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

PAYMENTS AND SECURITIES CLEARANCE AND SETTLEMENT SYSTEMS IN EL SALVADOR

DECEMBER 2000

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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 Monetary 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, Board of Governors of the Federal Reserve System, Federal Reserve Bank of New York, Inter-American Development Bank, International Monetary Fund, International Organization of Securities Regulators (IOSCO), Securities Commission of Spain (CNMV) 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 El Salvador"* is one of the public reports in the series and was prepared with the active support of the *Banco Central de Reserva de El Salvador* and the Superintendency of Securities. The Securities Commission of Peru (*CONASEV*) participated directly in its preparation.

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PAYMENTS AND SECURITIES CLEARANCE AND SETTLEMENT SYSTEMS IN EL SALVADOR*

* The WHI mission to El Salvador was done in coordination with the Financial Sector Assessment Program (FSAP) mission, the joint IMF-World Bank effort to assess vulnerabilities in a country's financial system. Hence, the content and organization of this report slightly differs from the standardized format of the WHI series. For detailed information on the series' Table of Contents and Statistical Tables see the other reports in the web page of the Initiative: www.ipho-whpi.org.

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1 ECONOMIC AND FINANCIAL MARKET OVERVIEW

Payments and securities clearance and settlement systems form the backbone of the financial infrastructure necessary for the efficient operation of the financial sector in general and the banks and securities markets in particular and to facilitate business and consumer transactions. Payments systems include all paper and electronic systems used to exchange financial value. A trade in a security —equity or debt— usually involves at least two steps: the transfer of ownership of the security and the payment transfer for the transaction. The first step includes physical or electronic trading arrangements and processes for registration upon transfer of ownership. The second step involves interaction with the payments system in the process of transferring cash, or more likely, deposit balances from the buyer to the seller.

This report describes and assesses the payments system and the securities clearance and settlement system in El Salvador. It then provides an analysis of the major issues that need to be addressed to improve the safety and efficiency of these systems and concludes with a set of recommendations for future actions.

Information used to prepare this report was derived from reports, documents and statistics available within El Salvador, as well as interviews with executives of large, medium and small commercial banks; banking and securities regulatory bodies; the stock exchange; the Bankers Association, the Central Bank of El Salvador (*Banco Central de Reserva* (BCR)) and other leaders in the financial sector. The mission wishes to thank all that contributed to this effort.

1.1 COUNTRY

El Salvador is a relatively small country with an area of 21,000 square kilometers, which, to provide a scale factor, is about 50 times smaller than Colombia (with an area of 1.1 million square kilometers). The country's small size is an important determinant of the configuration of its payments system, including the need for only one check clearinghouse in San Salvador.

Although rather small in area, El Salvador is a densely populated country with over 6 million inhabitants in 1998. About one third of the country's population is concentrated in and around the capital city of San Salvador. In spite of relatively rapid economic growth in the second half of the 1990s, real GDP per capita (at 1990 constant prices) increased only from 8,338 colones in 1994 to 8,931 colones in 1998. Growth in per capita income has been limited, given the still fast rate of population growth (slightly above 2%). With a minimum daily wage of colones 42 (equivalent to $4.83 USD per day), it is understandable that most of the transactions are done in cash and that the consumer client base of financial institutions is thin.

1.2 ECONOMIC SITUATION

El Salvador has had a satisfactory economic performance over the last three years, achieving high, although declining, rates of output growth while keeping inflation low and declining in the context of a fixed exchange rate regime. Real GDP grew by 4.0, 3.2 and an estimated 2.3%, in 1997, 1998 and 1999, respectively. Inflation declined significantly from the 7% reached in 1996 to 3.9 in 1997, 2.6 in 1998 and minus 0.4% in 1999. The recent slowdown in real GDP growth reflects adverse terms of trade shocks mainly due to the sharp decline in coffee export receipts and higher oil prices. The authorities have been less successful on the fiscal side with a negative overall balance for the non-financial public sector (even after the grants received following the hurricane Mitch) with an increasing overall deficit of 1.8% of GDP in 1997, 2.7% in 1998 and an estimated 3.0% in 1999. Rapid growth of current expenses of the consolidated public sector and a relatively low tax effort (10.6% of GDP in 1999) are behind this result.

Monetary developments in 1998 were characterized by a slowdown in the rates of growth of broad money and credit to the private sector, and were affected by the intervention by the Superintendency of the Financial System (*Superintendencia del Sistema Financiero* (SSF)) of a medium size bank (CREDISA) in the last quarter of the year, which required significant Central Bank assistance to cover withdrawals of deposits. Nonetheless, monetary policy was tightened and the rate of growth of broad money declined to 9.5% in 1998, from 12.3% during 1997, and an estimated 8% in 1999. To reverse the foreign exchange outflows, in early November 1998 the authorities announced a phased increase of 3 percentage points in legal reserve requirements (remunerated) to an average of 24%, which was completed in March 1999. In tandem, the Central Bank (*Banco Central de Reserva de El Salvador* (BCR)) increased interest rates on Central Bank paper to further discourage capital outflows. As a result, Net International Reserves (NIR) increased by USD $300 million in 1998 to $1,770 million or close to 6 months of imports of goods and services, and $1,965 million at the close of 1999, with an increase of $200 million during 1999. Foreign exchange reserves reached 118% of the country's monetary base, strengthening the stability of the Colón. El Salvador's external debt is rather low at USD $2.6 billion or 21.3% of the country's GDP in 1999.

In spite of an increasingly large trade account deficit (14.4, 15.6 and 17.0% of GDP, in 1997, 1998 and 1999, respectively), El Salvador has achieved a positive, although declining, overall balance of payments position thanks to the important private transfers (mostly remittances and, to a lesser extent, Foreign Direct Investments). Private transfers represented, on average, 12.2% of GDP over the last two years.

In spite of low and falling inflation, a fixed foreign exchange rate of the Colón to the US Dollar, political stability, moderate deficits in the current account and the public sector deficit, real interest rates in El Salvador are, paradoxically, quite high. Six-month deposit rates fluctuated between 10.5 and 11% in 1998 and 1999, resulting in real deposit rates of about 6.2 and 9.8% in the past two years. High funding costs for banks led to quite high nominal (15.1 and 15.4%) and real lending rates (10.5 and 14.3%) in 1998 and 1999. Part of the increase (1.3 percentage points according to estimates of the Bankers Association) in the basic lending rates (14.63 to 15.09%) is explained by the increase of 3 percentage points in the legal reserve requirements in October of 1998. However, the basic lending rate declined towards the end of 1999 to 10.57%. A second factor explaining the relatively high lending rates is the increase in non-performing loans (NPLs) held by banks from 4.8% in September, 1998 to 7.3% the same month of 1999. Excluding the impact of one intervened bank (CREDISA), the increase in NPLs is only of one percentage point (from 3.7 to 4.7%) during the 12 months ending in September, 1999.

In spite of this, average bank spreads are relatively low at an average of 4.7 percentage points in 1999.[1]

1.3 Financial Sector

Like the rest of the Latin America region, banks dominate the Salvadorian financial system. As of September 1999, the system of financial intermediation consisted mainly of 16 deposit-taking banks (including one registered as foreign owned and two public banks), one public second-tier bank, and one deposit taking non-bank (a finance company). The largest 5 banks (all private) accounted for nearly 75% of the system's deposits, and some 71% of loans. The number of locally owned commercial banks has declined through closures and, more recently, mergers. The largest commercial bank (Agrícola) and the fifth largest bank (Desarrollo) are at present being merged. The banks registered as foreign-owned concentrate some 0.8% of the system's deposits, although they hold, as a group, more than half the number of banking licenses[2], the 2 first-tier public banks 6.5% of the system's assets and the financial company a mere 0.5%. Credit cooperatives also provide financial services: they represent a very small share of the system's assets but have a relatively large number of clients. There are 15 trust and insurance companies in operation, 23 brokerage houses (mostly owned by commercial banks), 5 privately-run pension funds, 3 rating agencies, 7 warehousing financial institutions, 17 foreign exchange houses ("casas de cambio"), one stock exchange and one commodity exchange. In addition there are 50 credit cooperatives and 7 "workers' banks" (similar to credit unions).

A consolidation trend in the banking system has been observed in recent years, especially since the flight to quality and inter-bank market disruptions of 1997 following the failure of FINESPRO —a small financial institution accounting for 3% of deposits. In particular, the number of licensed private banks decreased from 25 in 1995 to 15 at end 1999. Conglomerate structures appear to dominate the Salvadorian banking system, but an appropriate legal framework to deal with financial conglomerates and consolidated banking supervision was only established recently, in September 1999, with the approval of a new Banking Law.

Financial depth in El Salvador is greater than in other Central American countries (excepting Panama), with the 1999 stock of bank credit to the private sector equivalent to about 43% of GDP, compared to 30, 25, and 18%, for Honduras, Costa Rica, and Guatemala, respectively. El Salvador's banking system accounts for about 38% of total banking assets in the Central American region (excepting Panama), followed by Guatemala and Costa Rica with 23 and 19%, respectively. Housing and construction loans jointly account for nearly 30% of the total banking system's loan portfolio, with the shares of loans to the commercial, manufacturing, and consumer sectors at about 22, 12, and 9.5%, respectively.

[1] See INFORMABANSA, Boletín Económico de la Asociación Bancaria Salvadoreña, Year 2, No. 11, San Salvador, C.A., January 2000.

[2] Citibank is the oldest foreign bank operating in the country since the early 1960s. Other foreign banks have entered recently into the Salvadorian market (i.e., Ahorronet purchased by ScotiaBank; Credomatic, a regional Central American bank; Unibanco, owned by Hamilton Bank from the USA; and Banco Capital, owned by Banco de Crédito from Perú). The large Spanish banks have not entered in El Salvador, except for BVVA's ownership of an AFP (*Administradora de Fondos de Pensiones* or Pension Fund Manager).

A new banking law was passed in September of 1999. This new law has a number of positive features, which will enhance the powers of the regulatory and supervisory agencies. Among other things, it (i) enables the consolidated supervision of financial conglomerates; (ii) establishes a gradual increase in the required ratio of capital to risk-weighted assets with the aim of reaching a capital to asset ratio (CAR) of 12% in 2005; (iii) increases the minimum capital required to establish new banks (to the equivalent of about $14 million USD); (iv) lowers the limit on loans to related parties from 15 to 5% of paid-in capital and reserves, while establishing more effective criteria to identify related parties; (v) creates an explicit, limited deposit insurance scheme funded via premiums assessed on the banking industry; (vi) establishes positive weights for mortgage loans and asset trusts for the purposes of calculating required capital; (vii) improves prompt corrective action rules to deal with troubled banks and strengthens bank failure resolution powers significantly;[3] (viii) provides legal protection to supervisors for actions taken in the discharge of their official duties; and (ix) shifts the responsibility for issuing prudential norms from the President of the Republic to the Superintendent of Banks. The new Banking Law (Art. 60) authorizes the electronic transfer of funds among banks from their reserve accounts at the BCR. A draft law on Non-Bank Financial Intermediaries was recently submitted to the National Assembly.

Table 1: Overview of the Financial Sector

	1997	*1998*	*1999 (June)*
Number of Licensed Banks:			
State-owned	2	2	2
As % of total assets	7.0	7.0	6.5
Foreign-owned	1	2	2
As % of total assets	0.8	5.9	7.7
Branches of foreign banks	1	1	1
As % of total assets	1.4	1.1	1.5
Non Bank Deposit Taking Institutions: (number)	1	1	1
As % of total assets	1.0	1.0	0.5
As % of GDP	0.6	0.6	0.2
Number of banks accounting for:			
25% of total assets	2	2	2
75% of total assets	7	7	6
Total assets as % of GDP	62.5	64.8	66.0
Foreign currency:			
Assets	14.7	13.7	n.a.
Liabilities	8.8	7.2	n.a.

Source: SSF.

[3] These powers are considered of great usefulness for occurrances such as the turbulence generated in 1997 by a case of fraud (the case of FINESPRO and its non-regulated sister entities) and the difficulties experienced in the intervention of a bank (CREDISA) in 1998.

BCR's Role. The BCR serves as the nation's central bank. The BCR has responsibility for monetary policy and maintaining the legal reserve requirements established by its Board of Directors (*Consejo Directivo*) on the daily balances of deposits of commercial banks. The BCR also has the authority to regulate the payment system and provide clearing and settlement services for payment transactions, with settlement taking place through the commercial banks unique reserve accounts. The BCR does not supervise or examine banks. That role is given to the SSF. The BCR maintains operations only in San Salvador, with no branches.

Each commercial bank maintains two reserve accounts at the BCR: one in colones and another in US dollars. The reserve account is used for both reserve and settlement purposes. Required reserves (RRs) are established based upon a percentage of bank (private and official) deposits, as follows:

- 30% of current account deposits (in both colones and foreign currency) and certified checks;
- 20% of savings and time deposits;
- 15% of housing and agricultural certificates, on time deposits for housing and the agricultural sector, and repos;
- 10% on foreign exchange loans granted by foreign banks as well as guarantees of less than 5 years;
- 1% on Investment Certificates with maturities in excess of 5 years guaranteed by Government Bonds for the conversion and consolidation of guaranteed domestic debts.

Part of the banks' RRs are invested in so called Reserve Requirement Certificates (CEDEs or *Certificados de Encaje*), up to the limit authorized by the BCR. At present those percentages fluctuate between 5% (for savings and time deposits with maturities below 180 days) and 15% (for Housing and Agriculture Certificates).

RRs are calculated on the basis of the banks' average deposit balances over the immediate prior balances held during a 14 day period. The same method is used to calculate the interest-yielding portion of the RRs invested in CEDEs. Banks must keep at all times, by the end of the day, average RRs of no less than 90% of the minimum required legal RRs. Daily penalty rates (dp) for non-compliance with minimum RRs (90% of RRs) are calculated according to the following formula: dp = [Average daily deficiency x (0.6/ 365)]. In case of non-compliance with the minimum RRs over three computation periods, BCR must report this to the SSF. BCR can waive penalty charges (dp) in the rare cases of problems with BCR's systems or accounting errors made by BCR. Banks know their RRs position no later than 12:30 p.m. of the following working day

BCR's Liquidity Facilities. The BCR has several types of liquidity facilities. The primary type is the Automatic Liquidity Facility (VLA). This facility is open to solvent banks, offering three tranches, with associated penalty rates as follows:

Table 2: Percentage of Required Reserves Advanced

Percentage of Required Reserves Advanced	*Rate*
5% of required reserves	Cost of funds + 10%
10% of required reserves	Cost of funds + 20%
15% of required reserves	Cost of funds + 30%

Source: BCR

VLA advances are uncollateralized and available for up to five days. Access to the VLA for more than three times in a month by an individual bank is highly discouraged by the BCR

The second type of liquidity facility is the emergency window, which provides uncollateralized one day advances at a rate of 90% and is offered only to healthy banks with a short term liquidity problem. The final type of BCR support is offered to troubled banks and requires collateral, in the form of grade A paper equal to 125% of the value of the advance.

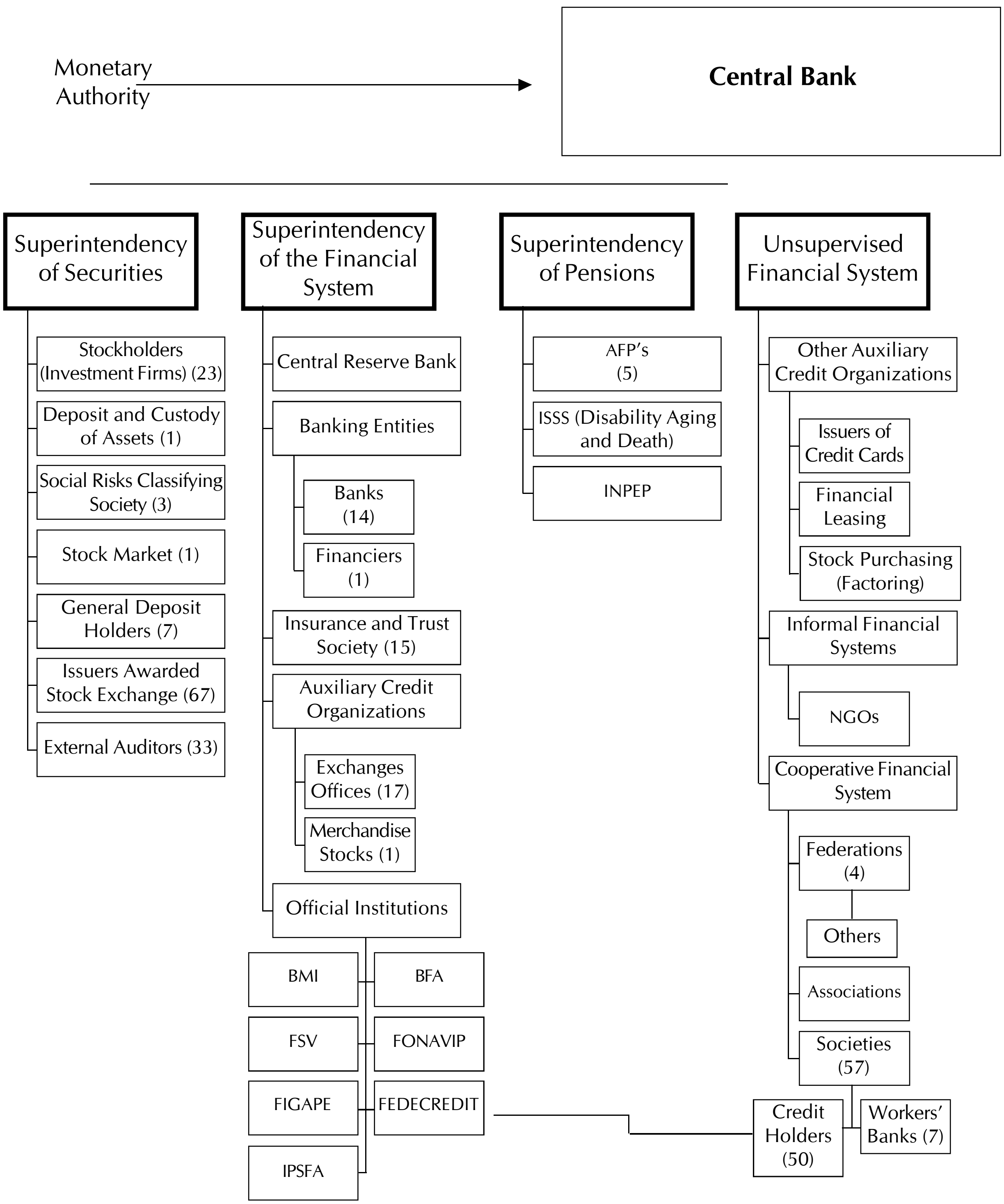
Because of the high level of RRs (an average of 24% of bank deposits), and relatively low value of checks cleared, overdrafts of reserve accounts at BCR are not deemed a problem.

Commercial Banks. At year-end, 1999, assets in El Salvador sixteen commercial banks totaled about 80 billion colones (about $9 billion USD). Banking hours are generally 9:00 a.m. to 3:00 p.m., Monday through Friday. However, banks do have flexibility in setting operating hours and some banks will keep selected branches open as late as 6:00 p.m.

Most banks have automated their internal customer accounting systems and have centralized data bases that enable them to access customer balances at each branch and make electronic intra bank transfers. Most current (checking) account customers are businesses, as opposed to individuals. One of the largest banks in the country had about 60% of its checking accounts belonging to businesses and 40% to individuals

Deposit Insurance. A deposit insurance fund has recently been introduced in El Salvador with customer deposits insured up to 55,000 colones (about $6,000 USD).

Figure 1
El Salvador's Structure of the Financial System



2 CURRENT PAYMENTS AND SECURITIES SETTLEMENT SYSTEMS

2.1 Legal and Regulatory Framework (Payments)

The legal and regulatory framework that governs the nations' payment system is provided, in a limited way, through the Banking Law, the Commercial Code and BCR regulations. The current banking law was passed in 1999. The main modification to the old banking law was the authorization and legal protection of payments among banks by electronic means (Art. 60).

The commercial code governs the rights and responsibilities of participants in commercial transactions. It is uncertain whether the Commercial Code would inhibit certain attempts to modernize the payment system. For example, the Commercial Code requires that banking records be maintained for thirty years, a period that adds to the cost of retention of payment system records. It is also unclear whether representative copies of the payment records, such as microfilm and or digitized images can be retained in lieu of source documents, such as checks and deposit tickets.

Finally, BCR is authorized to issue regulations regarding the payment system. In general, it would appear that the BCR tends to be more reactive in the issuance of regulations than proactive; leaving the proposing of new regulations largely to the commercial banks. It does not appear, however, that the legal and regulatory framework in El Salvador represents a significant barrier.

2.2 Payment Participants and Their Roles and Responsibilities

2.2.1 Commercial Banks

Commercial banks provide the primary vehicle for making payments within El Salvador through current accounts held by businesses and individuals. Through the current accounts, customers may purchase check books and issue checks to transfer funds to third parties. The commercial banks will credit depositors for checks deposited as well as debit check writers. In addition to the use of current accounts, consumers can use a savings account for ATM withdrawals and debit card purchases. Commercial banks will also collect funds, either in cash or from customer deposits, for the payment of certain types of bills, such as telephone, electric, etc.

2.2.2 Central Bank (BCR)

The BCR currently performs three major roles in the payment system. The BCR serves as the primary regulator for the payment system, ensuring that adequate regulations and standards are issued and followed. Second, the BCR operates the check clearinghouse. Finally, the BCR provides settlement services through the balances that commercial banks, the Government and the stock exchange maintain with the BCR.

Other than operating the clearinghouse and clearing checks on behalf of the Government, BCR does not provide any payment system operations services, such as processing checks on behalf of commercial banks or operating a high value payment system. The BCR also plays a limited role in promoting payment system improvements, leaving the development of new initiatives largely to the commercial banks and their trade association; and confining its role largely to ensuring that appropriate regulations and standards are developed.

2.2.3 Superintendency of the Financial System

The Superintendency of the Financial System (SSF) is responsible for ensuring the safety and soundness of the banking system. In its examination of banks, it may review payment system operations, but is largely concerned with the financial aspects of bank performance rather than operational aspects. The Superintendent largely defers on payment system issues to the BCR.

2.2.4 The Bankers Association (ABANSA)

Almost, but not all Salvadorian banks are members of ABANSA. ABANSA, like most Bankers Associations, conducts research on banking issues, promotes the interests of the banking industry and provides a forum for the discussion of issues of common interest or those which require cooperation among the banks.

The payment system is one such area that requires cooperation of the banks. An efficient payment system requires that standards exist for the inter bank clearing and settlement of payment transactions. It also requires a forum for discussion of ways in which payment transactions can be processed more rapidly, cost efficiently and securely.

ABANSA has recently served as a driving force behind a proposal to introduce an automated clearinghouse facility for El Salvador. This initiative requires the cooperation of all commercial banks and the BCR and coordination between the technology and operations groups within the participants.

2.3 Payment Instruments and Interbank Exchange and Settlement Circuits

2.3.1 Overview

The payment system (other than cash) in El Salvador is largely check based. Although checks are the primary form of non cash payments, their usage is low as compared to more developed country standards, particularly for individuals. It is estimated that only about 20% - 30% of the households have checking accounts, as opposed to 80% - 90% in more developed countries. Magnetic ink (MICR) has been recently employed to permit the automated processing of checks, although it is not fully utilized as yet.

In addition to checks, ATMs, debit and credit cards are also available, and, in the last few years, have become widely accessible to bank customers with checking or savings accounts. Four networks exist for the inter bank clearing and settlement of card based transactions.

An automated clearinghouse (ACH) does not yet operate, but is in the planning stages. There are no electronic links from the Central Bank to the commercial banks, and, therefore, no same day inter bank payment system exists for money transfers.

There is only one formal check clearinghouse in the country, located in San Salvador and operated by the BCR. The clearinghouse accepts checks in both colones and US dollars. Settlement for the clearinghouse takes place on a same day, multilateral net basis. Due to the small size of the country, the relatively low volume of checks and a three tiered clearinghouse program, virtually all checks can be cleared and settled on a next day basis. The primary clearing takes place at 7:30 a.m. for checks deposited the previous day within the San Salvador region. Check exchanges also exist in larger city areas outside of San Salvador. However, while such checks are physically exchanged between bank branches in the region, the settlement information is included in the second San Salvador clearing which occurs at 1:30 p.m. Also included in the second clearing are checks presented outside of San Salvador that cannot be exchanged locally. Only about 10% to 15% of the inter bank checks are exchanged outside of the San Salvador clearinghouse.

The final clearing occurs at 5:00 p.m. for the return of checks presented in the earlier clearings during the day. Settlement for each of the clearinghouse exchanges takes place on a same day, multilateral net basis. The settlement is posted to reserve accounts maintained by each bank at the central bank, in both colones and dollars.

2.3.2 Payment Instruments

2.3.2.1 Coin and Currency

Like most emerging economies, cash is the primary instrument used for most retail and small business transactions. The BCR is responsible for making coin and currency available to the nation's commercial banks, which it does by maintaining adequate supplies in its vaults which can be ordered and picked up by the commercial banks. The commercial banks must arrange for their own armored carrier pick up from the BCR and distribution to their branches

2.3.2.2 Checks

Checks are the primary means of making payments other than cash. From discussions with the commercial banks, it is estimated that there are about 100,000 – 200,000 checks written in the country per day, with an average value in excess of $1,000 USD. The majority of checks would appear to be "on-us" checks, whereby both the depositor and maker of the check have an account at the same bank. As such, these "on-us" checks can be cleared internally and are not collected and processed through the San Salvador clearinghouse. Only about 32,000 checks with a value of 700 million colones ($84 million USD) are cleared and settled, on average, through the clearinghouse on a daily basis. Over the last two years, the volume of inter bank checks is growing at about 2% per year (see table below).

As with many emerging economies, checks are widely used by businesses to make payments, but the availability of checks for individuals is generally limited to the more affluent and financially

Table 3: Volume and Value of Inter Bank Checks

Year	Daily Average Volume	Daily Average Value (US$ 000)	Average Value/ Check (US$)	Volume Growth (%)
1997	31,272	87,732	2,805	
1998	32,756	84,483	2,589	4.7%
1999	32,513	83,634	2,572	-0.7%

sophisticated within the country. It is estimated that businesses and Government write more than half the checks in El Salvador, as compared with 20% - 30% in developed countries. The concentration of checks within the business sector explains, in part, the relatively high average check value which, for example, exceeds that of the United States.

Automated processing of checks was introduced in 1996 through the use of magnetic ink character recognition (MICR) technology, which is commonly used throughout the world. A strip on the bottom of the check is pre-encoded in MICR with the issuing bank and customer account numbers. When MICR was originally introduced in El Salvador, the bank of first deposit would encode the check amount, either at the teller or in a central or regional check encoding center. This would permit the automated capture and sorting of the checks at the earliest point within the banking system, which is the system followed in most countries that use MICR. However, because of encoding quality problems within some banks, it was decided that the bank of first deposit would not encode the amount on the MICR strip, unless a bilateral agreement was made between the collecting and paying banks. It would then be left to the receiving bank to encode the amount to facilitate their internal processing.

Most, if not all banks in El Salvador maintain automated customer account records and will post check transactions through the capture of MICR line data. The banks utilize a range of methods for the capture and sorting of checks, from multi-pocket proof machines that can encode, capture and sort checks in one operation, to single pocket encoders combined with high speed reader sorters, which encode in one operation and capture and sort in a second operation.

While not required by regulation or law, it is common for banks to return checks to their customers. This is done for two primary reasons. First, most customers want to receive the checks that they write to maintain a record of their transactions. Second, existing law requires banking records to be maintained for 30 years. The cost of storage of checks for such a long time frame would be quite high. On the other hand, banks incur the cost of sorting the checks, first by the customers' branch and second by account number so that the checks can be returned to the check writer along with their statement. Furthermore, the mail is generally considered to be unreliable and checks are returned by messenger, which is quite expensive.

As a general rule, banks charge customers for checkbooks and for checks that must be returned for insufficient funds, improper signature, wrong date, etc. Banks do not, however, generally charge for the deposit or writing of checks. Indicative fees and service charges made by commercial banks are presented in Table 4.

Table 4: Indicative Commissions and Fees Charged by Banks
(In Colones - During the Month of February 2000)

Commissions for Services	Range of Fee
Replacement of Savings Accounts	Between 10 and 25
Replacement of Certificates of Deposits	Between 10 and 100+
Replacement of Investment Certificates	Between 20 and 50 plus public expenses
Certified Checks	Between 10 and 12 per check
Issuance of Cashiers Checks	Between 10 and 12 per check
Stopping Payment of Checks	Between 5 and 10 per check
Guaranteed Deposits	Between 500 and 600 yearly
Custody of Valuables and Documents	Between 50 and 300 yearly
Surcharges	**Range of Fee**
Returned checks due to insufficient funds	Between 25 and 300 per check
Returned checks due to other reasons	n.a.
Checking or Savings Accounts Inactive for one year or more	Between 10 and 50 monthly
Checking or Savings Accounts in US dollars Inactive for one year or more	Between 2 and 15 monthly
Credit Cards	**Range of Fee**
Issuance and/or renewal	
Local	Between 100 and 1600
International	Between 60 and 125
Cash Withdrawal Commission	5%

2.3.2.3 Card Based Payments

In the last few years, the availability and use of card-based payments has increased greatly. It is estimated that there are in excess of 200 ATMs in use in the country as compared to less than 50 in 1995.[4] Many ATMs are deployed off-premise, in shopping malls, grocery stores, gas stations, etc. Security for the ATM card is provided through the use of personal identification numbers (PINs). ATM sharing (permitting a customer of one bank to use the ATM of a different bank) is facilitated by the existence of four shared ATM networks. Two of the networks are operated by the two largest banks, one by a consortium of smaller banks and one by a credit card company. The shared networks charge about 7.25 colones per inter change transaction (about $0.80 USD). Such charges are rarely passed on to the banks' customers.

The growth in popularity of ATM cards has spurred growth in the debit card program as well. Many merchants have installed debit card readers and debit card purchases have become increasingly popular. The same card used for ATM transactions can also be used as a debit card. Debit card

[4] Listfield, Robert and Montes-Negret, F., "Payment Systems in Latin America: A Tale of Two Countries-Colombia and El Salvador", Policy Research Working Paper 1519, The World Bank, October, 1995.

security is provided through signature verification rather than through PIN verification. While this tends to reduce the level of security, it enables the deployment of cheaper point-of-sale (POS) terminals in merchant locations. It is estimated that about one-third of bank retail customers have an ATM/ Debit Card. There is, however, no universal debit or credit card network within the country. As a result, many merchants that accept debit and/or credit cards must have multiple POS terminals to accommodate the multiple networks. It would appear that three terminals in a single store would not be uncommon.

Credit cards are also increasing in availability, but are not nearly as prevalent as ATM/Debit cards. Because of the credit feature attached to a credit card (as opposed to the payment only feature of an ATM/Debit Card), banks are more cautious in issuing credit cards. It is estimated that less than 10% of bank retail customers have a credit card. Automation of credit and debit card capture at the point of sale is quite limited. These terminals are generally off-line and operate against a negative file.

2.3.2.4 Electronic Payment Instruments

At the present time, no inter bank electronic payment system other than for ATM and debit card transactions exists. The nation's bankers (ABANSA) have been working on creating an automated clearinghouse (ACH) for a number of years and had contracted with a vendor to provide such services in 1997. However, the absence of regulations and laws to cover electronic payments delayed implementation. A (limited) legal and regulatory framework for electronic payments was included in the comprehensive banking law passed during 1999. As such, planning has resumed for an ACH, which will be discussed in more detail in a subsequent section of the report.

Because an electronic payment system does not exist, there is no same day/ high value payment system in the country that operates on an inter bank basis. When same day payments are necessary, both the payer and payee are required to maintain an account at the same bank. Payment is then made by an "on-us" check, which can be settled on a same day basis.

2.3.2.5 Direct Deposit and Direct Debit

Both direct deposits, such as the deposit of wages directly into the employee's bank account (payroll deposits), and direct debits, such as the pre-authorized payment of a utility bill, exist in El Salvador only on an intra bank basis. This requires that the employee (for direct deposit) or beneficiary (for direct debit) maintain an account with each bank in the country. The paying corporation would then authorize the withdrawal of funds from its account in favor of its employees who are generally required to have accounts in the same bank to participate in the program. A similar process, but with funds flowing from individual accounts to the beneficiary account would occur for direct debits. While this process can be done electronically with the presentation of an electronic file of payment information by the company, the absence of an electronic inter bank system requires that the electronic payment data be done on an individual bank basis.

Direct deposit has replaced cash as the primary means of paying employees for most businesses of medium and large size. This trend has lead to a broader participation in the banking system on the part of employees of such businesses, as a bank account is required to obtain the direct deposit. In addition, since cash is no longer paid to many employees, these individuals have increasingly turned to ATMs and/or debit cards for cash or purchases. Accordingly, there has been a sharp rise in the issuance and use of ATM and debit cards within the country. Since checks were not widely available or used by individuals for routine purchases, the growth in debit card use appears to replace cash rather than checks within the payment system.

2.3.2.6 Bill Payments

Many banks offer a service whereby they will collect money for the payment of certain bills, such as telephone, electricity, rent, etc. The consumer can make payment by cash (for a non bank customer) or by a transfer of balances from the consumer to the utility. However, as with direct debits, the payment can only be made on an intra bank basis. Thus, the billing company must maintain accounts at all banks to ensure universal access to the bill collection service.

2.3.2.7 Same Day Payments

A limited form of same day settlement is offered through the BCR. Banks can request an exchange of colones and US dollars by letter through the International Department. This can be required in cases where the bank has a reserve deficiency in one currency and an excess in another. Same day payments are also available by check, but only when both the depositor and payer have accounts within the same bank, as mentioned above.

2.3.2.8 Cross-border Payments

BCR and five of the larger banks in El Salvador are members of the Society for Worldwide Interbank Funds Transfers (SWIFT) which is used to process cross-border payments. As such, they have access to SWIFT hardware and software that permits the electronic transmission of payment instructions on a worldwide basis. These payment instructions can then be settled through the use of correspondent bank balances in the country of settlement. SWIFT access in El Salvador occurred in the last 3 - 4 years and replaced Telex for international transfers.

The Central Bank has three types of clients for international payments. These are the Government, commercial banks and near Government agencies. The BCR serves as the Government bank, issuing and receiving payments on behalf of the Government. In order to facilitate international payments, Governmental entities will hold Central Bank accounts in both colones and US dollars. By law, overdrafts of Government accounts at BCR are not permitted. The BCR will also provide international payment services for commercial banks in El Salvador. As with Government agencies, transfers will be made to and from the commercial bank's US dollar holdings in their reserve account. The BCR will effect such transfers via SWIFT. Finally, there are a number of Government or near Government agencies that receive funds from foreign donor institutions. Such agencies may receive the payments via SWIFT through the BCR.

In total, BCR handles about 10 – 12 payments and a similar number of receipts per day. The average value of Government transactions is about $3 million USD, while commercial bank transactions average about $200,000 to $500,000 USD per transaction.

2.3.3 Interbank Clearing and Settlement Circuits

There are, in essence, three types of payment clearing and settlement systems in existence in El Salvador. These are:

- The inter bank check clearinghouse operated by BCR;
- The inter bank card settlement operated on a bilateral basis; and
- The intra bank settlement for "on-us" items performed within each bank.

Each of these systems is discussed below.

2.3.3.1 Inter Bank Check Clearing and Settlement

Because of the small size of the country, a relatively low volume of checks and a three tiered clearinghouse program, virtually all checks can be cleared and settled on a next day basis. Thus, checks deposited by bank customers on day 1 are generally cleared, settled and charged to the check issuer on day 2. Credit is generally extended to the depositor on day 3. Important bank clients with significant balances can often receive funds on day 2.

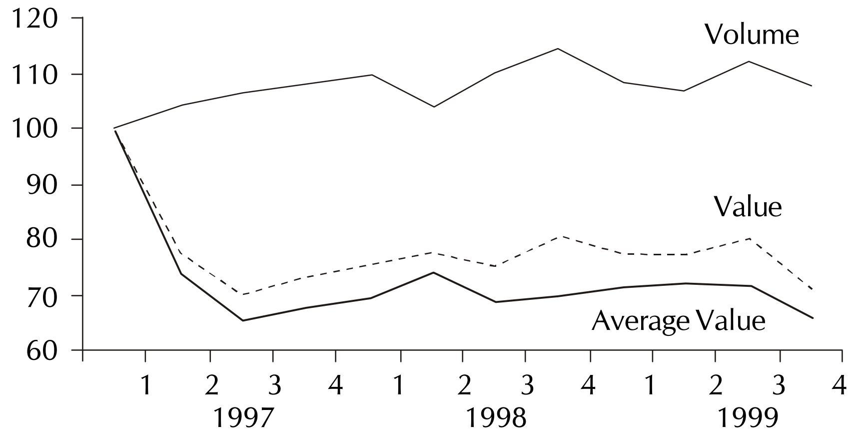
The BCR, which is empowered by regulation to operate the check clearinghouse or to designate the operator, serves as the operator of the country's only clearinghouse which is located in San Salvador. The clearinghouse accepts checks in both colones and US dollars. A daily average of about 32,000 checks worth 730 million colones (USD $84 million) are cleared daily. The average value per check is about USD $2,600, reflecting the concentration of check writing within the commercial sector. By contrast, the average value per check in the United States is estimated to be only about USD $500. Volume growth is about 2% per year over the last three years. The volume of US dollar denominated checks cleared is quite small, averaging only about 60 checks and USD $850,000 per day, for an average value per check of about $15,000.

The following graph shows the quarterly trends in check volume, value and average value over the last three years. The data is indexed to the first quarter 1997 for comparative purposes.

Clearinghouse operations take place at three times throughout the day:

- The first exchange occurs at 7:30 a.m. for the clearing and settlement of checks that have been deposited within the San Salvador region. Such checks represented 88% of the volume and 92% of the value of all clearinghouse checks during December 1999.
- Checks deposited outside of San Salvador are cleared and settled during the second clearinghouse exchange which occurs at 1:30 p.m. This occurs in one of two ways. If branches of both the depositing and paying banks are located in the same city areas, the physical checks are exchanged locally, with the settlement information transmitted to each bank's head office for submission into the 1:30 p.m. exchange. Such checks represented about

Figure 2
Indexed Quarterly First Clearing Check Volume, Value and Average Value, 1997-99
(1Q 1997 = 100)



10% of the volume and 6% of the value of December 1999 clearinghouse activity. If the paying bank does not have a local branch, the checks are sent to the depositing bank's head office for physical exchange and settlement through the 1:30 p.m. exchange. Such checks amount to only about 2% of the volume and 1.5% of the value of all clearinghouse checks. There are six local exchanges that occur outside of San Salvador. These are located in Santa Ana, Sonsonate, San Miguel, Ahuachapan, Usulutan and Santa Rosa de Lima

- The final exchange of the day is for the return of checks presented earlier in the day. This clearing occurs at 5:00 p.m. (6:00 p.m. on Tuesdays because of high volume).

Each of the exchanges are settled on a same day, multilateral net basis through reserve accounts held by each bank at the BCR. Each clearing handles both colones and U.S. dollar denominated checks, which are separately exchanged under the same procedures and time frames. The volume and value of the U.S. dollar clearings are only about 5% of the colones clearing. Each of the nation's 16 banks participates directly in the clearinghouse. Overdrafts of the reserve account are not permitted, and a bank would have to obtain funds to avoid such a condition. As a practical matter, the level of required reserves is very high relative to daily clearings, so such overdrafts are very unlikely to occur.

The settlement process is not automated and each bank submits their settlement information in paper form. The BCR clearinghouse manager calculates the net position of each bank on a manual basis. Clearinghouse operations are largely manual. Each participating bank submits a sheet showing the volume and value of checks presented against the other clearinghouse participants. These deposit sheets are manually entered into PC's by BCR employees. Upon verification of a zero net position and adequate funds in each bank's reserve account, the settlement takes place: the BCR enters the net settlement position of each bank for on-line posting.

Table 5 shows the timing of clearing, settlement and customer posting for check operations.

Table 5
Timing of Clearing, Settlement and Customer Posting for Check Operations

Day 1	*Day 2*	*Day 3*
	7:30 a.m. Primary Clearing for San Salvador checks	
	1:30 p.m. Clearing for checks presented outside of San Salvador	
	5:00 p.m. Return Item Clearing	
	Clearinghouse settlement	
Client Deposits Check	*Debit Check Writer*	*Credit Check Depositor*

The BCR also acts as agent for the various Governmental agencies that issue and receive checks. The BCR deposits checks received by Government agencies, and manually sorts them by paying bank and deposits through the clearinghouse. Similarly, the BCR receives Government payment checks through the clearinghouse and sorts them manually by issuing agency.

The BCR does not charge any fees for its clearing or settlement services.

About 3% of the checks by both volume and amount are returned. The banks in El Salvador levy a penalty fee (a minimum of colones $25 colones or USD $3) against the writer of a check against insufficient funds. Also habitual offenders (three or more bad checks within a year) often have their accounts closed by the bank.

It is said that several banks lost significant sums in the past by advancing against uncollected funds. These losses resulted in greater care in advancing funds and greater fees and penalties for writers of checks against insufficient funds.

In order to meet the 5:00 p.m. same day return deadline, banks must verify the adequacy of funds as well as the writer's signature within a short period of time. This does not appear to be a significant problem for San Salvador checks, but could present problems for checks that are physically exchanged outside of San Salvador. For such checks, each branch that receives checks must be able to access customer balances and signatures for customers of any branch within the paying bank's branch network. To accomplish this, most banks have centralized on-line account information available at each branch along with on-line access to customer signatures.

2.3.3.2 Unwinding

Since the only interbank payment system that settles through the BCR at present is the check, that is the only system that would require an unwind. It should be noted that few countries have formal unwinding procedures for a check clearinghouse. For example, the US Fed, some years ago, considered how they would deal with the clearinghouse settlement in the event of a bank failure. The solution was to hold final settlement until the status of the reserve account of all banks could be checked in order to ensure adequate funds. If adequate funds did not exist for a bank, the checks drawn on the problem bank would be returned to the depositing bank and eventually to the depositing customer. Another solution would be to require the problem bank to post collateral against its net debit position if it had one. As a practical matter, unwinding is not much of an issue in the U.S. as the deposit insurance agency (FDIC) would cover most of the checks against customer deposits in a failed bank (subject to the FDIC USD $100,000 limit).

As noted before, in El Salvador this question is rather an academic exercise as the reserve requirements are high, and the value of the check settlements are low. The only solution in the end is to return the checks that are drawn against the failed bank and let the banks or the bank customers wind up as creditors to the failed bank. In short, checks are not a serious problem as settlement is conditional and not immediately final. As such, at least in the US, a party can return the check if there are not sufficient funds in the customer or customer bank accounts. In El Salvador, legal support for this practice might need to be checked.

2.3.3.3 ATM, Debit and Credit Card Settlement

As noted earlier, there are four ATM/Debit card networks that operate within El Salvador. Settlement for inter bank transactions is made by each bank calculating a bilateral net position against each other bank. The bilateral net positions are settled by check. Separate settlements are done for credit cards and ATM/Debit card transactions.

2.3.3.4 Intra Bank Settlement

Most banks have automated their customer deposit accounting system. This permits on-line posting of debits and credits for “on-us” checks. In general, “on-us” checks are posted on a same day basis, with the depositor receiving same day credit and the issuer being debited on a same day basis as well.

2.4 SECURITIES MARKET AND SECURITIES SETTLEMENT SYSTEMS

2.4.1 Overview

The securities market in El Salvador is dominated by institutional investors, the major ones being banks, insurance companies, the private pension funds (AFPs), and brokers trading on their own account. There is almost no retail market, except for a small number of investors with quasi-mutual funds managed by brokers. In terms of instruments, the securities market consists almost entirely of fixed income securities, with equities forming a negligible portion of the market. The primary market is dominated by the public sector, principally bonds issued by the BCR, as part of its open market operations. The Treasury of El Salvador plays a relatively minor role in securities issues. Other large issuers are private banks (that issue certificates of deposit – CDs, (*Certificados de Depósito*) and the National Social Housing Fund (*Fondo Social para la Vivienda*) that issues long term (25 year) bonds that pension funds and insurance companies are required to invest in by law. Apart from the fixed income instruments mentioned above, 29 corporate entities have issued equity. The secondary market is dominated by repo trading on the stock exchange (*Bolsa de Valores*). The underlying instruments for the repos are mostly Central Bank securities. There is almost no trading in equities. Table 6 presents key market statistics.

Table 6: Traded Volumes on the Stock Exchange

(Colones millions, as of December 31)

Market\	1999		1998		1997		1996		1995	
Year	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Fixed Income										
Primary	18,946	27.82	10,461	18.24	8,747	18.28	9,418	26.50	2,349	11.08
Public	18,260	26.82	10,245	17.86	8,295	17.34	8,440	23.75	1,642	7.74
Private	686	1.01	216	0.38	452	0.94	978	2.75	707	3.33
Secondary	1,431	2.10	1,190	2.07	1,178	2.46	529	1.49	583	2.75
Public	903	1.33	722	1.26	806	1.68	376	1.06	511	2.41
Private	528	0.78	468	0.82	372	0.78	153	0.43	72	0.34
Repos	47,299	69.46	45,543	79.41	37,788	78.99	25,509	71.77	18,237	86.02
Public	33,415	49.07	22,207	38.72	16,967	35.47	15,964	44.92	13,511	63.73
Private	13,883	20.39	23,336	40.69	20,821	43.52	9,545	26.86	4,726	22.29
Equities	420	0.62	157	0.27	127	0.27	86	0.24	32	0.15
Primary	0	0.00	1	0.00	23	0.05	0	0.00	31	0.15
Secondary	420	0.62	156	0.27	104	0.22	86	0.24	1	0.00
Total	68,096	100.00	57,351	100.00	47,840	100.00	35,542	100.00	21,201	100.00

As can be seen from Table 6, the market is largely a money market, with over 99% of trading in fixed income securities and almost 70% in repos[5]. Trading on the stock exchange has, however, increased dramatically, from a level of about 21 billion colones in 1995 to over three times this amount in 1999. Most of the increase has been in repos and fixed income securities, with a limited role played by the equities market. The main investors in repos are banks with the objective of managing their reserve positions at the Central Bank.

2.4.2 General Legal Framework (Securities)

The legal basis of the El Salvador Stock Exchange comes from Legislative Decree No. 806, which ratifies the Organic Law of the Superintendency of Securities; Legislative Decree No. 809, which ratifies the Stock Exchange Law; the Internal Regulation of the El Salvador Stock Exchange; and sections of the Commercial Code of the Republic of El Salvador, which apply to the stock market.

With the Stock Market Law, which came into force on April 30, 1994, the Public Stock Exchange Registry is created. In addition, the registration mechanisms for the issuers and securities are defined,

[5] See below for a discussion on maturity of securities.

the registration process of brokerage firms and stock market operations, as well as public offering of securities, its transactions and respective markets are regulated. This law experienced its first reform in March 1995 and changes were basically directed at reducing the information requirements that private companies should present for the issue of securities.

In respect to foreign investment regulation, in El Salvador there are no special rules: the rules are the same general fiscal rules applied to local investors. Therefore, if they are not established as domestic investors a 20% deduction over any obtained earnings in the country is applied, except for dividends earned by legal entities not established in the country.

2.4.3 Instruments

This section describes the securities instruments used in El Salvador. While a range of fixed income and equity securities exists, the market is quite thin and the majority of securities trades are in BCR paper, usually on a repurchase agreement (repo) basis.

2.4.3.1 Equities

Common shares offered in El Salvador's capital market are mainly from recently privatized enterprises (particularly the telecom company), and from some financial intermediaries authorized by the SSF. There are only some 30 listed equity securities and trading is very thin in these securities. Table 6 shows that less that 1% of annual transaction volume has been in equities in the last five years (annual amount traded in 1999 was $420 million colones or about USD $48 million equivalent).

2.4.3.2 Bonds

Bonds traded in the Stock Exchange are entirely issued by the public sector, more precisely BCR and Treasury bonds. Bond yields have recently been fluctuating between 9 and 14%, depending on their tenor. These bonds can be denominated in colones or US dollars and are issued in bearer form (*al portador*). These bonds are usually placed at a discount.

2.4.3.3 Monetary Policy Management Certificates (Certificados de Administración Monetaria)

The *Certificados de Administración Monetaria* (CAMs) are issued by the BCR in order to conduct the Bank's open market operations. CAMs replaced the *Certificados de Estabilización Monetaria* (CEMs) previously issued by the BCR (in colones and US dollars) at a discount, with maturities going from a minimum of 30 days to a maximum of 360 days, with issues with tenors of multiples of 30 days between this range. The CAMs were originally auctioned by the BCR with similar rates and maturities to those of the CEMs but they were redeemed at maturity (interest and principal). More recently (since April, 1998), the BCR is auctioning CAMs at a discount, known as "CAM-D"s, being now the main instrument used to conduct BCR's monetary interventions. CAM-Ds are issued in colones and, for security reasons, they do not circulate in paper form, but remain in custody at the central bank.

CAM-Ds are traded using two electronic systems: one owned by the Stock Exchange (SINEVAL) and the other managed by the BCR (VENTAVAL)[6].

2.4.3.4 Investment Certificates ("Certificados de Inversión")

These certificates are issued by the 21 strongest companies in the country, being offered with different yields and tenors. These certificates pay interest monthly and the principal is redeemed at maturity. At present investment certificates with maturities of 360, 1,080 and 1,800 days, yielding between 14 and 15%, exist in the market.

2.4.3.5 Treasury Notes ("Letras del Tesoro")

These papers are issued by the Treasury (*Ministerio de Hacienda*) through the BCR. They are issued in bearer form and at a discount, with a tenor of 240 days (working days), with interest rates set by participants in their auction.

2.4.3.6 Housing Fund Certificates ("Certificados de Depósito a Plazo para la Vivienda")

This paper, issued by banks in order to finance housing loans, has a maturity of three to five years, with monthly interest payments, with the principal redeemed at maturity. Any capital gains and interest on investments in these securities are exempt from income and property taxes.

2.4.3.7 Bonds issued by the FSV

The FSV issues long-term —25 year maturity— bonds in order to finance loans to low-income borrowers[7]. These bonds are relatively illiquid and traded infrequently on the stock exchange. The masin investors in these bonds are pension funds and insurance companies that are required by law to invest in them.

2.4.4 Main Participants, Roles, and Responsibilities

The various actors in the securities market of El Salvador include primary issuers demanding funds, institutional and individual investors, intermediaries and brokers trading securities, and the different institutions providing the infrastructure and the tools for the safe, sound and efficient operation of the market, including the Stock Exchange and the trust and depositories charged with the custody of the papers being transacted.

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[6] See "Las Operaciones de Mercado Abierto en El Salvador", Boletín Económico, BCR, Year 12, Number 128, May-June, 1999.

[7] Prior to the reform of the pension system in 1997, the National Social Housing Fund was financed through a mandatory contribution from the wages of all workers. These contributions were credited to individual accounts and the accumulated amounts (at a nominal rate of interest) formed a part of the retirement benefits of the workers. Since the implementation of the pension reform, these contributions have been stopped. The only source of financing available to the housing fund now is the issue of long-term bonds.

2.4.4.1 Public and Private Issuers

At present there are four Government issuers registered in El Salvador's securities market: the BCR, the State Treasury, the Social Housing Fund and the Bank for Multisectoral Investments (BMI or *Banco Multisectorial de Inversiones)*.

There are 30 financial institutions registered in the Stock Exchange issuing both bonds and shares (equities). Other registered companies include 7 commercial companies, 10 industrial corporations, 4 non-financial service companies, 3 insurance companies, 5 private pension funds (AFPs), 4 power sector companies, and 2 telecom companies.

All financial instruments offered to the public, as well as the issuers, must be registered in the Stock Exchange, in addition of being registered in the Public Stock Exchange Registry (*Registro Público Bursátil*) managed by the Superintendency of Securities (*Superintendencia de Valores*). The latter requirement does not apply to the State Treasury and the BCR, nor to those financial instruments issued by them, which only need to present to the Stock Exchange a certification of the ordinance or Legislative Decree authorizing the issue, after informing the Superintendency of Securities. The latter exemption does not cover other decentralized autonomous public institutions.

The Stock Exchange of El Salvador allows only domestic private sector firms to be listed, with one exception. Central American private firms that are listed in their countries of origin may be cross-listed if the stock exchange if the country of origin has a reciprocal arrangement with the Stock Exchange of El Salvador. The issuer has also to obtain the approval of regulators in both countries. The Stock Exchange allows the Treasuries and central banks of other Central American countries and regional and international financial institutions to list their securities in El Salvador, subject to its approval. Foreign financial institutions are also allowed to issue and list their securities on the stock exchange subject to the approval of the Central Bank. While provisions for listing of foreign instruments exist, at present no foreign instrument is actually listed and traded in El Salvador.

2.4.4.2 Brokers

Brokerage houses chartered as corporations (*sociedades anónimas*) with the main objective of engaging in securities trading, must register in the Stock Exchange and in the Public Securities Registry prior to the start of operations. Each brokerage house must be established and must maintain, at all times, a fully subscribed and paid minimum capital of no less than colones $1 million

The Securities Law authorizes stockbrokers to intermediate (trade) securities on behalf of third parties, to grant credits to buy shares, to receive loans, to undertake repurchase ("repo") transactions, to subscribe and place primary issues, to provide advice on securities transactions, and other activities authorized by the Superintendency of Securities.

Stockbrokers can only buy and sell securities on their own behalf after informing the other parties of that fact. Moreover, they cannot buy or sell on their own behalf, nor pledge securities entrusted by a third party to them for its sale or purchased on behalf of a third party, but they must first faithfully execute clients' instructions or they can enter into such agreements only after receiving a written instruction by the owner of the shares. Cross-deals between stockbrokers and clients are not authorized**.** Stock brokerage houses which are affiliates of banks and finance companies, cannot buy or sell primary offers.

Brokers' duties and responsibilities include the following: maintain a registry of the sale and purchase orders received through any means, and supply to the Stock Exchange all the required information on the trades done. In addition, brokers are accountable for the identity and legal powers of their clients to enter into trades, of the authenticity and physical integrity of the securities traded, of the registry of the latest owner in the books of the issuer, when required, and the continuity and authenticity of any endorsements.

Stockbrokers must maintain and comply with maximum gearing ratios (*relaciones de endeudamiento*), placement and other liquidity and solvency requirements established by the Superintendency of Securities based on the type of operations done, the amounts involved and the type of instruments traded.

Stockbroker houses must submit prior to starting operations a guarantee of 1 million colones, to guarantee compliance with all their obligations in intermediating securities, while the Stock Exchange is empowered to demand higher guarantees considering the volume and nature of the operations executed and the financial health of the broker. The required guarantee can be posted in cash, or through a guarantee issued by a bank, finance company or an insurance company. In addition the broker may pledge securities acceptable to the Stock Exchange, without exceeding 25% of all the guarantees presented.

Brokerage houses are required to pay the purchase price and deliver the securities sold. The lack of funds is not an admissible excuse. In addition, stockbrokers are not allowed to net out the funds received on behalf of clients for the sale of securities with the funds owed by clients from the purchase of securities (i.e., gross settlement).

2.4.4.3 Institutional Investors

There are three types of institutional investors in El Salvador: private pension funds, brokerage houses (which manage quasi-mutual funds) and insurance companies.

2.4.4.4 Private Pension Funds

The private pension funds are rapidly becoming the largest institutional investors in the market. They have been in operation for just under two years and currently control about USD $200 million (about 1.6% of GDP). Assets under their management are expected to grow at about USD $100 million per year. Tables 7 and 8 provide details on the private pension funds. About 750,000 workers are now members of the private pension system.

Table 7: Assets Under Management by AFP
(millions of colones)

AFP	Dec. 1998	June 1999	Nov. 1999
Confia	175	427	714
Máxima	60	149	261
Porvenir	78	222	358
Previsión	89	212	325
Profuturo	11	20	33
Total	*413*	*1,031*	*1,691*

Table 8: Investments of the Private Pension System
(millions of colones)

	Dec. 1998	June 1999	Nov. 1999
1.Fixed Income	407	1,031	1,691
Govt. bonds	305	708	1,098
of wich:			
FSV (housing)	139	360	507
Bank paper	102	323	523
2. Equity	6	0*	0*
Total	*413*	*1,031*	*1,691*

* Less than $1 million of colones.

2.4.4.5 Quasi-mutual Funds

Mutual funds are currently not permitted in El Salvador. However, six brokerage houses offer "funds" which could be termed quasi-mutual funds with total assets under management (as of September 30, 1999) of colones $683 million. Investors in these funds range from banks to retail investors, although the latter form a small part of the investor base.

Table 9: Assets under Management of Brokerage Houses
(millions of colones)

	1999 (Sep. 30)	1998	1997	1996
Accival	90	122	64	110
Inversiones	19	n.a.	n.a.	n.a.
Capital	166	169	196	237
Corceval	351	446	250	216
SGB	24	12	n.a.	n.a.
OBC	33	78	18	53
Boncel	n.a.	0	11	2
Total	*683*	*857*	*539*	*619*

Table 10: Insurance Industry – 1998
(colones)

Insurance Company	*Premiums*	*% of Total*	*Assets*	*% of Total*	*Capital*	*% of Total*
Seguros e Inversiones	276,551,979	23.05	517,411,393	24.70	131,428,352	20.20
Aseguradora Suiza Salvadoreña	175,733,011	14.65	314,080,076	14.99	127,424,157	19.59
La Centro Americana	163,363,412	13.62	321,240,257	15.34	103,547,832	15.92
AIG Unión y Desarrollo	140,142,956	11.68	165,903,972	7.92	63,934,033	9.83
Compañía General de Seguros	105,503,995	8.79	157,947,436	7.54	55,136,300	8.48
Aseguradora Agrícola Comercial	85,883,810	7.16	146,660,442	7.00	32,098,851	4.93
Seguros Universales	65,600,428	5.47	98,543,406	4.70	31,081,148	4.78
Pan American Life Insurance Company	59,230,434	4.94	104,157,344	4.97	18,254,281	2.81
Internacional de Seguros	42,708,002	3.56	83,788,357	4.00	17,742,490	2.73
Aseguradora Popular	29,975,287	2.50	67,932,667	3.24	17,635,097	2.71
La Central de Seguros y Fianzas	20,445,434	1.70	38,141,191	1.82	21,759,740	3.34
Seguros del Pacífico	19,522,842	1.63	31,220,128	1.49	13,667,962	2.10
Compañía Anglo Salvadoreña de Seguros	6,398,377	0.53	19,118,067	0.91	12,531,603	1.93
Aseguradora Salvadoreña*	5,789,938	0.48	20,662,881	0.99	-1,856,750	-0.29
Seguros Futuro	3,002,606	0.25	7,906,544	0.38	6,188,997	0.95
TOTAL	1,199,852,511	100.00	2,094,714,161	100.00	650,574,093	100.00

* Aseguradora Salvadoreña is currently being liquidated.

2.4.4.6 Insurance Companies

The insurance industry in El Salvador consists of 15 insurance companies. Five of these companies are considered large by local standards with greater than 100 million colones of annual premiums (in 1998). There are six companies that are considered medium in size with premium income between 20 million and 100 million colones. The remaining four companies are considered to be small with less than 20 million colones of annual premiums. As the following chart indicates there is a reasonable level of correlation between premium volume, assets and capital in the insurance industry in El Salvador. It also indicates that the companies generally have strong capital positions. This chart is constructed on a direct premium basis (no adjustments for reinsurance) and sorted by size of company (largest to smallest).

In 1998 premium volume was split between life insurance and general insurance on the basis of 28% for life and 72% for general. During this five-year period the share of life insurance premiums increased from 23% to 28% with a corresponding decrease in the share of general insurance premiums. All of this growth was accounted for by an increase in group life insurance premiums. This trend is expected to accelerate because of pension reform that will bring significant life insurance premiums (life insurance, disability and annuity) into the system. Annuity premiums, in particular, will become important due to the large size of the premium required to purchase a life annuity.

2.4.4.7 Stock Exchange

El Salvador's Securities Law, prescribes that the Stock Exchange must be chartered as a corporation with variable capital (*sociedad anónima de capital variable*), with a minimum paid capital (*capital social mínimo*) of Colones $2.5 million, which must be maintained at all times. The exchange can be established by any number of shareholders, but at least ten of them must be stock brokerage houses duly authorized and registered or in the process of being registered in the Public Securities Registry.

To become a shareholder of the Stock Exchange, the interested party must comply with the requirements set in the Securities Law and the by-laws and regulations of the Stock Exchange. In addition, each shareholder cannot have more than one share, shares which must have the identical nominal value and would be of the same class (*serie*), with preferential shares not being allowed.

The Stock Exchange in operation, *Mercado de Valores de El Salvador S.A. de C.V.*, started its operation in April, 1992. The Stock Exchange has a trading room where securities are traded, where prices are posted and registered, with the type and volume of securities offered, and where all the necessary market information is regularly available, including the results of all trades.

In an increasingly global environment, the Stock Exchange has modernized its technological platform, operating an IBM system RS/6000 client-server with remote access and with a new software based in ORACLE developer/2000

All securities traded in the Stock Exchange of El Salvador must meet the following conditions:

- They must be transferable;
- Issues must belong to a series;
- In the case of debt instruments, the title must represent the individual share of the bond holder in a collective loan to the issuer.

2.4.4.8 CEDEVAL

Title V of the Securities Market Law develops the theme of companies specializing in the deposit and custody of securities, which are constituted as corporations and offer services including transfers, compensation and liquidation of operations that are carried out in respect to the securities under supervision. Presently, there is an association specialized in the deposit and custody of securities under the name *Central de Depósito de Valores (CEDEVAL)* —Central Securities Depository— which began its operations in 1998.

Companies specialized in the deposit and custody of securities are constituted as corporations and are subject to the commercial laws of El Salvador, with prior authorization from the Superintendency of Securities. Their principal objective is to offer custody, compensation, acquisition, liquidation administration, and securities transfer services. The deposit and custody services can only be offered through stock exchanges, banks, financiers or specialized institutions. These companies should be formed with a minimal capital stock of one million colones integrally underwritten and paid. Said capital should pertain to less than 60%, combined or individually, to the stock exchange, bank or financiers.

Since January 11, 1994, the *Central de Depósito de Valores, S.A.* (CEDEVAL), a company constituted as a specialized company in the deposit and custody of securities, whose operations began on November 18, 1998, is of variable capital having the Stock Exchange and brokerage firms as its principal shareholders. Presently, the stock market has 80% of CEDEVAL's capital, shares five of the same directors, and the Stock Exchange's general manager is proprietary director of CEDEVAL.

At present, CEDEVAL only immobilizes securities and transfers are registered by means of electronic recording. The physical certificates are deposited in the Banco Cuzcatlán for the securities of private companies, and in the case of the public sector, central Government and BCR securities are deposited in the BCR. CEDEVAL's registration system divides the securities' possessions from the brokerage firms, third party securities, and securities corresponding to investment accounts into different accounts.

Likewise, those who have an account at CEDEVAL are the AFPs, the Stock Exchange, and other foreign trustees. Presently, brokerage firms are not connected on-line with CEDEVAL, nevertheless this institution works so that the AFPs and the brokerage firms can directly access the trustee's information from their terminals.

2.4.4.9 Superintendency of Securities

The Superintendency of Securities is the entity in charge of supervising and overseeing the stock market and its participants. This institution began its operations on January 1, 1997, with the Stock Exchange, brokerage firms, securities deposit and custody firms, and risk rating firms falling within its limits of supervision.

In respect to the transactions of a security, the Superintendent, by means of considered resolution, can suspend the offer or transactions of a registered security up to 30 days when the issuer of indices incurs in one of the dissolution clauses or does not comply with the presentation of information required by the Law for the respective Exchange and the Superintendency. If after the 30 days the offense has not been excused or corrected, the security is cancelled in the Registry.

In respect to brokerage firms, the Superintendent can suspend their registered seat for up to one year in the case of serious violations of the obligations imposed by the rules in force, non-compliance for imputable reasons (to which with the original obligations in securities transactions in which they have taken part), non-compliance with sound market practices, participation in public offers or securities transactions that are not registered, suspended, or cease to carry out active intermediation for more than one year, among others. In the case of relapse in the first four offenses, the Superintendent can cancel the brokerage firm's registration.

2.4.5 Securities Clearance and Settlement Process

Organized securities trading occurs within the El Salvador Stock Exchange (*Bolsa*) in San Salvador[8]. Trading operations occur between 9:30 a.m. and 11:00 a.m. Settlement for trades takes place on a same day (T + 0) basis. While the securities are also transferred on a same day basis, the security and payment settlements are not linked and therefore do not represent true delivery versus payment (DVP). The payment settlement is coordinated by the *Bolsa* through a four part process. The *Bolsa* maintains an account with the BCR and each commercial bank to facilitate the settlement. Security settlement occurs through CEDEVAL, which is the nation's security depository. Securities settlement occurs by transferring the ownership records at CEDEVAL. Since not all securities are immobilized, sellers must deliver physical securities to CEDEVAL 24 hours before the sale is made.

Banks dominate the trading on the *Bolsa* and the largest brokers that handle the majority of the trading are part of bank-groups. Therefore, the settlement system is geared to take this structure into account in addition to the T+0 time frame. In order to effect the payment settlement, the *Bolsa* calculates four gross positions at the end of the trading day:

1. Funds owed <u>by</u> each bank for securities purchases;

2. Funds owed <u>to</u> each broker for sales made by their non bank clients;

3. Funds owed <u>by</u> each broker for purchases made by their non bank clients;

4. Funds owed <u>to</u> each bank for securities sales.

During the first stage, each bank credits the reserve account of the *Bolsa* for their purchases made during the day. It is important to note that reserve account transactions are directly between the *Bolsa* and the banks, although the trades are executed through the brokers. During the second stage, the *Bolsa* credits each broker's account at the broker's commercial bank for the sales made by its non bank clients. This provides liquidity for the brokers' to pay for the purchases made by their non bank clients (step 3). In the final step, the *Bolsa* credits each bank for its security sales. Steps 1 and 4 (payment from and to banks) occur through transfers of BCR balances to and from the *Bolsa*. Steps 2 and 3 (payment to and from brokers) occur on an intra bank basis at commercial banks designated by each broker. Because each transfer occurs on an intra bank (BCR or commercial) basis, settlement can be accomplished on a same day basis. The *Bolsa* maintains a liquidity facility to provide liquidity for the settlement.

This process is described in greater detail below.

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[8] There is anecdotal evidence of a substantial amount of off-exchange over-the-counter trading, but no reliable data is available.

2.4.5.1 Trading in the Stock Exchange

The following operations can be carried out in the El Salvador Stock Exchange:

- Cash-based market transactions that are to be settled within a mutually agreed timeframe (usually same day), but in any event no later than within three days.
- Forward transactions in which the settlement is done some time after the transaction - the timeframe for fulfillment of obligations cannot be less than 4 working days, nor greater than 360 calendar days.
- Repos, in which the one party transfers ownership of securities to another in exchange for an agreed upon sum and an agreement that the first party will buy back the security at a future date for the transfer price plus a premium. The longest period for these operations to be completed is 45 days.

2.4.5.2 Securities Trading on the Floor of the Exchange

In order to carry out a transaction, the agents of each brokerage firm exchange information directly in the trading room. Once two agents arrive at an agreement, they proceed to fill out a card which contains information about the type of operation (primary, secondary, or repos), the timeframe of the operation (in the case of the repos), the value and quantity, the expiration date of the security, and whether it is for their own account or on behalf of a third party[9]. They then give the card to the Exchange processors who verify that the securities are registered in CEDEVAL by means of a terminal, which allows them to access the depository's information. Once verified, the operation is entered into the Exchange's system, which verifies that the settlement of the operation will be on a date upon expiration of the security.

These operations are shown in two screens to all the brokerage firms' agents for a period of 10 seconds, during which time any agent can better the buying or selling price of the displayed operations. If there is an offer to better prices, these operations pass to another special screen where all the offers that are made, up until the final offer, are registered. The final operation, and those that go unattacked during the 10 seconds they are on display, are qualified as closed operations. The closed operations are verified by the Exchange outside the trading room and inputted into the Exchange's liquidation system. Similarly, the Exchange registers the securities that have been negotiated into CEDEVAL's system. In this way they avoid the possibility of negotiating a security twice.

Likewise, the system allows the option to close the account. This can be done for operations of the primary market and for registered securities whose owner orders a broker to settle through

[9] There is no obligatory system for registering orders from brokerage firms. Frequently, the buying and selling instructions are granted directly to the brokers by telephone in the trading room and then the order will be registered formally.

this system. This system is characterized by the fact that the number of securities offered for buying and selling should be accepted integrally. In this case, the brokerage firms should present the base price of the closing to the Exchange in advance, and it will be awarded to the one offering the best price. Upon the closing of each trading session, written records are left of the securities or instruments, as well as for the volumes of closed operations during the session, the prices and general closing conditions, and the suspensions and cancellations of operations.

2.4.5.3 Settlement of Transactions

At the end of the trading session in the Exchange, between 12:15 p.m. and 1:00 p.m., brokerage firms print the transaction sheets from their terminals and obtain the totals to pay and charge for completed transactions in the Exchange, separately classified if the client of the transaction is a bank or not.

The process of settlement of funds is divided into the four stages mentioned above:

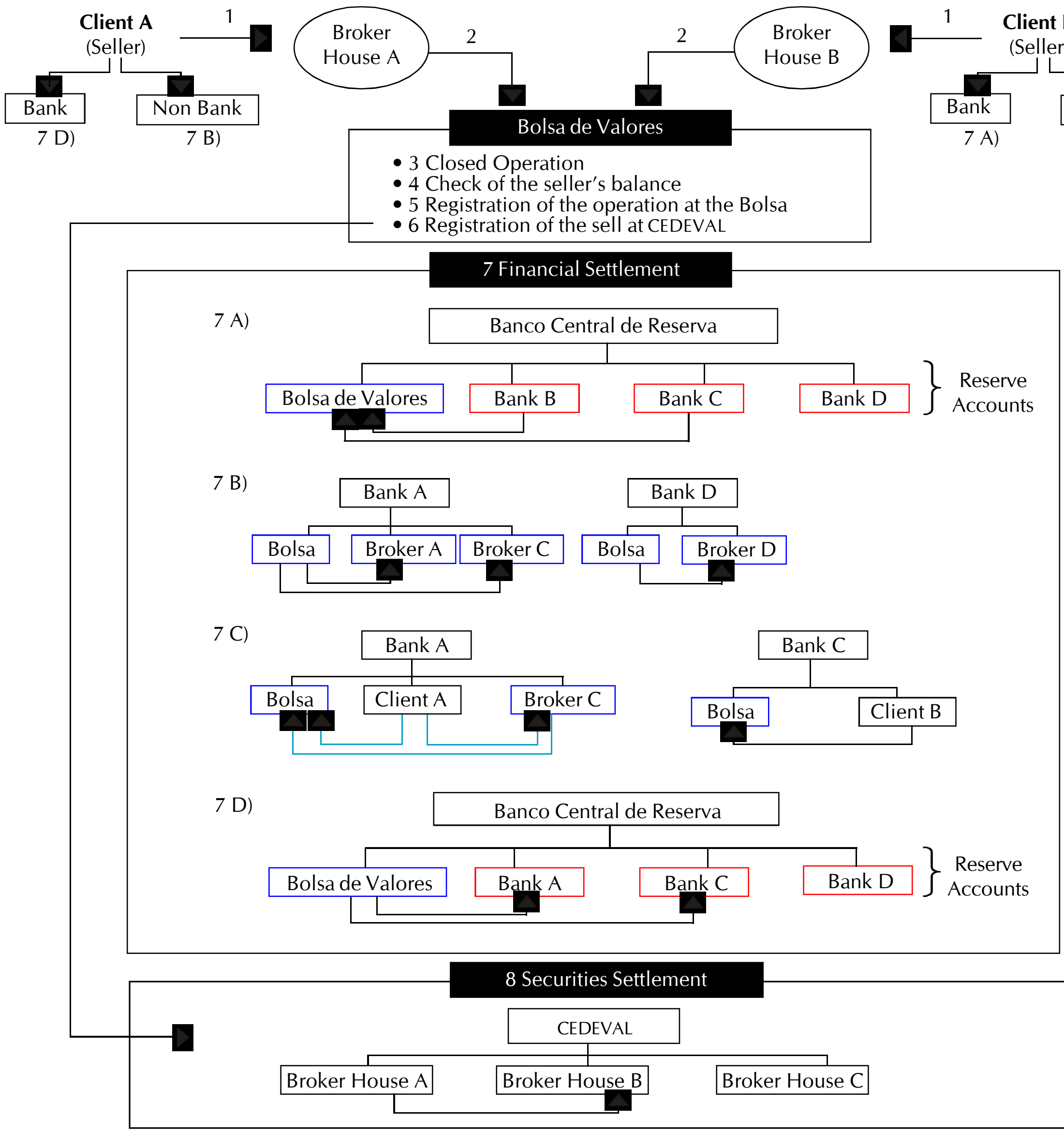
- **Collection for Bank Operations**: With the amounts obtained from the Exchange's system, the brokerage firms obtain the amounts to pay for banks' buying operations (including the amounts settled plus commissions). This information is faxed to the Exchange. Likewise, the brokerage firm coordinates with the respective banks so that they can communicate (via fax) to the BCR the amount corresponding to their buying operations to be debited from the cash reserves account, which is paid to the account maintained by the Exchange in the BCR (this process is performed around 2:30 p.m.).

- **Payment to the brokerage firms for sales operations of non-bank clients**: After 3:00 p.m. the Stock Exchange transfers the necessary funds to each bank through the BCR, and informs the banks of the deposit in the accounts of the brokerage firms for the sales operations of non-bank clients. Likewise, the brokerage firms inform their respective banks of the accounts of their clients to which the deposit will be made.

- **Charges for buying operations of non-bank clients**: After paying the brokerage firms, the Stock Exchange charges the brokers for the purchases of the non-bank clients. In this sense, before 4:45 p.m. the clients should have deposited the corresponding amount directly into the Stock Exchange's account. In the cases when the brokerage firms have charged their clients in advance, either because they are new clients or because they wish to take necessary security steps, these funds are transferred through the brokerage firms to the Stock Exchange's accounts. The Exchange's system allows for obtaining a net balance for these operations, but the net is partial if a client requests the deposit or payment through a bank in which the brokerage firm's bank does not have an account. This operation can not be netted. After receiving the funds from non-bank client operations, the Stock Exchange proceeds to transfer all the money from its operating accounts maintained in the commercial banks to the account at the BCR.

- **Payment for banks' operations**: With the settlement completed for non-bank clients, at approximately 5:00 p.m., the BCR credits the accounts of the banks with the funds corresponding to the sales transacted in the day.

Figure 3: Trading, Clearance and Settlement of Securities Transactions



Settlement T+0

1. Clients order securities buying and selling to their Broker Houses.
2. Broker Houses execute their clients' orders.
3. Operations are closed in the trading floor of the Bolsa de Valores de El Salvador.
4. The Bolsa de Valores verificies that the seller has the securities.
5. The operation is registered in the system of the Bolsa de Valores.
6. The sell is registered in the system of CEDEVAL.
7. Financial Settlement is divided in four steps:
7. A Charge for the buy executed by the banks;
7. B Payment to the Broker Houses for the sells of banks' clients;
7. C Charge to the Broker Houses for the buys of banks' clients;
7. D Payment for bank's sells.
8. Transfer of securities on the accounts at CEDEVAL

2.4.5.4 Securities Clearance

After 3:00 p.m. the brokerage firms send the information about the performed sales operations to CEDEVAL so that it proceeds to the transfer of securities. CEDEVAL waits for the confirmation from the Stock Exchange that the liquidation of the funds is in agreement and proceeds to register the transfer of the securities.

2.4.5.5 Settlement of Repo Operations

Just like cash operations, prior to the registry of the operation, an official from the Exchange verifies that the securities underlying the repo operation are registered with CEDEVAL and available to be "repoed". The registration of the operation relies on a validation system that checks whether the securities have been committed in other operations (lien).

The security transfer is performed jointly with the cash settlement. However, in the case of repos, CEDEVAL does not actually transfer securities, for one reason due to the short timeframe involved in these operations (typically from 5-8 days), and considering that upon completion of the operation the securities will be returned to their initial account. For transfer of securities underlying repo operations, the norm establishes that the securities should be registered in the name of the *reportador* (or purchaser of the first operation). Nevertheless, in practice CEDEVAL does not register such transfer. The securities are maintained in the *reportado's*[10] account, with a note that such securities are repos, so that a double operation is not performed with the same securities.

In respect to protecting accounts maintained in the financial system by brokerage firms for the purpose of settling trades, there is no specific rule which blocks the seizure of these funds for debts incurred by the Stock Exchange. Nevertheless, in this situation the Superintendency of Securities could request the judge to block the respective account in order to ensure the correct utilization of these resources.

2.4.5.6 Process to Handle Failed Securities Trades

In order to support the fulfillment of the operations performed in the Exchange, the Securities Exchange of El Salvador maintains lines of credit with the financial system, such that if a brokerage firm did not have sufficient balances to fulfill its obligations of liquidation, the Exchange will automatically activate an overdraft to the brokerage firm, which will be responsible for the payment. A 5% penalty is applied to the brokerage firm in addition to the corresponding interest on the loan. The line of credit maintained by the Exchange with other banks equaled colones $40 million in the past. Presently it has decreased to $8 million, due to the fact that they are looking to reduce incentives for its use.

2.4.5.7 Process to Handle Failed Repos

On the repo's expiration date, if it is neither liquidated nor extended, the operation is considered abandoned. The originator of the repo, as the owner of the securities, will have the right to claim

[10] I.e. the seller of the first operation.

legally whatever difference to which he has the right in relation to the actual value of the securities and the amount of the repo account. In dealing with repo operations, when brokerage firms notify the Exchange that a client of theirs, or the firms themselves in an operation of their own, will not be able to fulfill their payment obligations, the firms will be able to request a loan from the Exchange. The overdraft can be authorized by the Exchange until the amount equals the value of the *reportado* securities titles, for which the Exchange will grant the necessary liquidity. The grant requires the approval of the Board of Directors of the Stock Exchange and should be requested at least three days in advance.

In the case the brokerage firm makes the payment of the repo using the mentioned overdraft, the loan is documented through a notary and the brokerage firm authorizes the Exchange to sell the repo securities on behalf of its clients, at the best price, as of the next trading session.

3 PLANNED IMPROVEMENTS

A number of initiatives to improve payment and securities processing, clearing and settlement are currently under consideration. These include the following:

- Payments
  —Electronic settlement of check clearinghouse
  —Automated clearinghouse
- Securities
  —Dematerialization of BCR securities
  —Electronic trading system

3.1 PAYMENTS

3.1.1 Electronic Access to Reserve Accounts

At the present time, banks do not have intra day access to their reserve account balance. This requires that the banks monitor their reserve account transactions in order to know their position for reserve maintenance purposes. The BCR is in the process of implementing an on-line system which would provide reserve account holders with real time access to their BCR balances.[11] The system, known as SOV-2000 (*Sistema de Obligaciones a la Vista -2000*), would also permit immediate transfers between the bank's US dollar and colones accounts as well as inter bank transfers. The system would not, at least initially, permit third party transfers.

The on-line access project is being implemented in three phases. During the first phase, the BCR ensured that all systems were Y2K compliant. In the second phase, which BCR estimated would occur between January and June 2000, the BCR will enable decentralized posting of reserve account entries from BCR's departments whose operations affect reserve account balances.[12] Currently, each department within the BCR that produces reserve account entries must submit such entries in paper form to the Deposit Department which enters all reserve account entries into the system. The second phase will create automated interfaces between the reserve accounts and BCR departments with reserve entries. The third phase, to be completed between July and December 2000 would provide account holders with access to their account information. The acceptance of transfer requests in real time will occur sometime during 2001.

The specifications of the SOV-2000 project include high security measures (encryption); audit trail and risk control capabilities; archiving capabilities; a modular approach to allow for potential

[11] The project started in 1996 but it has been delayed for a number of reasons, including Y2K problems with the system initially selected through a bidding process (in which AT&T/NCR from El Salvador was the winner). A less ambitious project SOV-2000 (see below) was initiated in the last months of 1998.

[12] The latter would include electronic interbank transfers; electronic transfers among the BCR reserve account holders (Government, banks and finance companies); electronic check clearing; electronic settlement of Stock Exchange operations.

growth; fast recovery, back-up systems and robust contingency plans; high speed to allow for on-line access to balances; and interconnectivity with other BCR (accounting and FX) and external (commercial banks) systems. BCR will require individual contracts with each of the participants setting clearly the responsibilities and rights of each of the parties.

3.1.2 Automated Clearinghouse

The nation's commercial banks, working through the Bankers' Association (ABANSA), are developing plans to implement an automated clearinghouse (ACH) during 2000. While the planning is not yet finalized, certain preliminary thoughts are available.

Current thinking is that the initial implementation would entail the electronic exchange of checks. During this initial phase, the check MICR line data would be electronically captured and exchanged, with the checks to follow. The electronic data would be used for customer posting while the physical documents would be used for proving to the electronic data as well as to verify signature, endorsement, date, etc.

After a period of time to verify that the electronic transmissions have sufficient accuracy, the second phase of electronic check clearing would commence. During this phase, checks would be truncated at the bank of first deposit, with the transfer of check images, rather than the physical checks used for signature and date verification. The check images would then be sorted for purposes of statement preparation and presentation to customers. It is believed that the electronic processing of MICR line data and check images would be less expensive than the cost of processing the physical items.

During subsequent phases of the ACH implementation, new applications would be introduced such as direct deposit and direct debit. These applications would permit inter bank clearing of payroll and utility payments. This would eliminate the need for individuals to maintain an account with the same bank that their employer uses to disburse payroll; and eliminate the need for utility companies to maintain multiple banking relationships to collect consumer payments.

Eventually, it is envisioned that the ACH can be used to replace checks entirely, such as through telephone or PC based bill payment and to facilitate same day, inter bank payments.

3.2 Securities

3.2.1 Dematerialization

The BCR and the Superintendency of Securities are currently examining the possibility of dematerializing securities —both public and private— and the legal implications of the matter. At present, the BCR is preparing a project to dematerialize all securities issued by the Government and the BCR. Considering that 80% of all transactions in the securities market are of official securities (Treasury and BCR paper), mainly in the form of short-term repos, the proposed reforms could contribute significantly to improve the efficiency and security of the secondary market. A pre-requisite for the introduction of the new book entry system is the "standardization" of the securities being traded.[13]

While the Securities Markets Law allows for dematerialization, it is incomplete in several respects such as the evidence required for a security holder to prove ownership. There are also issues regarding potential conflicts of any such action with the Commercial Law.

3.2.2 Electronic Trading System (Stock Exchange)

The Stock Exchange is examining the possibility of implementing an electronic trading system which will eliminate the need to use the trading floor and provide more open access to trading information and allow potentially more transparent price formation. The internal regulations of the stock exchange permit the possibility of such a system[14]. The regulations also specify the evidence necessary to prove ownership in the case of an electronic trading system and establishes the legal obligations of the users of such a system. Work on the technical aspects of the implementation of the system is being carried out.

[13] The latter is one of the main recommendations of a study commissioned by the Superintendency of Securities to Arthur Andersen (*"Diagnóstico de los Procesos Operativos en el Mercado de Valores de la República de El Salvador"*, January, 1999).

[14] Articles 41 and 45, paragraph 1.10 of the internal regulations.

4 ISSUES AND CONCERNS

This section discusses issues that have an impact on the safety and efficiency of payment and securities settlement. For the most part, the discussion will contrast the practices in El Salvador with prevailing international practice. While it is often tempting to compare on the basis of world's best practice such a high standard is not always required. Indeed, it is far more desirable to contrast with practices which are relevant for countries that share common characteristics, such as country size and stage of economic development. To do otherwise could lead to the creation of systems that cannot be cost justified based upon current or even likely future needs.

4.1 Payment System Issues

4.1.1 Leadership in Promoting Payment System Improvements

An effective national payment system requires someone in a position of leadership to foster the significant cooperation within the banking system. Individual commercial banks have difficulty in bringing about such cooperation as competitive pressures often conflict with compromising for the common good. Accordingly, an objective and trusted third party is often best positioned to promote, and if necessary enforce, the level of inter bank cooperation necessary to create and maintain an efficient payment system.

An effective payment system also requires sufficient technical knowledge of payment system activities, both within and outside the country, to ensure that the national system meets the needs of its end users as well as taking advantage of international best practices.

It is unclear who within El Salvador provides such leadership and payment system knowledge. ABANSA has attempted to take this role for the ACH, but lacks enforcement power as well as in-depth payment system knowledge. The BCR generally appears to take a passive role with respect to promoting payment system initiatives.

Absent effective leadership and knowledge, it is difficult to envision the payments system operating in a most effective and efficient manner. In most countries, such leadership is often exerted through a strong partnership between the central bank and the commercial banks. Such a strong partnership does not appear to exist within El Salvador.

4.1.2 Lack of an Automated Clearinghouse Capability

Plans are being developed to create an automated clearinghouse capability. The priority appears to be placed on the electronic clearing of checks, which already seem to be collected effectively. In countries where electronic check clearing is a priority, it is usually because geographic size makes it difficult to collect checks in a timely manner. Such a problem does not exist in El Salvador, where the three day maximum time is consistent with international best practice. In most countries where check clearing times are not a major problem, applications such as direct debits and credits are the first priority for an ACH as these reflect new capabilities rather than merely upgraded capability.

It would appear that establishing electronic check clearing as a first priority can only be justified if it would reduce the cost of processing checks. This will not occur if the checks continue to accompany the electronic data. However truncation would appear to require the application of image technology, the cost of which may negate the savings associated with electronic check presentment. We know of no countries that have moved to full truncation of checks at the bank of first deposit and question whether that can be done in El Salvador in a cost effective and timely manner.

4.1.3 Lack of a System for Same Day Finality for Interbank Payments

At present, there does not exist any mechanism for providing same day finality for inter bank payments. Many high value payments are settled by check, which has only next day finality. In order to achieve same day finality of inter bank payments, both the payee and payer must have an account at the same bank.

For example, the settlement of Stock Exchange (*Bolsa*) transactions requires that the *Bolsa* maintain an account at each bank to permit the same day transfer of funds between brokers and the *Bolsa*. To meet the growing demand for same day finality of time critical, usually high value payments, many developed countries have introduced a real time gross settlement system (RTGS). Such a system permits the immediate transfer of high value payments through reserve account balances. While it appears that El Salvador requires a same day settlement capability for inter bank transfers, it is less clear that a similar capability is required at the present time for the real time transfer of third party payments.

It is our understanding that the BCR's planned system to offer on-line access to reserve accounts will permit same day inter bank transfers on a real time gross basis. The introduction of such a capability for high value bank-to-bank payments, coupled with an ACH, which may offer a same day payment facility for third party, lower value payments may be sufficient for the near term.

4.1.4 Processing Quality

The implementation of MICR check processing commenced in 1996. The original plan was to follow international practice and have the bank number and customer account pre-encoded in MICR, with the amount field encoded by the bank of first deposit. After a period of time in which amount field encoding was determined to have quality problems, the program was changed to leave amount encoding to the paying bank which could do so if it wished as part of its internal processing.

As a result, the full benefits of MICR processing have not been realized. If, indeed, it was quality problems that induced the program change, it raises concerns for the development of electronic clearing systems that also rely on high quality input from all banks. In most countries, there is a body that has the power to enforce the appropriate compliance with industry standards. For example, when MICR was introduced in the United States, the Federal Reserve permitted a certain period of time for universal adoption of the standards and after that period delayed funds availability on checks for one day if MICR amount encoding was not implemented by the depositing bank.

4.1.5 Debit Card Development

In the last several years, there has been tremendous expansion in the deployment and use of ATMs and point of sale (POS) debit cards. To satisfy this demand, multiple ATM and debit card networks exist in El Salvador. Such a situation is not unusual and could lead to greater innovation through competition. However, it appears that a lack of standardization between the networks may lead to inefficiencies that could retard development or lead to cost inefficiencies. It was noted that merchants often need multiple point-of-sale (POS) terminals in order to accommodate the multiple networks. In most countries with multiple networks, standards exist that would permit the acceptance of all network cards in a single terminal.

In addition, it appears that the settlement system for ATM, debit and credit card payments is relatively inefficient as it requires bilateral settlement for all participants. Although it is not a significant issue, most countries will settle card payments on a net basis through one of the bank participants.

4.1.6 Fee Structure to Encourage Payment Efficiency

Banks in El Salvador appear to be reluctant to levy explicit charges for customers for transaction services. Rather, the banks rely on spreads on balances to generate the bulk of their income. While bank pricing philosophies are best left to the private sector, the absence of explicit charges on payment transactions makes it difficult to use pricing as a mechanism to encourage the use of more efficient payment means.

For example, it was mentioned that part of the justification of the implementation of the ACH was based on the presumption that banks could charge for the service. However, if check services are provided at no cost, it will be difficult to charge for ACH services unless the customer sees a clear benefit in terms of improved service levels. If the benefits of the ACH, or other payment system initiatives is largely to reduce the cost of bank operations rather than increased service, pricing is the primary lever to encourage users to move to more efficient systems.

The BCR can take a leadership role in encouraging greater use of explicit pricing by charging fees for certain services. Initially, that may only include clearing services, but those charges can be used by banks to justify levying check fees to their customers. Further, the revenues generated by the BCR for service charges can be used to fund payment system improvements and greater payment system focus within the BCR.

4.1.7 Collection of Payment System Statistical Information

There does not appear to be any systematic effort to collect and disseminate information on payment system developments. Accordingly, it was difficult to amass information on volumes and trends in payment system usage within the country, including volumes and values by type of payment instrument. Thus, there does not seem to be any monitoring of such activities as check writing, ATM deployment, cards issued, card transactions, consumer access to banking services, etc.

Such information often serves as a base for monitoring the efficiency of the payment system and in analyzing potential payment system improvements. In many countries, such statistics is collected on a regular basis by a combination of the central bank, Bankers Association or private and/or public sector research entities.

4.1.8 Legal and Regulatory Framework

While a detailed analysis on the legal and regulatory framework was not undertaken on this mission, some concerns were expressed during the course of the interviews. These concerns included the length of time for record retention of financial records, including checks, and the uncertainty regarding acceptability of maintaining records in other than physical form (e.g. image or microfilm).

To ensure that the payment system can continue to respond to changes in user needs and technological capabilities, the legal and regulatory framework must be both flexible and regularly updated. It is unclear whether the framework in El Salvador has all the flexibility required, nor is it clear who takes the leadership role in ensuring that the framework is updated as necessary.

4.1.9 Service Bureaus for Smaller Banks

As the payment system evolves to greater reliance on technology as opposed to manual effort, it is possible that smaller banks may lack the financial capacity and or transaction volumes to justify technology investment. Yet, the inter bank payment system is only as strong as its weakest participant.

While there is no real evidence that the smaller banks cannot maintain the same standards as the larger banks, it is quite possible that such limitations will arise in the future. In many countries, this issue is addressed through service bureaus or cooperatives that provide consolidated processing for small to medium sized banks. This enables banks of all sizes to obtain benefits of scale economies. Consideration should be given to whether a service bureau capability is of value and if so, how such a capability might be created.

4.2 Securities Markets Issues

4.2.1 Risks in the Securities Clearance and Settlement Process

The clearing and settlement system exposes all participants to large risks. Due to the cash settlements being done through the central bank, the BCR is exposed to the possibility of a default by a broker. In order to minimize risks to the entire payments system, the BCR may be forced to provide liquidity support to the stock exchange without adequate collateral. At present, the Stock Exchange acts as a liquidity provider in the event of default up to a certain maximum limit and this is not a role that the Stock Exchange should be playing. The brokers themselves seem to face the least risks, when, in fact, they should be the ones bearing them since they are the most exposed. If this were the case, it would provide the appropriate incentives for the brokers.

4.2.2 Dematerialization

At present, securities are immobilized in El Salvador, although they are not yet dematerialized. As described in section 3.2.2 above, any one wishing to trade needs to deposit the security in CEDEVAL at least 24 hours prior to the trade. This process substantially reduces the possibility of fraud, but concomitantly reduces market liquidity as well. Currently, most trades are repos with the underlying security as central bank paper or secondary market transactions in central bank paper. Transfer of ownership in the records of the central bank is not required until the maturity of the security and hence CEDEVAL can affect the transfer in these cases. However, transfer of ownership of equities or corporate debt issues is required in the books of the issuer and this is an extremely time consuming process (often takes several months).

Countries are increasingly moving to dematerialization to reduce clearing costs and time.

4.2.3 DVP

At present there is no system of delivery vs. payment (DVP) in El Salvador. However, clearing and settlement occurs on the same day. Although this may not present severe problems at present due to the incipient nature of capital markets, lack of DVP may present a major hurdle to future development of capital markets. The fundamental reason for the lack of a DVP system is the insistence of market participants on a T + 0 settlement schedule. This in turn arises both due to historical reasons and to the stated lack of confidence in counter-parties. Lack of DVP affects the liquidity in the market and increases counter-party risks.

DVP has become the recognized standard for reducing the risk in security trading.

4.2.4 Settlement Timing

The requirement of T + 0 settlement places liquidity burdens on the *Bolsa* in conducting the financial settlement for trades. While this system may be adequate in an environment where banks are the parties in most of the trades, it may not suffice if brokers increase their business with non bank clients.

The same day settlement of the trades may not allow brokers to collect funds for securities purchases from their non bank clients. Alternatively, T + 0 may require that buyers pre-fund their purchases, which would reduce the liquidity of the markets.

In an environment where a more diverse set of traders enter the capital markets, both the Stock Exchange and the central bank will also be exposed to settlement risks if brokers cannot obtain funds from their clients on the same day that the trade is executed. It would be preferable to keep the risk where it should lie —with the brokers and their customers. This process would be facilitated by a settlement schedule such as T + 3, which is prevalent in many international markets.

On the other hand, repos and the primary and secondary market for central bank paper may very well require same day settlement, particularly as repos are the principal means used by banks to meet reserve requirements. Accordingly, it may be desirable to split the trades between Government and central bank paper which requires same day settlement from non bank and equity transactions that may need T + 3 settlement for liquidity purposes.

The same day settlement of Government paper is often done in other countries through a "book entry" system which provides for the simultaneous exchange (DVP) of dematerialized securities and central bank reserve balances, often on a real time basis. Because such systems settle through central bank balances, the operator of the system is usually the central bank.

4.2.5 Setting Limits for Counter-party Risks

Brokers do not set limits for exposures by counter-party. The justification provided is that the market is small enough that trades can be done on the basis of trust. In reality, it seems that there is an implicit guarantee of the Stock Exchange ensuring that all trades will be settled. This creates a situation where the Stock Exchange could be exposed to substantial risks if a large broker experiences liquidity problems. Given the small size of the overall financial sector, this could be a source of systemic risk.

4.2.6 Lack of Netting Arrangements

At present all settlement is done on semi-gross basis —it is done by type of client (and not by transaction), but there is no netting. Combined with the requirement of T + 0 settlement, this leads to an unnecessarily cumbersome settlement process (see figure 3).

4.2.7 Off-Stock Exchange Trading

There is anecdotal evidence that a substantial amount of trading occurs off the Stock Exchange. In such trades, especially if they are performed by brokers on behalf of third party (non-own-bank) clients, it is difficult to ensure that the clients are indeed getting the best price available on the market. This could be another reason contributing to the illiquidity of most markets, except for short-term repos.

4.2.8 Equity Market Development

Equity markets in El Salvador are almost non-existent. Almost all primary issues have been due either to privatization or Government regulations requiring financial institutions to list their shares. While part of the reason may be cultural, it could also be that accounting regulations and disclosure norms do not provide much incentive for issuers to provide information to the public and a vicious cycle of lack of interest in equity investments could begin. It would be useful to address a few additional issues in attempting to develop equity markets. Is there a demand for risk capital? Are excessive levels of corporate leverage (anecdotal evidence suggests an average debt equity ratio of 4:1) and the thereby increased risk taking by the banking sector creating disincentives for equity issuance?

4.2.9 Leadership Role

The Stock Exchange was created before the regulator —the Superintendency of Securities. This has created a situation of conflict where some responsibilities overlap and the question of who is the final authority is unclear. In this process, in addition to the day-to-day conflicts, especially for issuers who face multiple hurdles, there seems to be a pressing need for either institution to take a leadership role with a strategic perspective on how the capital markets need to be developed further.

4.2.10 Regionalization

Ultimately, given the size of the economy, El Salvador will face constraints on the vibrancy it can achieve in its capital market. One issue that needs to be examined is whether there is a role for regionalization of capital markets across countries in Central America. It is obvious that this raises its own set of complex issues, but a close and coordinated examination of the costs and benefits of such a move may be a useful first step.

List of Abbreviations

ABANSA:	Asociación Bancaria de El Salvador
ACH:	Automated Clearing House
AFP:	Administradora de Fondos de Pensiones
ATM:	Automated Teller Machine
BCR:	Banco Central de la Reserva de El Salvador
CAMs:	Certificados de Administración Monetaria
CAM-Ds:	Certificados de Administración Monetaria at a discount
CAR:	Capital to Asset Ratio
CDs:	Certificados de Depósito
CEDEs:	Certificados de Encaje
CEMs:	Certificados de Estabilización Monetaria
CEMLA:	Centro de Estudios Monetarios Latinoamericanos
CEDEVAL:	Central de Depósito de Valores
COSRA:	Council of Securities Regulators of the Americas
DVP:	Delivery Versus Payment
IAC:	International Advisory Council
IOSCO:	International Organization of Securities Regulators
MICR:	Magnetic Ink Character Recognition
NET:	Net International Reserves
NPL:	Non Performing Loans
POS:	Point of Sale
RR:	Required Reserves
RTGS:	Real Time Gross Settlement
SEC:	U.S. Securities and Exchange Commission
SOV-2000:	Sistema de Obligaciones a Vista 2000
SSF:	Superintendencia del Sistema Financiero
SWIFT:	Society for Worldwide Interbank Funds Transfers
WB:	World Bank

Glossary

In January 2001, the Committee on Payment and Settlement Systems (CPSS) of the Bank for International Settlements (BIS) published a combined glossary for payments and securities clearance and settlement terms. The Glossary can be found on the BIS web page at www.bis.org. The Western Hemisphere Payments and Securities Clearance and Settlement Initiative (WHI) decided not to produce an independent list of terms for its reports, in order to avoid unnecessary proliferation of terminology. The following are some of the terms used in this report, as they are explained in the CPSS glossary. In some cases, WHI reports present a glossary of terms, which are peculiar to the country's context.

Automated Clearinghouse (ACH): an electronic clearing system in which payment orders are exchanged among financial institutions, primarily via magnetic media or telecommunication networks, and handled by a data processing center.

Automated Teller Machine (ATM): an electromechanical device that permits authorised users, typically using machine-readable plastic cards, to withdraw cash from their accounts and/or access other services, such as balance enquiries, transfer of funds or acceptance of deposits. ATMs may be operated either online with real-time access to an authorisation database or offline.

Central Securities Depository (CSD): a facility (or an institution) for holding securities, which enables securities transactions to be processed by book entry. Physical securities may be immobilised by the depository or securities may be dematerialised (i.e. so that they exist only as electronic records). In addition to safekeeping, a central securities depository may incorporate comparison, clearing and settlement functions.

Collateral: an asset that is delivered by the collateral provider to secure an obligation to the collateral taker. Collateral arrangements may take different legal forms; collateral may be obtained using the method of title transfer or pledge.

Credit Card: a card indicating that the holder has been granted a line of credit. It enables the holder to make purchases and/or withdraw cash up to a prearranged ceiling; the credit granted can be settled in part, with the balance taken as extended credit. Interest is charged on the amount of any extended credit and the holder is sometimes charged an annual fee.

Credit (Counter-party) Risk: the risk that a counter-party will not settle an obligation for full value, either when due or at any time thereafter. In exchange-for-value systems, the risk is generally defined to include replacement cost risk and principal risk.

Debit Card:	card enabling the holder to have his purchases directly charged to funds on his account at a deposit taking institution (may sometimes be combined with another function, e.g. that of a cash card or cheque guarantee card).
Delivery Versus Payment (DVP):	a link between a securities transfer system and a funds transfer system that ensures that delivery occurs if, and only if, payment occurs.
Dematerialization:	the elimination of physical certificates or documents of title which represent ownership of securities that securities exist only as accounting records.
Immobilization:	placement of certificated securities and financial instruments in a central securities depository to facilitate book-entry transfers.
Magnetic Ink Character Recognition:	a technique, using special MICR machine readable characters, by which instrument (i.e. cheques, credit transfers, direct debits) are read by machines for electronic processing.
Multilateral netting:	an arrangement among three or more parties to net their obligations. The obligations covered by the arrangement may arise from financial contracts, transfers or both. The multilateral netting of payment obligations normally takes place in the context of a multilateral net settlement system.
Point of Sale (POS):	this term refers to the use of payment cards at a retail location (point of sale). The payment information is captured either by paper vouchers or by electronic terminals, which, in some cases, are designed also to transmit the information. Where this is so, the arrangement may be referred to as "electronic funds transfer at the point of sale" (EFTPOS).
Real Time Gross Settlement (RTGS):	the continuous (real time) settlement of funds or securities transfers individually on an order-by-order basis (without netting).
Repurchase Agreement (repo):	a contract to sell and subsequently repurchase securities at a specified date and price. Also known as RP and buyback agreement.
Settlement:	an act that discharges obligations between two or more parties.

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