a dividend payment at the end of the year.

sector complement to the central bank managed real-time gross settlement system, *Medio Electrónico de Pagos (MEP)*. Currently, banks mainly use the *MEP* directly for settling their money payments, sometimes for single transactions as low as \$12,000 pesos, rather than the multilateral net settlement system. On the other hand, *Interbanking* is developing marketing initiatives to demonstrate some of the benefits of netting large-value payments.

(a) Operation of the system

Although *Interbanking* is commonly referred to as a large-value clearinghouse, it does not process large-value payments exclusively. It processes interbank payments of any size in its netting operation, and there is no floor on the size of eligible transactions. In fact, some of the so-called low-value clearinghouses may process individual transactions in the same magnitude as *Interbanking*. Accordingly, *Interbanking* is more a private sector multilateral netting payments system, rather than a large-value clearinghouse *per se*.

Interbanking is the union of two pre-existing financial services firms, *Datacash* and *NewNet*, which provided various cash management services, including electronic funds transfer services, to corporate clients for more than 12 years. The combined firm, *Interbanking*, continues to offer cash management services to corporate clients. Currently, *Interbanking* provides such services to approximately 3600 corporates, and it accounts for as much as 90 per cent of *Interbanking's* total activity.

(b) Multilateral Netting Operation

For banks, *Interbanking* operates a multilateral netting service for money payments.

- *Interbanking* maintains a single account at the central bank in which it holds sub-accounts in the names of its participants (see Chart 1).
- At 10:00 a.m. each morning, *Interbanking* verifies on-line that participants have deposited sufficient collateral. Cash collateral is the only permissible form in which collateral is held. The collateral amount is held in the participants' *Interbanking* sub-account on *MEP* (see Chart 2).
- At 5:00 p.m., *Interbanking* calculates the net settlement obligation of each participant in the system.
- By 6:00 p.m., participants are notified of their net settlement obligations.
- By 6:45 p.m., participants in net debit positions are required to make payment to *Interbanking* through *MEP*. Once *MEP* has received all net debit obligations, it pays those participants in net credit positions, again, through *MEP*.

On average, the system processes 22,000 transactions each day. Typical positions taken on during the day can be as high as \$40 million pesos for a single participant. The average net amount settled by the system on an average operating day is approximately \$100 million pesos.

Chart 1

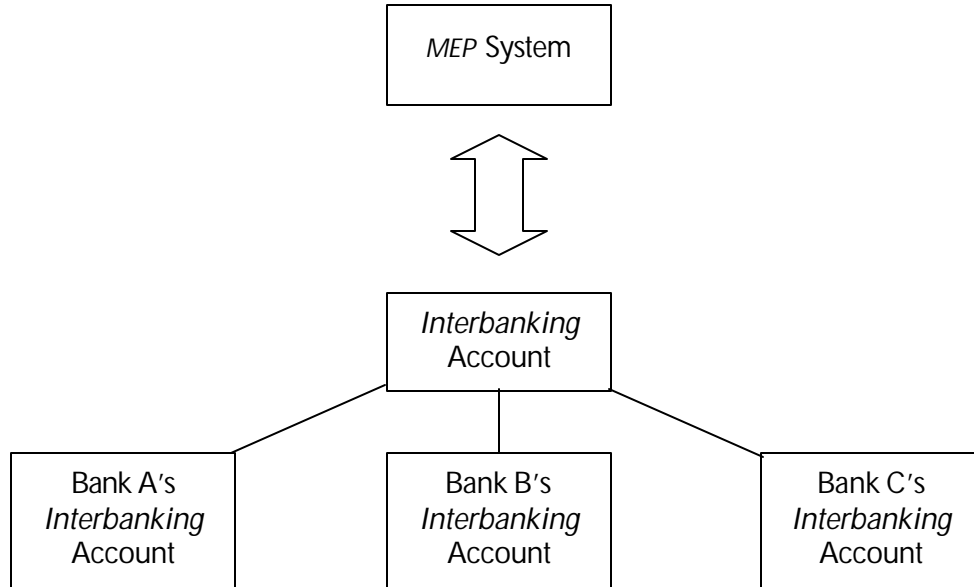
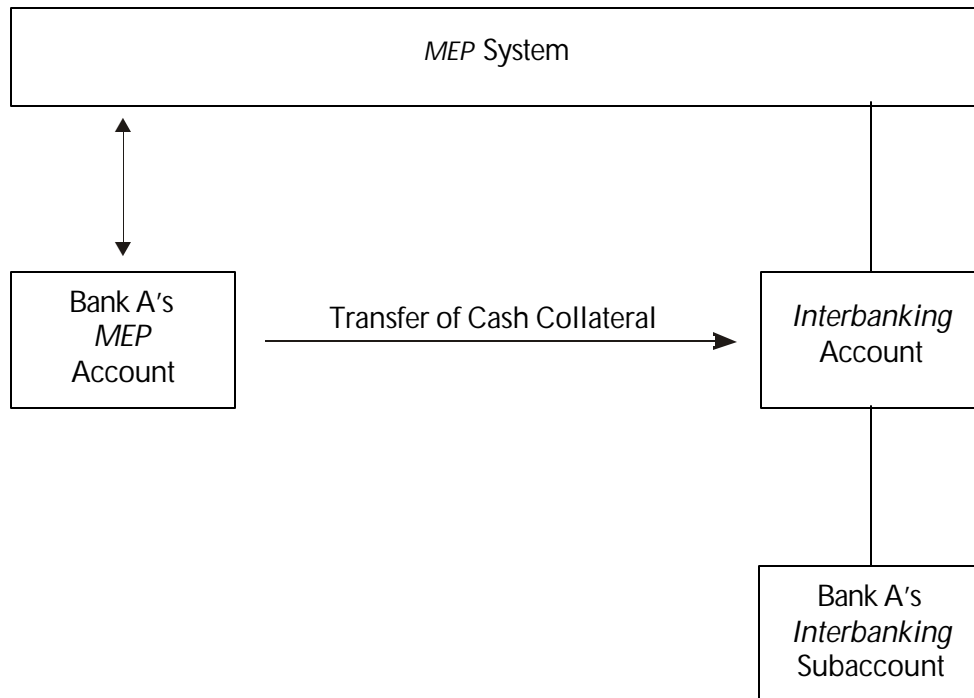


Chart 2



(c) Intercompany services

The Intercompany electronic transfer service accounts for approximately 90 per cent of the transaction volume at *Interbanking*. Companies maintain funds at a bank (debit bank). *Interbanking* monitors firms' balances with their debit banks in real-time during the day. When a company wants to effect a funds transfer, it sends the instruction to *Interbanking*, which, in turn, sends the instruction to the debit bank. The funds instruction is sent to *Interbanking* by the debit bank in real-time over the *MEP* system. Firms' debit positions are limited by a debit cap control administered by *Interbanking* in real-time (see Chart 3). At the end of the day, the related credits are delivered to those in a funds credit position and posted to the accounts of the beneficiary firms.

(d) Risk Management for the multilateral payment netting service

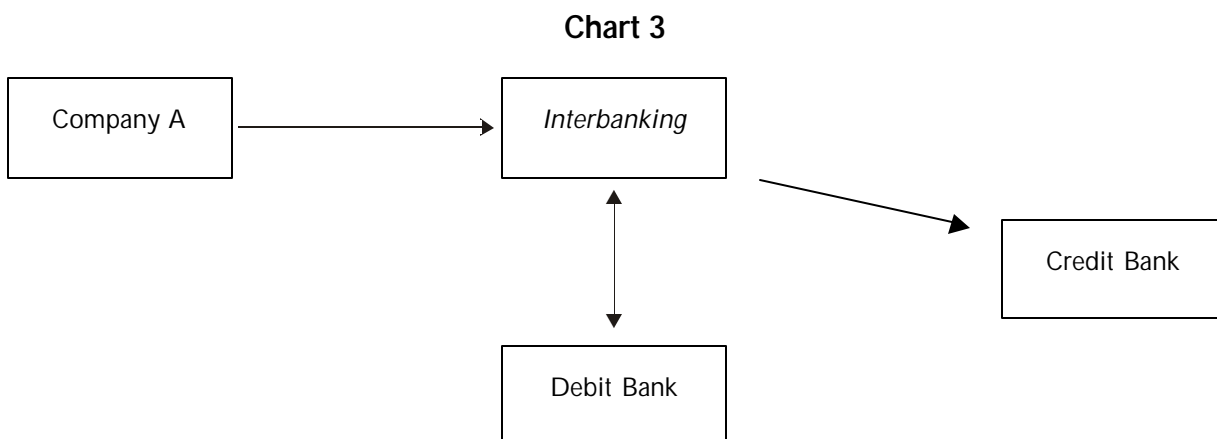
There are no membership rules for *Interbanking* multilateral payment netting service. Although admission criteria were initially considered, such rules were thought to unfairly preclude smaller banks from participating.

Bilateral credit limits are at the heart of *Interbanking's* risk-management process. Participants' payment obligations vis-à-vis another participant are limited by the amount of credit the counterparty is willing to extend. In addition, the size of credit exposures is also limited by a network limit which caps a participant's intraday credit to 5 per cent of the sum of bilateral credits received. For example, if Bank A receives a total \$100 million pesos in credit from its counterparties, its daily transaction activity is limited to \$5 million pesos. Bank A cannot initiate payments in excess of this limit, unless it deposits additional collateral with *Interbanking*.

There are two forms of collateral, which are commonly referred to as "guarantees". First, each participant is required to satisfy a mandatory collateral deposit: Compulsory Guarantee. The amount of the guarantee is based on 10 per cent of the maximum bilateral credit limit. The amount can be no less than \$500,000 pesos. Second, in the event a participant feels constrained by its network limit, it can deposit a voluntary guarantee. A sub-account is designated within *Interbanking's* master account at the central bank for these funds.

Finally, the system also employs loss-allocation rules, which may apply in the event of participant failure or default. Loss is assessed pro-rata based on the size of bilateral credit limits extended to the defaulting party. For example, if the loss is \$100 million pesos, and the participant has bilateral credit limits from Bank A of \$25 million and from Bank B in the amount of \$75 million pesos, Bank B would pay 75 per cent of the loss and Bank A would pay 25 per cent. Under *Interbanking's* rules, Bank B would pay this amount even if it did not have transactions with the defaulter on the day it defaulted.

Interbanking claims to be Lamfalussy + 1, meaning that it can effect timely settlement despite the failure of two of its largest net debit positions.



4.4.2 Provincanje

A new clearinghouse for cash withdrawals at ATMs, *Provincanje*, became operational at the beginning of the year 2000. This clearinghouse, according to the definition adopted in Argentina, is considered to be large value, as clearing and settlement procedures are completed within 24 hours from the submitting of the payment instruction within the clearing system.

4.5 CENTRAL BANK OPERATED REAL TIME GROSS SETTLEMENT SYSTEM (THE *MEP* SYSTEM)

The *Medio Electrónico de Pago (MEP)*, owned and operated by the BCRA is a real-time gross settlement system launched by the BCRA in 1997. It enables participants to execute real-time gross transfers through the current accounts held with the BCRA over a long operational cycle (from 9:00 a.m. to 8:00 p.m.) and to dispose of real-time information on funds available on their accounts. Cross-border transfers may also be executed through the system.

The system does not provide queueing mechanisms or intra-day liquidity facilities. However, thanks to the liquidity banks hold in compliance with the liquidity requirements (see Section 2.4), payments are processed through the systems smoothly in normal circumstances.

The system, in its current configuration, is based on communication links which do not allow encryption and authentication. Nevertheless, security of transactions is safeguarded by means of rigorous procedures which banks must follow to send payments. A new version of the *MEP*, technologically more advanced, is scheduled to be launched in the second half of 2000 (see Section 4.7).

(a) Operation of the system

Institutions participating in the *MEP* systems include: banks, the automated clearinghouses (CEC) and the BCRA. Non bank financial intermediaries participating in CRYL hold "limited-purpose" *MEP* accounts. Only direct participation is foreseen. All banks are members of the *MEP*; however, approximately 90% of the banks are active users of the system.

The transactions that can be executed by financial institutions and CEC are: 1) interbank transactions (money market, cash leg of securities and foreign-exchange transactions); 2) transactions initiated by customers; 3) cross-border transfers, e.g. transfers between the *MEP* accounts and the U.S. dollars accounts that are held by the financial institutions and BCRA in New York; 4) repayments of IADB and IBRD loans; 5) settlement of *pasas activos* with BCRA, i.e. of repos against domestic Government securities denominated in foreign currencies; 6) *ALADI* operations; 7) settlement of the net balances of the clearing process and 8) operations with the Guarantee accounts. In the near future other operations will be handled through the system, namely cash withdrawals at BCRA from financial institutions and operations related to Government securities. There is no minimum value limit as to payments which may be processed through the system.

The possibility to transfer funds effectively and in real time from the *MEP* accounts and the US\$ accounts held in New York is also provided with the aim to enhancing the confidence of foreign investors in the domestic financial market.⁴⁶

The *MEP* system is operational from 9:00 a.m. to 8:00 p.m. The operating hours are distributed as shown in the box.

<u>Time</u>	<u>Operations</u>
From 9:00 a.m. to 12:00 p.m.	Cross-border transfers
From 9:00 a.m. to 4:30 p.m.	IADB and IBRD operations
From 9:00 a.m. to 6:00 p.m.	Settlement of repos
From 9:00 a.m. to 6:30 p.m.	<i>ALADI</i> operations
From 9:00 a.m. to 8:00 p.m.	Customer and interbank transactions
From 6:30 p.m. to 8:00 p.m.	Transfers to cover the net debit balances of clearinghouses and settlement operations of the CECs

The closing time of the *MEP* systems may be delayed in case of problems arising in the clearing systems.

In the period January-June 1999, on a daily average, approximately 3,000 transactions, accounting for US\$7,500 million, were executed. Transactions among commercial banks represented almost 43% of the total value whereas 98% in terms of number of payments. The settlement of the *pasas activos* accounted for 53% of the total amount.

In June 1999, about 10% of total flows (in terms of value) was settled by 2:00 p.m., 78% between 2:00 p.m. and 6:00 p.m., 12% between 6:00 p.m. and 8 p.m. The peak hour was between 3:00 and 4:00 p.m. when 28% of total payments, in terms of value, was settled.⁴⁷

⁴⁶ For the operational aspects of these cross-border transfers, see Section 8.5.

⁴⁷ Figures for the total 1999 and first semester 2000 are available in Table A12.

(b) Analysis of information flows to banks, timing and reconciliation process

The MEP system has a “V-shaped” configuration.⁴⁸ Information flows are sent from the originating bank to the BCRA and then, only after the account concerned has been debited, are sent to the beneficiary bank. A payment is executed only when there are sufficient funds on the account of the originating bank; otherwise, the transaction is rejected and will have to be re-sent by the originating bank, as the system does not provide automatic queueing facilities. Messages sent through the system are irrevocable.

Financial institutions effect debit operations on their accounts without any intervention of the BCRA. The central bank, in fact, cannot intervene debiting the accounts of the financial institutions, but, it is allowed to credit them if they need to.

For security reasons, procedures for sending payments by the originating bank require, in addition to the loading of the transaction in the system, an authorization by another person inside the bank.

(c) Pricing policy

At present the BCRA does not apply any fee on the services provided through the *MEP*, seeking to promote the use of the system. In addition, the pricing policy currently recognizes that the present configuration of the system entails operational burdens for banks, stemming from the need to authorize transactions after their loading into the system. In perspective, when the new *MEP* is operational, the BCRA will probably modify its approach by recovering its costs.

(d) Accounts and liquidity facilities

The BCRA does not offer intra-day liquidity facilities associated with the *MEP* system. In fact, the abundant liquidity held by the banking system for liquidity requirements allows for a sufficiently fluid processing of payments.

Banks have access to overnight liquidity provided by the BCRA through repo operations (*pasas activos*) against domestic Government securities denominated in foreign currencies. Such operations are activated on initiative of banks. They are settled through the *MEP* system up to 6:00 p.m.. Furthermore, banks may have access to the rediscount at the BCRA late in the evening (see Chapter 8).

(e) Operational aspects and security requirements

The *MEP* system, in its present configuration, relies on a communication system originally set up by the BCRA for the exchange of confidential information between the central bank and the banking system (*STAF*), which does not allow for encryption and authentication. Therefore, to ensure an

⁴⁸ See, Bank for International Settlements, Committee on Payment and Settlement Systems, *Real Time Gross Settlement Systems*, Basle, March 1997.

adequate level of technical security, the BCRA established detailed requirements and rules governing the structure and the operation of the systems.

An important security safeguard is provided by the procedure for sending a transfer through the system which involves two main steps: (i) a bank "operator" logs the transactions in a terminal remotely connected with the central computer at the BCRA; (ii) once logged in, the transaction has to be authorized by another person inside the bank (the "authorizer") who uses another terminal remotely connected to the central computer at the BCRA (on which are shown the details of payments logged in by the "operator") and of a personal computer whose function is to generate a security code for each single transaction. The authorizer sends to the BCRA details of the payments and the associated security codes. BCRA will accept payments only if securities codes are "recognized" by the central computer. In such a security scheme, a crucial role is played by the Security Package installed by the BCRA (*Seguridad Informática*) at the banks which performs the delicate function of generating security codes.

Contingency plans are established to deal with malfunctions of the communication linkages between BCRA and members due to failures both of the central computer and of equipment at member banks. The need to resort to contingency plans is to be communicated through MS Exchange. Then, transactions are sent through an alternative network and are handled on the basis of batches of payments settled each hour (the sum of payments in the batch must not exceed the funds available on the current account). In case of failure of both the main connection and the back-up, the "operator" and the "authorizer" of the concerned bank may go to BCRA premises and send payments through a PC put at their disposal.

The SEFYC supervises through on-site inspections the compliance of banks with technical and operational requirements.

4.6 OTHER SYSTEMS AND TYPES OF SETTLEMENTS

There are other types of operations processed outside of the CECs and the *MEP* which are settled on the accounts held by financial institutions at the BCRA. They include: 1) the net balances resulting from the operation of ATM networks and debit/credit card systems and from the clearinghouse of the inner country, not yet incorporated in the automated clearing system; 2) payment of pensions on behalf of the Administración Nacional de la Seguridad Social (ANSeSO); 3) some transactions between the BCRA and commercial banks, i.e., *pases pasivos* (reverse repos) and cash withdrawals by banks at the BCRA.

In particular, the operation of ATM networks and of debit/credit card systems is subject to regulations issued by the BCRA requiring the deposit of guarantees in accounts at the BCRA. As in the case of low-value clearing houses, the amount of collateral must at least be equal to the simple average of the five maximum debit balance incurred by each participant in the last quarter; furthermore, such guarantees are included in the aggregate considered for the compliance with the mandatory liquidity requirements. In case a bank is unable to meet its debit obligations, the BCRA debits the guarantee account for the necessary amount. Should the debit balance exceed the amount of the guarantee, all the transactions processed through the system will have to be unwound.

4.7 MAJOR PROJECTS AND POLICIES BEING IMPLEMENTED

The main initiatives under way relate to: (i) the promotion of the use and the overhaul of the *MEP* system; (ii) the settlement through *Interbanking* of the cash leg of securities transactions on the basis of DVP procedures.

(a) The new MEP system

Two key initiatives are under way: (i) the channeling through the *MEP* of transactions currently settled outside the system; (ii) a thorough overhaul of the *MEP* system.

Transactions currently settled on the accounts at the BCRA without using the *MEP*, such as cash withdrawals by banks and settlement of balances of operation among banks associated to the ATM networks and debit/credit card systems, will be shortly incorporated in the system.

The new *MEP* should be launched in the second half of 2000. It will be based on an advanced telecommunication systems architecture which will ensure, on one hand, high operational capacity, and, on the other, the adoption of encryption and authentication technologies. As a result, the procedures to send and receive payments will be streamlined so that banks will be enabled to process payments straight-through.

A number of procedures which today require a manual intervention of the BCRA will be fully automated to enhance the quality of service provided to customers. This is the case, for instance, of the facilities for cross-border payments that enable foreign investors to move funds from Argentina to other countries.

In the new configuration also, the system will not provide automated queueing facilities and intraday liquidity which, as mentioned above, are not considered necessary in Argentina at the current stage. Furthermore, the project provides for the fusion of the *MEP* system and the CRYL so as to fully automate the DVP mechanism.

In the design of the new system, specific attention is paid to issues relating to the possible use of the system for money laundering purposes. With this in view, the possibility of adopting specific controls of a statistical nature is under consideration.

(b) Delivery versus payment for securities transactions

Interbanking has partnered with the *Caja de Valores*, the central securities depository for the Argentine market, and a new financial market intermediary in Argentina, *Argenclear*, to facilitate delivery versus payment in securities settlement. *Argenclear* will only settle trades taking place at the over-the-counter market. For eligible securities, banks will be able to move net securities positions settled at the *Caja de Valores* against net funds positions settled at *Interbanking*. *Argenclear* will facilitate the movement of participants' net securities against their net funds position upon confirming that the participant has sufficient funds for the transaction. Only if the participant has sufficient funds,

Argenclear will direct the *Caja de Valores* to transfer the securities to the account of the buyer at the *Caja de Valores*.

This operation is separate from *Interbanking's* other services. The netting of funds positions for participants in the delivery versus payment service takes place at 4:30 p.m., about an hour or so earlier than *Interbanking's* other netting operation. However, the risk controls for the delivery versus payment operation are the same. Participants are required to collateralize their positions and their debit positions are limited. Also, the same loss-sharing rules apply.

Delivery Versus Payment Service Process Schedule at *Interbanking*:

- 4:30 p.m.—*Interbanking* calculates participants' net funds positions.
- 5:00 p.m.— *Argenclear* receives net securities position information from the *Caja de Valores*.
- 5:30 p.m.— Net funds positions are communicated to *Argenclear*.

**Argenclear* will provide delivery versus payment for government securities, and initially, only for two species. Government securities settlement in Argentina occurs on T + 3.

5 SECURITIES: INSTRUMENTS, MARKET STRUCTURE AND TRADING

5.1 FORMS OF SECURITIES

There are four general ways in which securities can be represented:

- *Physical securities*: these are paper-based securities. The amount of paper-based securities has been significantly reduced since the movement to dematerialize securities started in 1983.
- *Dematerialized securities*: these securities are not physical and there is no certificate. Ownership is kept in a registry, which can be manual or, in most cases, electronic.
- *Global certificates*: these are physical securities representing a complete issue or a significant part of an issue. Individual ownership is determined through entries in the registrar or issuer's register book. They may generally be exchanged for the individual securities they represent upon request from their legitimate owner.
- *Provisional certificates*: these are provisional securities issued for stocks that have not been fully paid up. They may be exchanged for the final securities once the stocks are paid up.

5.2 TYPES OF SECURITIES

There are three general classes of equity securities (shares) in Argentina:

- *Ordinary shares*: they confer the right to get dividends and a liquidation quota, both proportional to the amount of capital they represent. With respect to voting rights, in principle each ordinary share represents one vote. However, the by-laws can create other types representing up to 5 votes per share (only one vote per share is allowed for new shares, after the company goes public).
- *Preferred stock*: they enable their holder to obtain a certain amount of the profits with preference over the ordinary shares. They can be obtained: 1) in a cumulative way; 2) temporarily cumulative; 3) permanently cumulative; or 4) with an additional participation. These shares may involve the right to the preferred collection of liquidated and realized profits or of a fixed dividend, cumulative or not. They might also carry preferred rights in the event of liquidation of the company. With respect to voting rights, the law sets forth that they may not have the right to vote, but they can allow participation with a voice to company's statutory meetings.
- *Participation stocks*: they represent an interest in the corporate capital but do not carry voting rights. A public offering of participation shares is subject to the same requirements as any other type of stock.

As stated above, the vast majority of debt trading activity takes place at the MAE. The following types of debt instruments are traded there:

- *Government bonds*: these instruments represent the debt of the national, provincial or municipal governments. Their interest is payable annually or every six months. They may be issued in dollars, pesos or any other currency.
- *Corporate bonds*: these securities represent the debt of private firms, including corporations, co-operatives and civil associations, as well as subsidiaries of Argentine companies operating abroad.
- ◆ *Commercial paper*: short-term obligations mainly intended to finance the working capital of private sector firms. These securities may be issued under special tax information requirements; however, in these cases, the offerings are restricted to qualified investors, as defined by the securities laws.

5.3 SECURITIES IDENTIFICATION CODE

The *Caja de Valores* assigns a unique alphanumeric code to each issuer. The *Caja de Valores* is acknowledged as the national numbering agency.

The alphanumeric code assigned by the *Caja de Valores* is used to identify all securities; however, an alphabetic identifier is used by the *Merval* and the Buenos Aires Stock Exchange to identify securities for trading purposes.

5.4 CLASSIFICATION OF SECURITIES ACCORDING TO TYPE OF TRANSFER

Ownership rights may vary considerably by class of security one holds:

Bearer Securities: Generally, holders of these securities are not registered with the register book of the issuer; they are presumed to be the owners of those securities. Transfer of the securities is executed by means of the consent of both parties and the delivery of the securities. However, according to Act 24.587, non-government securities and the provisional certificates representing them must be non-endorable, registered or book-entry. Therefore, all securities issued before May 22, 1996 must be converted.

Endorsable Registered Securities: The holders of these securities are registered with the register book of the issuer. These securities are transferred by means of their endorsement. However, in order to be able to exercise the rights they carry, the transfer must be registered in the register of shareholders.

Non-endorable Registered Securities: The holders of these securities are registered with the register book of the issuer. Transfer is effected by registration of the new holder with the issuer.

Book-entry Securities: These securities are dematerialized and their ownership is proved by the entry appearing in the register book of the issuer or a registration agent. The *Caja de Valores* or private sector bank may play the role of registration agent.

Global Certificates or Securities: These are book-entry securities representing a complete issue or a significant part of an issue. They are immobilized with a depository (e.g., *Caja de Valores*) and their ownership is demonstrated by entry in the account books of the depository. To appropriately reflect ownership, the depository must register the transfer.

5.5 TRANSFER OF OWNERSHIP

Most outstanding securities are held in book-entry form. Transfer is carried out by a transaction recorded in the book-entry system. This will cause the issuer or the registration agent to record a change in ownership.

5.5.1 Determination of Ownership

Transfer of securities is perfected by delivery of the security after settlement. For example, after trades are executed at the *Merval*, they enter the *Merval's* clearing system. "Delivery" of the securities is not a physical process; it is accomplished by entering the relevant information into the parties' accounts at the securities depository, the *Caja de Valores*.

5.5.2 Novation

Novation of legal obligations is governed by the Civil Code, Title XVII—Novation, Sections 801 to 817. In the context of the *Merval's* clearing system, novation takes place when transactions enter the system for clearance and settlement.

5.5.3 Bankruptcy

Bankruptcy legislation establishes that certain legal acts performed during the "suspicion period"—a period between the date determined as the beginning of the insolvency state and the date of the adjudication of bankruptcy—are ineffective to creditors when proven that the third party was aware of the debtor's insolvency state.

However, transactions in the process of settlement at the *Merval* are exempted from these provisions. The *Merval* has a claim against assets of a participant to ensure settlement.

Section 53 of The Public Offering of Securities Law (Act 17.811) provides that when a stock market guarantees the fulfillment of trades, it must settle pending trades of a bankrupt stockbroker. If the result of the settlement proved a credit in favor of the failed stockbroker, the amount of the credit will be deposited in the bankruptcy estate.

5.6 TREATMENT OF LOST, STOLEN OR DESTROYED SECURITIES

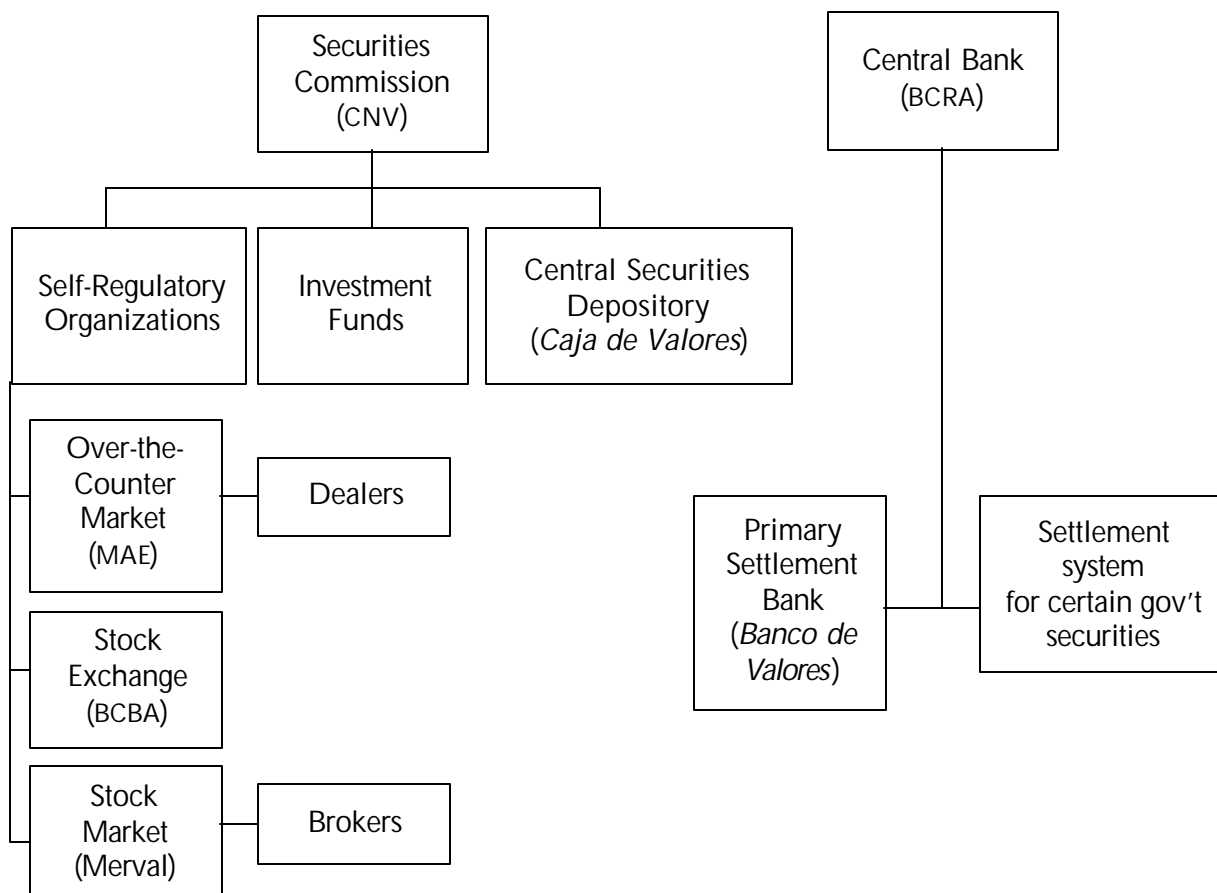
Procedures pertaining to lost, stolen or destroyed securities are addressed by Book II, Title XI, Chapter III of the Commercial Code. In case of partial or total destruction of securities, the depository is bound to comply with the provisions of Title XI.

5.7 MARKET STRUCTURE AND TRADING SYSTEMS

5.7.1 General Scheme

The diagram below is a summary of the organizational structure for Argentina's securities market, including government securities addressed in Section 7:

Chart 4



5.7.2 Regulatory Dimension

Under the authority of the Executive Branch, exercised through the Ministry of Economy, the CNV is the federal securities market regulator and also has authority for setting rules pertaining to SROs in the securities market, who, in turn, set rules for member financial institutions conducting securities market related activity. As described above, investment funds are directly supervised by the CNV.

The CNV's authority for the securities market also includes supervision for trading of government securities. Although it is not involved in the supervision of government securities trading, the central bank plays a role with respect to settlement of certain short and medium-term government securities, *Letes* and *Bontes*. These government securities are settled on the central bank managed settlement system called the *Central de Registración y Liquidación de Instrumentos de Endeudamiento Público* (CRYL). The government securities market, and the operation of the CRYL system in particular are discussed in Section 7.

5.7.3 Self-Regulatory Organizations

There are three key self-regulatory organizations in the Argentine securities market: the *Mercado Abierto Electrónico* (MAE), the Buenos Aires Stock Exchange, and the *Merval*, the stock market. In the Argentine market, the stock exchange is a listing agent, authorizing the listing and delisting of securities on the stock exchange. The *Bolsa de Comercio de Buenos Aires* (BCBA) (Buenos Aires Stock Exchange), established in 1854, is the principal stock exchange in Argentina. There are seven other stock exchanges in the country; however, the vast majority of firms are listed on the Buenos Aires Stock Exchange.⁴⁹ It monitors listed companies to ensure adequate disclosure of financial information. The stock exchange is also responsible for disseminating volume and price information to the public.

The stock market is primarily responsible for the execution of securities trades on the stock exchange. The *Merval*, the most significant stock market in Argentina, also provides clearance and settlement and guaranty of securities trades executed there.

Stock exchanges may take the legal form of a civil association or a corporation. Some of the key requirements for stock exchanges include the following:

- Provide requirements for participants to list securities;
- Enforce observance of legal and statutory provisions pertaining to listed companies;
- Establish rules intended to ensure accuracy of balance-sheets and financial statements submitted by listed companies; and
- Provide rules to ensure the integrity of prices.

⁴⁹ The other exchanges are located in the following places: Córdoba, Mendoza, Rosario, Del Litoral (Santa Fe), La Rioja, and Regional de Capitales (La Plata). These stock exchanges execute transactions on the Merval's trading system. There are several smaller exchanges in the interior that operate their own stock market: Bahía Blanca, Confederada S.A., Mar del Plata, Patagonia Sur, San Juan and Nueva Bolsa de Tucumán.

5.7.4 The Caja de Valores and the Banco de Valores

The *Merval* and the *Bolsa* have one affiliate, the *Caja de Valores*, which is owned 50 per cent by the *Merval* and 50 per cent by the Buenos Aires Stock Exchange. The main settlement bank, *Banco de Valores*, on the other hand, is controlled by the *Merval*.

Founded in 1978, the *Banco de Valores* acts as a primary settlement bank for the *Merval*; brokers are permitted to use other settlement banks.⁵⁰ It also conducts commercial banking and investment banking activities, and, most recently, has developed a trust and fiduciary business. This “captured bank” acts as a key source of liquidity for brokers trading at the *Merval*.

5.7.5 The Over-the-counter Market, the MAE

The MAE is a quote-driven market where trades in government securities and private debt are executed by telephone and by price spread. To date, the number of registered intermediaries amounts to eighty. Most of the participants at the MAE, called Open Market Agents (AMAs), are financial institutions.

Prior to 1992, only individuals were able to become members of *Merval*. Banks and brokerage firms, which were precluded from obtaining seats on *Merval*, established the MAE. In May, 1993 *Merval* and the MAE reached an accord whereby the *Merval* would regulate equity securities trading and settlement but both markets would continue to trade government bonds. The MAE's trading volume in government bonds now exceeds that of the *Merval*.

The MAE does not provide settlement services. Transactions performed at the MAE are settled bilaterally between the parties.

5.7.6 Futures and Options Market

Currently, there are two futures and options markets in operation:

- *Mercado a Término de Buenos Aires S.A.* (MAT/BA) trades futures and options contracts on wheat, corn, sunflower and soybean. The contractual unit in all cases is 100 tons and transactions are executed in an open out-cry environment.
- *Mercado a Término de Rosario S.A./Rosario Futures Exchange* (ROFEX) trades futures and options contracts on wheat, corn, sunflower, the soybean index ROSAFE and the Argentine Steer Index (INA). The contractual unit for corn and wheat is 50 tons, while for the sunflower and the ROSAFE index is 25 tons.

Trades may be executed either open out-cry or by telephone through the ROFEX system.⁵¹

⁵⁰The *Banco de Valores* is supervised and regulated by the central bank.

⁵¹ROFEX is an electronic system used to negotiate futures and options contracts authorized by the market in real time.

6 CLEARANCE AND SETTLEMENT CIRCUITS FOR CORPORATE SECURITIES

6.1 ORGANIZATIONS AND INSTITUTIONS

6.1.1 Merval's Clearance and Settlement System

The *Merval* maintains and operates the principal clearance and settlement system for equity and debt transactions in Argentina, a single clearing system for transactions executed in both systems: (a) the continuous trading system for bilateral telephone execution of trades in which only public securities and corporate bonds are traded, and (b) the concurrent market where trades are executed in an automated order-matching system or the traditional open outcry mode on the floor of the stock exchange.

The *Merval* guarantees settlement for all trades in the concurrent market, but only those specifically designated by the parties on the continuous trading system. The system settles the following types of trades: (1) cash transactions; (2) forward transactions; (3) securities loans; and (4) repurchase agreements. The system may also settle trades executed in the over-the-counter markets. In these cases, both the buyer and the seller must furnish the *Merval* with accurate trade details.

The clearing and settlement system used by the *Merval* operates on a multilateral net settlement basis and generally resembles a Model 3 approach to delivery versus payment, as defined by the Bank for International Settlements. The coordination of delivery of securities and payment of funds eliminates the largest source of credit risk in securities settlement and, thus, the most likely source of systemic risk—principal risk—on the settlement date.⁵² The essential characteristic of model 3 systems is the simultaneous net settlement of both securities and funds transfer instructions. Settlement may occur once or at several times during the day. The system maintains securities accounts for participants. Funds accounts may be maintained by a separate entity, either a commercial bank or a central bank. If and only if all participants in net debit positions have sufficient balances of funds and securities, final transfers of the net securities balances and net funds balances are executed.

By providing a DVP mechanism, the *Merval* attempts to reduce the potential for principal risk. DVP, however, only addresses principal risk; other potential risks remain in the absence of other safeguards. The *Merval's* settlement guarantee is an effort to address these other risk issues, including liquidity risk in the event of a member default. In these cases, the *Merval* will purchase the securities from the selling counterparties and immediately try to sell them in the open market. In such an instance, the *Merval* would be exposed to market risk, that is, the difference between the amount owed to the selling counterparties and any decline in the price of the securities during the three-day settlement cycle. To make up for any possible shortfall, the *Merval* may seize and liquidate any securities that the defaulted member may have on deposit at the *Caja de Valores* before the *Merval* would use its

⁵² Committee on Payment and Settlement Systems, Bank for International Settlements, *Delivery versus Payment in Securities Settlement Systems*, September 1992, 15.

own resources. The *Merval's* ability to support its trade guaranty, especially relevant during periods of extreme market stress that are likely to expose the *Merval* to significant market risk, is determined significantly by the liquidity resources supporting the guaranty.

The Stock Market Legislation (Act 17.811) provides that securities markets must maintain a guarantee fund that can be used only to fulfill settlement obligations in the event of member default. Accordingly, the *Merval* transfers 50% of annual profits into the fund. When the *Merval's* earnings increase so does its annual contribution. When *Merval* is unprofitable, it adds nothing to the fund. In addition, *Merval's* board has no powers to assess its members. The fund has increased six fold in the past ten years, reaching approximately \$66 million pesos. To date, there have been no withdrawals.

In addition, the *Merval* maintains a second fund—a Special Guarantee Fund—to reimburse investors in case of gross stockbroker negligence or fraud. This fund totals approximately \$8 million pesos. Annual contributions are at the discretion of the *Merval's* board of directors. To date, there have been no payouts.

An additional financial safeguard is the creditworthiness of members. All members must purchase one share of *Merval* stock and must pledge these shares in favor of an insurance company chosen by the *Merval*. These shares cannot be rehypothecated in favor of third parties. In the event of member failure, in the worst case, the *Merval* would try to sell these shares to cover any shortfall by the participant. In addition to this share ownership (collateral) requirement, the *Merval* board of directors must approve new participants. The compliance department advises the board of directors on all new applicants and conducts legal and financial background checks of all applicants.

The *Merval* also operates a securities loan facility that is used primarily to reduce the impact of shortfalls in the settlement process.⁵³ The securities loan is treated as an exchange trade, and is extended *Merval's* settlement guarantee. Finally, with respect to forward trades, stockbrokers and brokerage firms must furnish a margin reposition determined by historical price volatility of the security.

In October 1997, the central bank payment system converted from a paper-based payment mechanism to a national electronic payment network, a real-time gross settlement system, the MEP (see Chapter 4). This development strengthened the linkages between securities settlement and funds settlement significantly, and facilitated a reduction in securities settlement risk at the *Merval*. Previously, funds were transferred via the central bank on the evening of settlement date, so that confirmations were not delivered until the financial system opened the following morning.

6.2 PARTICIPATION IN THE CLEARING AND SETTLEMENT PROCESS

Direct participants are brokers and brokerage firms that hold a share of stock in the *Merval*. These participants are legally authorized to execute trades in the stock market settlement securities related transactions in the *Merval's* clearing system. The trading and clearing system also accommodate

⁵³ The *Merval's* procedures for participating in the securities loan system is provided in Circular Letter 3346 dated February 10, 1997.

indirect participants. These participants rely on a direct participant for execution of a trade but are able to settle the transaction themselves. Prior to settlement, the direct participant is able to transfer the guaranteed trade to the indirect participant.

The direct participant must inform the clearing system during T+0 or T+1 of the transaction to be transferred and the indirect participant must confirm to the clearing system that it is willing to settle the trade. A non-confirmed transfer is automatically annulled at the end of T+1 and should be settled by the direct participant. This process enables foreign institutional investors as well as brokers belonging to other stock markets within Argentina to settle in a delivery versus payment environment at the *Merval*.

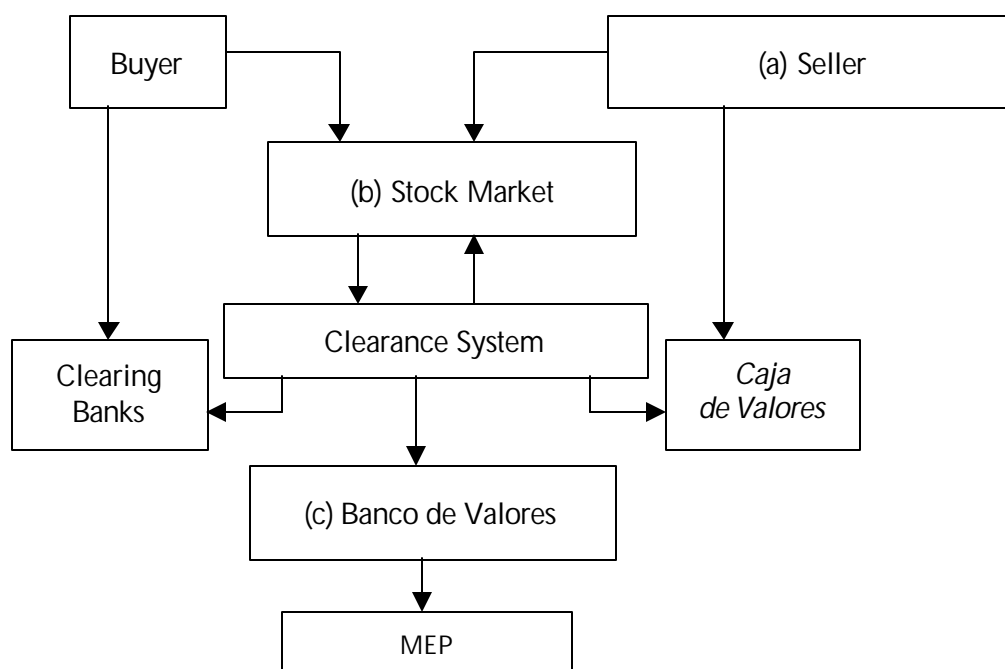
All participants must maintain a securities settlement account at the *Caja de Valores* and a cash settlement account with one of thirty authorized settlement banks, including the Banco de Valores. The cash settlement may be effected in Argentine pesos or in US dollars.

6.3 CLEARING AND SETTLEMENT PROCESS

6.3.1 Clearing at the Merval

The *Merval's* clearing and settlement process is a centralized mechanism based on multilateral netting in a delivery versus payment environment. The following is a general outline of the process from trade execution to settlement:

Chart 5



The normal settlement cycle is 3 days after trade date (T + 3). The seller inputs trades into *Merval's* data processing system. From that moment the settlement guarantee takes effect. Brokers receive statements by 6:00 p.m. on trade date (T). Buyers and sellers may alter the terms of the trade, should there be any mistake, up to noon on the next day (T + 1).

On the morning of settlement date (T + 3), the *Merval* notifies the buying/selling brokers of amounts due on a net basis, as well as on a gross basis for information purposes. By the afternoon of settlement date, the buying broker must deposit its net funds obligation into the settlement account.

Simultaneously on T + 3, the selling broker instructs the *Caja de Valores* to transfer securities from its account to its *Merval* clearing and settlement account. If funds in the clearing banks' settlement accounts and securities in *Caja de Valores* settlement account match, the *Merval* will effect the electronic movement of funds and the *Caja* effects the movement of securities between selling and buying participants.

If the seller does not meet its securities obligation by T + 3, it must borrow those securities in the open market or postpone the settlement, if so agreed with the counterpart. In case of postponement, the buyer's funds are returned. If the settlement is postponed, the *Merval* inputs the trade settlement information again on the next day (T + 4). All transfers of securities and cash on settlement date are unconditional and final. The seller does have the opportunity to settle free of payment.

When settlement is done in US dollars, the *Merval* causes a wire transfer to be sent to its account at Swiss Bank Corporation's New York branch.

6.4 SECURITIES CUSTODY

The *Caja de Valores* is the country's central securities depository for both government and corporate securities, including government bonds traded at the MAE. Its major shareholders are the Buenos Aires Stock Exchange and the *Merval*. Although the law does not prevent the establishment of other central securities depositories, no other depositories have been established.

The *Caja de Valores* holds participants' securities deposits in a tiered account structure system. The account is held in the name of the depositor, which then provides sub-accounts for identifying the ultimate beneficiary. This approach to securities custody is particularly useful in the case of bankruptcy of the primary account holder/depositor. The assets in the sub-accounts are automatically excluded from the bankruptcy estate, and the ultimate beneficiary is ensured protection of their assets.

The following persons or institutions are permitted by law to maintain accounts at the *Caja de Valores*:

- stockbrokers or over-the-counter agents registered in local or foreign exchanges;
- securities markets, except when they take part in the organization of a central securities depository;

- official private or mixed-capital banks and local or foreign financial institutions authorized to act in Argentina;
- depositories of mutual funds, with respect to their securities; foreign investment funds or pension funds and Argentine pension funds; and
- foreign securities central depositories or clearinghouses authorized by the CNV.

The *Caja de Valores* also acts as registration agent: it maintains shareholders' registers when needed by issuers, which is practically in all the cases. In addition, it performs the functions of a paying agent in cases of dividends, interest and reimbursements; issues ownership certificates; provides technical and operational support to the *Merval's* clearing and settlement operation; acts as the data processing center for the Buenos Aires Stock Exchange and the *Merval*.

The *Caja de Valores S.A.* has been operating since 1974 and has never incurred any non-fulfillment of its obligations, even during the years of hyperinflation when it was obliged to operate in T+0. In addition, it keeps a back-up system located in a different site, which protects against the loss of information. The company is also insured with international companies against the risk of computer fraud. The *Caja de Valores* has been rated BBB- by Standard and Poor's.

Caja de Valores has proceedings in place to avoid risks derived from loss, forgery or material deterioration.

6.4.1 Rights Derived from Securities on Deposit

Approximately 6% of the securities in custody are physical securities and are registered. For securities held in electronic form, the *Caja de Valores* will issue certificates to the name of the depositors upon request. These requests are common in the event of shareholder meetings. These certificates will consign the amount, issue, class and issuer of the securities.

When issuing the certificates, the *Caja de Valores* holds for its own account an amount of securities equivalent to the amount of certificates provided, and holds those securities up to the day following the shareholder meeting. During that period, depositors may not overdraw or withdraw funds for the account of those that have received a certificate for the shareholder meeting.

6.4.2 Withdrawal of Securities

Upon request of the principal, the depositor may withdraw securities registered to the name of the latter by means of a withdrawal order. The *Caja* will notify the issuer in order to register the name and domicile of the principal, his/her identity document, and the amount, issue and class of securities delivered, when registered.

6.4.3 Pledge of Securities

Both the *Caja de Valores* and the depositor are required to maintain the registers in order to specify at all times the rights of the depositor and principal. To this end, the *Caja de Valores* will record

transmissions, pledge contracts and withdraw securities provided it receives from the depositors the respective forms. The entries made by the *Caja de Valores* will correlate to similar registrations in the issuers' register books.

The principal may assign in whole or in part joint property rights or pledge shares. The principal must instruct the depositor to make the relevant request to the *Caja de Valores*. Within twenty-four hours, the *Caja de Valores* will make the appropriate accounting entries in its records. At that moment, assignment of rights or the pledge will be deemed perfected.

6.4.4 International Links

The *Caja de Valores* has an account in its name with CEDEL, EUROCLEAR, Depository Trust Company (DTC) and the Securities Clearing and Settlement Service-Servicio de Compensación y Liquidación de Valores S.A. (SCLV). This account enables authorized offerings of foreign securities to the Argentine market with public offering authorized in Argentina and facilitates trading in those securities on the Buenos Aires Stock Exchange.

7 CLEARANCE AND SETTLEMENT CIRCUITS FOR GOVERNMENT SECURITIES

7.1 THE GOVERNMENT SECURITIES MARKET

As part of a plan to reform the domestic public debt market, the government initiated issuance of *Letes* and *Bontes* (Treasury securities) in 1996. *Letes* are short-term discount Treasury bills issued in both US dollars and pesos. *Bontes* are medium-term Treasury bonds with a semiannual coupon and bullet principal repayment. *Bontes* can be denominated in either pesos or US dollars and can be issued with either a fixed or floating coupon. Trading for these securities occurs in the over-the-counter (OTC) market (MAE).

The restructured domestic debt market comprises mainly government obligations issued by the Ministry of Economy. Domestic debt instruments are denominated in both pesos and dollars; dollar-denominated issues make up about 75 per cent of the market. Maturities up to 10 years are available. All instruments are floating-rate, amortizing bonds. Most bonds capitalized interest payments initially or are capitalizing them currently. All are callable by the government.

Dollar-denominated bonds pay Libor-based coupons. Peso-denominated instruments pay the weighted average of deposit rates on peso accounts at commercial banks, as calculated by the central bank at month-end.

Shorter-term notes include dollar-denominated Bonex89, Bote 10 and Bote 3. Daily secondary market trading volumes in the MAE average US\$16 million for Bote and US\$30 million nominal face value for Bonex89. Both dollar-and peso-denominated Bonos de Consolidación (Bocones) are longer-maturity instruments issued to cancel government debt to pensioners and private suppliers in the early 1990's. The Pre2, Pre4, and Pro2 Bocones are dollar-denominated instruments which capitalize, amortize and pay coupons monthly. Pre1, Pre3 and Pro1 Bocones are peso-denominated and also capitalize, amortize and pay coupons monthly. The daily trading volume of all peso Bocones in the MAE is approximately \$190 million pesos while dollar issues reach US\$210 million. The Pro1, the most liquid of the local market instruments, has a daily trading volume of US\$130 million face value.

Most trading of government securities generally takes place over the counter through the MAE.

7.2 THE REGULATORY ENVIRONMENT

The Ministry of Economy (Ministry), an arm of the National Executive Branch, has supervisory authority for economic and fiscal policy in Argentina. In this context, the Ministry has responsibility for the issuance of government debt and oversight for the primary market for government securities. The *Comisión Nacional de Valores* (CNV) regulates secondary trading of government debt. The institutional relationship between the CNV and the Ministry in the context of the government securities market is complementary. The Ministry relies on twelve banks that serve as market-makers (sometimes

referred to as primary dealers)⁵⁴. The market-maker status includes receiving approval to operate in the secondary market, serving as a participant in the securities market on the *Mercado de Valores de Buenos Aires*, the securities market responsible for trading operations on the Buenos Aires Stock Exchange. Alternatively, the firm can be a participant in the over-the-counter market as a member of the *Mercado Abierto Electrónico S.A.* Market-makers are required to purchase 4 per cent of the government's new issues at auction and 1.5 per cent of the secondary market for government securities during the year.

In December 1995, in the context of the broad effort to reform the local public debt market, the Ministry led the way for an electronic system that would settle government securities in book-entry form within a delivery versus payment environment. The Ministry requested the BCRA to develop a settlement system for newly issued *Letes* and *Bontes*, and the issuance of these new Treasury securities was made to coincide with the development of the CRYL. The system was intended as a temporary solution to delivery versus payment in the government securities marketplace. It was anticipated that the private sector would develop a more long-term solution by establishing a private sector managed delivery versus payment settlement arrangement.

The CRYL started operations in April 1996. The CRYL records the primary placement of issues and settles trade activity in *Letes* and *Bontes* among market participants eligible for the system. Its operations include auction of new *Letes* and *Bontes*, interest and principal payments, and delivery versus payment settlement of *Letes* and *Bontes*. The system settles the new *Letes* and *Bontes* denominated in either pesos or dollars on a multilateral net basis. The CRYL operates a model 4 system, which is the logical equivalent of a model 2 DVP settlement system. The primary characteristic of model 2 systems is that securities transfers are settled on a trade-for-trade basis throughout the processing cycle, while funds transfers are settled on a net basis at the end of the processing cycle.

The CRYL provides securities accounts for the settlement of *Letes* and *Bontes* and transactions in these securities are netted at the end of the day. Attendant funds payments are settled in real-time through participants' accounts in the MEP, the central bank large-value system (see Chapter 4).

Participants include approximately 35 banks and the MAE.⁵⁵ The *Merval* and the *Caja de Valores* also maintain an account on the CRYL for settlement of the new *Letes* and *Bontes*. CRYL also has a custodial capacity. Currently, it holds approximately \$11 billion pesos worth of Treasury securities under custody.⁵⁶

⁵⁴ Most of the market makers are foreign banking organizations operating in Argentina. Only one market maker is a local Argentine bank.

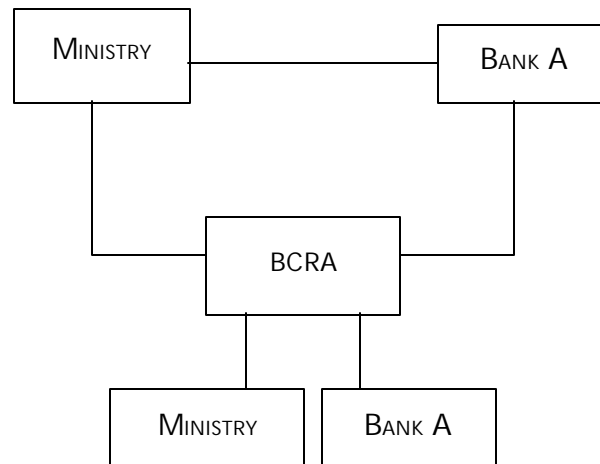
⁵⁵ Non-bank members of the MAE maintain a restricted funds account on the MEP to facilitate settlement of securities transactions on the CRYL.

⁵⁶ Bondholders must specifically request that their securities be settled on the CRYL system. Otherwise, brokers may settle the new *Letes* and *Bontes* in the *Caja de Valores*, which is a non-DVP environment.

7.3 TRANSACTIONS ON THE CRYL

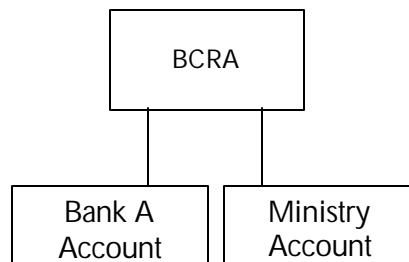
Consider a dollar-denominated Treasury security (e.g., *Letes*). At auction, Bank A purchases \$100,000 worth of *Letes*. The BCRA registers ownership of the *Letes* in the name of Bank A. Settlement occurs on the CRYL system. Bank A instructs the BCRA to debit its central bank account in the amount of \$100,000 and credit the amount to the Ministry's BCRA account, a dollar-denominated account. The Ministry instructs the BCRA to debit its CRYL account and credit the securities account of Bank A.

Chart 6



At redemption, there are two ways in which Bank A can receive its payment in dollars. First, the Ministry instructs the BCRA to debit its dollar account in the amount of \$100,000 and credit the \$100,000 to Bank A's BCRA account, which is also dollar-denominated. In this case, the dollar payment would move over the MEP system.

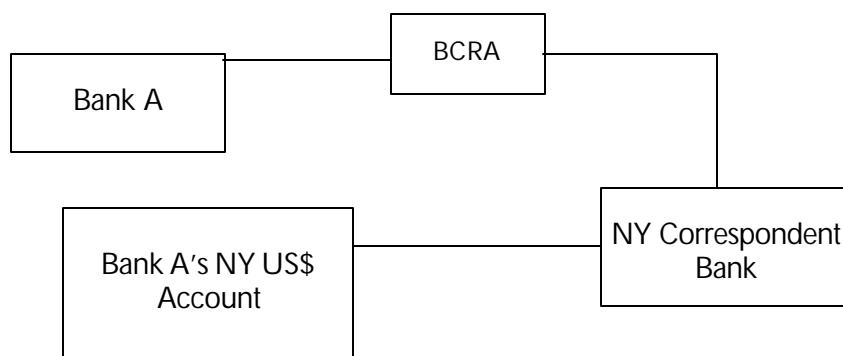
Chart 7



Alternatively, Bank A could give the BCRA a payment instruction to send its dollar payment to a dollar account held in New York. The BCRA might send the payment instruction to New York

through its correspondent bank by way of a SWIFT instruction. The New York correspondent bank would then send a payment instruction to the beneficiary bank (i.e., the bank being credited with the funds) through Fedwire, the Federal Reserve's payment system.

Chart 8



Settlement Time-Frame for the CRYL System

T + 1:

- Matching of paper receipts from counterparties. Unmatched transactions are voided.
- Participants receive a transaction summary report based on the receipts submitted earlier in the day.

T + 3: (settlement date)

- Funds in participants' MEP accounts are "ear-marked" for settlement on the CRYL in the morning. Information is based on the matching process on T + 1.
- At 12 noon, participants are required to have sufficient securities in their CRYL accounts. If participants fail to meet their obligations at this time, they have another opportunity at 3:30 p.m.

T + 4:

- If participants fail to meet their securities obligations on T + 3, they have two additional opportunities on T + 4: first, at 12 noon and then at 3:30 p.m.

Box 7
Future Clearance and Settlement Systems

The Argentine government mandated that the Argentine financial markets organize a clearinghouse to settle all over-the-counter trades on a delivery versus payment basis. Argenclear is the private sector response to that charge. Actual operation of Argenclear has not yet started; however, architecture for the system has been developed over a period of years. Currently ownership of Argenclear is divided among members of the MAE (60 per cent) and the Merval (40 per cent). Argenclear's operation will be restricted to providing settlement for securities registered and traded in the MAE. The settlement process and operation will resemble the clearing and settlement operation at the Merval; details have not been finalized.

8 THE ROLE OF THE CENTRAL BANK IN INTERBANK CIRCUITS

The BCRA's current role in payment systems differs considerably from that which it played in the past. In particular, its involvement in directly managing clearinghouse operations and interbank payment mechanisms has diminished. In addition, reform in payments arrangements places a greater responsibility on the private sector to manage risk associated with payment transactions. The BCRA has developed a risk control policy to provide guidance for the private sector in formulating approaches to these issues. This evolution in the payment system was likely fostered by the need for the central bank to cope with the complex challenges deriving from both the macroeconomic environment and the financial instability which affected Argentina in mid-90s (see Chapter 1 and Section 2.4).

8.1 THE RISK CONTROL POLICY

As mentioned in Section 2.4 and in Chapter 4, the capacity of the BCRA to act as regulator and overseer of the private clearinghouses hinges on the provisions of the *Carta Orgánica* which explicitly gives the Board of Directors the power to regulate the creation and functioning of clearing organizations for checks and other operations managed by financial entities. Accordingly, in 1997 the BCRA established, through specific provisions, the regulatory framework governing the structure and operation of private automated clearinghouses. This includes the risk control policy which provides both (i) the definition of risk control measures for the clearing systems and (ii) the establishment and implementation of the RTGS system.

The risk control measures defined for the private clearinghouses are aimed at ensuring a high level of protection for all the systems – handling both low-value and large value payments - against the emergence of both credit and operational risks. In this context, the BCRA established a broad range of minimum requirements which relate to: access criteria; technical aspects; guarantees; settlement procedures; management of abnormal situations.

Collateral plays a particularly important role in the context of the risk control measures. The collateral requirements for low-value and large value clearinghouses are described in Chapter 4.

For low value clearinghouses, whose operational cycle lasts more than 24 hours (and include, for instance, checks), the provisions issued by the BCRA are particularly detailed. In the case of large value payments, more is left to the initiative of each clearinghouse. However, the BCRA has to approve the proposed risk control measures. In fact, as a consequence of the definition adopted for large value payments (*i.e.*, those which are settled on the basis of an operational cycle not longer than 24 hours), heterogeneous types of payments may fall in this category and it may be necessary for clearinghouses to design risk control measures accordingly.

The design of the risk control measures is aimed at promoting arrangements according to which any critical situations emerging within the clearinghouses will be dealt with by the clearinghouse concerned in advance of the settlement of final balance. This is to limit the impact that an abnormal

situation in a clearinghouse may have on others and to limit the direct operational involvement of the central bank in the management of such situations.

Nevertheless, the BCRA plays an important role not only as regulator, but also as overseer of the clearinghouses, especially when abnormal situations occur. In fact, in the management of critical situations emerging within clearing systems (low value as well as large value) a relevant role is played by the *Comité de Cámaras* (see Chapter 4.2).

8.2 SETTLEMENT

(a) Accounts held by the banking system with the BCRA

Banks hold at the BCRA current accounts and guarantee accounts.

The current accounts at the BCRA are accessed through the *MEP* system through which also the net balances of the clearing systems are settled. Additional transactions not handled via the *MEP* are presently settled on current accounts (e.g., banks cash withdrawals at the BCRA, balances of ATM and credit card transactions).

A significant proportion of payment transactions are settled in US dollars. The *MEP* is designed to accommodate US dollar payment activity; however, banks do not maintain separate accounts on the books of the central bank for pesos and dollars. The central bank treats dollars and pesos as fungible. In fact, according to the definition adopted by the central bank, the balances of the current accounts are denominated in "convertible US dollars". Both dollar and pesos funds transfers are executed without any distinction among them. Banks may, on the other hand, execute dollar transactions through the BCRA that are settled by a correspondent (e.g., in New York).

No interest is paid on the balances held on the current accounts due to explicit provisions provided by the Convertibility Law. However, after closing of the *MEP* system, the BCRA executes reverse repos (*pasas pasivos*) through which a remuneration is granted. On the following morning, such repos are reversed before the start of operations of the *MEP* system in order to provide banks with the liquidity necessary for their operation in the payment system. The remuneration the banks receive through such repos is equal to the rate earned by the BCRA on its international reserves minus 0.10 (at present 5.8 per cent, see Annex).

Finally, as a necessary requirement for their participation in the clearinghouses, banks must have guarantee accounts at the BCRA. These are special-purpose accounts which may be debited only by the clearinghouses in relation to settlement problems emerging in clearing operations.

(b) Use of liquidity requirements for payment system purposes

Rules governing liquidity requirements are designed in such a way as to facilitate the use of mandatory liquidity reserves by banks for payment system purposes. In this respect, liquidity requirements must be complied with on a monthly average basis. Daily balances may never be lower than the

60% of the requirements relating to the preceding month. Moreover, holdings of eligible assets may vary on an intra-day basis as only the end-of-day balances are relevant to the liquidity requirements. This means that, as already mentioned, eligible assets must also include the end-of-day *pases pasivos* through which the BCRA grants a remuneration on banks' current accounts.

Additionally, liquidity held abroad may be used for payment system purposes. The BCRA provides cross-border payment services which enable banks to transfer liquidity between the US dollar accounts held in New York and the current accounts at the central bank. The BCRA uses also the accounts it holds at three banks in New York (*Deutsche Bank, Banco de la Nación Argentina, and Swiss Bank Corporation, SBC*) to activate these transfers.

(c) Settlement procedures

Interbank payments may be settled on a gross basis, through the *MEP* system or on end-of-day net basis, through one of the private clearinghouses. In any case, ultimate settlement occurs on the books of the central bank. However, the involvement of BCRA in settlement procedures is limited to the mere provision of the *MEP* system and of current accounts.⁵⁷ For instance, settlement procedures for clearinghouses are entirely managed by banks and the clearinghouses themselves; as described in Chapter 4, banks with debit position transfer funds through the *MEP* system to the account of the clearinghouse which, in turn, transfers funds to the banks in a credit position.

In addition, payments between the central bank and commercial banks are executed through the *MEP* system. No payment is posted on banks' accounts by the BCRA on its own initiative during the operational day. Therefore, banks have full responsibility for the use of their own funds. Also, payments between the central bank and commercial banks are executed through the *MEP* system. No payment is posted on banks' accounts by the BCRA on its own initiative during the operational day. Therefore, banks have full responsibility for the use of their own funds.

8.3 MONETARY POLICY AND PAYMENT SYSTEMS

(a) Extension of central bank credit

Lending operations by the BCRA are based on repurchase agreements and liquidity rediscount facilities. In addition, the central bank can provide extraordinary financial assistance in particular cases. All these operations are activated by the banks as the BCRA does not pursue an active management of the liquidity of the banking system.

Through the repos (*pases activos*) the BCRA purchases securities and sells them to banks at a specified date and price. They are normally executed against government securities denominated in foreign currency (U.S. dollars) traded on the Buenos Aires market. A haircut of 10% is applied.

⁵⁷In the past, instead, as mentioned in Section 4.1, the BCRA had some discretion in handling payments originated by banks.

Repos are activated by the banks and generally have an overnight maturity. At present the BCRA does not provide liquidity on an intraday basis. The interest rate is fixed by the BCRA and currently amounts to 9% on an annual basis. The relative funds are credited to banks through the *MEP* by 6:00 p.m. and are reimbursed to the BCRA also through the *MEP*. In the event that the entity does not have sufficient funds in its accounts, the operation is postponed for one day and if it is not reimbursed even on the following day, the BCRA will sell the securities on Buenos Aires' markets. As mentioned in Section 2.4, such operations are subject to the constraint that a maximum of 1/3 of reserves backing the monetary base may be in dollar-denominated government bonds. Banks resort to such facilities to a very limited extent as they may use, for payment purposes, the liquidity held in compliance with the liquidity requirements.

According to the *Carta Orgánica*, rediscount and advances may be provided by the BCRA to cope with situations of temporary lack of liquidity of the applicant bank. The amount granted may not exceed the net capital of the bank nor a duration of 30 days. The applicant banks must provide: (i) in case of the advances, either government securities or a first mortgage on their own assets; (ii) in case of rediscount, loans to the private sector complying with minimum quality requirements. In any case, the guarantee must amount at least to 125% of the funds required.

Both rediscount and advances operations may be required by banks also at the end of the operational day and are liquidated on the current accounts held at the BCRA.

Lastly, according to Law 24/485 of 1995, the BCRA, in situations of systemic liquidity problems, can extraordinarily provide lending at conditions exceeding the amount and duration normally permitted.

(b) Reverse repurchase agreements

The BCRA executes reverse repurchase agreements (*pases pasivos*) by selling dollar or peso denominated government bonds and repurchasing them at a specified date and price. A haircut of 10% is applied on such securities. The interest rate, which is periodically fixed by the BCRA, amounts at present to 4.7% annually. There is an automatic *pase pasivo* for the balances that the financial entities hold at the end of the day until the beginning of the next working day. This process allows financial institutions to remunerate their liquidity requirements.

8.4 THE ROLE OF THE BCRA IN CROSS-BORDER PAYMENTS

The BCRA's role in cross-border payments is related to its function as financial agent of the government, the management of external reserves, the foreign exchange transactions between commercial banks and the central bank, and the participation in multilateral payment agreements (e.g., the *Asociación Latinoamericana de Integración, ALADI*).

As financial agent to the government, the BCRA manages approximately \$20 billion pesos per year, including payments for government securities and obligations to international organizations. In addition, the BCRA's management of international reserves involves a volume of operations of a monthly average value of \$2 billion pesos. Finally, the BCRA manages the peso/dollars transfers

between accounts held by the banks in New York and those held in Buenos Aires. The bulk of these operations are processed through SWIFT.

8.4.1 Asociación Latinoamericana de Integración (ALADI)

The BCRA is one of the members of the *Asociación Latinoamericana de Integración (ALADI)* created in 1963 with the objective of strengthening the relations among central banks in the region, as well as facilitating trade within the member countries⁵⁸. Through this agreement, the members guarantee the full convertibility of their domestic currencies with US dollars and the payments of the eligible operations through the central banks.

Payment orders are sent daily from the authorized financial entities and are settled at the respective central banks. A multilateral netting occurs among central banks every four months. In order to minimize the risks that central banks incur in the system by guaranteeing the operations, in 1997 ALADI members implemented a system (*Sistema de Compromiso a Futuro, SICOF*) in which the operators have to indicate in advance the amount of the operations that they will introduce in the system. In addition, since 1998, the BCRA requires that all operations in the system be collateralized.

Operationally, transactions are settled in the *MEP* before the beginning of the *MEP* operating day on the day following communication from the financial entity. The participation of the BCRA in the system is equal to around 25 per cent of the total of receivables (for payment of exports) and 18 per cent of the payments (for payments of imports). Consequently, the BCRA is normally in a net credit position (around \$150 million pesos per netting).

Table B10 shows the evolution of ALADI operations for Argentina in recent years. It is interesting to notice the decrease in the value of operations in the years that followed the introduction of the new risk policy measures.⁵⁹

8.5 PRICING POLICIES

At the moment, the BCRA charges only a fixed cost for cross-border transfers of currency and for securities selling when entities do not complete swap operations when they expire.

⁵⁸ The participating countries are twelve: Argentina, Bolivia, Brazil, Colombia, Chile, Ecuador, Mexico, Paraguay, Peru, Dominican Republic, Uruguay and Venezuela. The agreement is administered by the *Banco Central de la Reserva del Perú* through the *Sistema de Información Computerizado de Apoyo al Convenio de Pagos y Créditos Recíprocos (SICAP)*. The secretariat of ALADI is located in Montevideo, Uruguay.

⁵⁹ The BCRA has introduced a system similar to the SICOF since 1993.

9 SUPERVISION OF SECURITIES CLEARANCE AND SETTLEMENT SYSTEMS

9.1 CNV STATUTORY AND SUPERVISORY RESPONSIBILITY OVER PARTICIPANTS IN THE CLEARANCE AND SETTLEMENT SYSTEMS⁶⁰

The CNV has responsibility for ensuring transparency in the capital market, overseeing appropriate and correct price-formation and protecting investors. Pursuant to Section 7 of the Public Offering of Securities Law, the CNV may do the following: (1) demand reports and make inspections and investigations of the physical or legal persons subject to its oversight; (2) request cooperation from law enforcement personnel; (3) commence legal actions; and (4) report frauds or establish itself as complainant.

The CNV has authority for setting rules pertaining to SROs in the securities market, including those that perform clearing and settlement functions. The *Merval's* clearing and settlement system is one of the primary SROs regulated by the CNV. The *Merval* is required to submit all proposed rule changes to the CNV for approval.

9.1.1 Responsibility over SROs

According to the Public Offering of Securities Law, no person shall carry on business as a securities exchange or function as a clearing agency unless registered as an SRO under the law. All SROs must register with the CNV before starting their activities.

The application for registration must state the purpose for engaging in the securities business, provide the name of the corporation and indicate the existence of a body of rules for the governance of its members. Amendments of SROs' rules must be submitted for the CNV's consideration and approval. The CNV can make an order requiring changes in the rules of the SROs to ensure fair administration or to make the rules conform to the requirements of the Public Offering of Securities Law.

The CNV has the authority to make inspections of the books and records and physical premises of SROs, including clearing agencies, and may do so on an annual basis. At that time, the CNV may also inspect the Special Guaranty Fund, which each securities market (e.g., the *Merval*) is required by law to maintain. The Fund is used as a liquidity resource to fulfill settlement obligations in the event of member default.

9.2 SROs STATUTORY AND SUPERVISORY RESPONSIBILITY FOR CLEARANCE AND SETTLEMENT

SROs have supervisory and statutory responsibility over their members and participants. In particular, an SRO may refuse membership or impose conditions on membership or prohibit or limit access to services furnished by it or its members.

⁶⁰ Additional aspects related to the regulatory framework of securities transactions can be found in Sections 2.1 and 2.6 and in Chapters 5, 6 and 7.

ANNEX

THE CONVERTIBILITY PLAN

The main pillars of the Convertibility Plan are:

- (i) Monetary Reform, through the Convertibility Law, subsequently supplemented by the new Charter of the Central Bank;
- (ii) Fiscal Reform, including the administration of the tax system and a redefinition of tax instruments and rates;
- (iii) State Reform, through privatization and deregulation of factor and product markets;
- (iv) Social Security Reform, with a new capitalization mechanism operated by the private sector;
- (v) Trade Reform through the elimination of export taxes and most quantitative restrictions on imports, and the reduction of the level and range of import tariffs.

MONETARY AND EXCHANGE REGIME

1. Objective

Guarantee the stability of the peso within the framework of the Convertibility Law (April 1991) and the Charter of the Central Bank (September 1992).

2. Main elements

The Convertibility Law of April 1991 fixes the rate of the Austral at 10,000/1 to the US dollar. On January 1992, the Austral was replaced by the Peso at the fixed rate of 1/1 to the US dollar.

The monetary base cannot exceed the dollar value of international reserves. That is to say, there is a mandate to the Central Bank to back at least 100% of the monetary base with freely available international reserve requirement. These reserves can be represented by gold, US dollars, US dollar denominated government bonds issued by the Republic of Argentina. The Central Bank Charter permits a maximum of 1/3 of reserves backing the monetary base to be assets of the latter category.

The Central Bank Charter establishes that the BCRA cannot provide credit to the National Government, Provincial or Municipal Governments, neither to the non-financial private sector:

- The central bank can only finance the Treasury (*Tesorería de la Nación*) buying public securities at market prices.
- The increase in the stock of public securities maintained at the BCRA can only increase, at maximum, at an annual rate of 10%.

- The stock of Government securities of the BCRA cannot exceed 1/3 of the total of international reserves.

The Central Bank Charter establishes the independence of the Board of Directors, all of whom are ratified by Congress and provides fixed terms of tenure for the appointees, including the President.

The Central Bank cannot take any new interest earning liabilities and it cannot remunerate reserve requirements (see Point 4.b). Also it cannot guarantee commercial bank deposits, i.e. deposit insurance (a privately funded and limited deposit insurance fund was established in 1995). This substantially reduces the role of the Central Bank as a lender of last resort (both in pesos and in dollars). Nevertheless, in case of emergency, the Central Bank can provide, for limited time, liquidity up to 100% of a bank's capital, through the rediscount window.

3. Free capital movement

There are no restrictions in capital flows. Variations in international reserves have a direct impact on the economy through changes in the money supply and the real interest rate.

4. Liquidity regulation operations

a) *Pases Activos* operations (repos)⁶¹

The qualifying assets are:

- Public securities
- Dollar or pesos denominated securities, at market prices, with a haircut of 10%.
- Financial trust participation certificates (*Certificados de Participación de Fideicomisos Financieros*). The underlying assets must be credits with co-participation guarantee or securities issued by SEDESA.

The interest rate is periodically fixed by the BCRA (at present, 9% annual).

b) *Pases Pasivos* operations (reverse repos):⁶²

Sale of dollar or peso denominated securities, at market prices, with a haircut of 10%.

The interest rate: periodically fixed by the BCRA (at present, 5.8% annual). There is an automatic *pase pasivo* for the balances that the financial entities hold at the end of the day until the beginning of the next working day. Through these operations banks can remunerate their liquidity requirements.

⁶¹ Purchase of securities and resale back to the seller at a future specified date and price.

⁶² Sale of public securities and repurchase in the future at a specified date and price.

c) Illiquidity Advances and Rediscounts

- Maximum amount: equity of the entity at the books in the last audited quarter.
- Maximum duration of 30 days with a renewal from 45 days after the maturity date.
- 125% collateralized with public securities or specific assets.
- The financial entities using this facility are prohibited to buy fixed term deposit certificates or negotiable bonds issued by themselves, to cancel in advance *pases activos* or concede financial assistance with the guarantee of these instruments.
- The BCRA, facing systemic liquidity problems in the system, can extraordinarily give financial assistance. (Law 24,485, April 1995).

5. Contingent repo facility

The aim of the repo facility is to increase systemic liquidity for a brief (but sufficiently long) period during an international liquidity crisis. The facility gives the BCRA the option to sell dollar denominated government bonds and mortgage bills to international banks subject to a buy-back clause (with an embedded implicit interest rate).

Conditions:

- Program Duration: 2 to 5 years. Extensions to the agreements (beyond the contracted duration) can be negotiated every three months.
- Operations term: depending on the needs of BCRA, but under the limits of the contract signed with each international bank.
- Haircut: 20-28% of the market value, depending on the security.
- Market value fluctuations margin: if the market price falls more than 5% the BCRA should compensate the difference with securities of the same nature or US dollars up to 125% in the case of public securities and 140% in the case of mortgage bills. If the price fell under the repurchase price, BCRA would have to pay the difference in cash (US dollars).

APPENDIX: STATISTICAL TABLES OF ARGENTINA

The first series of tables (A) are statistics on payments and securities clearance and settlement in Argentina and were completed following a standard model prepared in the context of the Western Hemisphere Payments and Securities Clearance and Settlement Initiative. They slightly differ from the model due to data availability constraints. The second series (B) are more general statistics related to the financial sector.

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Table A1: Basic Statistical Data

	1995	1996	1997	1998	1999
Population ^(a)	30.1 ^(b)	31.0 ^(b)	31.6 ^(b)	36.1	36.6
GDP (billion US dollars)	258.0	272.1	292.9	298.1	283.2
GDP per capita	8,571.4	8,777.4	9,269.0	8,257.6	7,737.7
Exchange rate Peso/US\$	1.00	1.00	1.00	1.00	1.00

Source: BCRA; Instituto Nacional de Estadística y Censos (Indec); Dirección Nacional de Cuentas Nacionales.

^(a) In millions.

^(b) May.

Table A2: Settlement Media Used by Non-banks

(Millions of pesos)

	1995	1996	1997	1998	1999
Notes and coins	13,050	14,035	15,970	16,370	16,493
<i>held by the public</i>	11,154	11,730	13,325	13,496	13,725
Transferrable deposits in domestic currency	19,182	24,564	31,796	34,831	32,608
Narrow money supply M1	16,651	19,909	23,208	23,782	22,846
Transferrable deposits in foreign currency	23,414	28,194	36,705	41,963	46,055
Broad money aggregate (M3)	53,750	64,488	81,825	90,290	92,387

Source: BCRA and Superintendencia de Entidades Financieras y Cambiarias

Table A3: Settlement Media Used by Deposit Taking Institutions

(Millions of US dollars)

	1995	1996	1997	1998	1999
Required reserves at the Central Bank ^(a)	5,119	6,386	9,932	10,005	11,530
Deposit at Deutsche Bank	4,236	7,222	6,312	7,197	6,935
TOTAL	9,355	13,608	16,244	17,202	18,465

Source: BCRA.

^(a) Held at the BCRA in Buenos Aires.

Table A4: Institutional Framework

	1999			
	Number of institutions	Number of offices	Number of accounts ^(a)	Value of Accounts ^(b)
Central Bank	1	1	—	—
Commercial banks	93	4,325	16,855	81,222
of which:				
Public banks	15	1,358	4,451	26,774
Private banks	78	2,967	13,803	54,447
Offices of foreign banks	16	327	1,754	13,550
Non banking financial institutions	22	56	36	352
Post Office	1	6,000	—	—

Source: Superintendencia de Entidades Financieras y Cambiarias.

^(a) Number of checking, savings and time deposit accounts, in thousands.

^(b) Millions of pesos.

Table A5: Bank Notes and Coins

(Millions of pesos)

	At the end of the year				
	1996	1997	1998	1999	2000 ^(a)
Total currency issued	14,035.6	15,970.0	16,370.1	16,492.7	13,642.0
Total Banknotes issued	13,533.1	15,409.9	15,820.7	15,922.1	13,089.2
Of which:					
100	9,323.2	10,831.0	11,480.0	11,713.9	9,502.5
50	2,262.1	2,388.5	1,954.8	1,704.0	1,450.1
20	433.1	551.9	559.3	736.5	604.4
10	1,032.4	1,083.6	1,234.4	1,150.0	1,006.0
5	291.2	329.9	1,234.4	316.0	282.0
2	191.5	205.4	250.1	282.2	224.7
1	19.6	19.6	19.6	19.5	19.5
Coins issued	482.5	560.1	549.4	570.6	552.8
Notes and coins held by banks	2,300.0	2,640.0	2,873.0	2,768.0	2,296.0
Notes and coins circulating outside banks	11,736.0	13,330.0	13,497.0	13,725.0	11,346.0

Source: BCRA.

^(a) 31/03/2000.

Table A6: Cash Dispensers, ATMs and EFTPOS Terminals

	<i>1998</i>
Cash dispensers and ATMs	
Number of networks	2
National	2
Regional	—
Number of machines	6,000
Volume of transactions (in millions)	271.2
Value of Transactions (in millions of pesos)	54,240
EFTPOS:	
Number of networks	9
debit cards	2
credit cards	7
Number of machines ^(a)	72,600

Source: Interviews with card operators.

^(a) EFTPOS can accept both credit and debit cards, the circuits are interoperable.

Table A7: Number of Payment Cards in Circulation

	<i>1998</i>
Cards with a cash function (in millions)	9.5
Cards with a debit/credit function (in millions)	
of which	24.5
debit cards	9.5
credit cards	15.0
Cards with a cheque-guarantee function	N.A.
Retailer and fidelity cards	N.A.
Stored-value cards	N.A.

Source: Interviews with card operators.

Table A8: Indicators of Use of Various Cashless Payment Instruments
(Volume of transactions, in thousands)

	<i>1996</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>
Checks issued	106,379	116,961	121,194	115,395
in local currency	106,433	116,552	120,691	114,866
in foreign currency	306	409	503	529
Payments by cards				
debit	N.A.	N.A.	2,400	N.A.
credit	N.A.	N.A.	15,000	N.A.
Paper-based credit transfers	N.A.	N.A.	N.A.	N.A.
Paperless credit transfers	N.A.	N.A.	N.A.	N.A.
Direct Debits	N.A.	N.A.	1,200.0	N.A.
E-money	—	—	—	—

Source: BCRA, Interviews with card operators.

Table A9: Indicators of Use of Various Cashless Payment Instruments
(Value of transactions, in millions of pesos)

	1996	1997	1998	1999
Checks issued	303,400	336,353	341,801	320,912
in local currency	297,664	327,117	329,696	308,900
in foreign currency	5,736	9,235.90	12,104.70	12,012
Payments by cards				
debit	N.A.	N.A.	240	N.A.
credit	N.A.	N.A.	15,000	N.A.
Paper-based credit transfers	N.A.	N.A.	N.A.	N.A.
Paperless credit transfers	N.A.	N.A.	N.A.	N.A.
Direct Debits	N.A.	N.A.	110	N.A.
E-money	—	—	—	—

Source: BCRA, Interviews with card operators.

**Table A10: Payment Instructions Handled by Selected Interbank
Transfer Systems (volume, in thousand units)**

	1996	1997	1998	1999	2000
Checks (Low-value clearinghouse)	106,739	116,961	121,194	115,395	27,689 ^(a)
in domestic currency	106,433	116,552	120,691	114,866	27,729 ^(a)
in foreign currency	306	409	503	529	140 ^(a)
MEP (RTGS system)	—	—	670.5	78	456.2 ^(b)

Source: BCRA.

^(a) First Quarter of 2000.

^(b) First Semester of 2000.

**Table A11: Payment Instructions Handled by Selected Interbank
Transfer Systems (millions of US\$)**

	1996	1997	1998	1999	2000
Checks (Low-value clearinghouse)	303,399.8	336,352.9	341,800.7	320,911.6	76,047.7 ^(a)
in domestic currency	297,663.8	327,117.0	329,696.0	308,899.7	73,013.2 ^(a)
in foreign currency	5,736.0	9,235.9	12,104.7	12,011.9	3,034.5 ^(a)
MEP (RTGS system)	—	—	1,033,778.1	1,821,534.5	1,156,670.7 ^(b)

Source: BCRA.

(a) First Quarter of 2000.

(b) First Semester of 2000.

Table A12: Payment Instructions Handled by the RTGS System
(Detail, 1st Semester 2000)

	<i>Volume</i>	<i>Value^(a)</i>
TOTAL	456,214	1,156,670.7
Automated Clearinghouses	42,043	46,875.7
Interbank Transfers	401,377	272,206.3
Pases Activos	5,210	790,056.5
Other	7,584	47,532.2

Source: BCRA.

^(a) In Millions of US\$.

Table A13: Securities and Accounts Registered in Securities Settlement Systems

<i>Registration</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>
CAJA DE VALORES			
Number of securities registered	811 ^(a)	916 ^(a)	1,021 ^(a)
Number of accounts	623 ^(b)	619 ^(b)	602 ^(b)
Number of subaccounts	2,904,909 ^(c)	2,989,064 ^(c)	2,901,807 ^(c)
Number of foreign investors	2,613 ^(d)	2,391 ^(d)	2,178 ^(d)

Source: CNV.

^(a) Quantity per species. They include those listed in other central depositories, but excluding those corresponding to dividends accounts.

^(b) Brokers' accounts.

^(c) Total of domestic and foreign clients.

^(d) Clients living abroad who registered balances in the referred years.

Table A14: Securities Holdings in Securities Settlement Systems
(Millions of US\$)

<i>Securities Holdings^(a)</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>
CAJA DE VALORES			
Government Securities			
Treasury Securities	25,077.86	24,241.70	25,084.50
Other Government securities	—	—	—
Corporate Bonds	584.70	785.80	1,013.40

Source: CNV.

^(a) Nominal Value at year-end.

Table A15: Transfer Instructions Handled by Securities Settlement Systems
(Volume, in millions)

<i>Settlement System</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>
MERVAL			
Government Securities ^(a)	64,611	33,721	33,332
Shares	53.739 ^(b)	72,467	42,564
Corporate Debt ^(a)	529	461	502
MAE			
Government Securities ^(a)	338,080	171,460	153,572
Shares	^(c)	^(c)	^(c)
Corporate Debt ^(a)	949	886	847
CAJA DE VALORES			
Government Securities ^(a)	25,077	24,241	33,332
Shares	na	na	na
Corporate Debt ^(a)	585	786	1,013
ARGENCLEAR	0	0	0

Source: CNV.

^(a) Par value.

^(b) Number of shares traded on the floor. As from July 6, 1998 (start date of Mercado de Concurrencia), the number of trades on SINAC is added.

^(c) Does not operate.

Table A16: Transfer Instructions Handled by Securities Settlement Systems
(Value, in millions of pesos)

<i>Settlement System</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>
MERVAL			
Government Securities ^(a)	67,775	35,343	33,704
Shares	37.827 ^(b)	25,978	11,805
Corporate Debt ^(a)	546	420	445
MAE			
Government Securities ^(a)	366,264	195,476	187,105
Shares	^(c)	^(c)	^(c)
Corporate Debt ^(a)	924.8	945.4	924.4
ARGENCLEAR	0	0	0

Source: CNV.

^(a) Par value.

^(b) Number of shares traded on the floor. As from July 6, 1998 (start date of Mercado de Concurrencia), the number of trades on SINAC is added.

^(c) Does not operate.

Table B1: Number of Financial Entities

	<i>Dec-96</i>	<i>Dec-97</i>	<i>Dec-98</i>	<i>Dec-99</i>
Total Financial System	147	142	130	115
Total banks, of which:	121	115	105	93
Public banks	21	20	16	15
Private banks	100	95	89	78
Domestic banks	82	71	50	52
Foreign capital banks	23	28	22	21
Branches of foreign banks	16	16	17	20
Non-banking financial institutions	26	27	25	22

Source: Superintendencia de Entidades Financieras y Cambiarias.

Table B2: Number of Checking, Savings and Time Deposits Accounts

(In thousands)

	<i>Dec-96</i>	<i>Dec-97</i>	<i>Dec-98</i>	<i>Dec-99</i>
Total Financial System	10,115	12,563	16,542	16,855
Total banks, of which:	10,080	12,523	16,506	16,819
Public banks	3,333	3,686	4,252	4,451
Private banks	6,748	8,835	12,265	13,803
Domestic banks	6,086	7,106	8,352	8,774
Foreign capital banks	3,019	4,315	6,463	6,291
Branches of foreign banks	975	1,102	1,691	1,754
Non-banking financial institutions	35	40	36	36

Source: Superintendencia de Entidades Financieras y Cambiarias.

Table B3: Assets

(Millions of pesos)

<i>ASSETS</i>	<i>Dec-96</i>	<i>Dec-97</i>	<i>Dec-98</i>	<i>Dec-99</i>
Total Financial System	108,342	131,935	144,647	152,451
Total banks, of which:	107,125	130,556	142,721	150,341
Public banks	37,393	36,390	39,876	41,574
Private banks	69,732	94,166	102,845	108,767
Domestic banks	63,466	70,038	73,956	78,481
Foreign capital banks	29,575	37,999	40,009	40,114
Branches of foreign banks	14,084	22,519	28,756	31,746
Non-banking financial institutions	1,216	1,379	1,926	2,110

Source: Superintendencia de Entidades Financieras y Cambiarias.

Table B4: Deposits
(Millions of pesos)

	<i>Dec-96</i>	<i>Dec-97</i>	<i>Dec-98</i>	<i>Dec-99</i>
Total Financial System	54,784	69,931	78,334	81,574
Total banks, of which:	54,413	69,596	77,944	81,222
Public banks	19,119	23,128	27,046	26,774
Private banks	35,294	46,468	50,898	54,447
Domestic banks	33,402	44,573	43,535	43,256
Foreign capital banks	14,723	19,884	21,915	24,416
Branches of foreign banks	6,288	9,877	12,494	13,550
Non-banking financial institutions	371	335	390	352

Source: Superintendencia de Entidades Financieras y Cambiarias.

Table B5: Equity
(millions of pesos)

<i>EQUITY</i>	<i>Dec-96</i>	<i>Dec-97</i>	<i>Dec-98</i>	<i>Dec-99</i>
Total Financial System	15,255	16,036	16,688	16,890
Total banks, of which:	15,065	15,803	16,321	16,421
Public banks	7,218	6,720	6,619	4,113
Private banks	7,847	9,083	9,702	12,309
Domestic banks	10,159	11,417	10,052	9,693
Foreign capital banks	3,413	2,583	3,902	4,244
Branches of foreign banks	1,493	1,803	2,367	2,484
Non-banking financial institutions	190	233	367	469

Source: Superintendencia de Entidades Financieras y Cambiarias.

Table B6: Loans
(millions of pesos)

<i>LOANS</i>	<i>Dec-96</i>	<i>Dec-97</i>	<i>Dec-98</i>	<i>Dec-99</i>	<i>Mar-00</i>
Total	58,048	67,172	77,475	77,689	77,221
Public Sector	6,358	7,010	9,315	11,990	12,476
In pesos	1,926	1,766	1,478	1,675	1,546
In foreign currency	4,432	5,244	7,837	10,315	10,930
Non financial private sector	51,233	59,925	67,091	65,250	64,100
In pesos	19,549	22,032	24,741	24,388	24,047
In foreign currency	31,684	37,893	42,350	40,862	40,053
Foreign residents	457	237	1,069	449	645
In pesos	6	1	11	15	12
In foreign currency	451	236	1,058	434	633

Source: Superintendencia de Entidades Financieras y Cambiarias

Table B7: Equity Market

<i>Date</i>	<i>Market capitalization over GDP End-of-month average (percentage)</i>	<i>Traded over GDP Yearly value (percentage)</i>	<i>Number of listed Companies End-of-month average</i>	<i>Market capitalization over Stock Market Index End-of-month average</i>
1990	2.3	0.6	181	1.01
1991	4.7	2.5	174	1.06
1992	9.7	6.9	175	1.60
1993	10.4	4.0	176	2.18
1994	15.8	4.0	159	2.81
1995	12.0	1.6	150	2.90
1996	13.9	1.5	147 ^(a)	3.00
1997 ^(a)	20.1	6.8	136	4.57
1998 ^(a)	15.2	3.7	131	5.02
1999 ^(a)	29.7	4.7	125	6.78

Source: Argentina Financial Sector Review, september 1998, World Bank (based on IFC's monthly data) and Banco central de la República Argentina.

^(a) end of the year.

Table B8: Corporate Bonds

(Millions of dollars)

<i>Date</i>	<i>Amounts authorized</i>	<i>Amounts issued</i>	<i>Monthly mean maturity</i>	<i>Number of issues</i>
1990	832.2	48.4	37	4
1991	522.2	374.5	55	11
1992	1,952.0	1,552.9	34	45
1993	5,596.6	4,287.6	36	63
1994	5,688.0	3,546.4	30	62
1995	4,087.0	3,319.1	20	88
1996	5,614.2	3,259.6	34	69
1997	9,782.6	2,550.0	50	30

Source: Argentina Financial Sector Review, september 1998, World Bank (based on IFC's monthly data) and Banco Central de la República Argentina.

Table B9: Issues in the International Capital Markets

<i>Date</i>	<i>Issues</i>	<i>Mean Maturity (in years)</i>	<i>Amount (US\$ billions)</i>	<i>Average Spread (basis points)^(a)</i>
1994	19	3.3	2.6	238
1995	18	4.0	6.4	371
1996	30	8.2	10.4	395
1997	18	14.9	10.2	310
1998	24	13.3	11.7	429
1999	40	7.6	11.9	594
2000 ^(b)	11	10.8	9.2	574

Source: Banco Central de la República Argentina.

^(a) Spread over a US Treasury security of the same maturity.

^(b) Second quarter.

Table B10: Argentina - ALADI Operations
(Million of US dollars)

	1992	1993	1994	1995	1996	1997	1998	1999
Argentina - Total exports	12,235	13,118	15,839	20,963	23,811	26,430	26,441	23,308
Exports to ALADI countries								
in US dollars	3,918	5,287	6,957	9,625	11,092	13,088	12,978	10,136
% of Total exports	32.1	40.3	43.9	45.9	46.6	49.5	49.1	43.5
Receivables through ALADI	2,622	3,013	2,734	3,125	1,830	1,808	1,547	857
% of exports to ALADI	66.9	57.0	39.3	32.5	16.5	13.8	11.9	9.3
% of total exports	21.4	23.0	17.3	14.9	7.7	6.8	5.8	4.0
Argentina - Total imports	14,872	16,784	21,590	20,122	23,762	30,450	31,404	23,538
Imports to ALADI countries								
in US dollars	4,973	5,426	6,606	5,860	7,362	9,350	9,675	7,734
% of total imports	33.4	32.3	30.6	29.1	31.0	30.7	30.8	30.3
Payments through ALADI	3,616	3,068	2,398	1,693	1,381	1,139	889	591
% of imports to ALADI	72.7	56.5	36.3	28.9	18.8	12.2	9.2	8.5
% of Total Imports	24.3	18.3	11.1	8.4	5.8	3.7	2.8	2.5

Source: Banco Central de la República Argentina, Informe al Congreso de la Nación.

List of Abbreviations

ABA:	Asociación de Bancos de la República Argentina
ABAPPRA:	Asociación de Bancos Públicos y Privados de la República Argentina
ABM:	Asociación de la Banca Minorista
ADR:	American Depository Receipt
ALADI:	Asociación Latinoamericana de Integración
AMA:	Agente de Mercado Abierto
BASIC:	Bonds, Auditing, Supervision and Financial Institutions' Ratings
BCBA:	Bolsa de Comercio de Buenos Aires
BdNA:	Banco de la Nación Argentina
BOCONES:	Bonos de Consolidación
CEC:	Cámaras Electrónicas Compensadora
CEMLA:	Centro de Estudios Monetarios Latinoamericanos
CIMPRA:	Comisión Interbancaria de Medios de Pago de la República Argentina
CNV:	Comisión Nacional de Valores
COELSA:	Compensadora Electrónica S.A.
COSRA:	Council of Securities Regulators of the Americas
CRYL:	Central de Registración y Liquidación de Instrumentos de Endeudamiento Público
CUT:	Cuenta Única del Tesoro
DTC:	Depository Trust Company
FIA:	Futures Industry Association
IAC:	International Advisory Council
IMFC:	Instituto Movilizador de Fondos Cooperativos
IOSCO:	International Organization of Securities Regulators
MAE:	Mercado Abierto Electrónico, S.A.
MAT/BA:	Mercado a Término de Buenos Aires, S.A.
MEP:	Medio Electrónico de Pagos
MERVAL:	Mercado de Valores de Buenos Aires, S.A.
MIF:	Mutual Investment Fund
NACHA:	National Automated Clearinghouse Association

ROFEX:	Mercado a Término de Rosario, S.A./Rosario Futures Exchange
RTGS:	Real Time Gross Settlement
SBC:	Swiss Bank Corporation
SCLV:	Servicio de Compensación y Liquidación de Valores, S.A.
SEC:	U.S. Securities Commission
SEDESA:	Sistema de Seguro de Garantía de los Depósitos Bancarios
SEFyC:	Superintendencia de Entidades Financieras y Cambiarias
SICOF:	Sistema de Compromiso a Futuro
SRO:	Self-Regulatory Organization
UIF:	Unidad de Información Financiera
WB:	World Bank

Glossary

The Committee on Payment and Settlement Systems (CPSS) of the Bank for International Settlement (BIS) is finalizing a combined glossary for payments and securities clearance and settlement terms, which should be published in the following months. In order to avoid unnecessary proliferation of terminology, the Western Hemisphere Payments and Securities Clearance and Settlement Initiative decided not to present an independent list of terms. As soon as the BIS document becomes available, some of its terms will be added, where appropriate, to the subsequent reports.

The following are some of the terms used in this report, which are peculiar to the Argentine context.

<i>Bancarización:</i>	access by the population to banking services, often measured as the number of accounts, both checking and savings, and/or the deposit/GDP ratio.
<i>Bontes:</i>	medium-term Treasury bonds with a semiannual coupon and bullet principal repayment. <i>Bontes</i> can be denominated in either pesos or US dollars and can be issued with either a fixed or floating coupon.
<i>Carta Orgánica</i> (del BCRA):	the Charter regulating central banks' activity. It was issued in 1992 and modified in 1995.
<i>Cheques de pagos diferidos:</i>	a post-dated check, i.e. an order of payment for a date subsequent to the date on which the check was issued.
<i>Convertibility Plan:</i>	see Annex.
<i>Letes:</i>	short-term discount Treasury bills issued in both US dollars and pesos.
<i>Pase activo:</i>	repurchase agreement (repo), purchase of securities and resale back to the seller at a future specified date and price.
<i>Pase pasivo:</i>	reverse repurchase agreement (reverse repo), sale of securities and repurchase in the future at a specified date and price.
<i>Rechazados:</i>	checks that are rejected during the clearing process due to the lack of funds and/or formal imperfections.

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