
This volume is a product of the staff of the International Bank for Reconstruction and Development/The World Bank. The World Bank does not guarantee the accuracy of the data included in this work. The findings, interpretations, and conclusions expressed in this paper do not necessarily reflect the views of the Executive Directors of the World Bank or the governments they represent.

The material in this publication is copyrighted.

FINANCIAL SECTOR ASSESSMENT PROGRAM UPDATE

EL SALVADOR

PAYMENTS, REMITTANCES, AND SECURITIES SETTLEMENT
SYSTEMS

TECHNICAL NOTE

NOVEMBER 2010

THE WORLD BANK
FINANCIAL AND PRIVATE SECTOR
DEVELOPMENT VICE PRESIDENCY
LATIN AMERICA AND THE CARIBBEAN
REGION VICE PRESIDENCY

INTERNATIONAL MONETARY FUND
MONETARY AND CAPITAL MARKETS
DEPARTMENT

CONTENTS

Glossary	iii
I. Introduction	1
II. Overview of the National Payments System	2
III. Main Observations and Recommendations	5
A. Legal and Regulatory Framework	5
B. Payment and Securities Settlement Systems	6
C. Payment Systems Oversight and Cooperation	10
Tables	
1. Banking Sector Branches and Agencies	2
2. ATM and POS Infrastructure	3
3. Systemically Important Payment Systems	4
4. Overview of the Local Capital Market	5
5. Main Secondary Market Activities Indicators (Repo Markets)	5
Boxes	
1. Core Principles for Systemically Important Payment Systems and Responsibilities of the Central Bank in Applying the Core Principles	7

GLOSSARY

ABANSA	Asociación Bancaria Salvadoreña (Bankers Association)
ACH	Automatic clearing house
ATM	Automated teller machine
AML/CFT	Anti-Money Laundering/Combating Financing of Terrorism
BCR	Banco Central de Reserva de El Salvador (Central Bank of El Salvador)
BVES	Bolsa de Valores de El Salvador (Stock Exchange of El Salvador)
CCH	Cheques clearing house
CEDEVAL	Central de Depósito de Valores (Central Securities Depository)
CPSS	Committee on Payment and Settlement Systems
CPSIPS	Core Principles for Systemically Important Payment Systems
DvP	Delivery versus payment
EFT	Electronic funds transfer
EFTPOS	Electronic funds transfer at the point of sale
FIFO	First-in first-out
FSAP	Financial Sector Assessment Program
GP	General Principles for International Remittance Services
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
MINREX	Ministerio de Relaciones Exteriores (Ministry of Foreign Affairs)
MTO	Money transfer operator
NGO	Non-governmental organization
NPS	National payments system
POS	Point of sale terminal
RSP	Remittance service provider
RTGS	Real-time gross settlement
SAFI	Sistema de Administración Financiera Integrado (Integrated Financial Administrative System)
SIPS	Systematically important payment system
SSF	Superintendencia del Sistema Financiero (Financial System Supervision Agency)
STP	Straight-through processing
The Treaty	Treaty on the Payment and Securities Settlement Systems for Central America and the Dominican Republic
VPN	Vendor part number
WB	World Bank

I. INTRODUCTION¹

1. **Payment systems are a core part of all financial systems.** The quality of payment systems determines the stability of the overall economy, the efficiency and reliability of financial intermediation, and the possibility for the private sector to innovate and provide new services to consumers. This Technical Note presents the results of the assessment of payments, remittances, and securities settlement processes in El Salvador, based on international standards and best practices. It includes several observations for the improvement of the national payments system (NPS) in El Salvador. This Note takes into account the peculiarities of the jurisdiction of El Salvador: namely, the relatively small size of the financial system and the dollarized nature of the economy. The central bank and other institutions are already planning appropriate actions on many of the issues discussed. In some cases, however, the team identified additional elements, which are discussed in this Note.

2. **Frank discussions with several institutions provided key inputs for preparation of this document.** In addition to meetings with staff of the Central Bank of El Salvador (Banco Central de Reserva de El Salvador, BCR), the team attended meetings with the Ministry of Finance (Ministerio de Hacienda), the Ministry of Foreign Affairs (Ministerio de Relaciones Exteriores, MINREX), the Financial System Supervision Agency (Superintendencia del Sistema Financiero, SSF), the Securities Commission (Superintendencia de Valores), the Central Securities Depository (Central de Depósito de Valores, CEDEVVAL), the Bankers Association (Asociación Bancaria Salvadoreña, ABANSA), commercial banks (Citibank, Banco Agrícola, Procredit, HSBC), and some money transfer operators (MTOs). The team wants to express its appreciation to the management and staff of the BCR and all the representatives of the institutions visited for their full and enthusiastic support to the mission's activities and objectives.

3. **The assessment has benefited from the different sources of publicly accessible information.** Written reports and other publicly available information (including quantitative data) on the design, functioning, performance, and envisaged evolution of payment systems in El Salvador have increased since the 2004 FSAP. In addition, the assessment is based on legal and regulatory documents, feedback gathered during meetings, and reports produced in the context of previous work. To date, no formal self-assessment against the Committee on Payment and Settlement Systems (CPSS) Core Principles for Systematically Important Payment Systems (CPSIPS) has been produced by the BCR.

4. **A comprehensive set of international standards and best practices was used for the assessment of payments, remittances, and securities settlement processes.** The main tools used for this review of El Salvador's payment system landscape have been the CPSIPS, the Guidance Note for Assessing Observance of Core Principles for Systematically Important Payment Systems issued by the International Monetary Fund (IMF) and the World Bank (WB), the Recommendations for Securities Settlement Systems issued by the Committee on Payment and Settlement Systems (CPSS) and the International Organization of Securities Commissions (IOSCO), the CPSS Guidance Note for National Payment System Development, the CPSS-WB

¹ This Technical Note was prepared by Carlo Corazza, Payment Systems Development Group (PSDG), World Bank.

General Principles (GPs) on International Remittance Services and related methodologies, as well as the CPSS Report on the Interdependencies of Payment and Settlement Systems. Integrated work has been carried out with other FSAP team members, especially on issues like bank supervision and liquidity management in the financial system.

II. OVERVIEW OF THE NATIONAL PAYMENTS SYSTEM

5. **Both regulated and unregulated financial institutions compete in the market, providing an infrastructure that serves different segments of the market.** Banks, cooperative banks, savings and loans societies, some worker's banks, and a federation of worker's banks and *cajas de crédito* (FEDECREDITO) constitute the regulated market and are under the supervision of the SSF. Commercial banks operated a total of 555 agencies and branches, as of March 2010 (see Table 1). The unregulated market is mainly composed of an array of cooperative associations and societies, *cajas de crédito*, associations, nonbank finance companies (mortgage, leasing, factoring), and foundations such as non-governmental organizations (NGOs). As of December 2009, 88 of the more than 300 unregulated institutions had amassed US\$ 387 million in member deposits. El Salvador officially became the third dollarized economy in Latin America on January 1, 2001.²

Table 1. Banking Sector Branches and Agencies

Banks	2010				
	Agencies	ATMs	Branches	Minibanks	Total
Banco Agrícola, S.A.	65	5	28	0	98
Banco Azteca El Salvador, S.A.	29	0	0	33	62
Banco Citibank de El Salvador, S.A.	51	3	0	0	54
Banco de América Central, S.A.	34	0	33	0	67
Banco G&T Continental, S.A.	11	4	3	0	18
Banco Hipotecario de El Salvador, S.A.	17	3	0	0	20
Banco Procredit, S.A.	52	0	0	0	52
Banco Promérica, S.A.	22	7	0	0	29
Banco HSBC, S.A.	60	7	3	0	70
Citibank, N.A.	1	0	0	0	1
Scotiabank El Salvador, S.A.	56	1	2	0	58
Banco de Fomento Agropecuario	23	1	0	0	24
First Commercial Bank	1	0	0	0	1
Total	422	31	69	33	555

Source: Superintendencia del Sistema Financiero (SSF).

6. **Cash is still by far the most used payment instrument.** Payments by credit and debit cards are stagnant or increasing at a slow pace. Bank customers are increasing using Internet banking. Between 2007 and 2008, the total value of electronic credit transfers grew by approximately 30 percent. However the aggregated value of electronic credit transfer in 2008 was equivalent to US\$ 15,378 million, still far from the total value of cheques (US\$ 51,833 million). The retail payment systems infrastructure is expanding. Both automated teller machine (ATM) and electronic funds transfer at the point of sale (EFTPOS) terminals are growing at a rapid pace (see Table 2).

² Ecuador adopted the dollar as official currency in September 2000. Panama has used the U.S. dollar since 1904.

Table 2. ATM and POS Infrastructure

	2003	2004	2005	2006	2007	2008
Cash dispensers (ATM)						
Numbers of national networks	2	7	7	8	8	9
Number of terminals	717	798	897	958	1,029	1,118
Volume of transactions (thousands)	36,000	43,402	48,898	56,930	65,443	67,439
Value of transactions (US\$ thousand)	1,599,600	1,943,665	2,190,548	2,209,507	2,841,309	3,035,341
Electronic funds transfer at the point of sale (EFTPOS)						
Number of networks	n.a	2	2	2	7	7
Debit cards	803,526	1,218,930	1,486,643	1,632,642	1,465,046	1,478,897
Credit cards	446,136	581,851	629,739	806,004	717,367	759,148
Number of terminals	n.a	6,000	6,914	10,870	18,096	21,397
Volume of transactions (thousands)	8,100	22,355	25,559	31,738	23,481	24,683
Value of transactions (thousands)	575,200	987,481	1,262,184	1,661,734	1,548,680	1,503,407

Source: Banco Central de Reserva de El Salvador (BCR).

N.A. indicates that data is not available.

7. **Systematically Important Payment Systems (SIPS) are the most significant component of the national payment system since they are capable of triggering and transmitting disturbances of a systemic nature to the financial sector domestically and/or internationally.** So far no formal analysis has been carried out by Salvadorian authorities to determine which system qualifies as SIPS. However, two payment systems can be qualified as SIPs, in light of the aggregated and individual high values of the payments processed in relation to the resources of the system's participants and in the context of the financial system more generally. These are: the El Salvador's Real Time Gross Settlement (RTGS) system, which went live in February 2010, and the Cheque Clearing House (CCH) (see Table 3).

8. **The RTGS system is owned and operated by the BCR.** It was introduced with the primary goal of having a modern, safe, and efficient channel available to process high-value and time-critical payments. The system operates from 8:30 a.m. to 5:30 p.m. on weekdays and can be consulted by participants from 7:00 a.m. to 8:00 p.m. In the first three-month period of operations (February–April, 2010), the RTGS system had processed a total volume of 6,683 transactions with a total value of US\$ 6,841.06 million. The average value per transaction was around US\$ 1.02 million. These figures are expected to grow in the near future because banks are increasingly using the system.

9. **The Cheque Clearing House (CCH) is the property of and run by the BCR, as well.** This is a centralized cheque clearing house with nation-wide coverage. Both large-value and retail payments are settled in the CCH. The settlement of the participants' net positions resulting from the daily operations of the clearinghouse takes place on a same day. Due to the small size of the country, the relatively low volume of cheques, and a "three-tiered clearinghouse program," virtually all cheques are available on beneficiaries' account on a next-day basis. The primary clearing takes place at 7:30 a.m. for cheques deposited the previous day within the San Salvador region. Cheque exchanges also exist in larger city areas outside of San Salvador. Although such

cheques 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 cheques presented outside of San Salvador that cannot be exchanged locally. Only about 10 to 15 percent of interbank cheques are exchanged outside of the San Salvador clearinghouse. The final clearing occurs at 5:00 p.m. for the return of cheques presented in 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 the reserve accounts maintained by each bank at the central bank. Overdrafts of the reserve account are not permitted. In case one or more banks cannot settle, they must request the SSF to authorize the use of the last tranche. Should this measure not be sufficient, an unwinding procedure will be applied to the operations (debit and credit) of the illiquid banks until they are able to settle. A bank would have to obtain funds in the interbank market to avoid such a condition. There are no other tools available to the banks in case of liquidity shortfalls, since the BCR cannot be lender of last resort, as per Art. 51 of the Central Bank Law (Ley Orgánica del Banco Central de Reserva de El Salvador). As a practical matter, the level of required reserves is high relative to daily clearings. So far, banks have been able to fulfill their obligations in the clearinghouse. In addition, the BCR is currently establishing a link between the CCH and the RTGS system to allow settlement through this channel. This link would facilitate the operations, but would not eliminate the risk currently posed by the settlement provisions of the CCH. The funds are normally available on customer accounts by T+2. In 2009, 5,990,803 cheques were cleared with a total value of approximately US\$ 22,739.5 million.

Table 3. Systemically Important Payment Systems

Name of system	Number of participants	Daily value of instructions handled (US\$ million)	Average value per transaction settled (US\$)	Daily volume of instructions handled
RTGS ^a	13 direct 19 indirect	133.473	980,860	135.0
CCH ^b	13 banks	88.200	3,876.83	22,750.5

Source: BCR. a. Data are for March 2010. b. Data are for all of 2009.

10. **The securities market is still incipient** (see Tables 4 and 5). At end 2009, there were only 40 listed stocks and a small number of corporate bond issuers. Stock market capitalization was about US\$5.2 billion, but this number is substantially reduced, if it does not include the shares of the financial institutions that are largely controlled by foreign institutions with minimum float in the market. The government issued securities for about US\$ 6 billion, about 28.7 percent of GDP, out of which 66.7 percent is represented by Eurobonds issued in the international markets. Some considerations on the arrangements governing Securities Settlement Systems are presented in Section III; no in-depth analysis is carried out in this Technical Note because the local market is not particularly relevant to the analysis.

Table 4. Overview of the Local Capital Market

	2007	2008	2009
Government securities (US\$ million)	4,634.5	5,617.7	6,054.9
of which Eurobonds (US\$ million)	3,240.0	3,240.0	4,040.0
Government securities (% of GDP)	22.7	25.4	28.7
Corporate bonds			
Outstanding volume (US\$ million)	1,021.8	1,052.8	1,137.4
Number of outstanding issues	38	44	40
Number of new issues	3	8	5
Equity markets			
Number of listed companies	42	41	40
Number of new listings	3	0	3
Market capitalization (US\$ million)	6,048.0	5,398.0	5,195.0
Market capitalization (% of GDP)	29.7	24.4	24.6

Source: Bolsa de Valores de El Salvador (Stock BEVS).

Table 5. Main Secondary Market Activities Indicators (Repo Market)

	2007	2008	2009
Total repo transactions	3,940.7	3,404.0	1,266.6
of which: repo transactions of public instruments	3,179.9	2,874.5	974.4
Total number of operations	16,366	14,081	6,236
Days of operation	249	250	247
Average daily amount (US\$ million)	15.8	13.6	5.1

Source: Bolsa de Valores De El Salvador (Stock BEVS).

III. MAIN OBSERVATIONS AND RECOMMENDATIONS

A. Legal and Regulatory Framework

11. **Gaps in the legal and regulatory framework for payment systems should be addressed promptly.** The Central Bank Law should be amended to fully implement the Treaty on the Payment and Securities Settlement Systems for Central America and the Dominican Republic (the Treaty).³ The amendment, already drafted, would provide the BCR with adequate powers to regulate fees and sanctions in the payments system. Salvadoran authorities should also adopt a comprehensive and consistent legal framework on payment services. The Treaty introduces a specific legal framework exclusively in the payments systems area, but does not introduce any new regulatory framework on payment services.

12. **A law or regulation on remittances services should also be considered.** Currently the country lacks a regulatory framework for the disbursement of remittances. Neither registration nor licensing is requested to operate in this market. In 2007, approximately 77.7 percent of the US\$ 3,364.2 million of remittances channeled through the financial sector was disbursed by banks. The remainder was disbursed by cooperatives, microfinance institutions (MFIs), exchange houses, MTOs, agencies, and others. Even though the disbursement of remittances is operated mainly through banks or other entities supervised by the SSF, a considerable amount of

³ The Treaty reforms the legal framework of the member states in the payment systems area. Chapter 4, Art. 11 provides the central banks of the member states with powers to manage, oversee, and regulate the national payment systems. The Treaty was ratified and became enforceable in the member countries in December 2008. It complements the limited provisions of Art. 67 of the Ley Orgánica del Banco Central de Reserva de El Salvador (Decreto No. 746/1991) and of Art. 60 of the Ley de Bancos (Decreto No. 697/1999).

remittances are delivered through entities whose activities are inappropriately supervised or not supervised at all by public authorities. Thus a significant part of the industry might not be in compliance with requirements of the international standards for Anti-Money Laundering/Combating Financing of Terrorism (AML/CFT). The gap also leaves consumers without any protection in case of defaults, problems, or misconduct. In addition, in the event of fraud or mismanagement, the entire industry could face a reputational risk that could lead customers to abandon the legal/formal sector in favor of alternative mechanism of remitting funds. The suggested adoption of a legal reform for payment services should include the introduction of a sound, predictable, nondiscriminatory, and proportionate legal framework for the remittances market. Specific legal provisions should address: licensing by or registration with the oversight authorities (BCR or SSF); minimum capital and operational requirements; governance and risk management policies; reporting activities and AML/CFT requirements; and transparency and consumer protection.

13. Authorities should consider creating a centralized system for government payments fully connected with the national payments system. Currently, the Government of El Salvador has a decentralized system to pay salaries and public sector providers. Each time different entities need to make a payment, they apply for authorization from the Ministry of Finance through the Integrated Financial Administrative System (Sistema de Administración Financiera Integrado, SAFI). The Ministry authorizes the payment and requests the BCR to transfer the money from its account in the BCR to the accounts of the payee entities in the different commercial banks. The request is delivered through a physical order of payment, as the SAFI is not connected to the RTGS system. Article 11 of the Ley Orgánica de Administración Financiera del Estado (Decreto 516/1995) should be modified to reform the SAFI and connect it to the RTGS system.

B. Payment and Securities Settlement Systems

14. Significant progress has been made in modernizing national payments system over the last few years, including establishing an RTGS system. The RTGS system has contributed to a better integration between the central bank and the banks and other financial institutions, and is also allowing for a growing share of large-value payments to be channeled through safer payments mechanism.

15. The RTGS system does not fully comply with some of the Core Principles for Systemically Important Payment Systems of the Committee on Payment and Settlement Systems (CPSS) (see Box 1). It is exposed to both financial and operational risks.

Box 1. Core Principles for Systemically Important Payment Systems and Responsibilities of the Central Bank in Applying the Core Principles

The system should have a well-founded legal basis under all relevant jurisdictions.

- I. The system's rules and procedures should enable participants to have a clear understanding of the system's impact on each of the financial risks they incur through participation in it.
- II. The system should have clearly defined procedures for the management of credit risks and liquidity risks, which specify the respective responsibilities of the system operator and the participants and which provide appropriate incentives to manage and contain those risks.
- III. The system should provide prompt final settlement on the day of value, preferably during the day and at a minimum at the end of the day.
- IV. A system in which multilateral netting takes place should, at a minimum, be capable of ensuring the timely completion of daily settlements in the event of an inability to settle by the participant with the largest single settlement obligation.
- V. Assets used for settlement should preferably be a claim on the central bank; where other assets are used, they should carry little or no credit risk.
- VI. The system should ensure a high degree of security and operational reliability and should have contingency arrangements for timely completion of daily processing.
- VII. The system should provide a means of making payments which is practical for its users and efficient for the economy.
- VIII. The system should have objective and publicly disclosed criteria for participation which permit fair and open access.
- IX. The system's governance arrangements should be effective, accountable, and transparent.
 - A. The central bank should define clearly its payment system objectives and should disclose publicly its role and major policies with respect to systemically important payment systems.
 - B. The central bank should define clearly its payment system objectives and should disclose publicly its role and major policies with respect to systemically important payment systems.
 - C. The central bank should oversee compliance with the core principles by systems it does not operate and it should have the ability to carry out this oversight.
 - D. The central bank, in promoting payment system safety and efficiency through the core principles, should cooperate with other central banks and with any other relevant domestic or foreign authorities.

16. **The RTGS system is also exposed to operational risk.** The RTGS is not fully compliant with CPSS Core Principle VII rules and procedures on security, operational reliability, and business continuity.

17. **Management of legal risks is adequate, but the RTGS presents financial risks.** The Treaty on the Payment and Securities Settlement Systems for Central America and the Dominican Republic provides the legal basis for the system to operate. The BCR has adopted the relative operational rules and manuals, and has engaged in intense dialogue and training before, during and after the implementation of the system. The participants in the system receive all the relevant information, including the operational manual and rules, and the contractual agreements with the BCR, including a clear list of all the applicable laws and norms. The manual and rules explicitly clarify the functional procedures. From the point of view of operational design, the system offers a centrally located first-in first-out (FIFO) bypass queue management facility for a more efficient management of the liquidity requirements. Participants can obtain reports on their accounts and monitor the flows of payments in real time. For commercial banks and other financial institutions subject to reserve requirements, Article 20 of the Monetary Integration Law (Ley de Integración Monetaria, LIM), introduces the option to move their required reserves to any sound foreign banks, after a transition period of two years, during which time they will

continue to be held on a mandatory basis at the BCR. In addition, Articles 17 and 20 prevent the BCR from granting any kind of credit to commercial banks and allow repo operations by the BCR only in abnormal circumstances. The BCR is not a last resort lender; therefore, intraday liquidity arrangements are not available. At the same time, the BCR does not operate an adequate pricing scheme aimed at reinforcing guidelines to control liquidity risk. Therefore, BCR is no longer able to provide liquidity assistance in emergency situations. As a result, the RTGS system does not fully comply with the CPSS Core Principle III.⁴

18. **The RTGS system is also exposed to operational risk.** The RTGS is not fully compliant with CPSS Core Principle VII. Rules and procedures on security, operational reliability, and business continuity of the system are in place. However the contingency site in order to guarantee complete business continuity to the system has not yet been implemented and the system remains exposed to relevant risk.

19. **As the system became operational only recently, there is not yet specific evidence to evaluate its performance and its compliance with the efficiency Core Principle.** The system operated by the BCR allows participants to instruct payments through three different modalities: host-to-host links allowing a straight-through processing of the payments; manual insertion of payments through a Virtual Private Network (VPN) connection; and SWIFT messaging. At the time the team visited El Salvador, the RTGS system had been functional for less than three months. However, so far both operators and users have expressed their satisfaction with the service provided. On the other hand, the costs for the participation in the system are not clear to the users, as users are not charged based on the use of the system, but according to a flat rate calculated on the deposit of liquidity that each one holds in the BCR. The team recommends that the BCR adopt a more comprehensible and well-structured pricing scheme, and try to shape it in a way that can incentivize the use of the system among the users.

20. **Access to the system is clearly defined, but transparency and accountability of the RTGS system management could be enhanced.** The access to the system is clearly defined by the operational manuals and rules. The BCR is considering expanding access to the system to cooperatives and microfinance institutions and has started the analysis of the legal and operational requirements for such an expansion. Any expansion should be designed carefully. To protect the system from excessive exposure, the creation of special access modalities, with limited functionalities, should be considered. Such provisions could encourage competition and promote efficient and low-cost payment services.

21. **Effective governance can be achieved through different tools, which in turn depend on the nature of the systems, the situation of the country, and other variables.** International experience has shown that a number of tools have proven to be effective in multiple scenarios. First, the transparency and the accountability of management should be enhanced by the central bank (in El Salvador's case, the BCR). In particular, the BCR should clearly disclose the senior management structure—including the division of the responsibilities and the internal reporting lines—to the users. Secondly, the BCR should adopt formal arrangements to obtain the opinions

⁴ As a practical matter, the level of required reserves is high relative to daily clearings and so far banks have been able to fulfill their obligations. The financial risks arising from limited LOLR capacity by the BCR are also present in the CCH.

of the users of the system, both through bilateral dialogue and through the creation of groups of users aimed at discussing operational aspects and possible reforms. Finally, the system should be regularly audited by external experts in order to assure users and others of the effectiveness of the internal control system and the organization's operational efficiency.

22. The BCR should encourage and foster the use of the recently implemented Real Time Gross Settlement system by the banks and reduce the systemic importance of the CCH. These measures will serve several needs. First, they will help to progressively eliminate the use of cheques for large-value payments and to reduce and progressively eliminate liquidity and credit risks in the CCH. Second, interlinkages between the RTGS system and securities settlement systems might be further reinforced to ensure settlement through proper delivery versus payment (DvP). Along these lines, CEDEVAL, BCR, and the Securities Commission (Superintendencia de Valores, SV) should also fully complete the process of dematerialization of all securities and avoid future emissions of any security in physical form. Third, other subsystems, such as the SAFI (see above), should be linked to the RTGS system in order to allow the processing of government payments safely and efficiently.

23. The BCR should play a key role in developing the infrastructure for interbank retail payment instruments. More specifically, the central bank should:

- Coordinate all efforts underway so that a single system of this kind is implemented in the country to avoid duplications and misuse of infrastructure and resources;
- Ensure that the system operates to maximum potential by promoting the participation of all banks and other major players, including the government;
- Become involved in the design of the system so as to ensure that effective standards (such as standardization of bank accounts) and infrastructure agreements are implemented, which would allow for high straight-through processing (STP) rates to be achieved at all times;
- Become involved in the design of the system rules and procedures, including issues like guarantees, responsibilities, message structures, contingency arrangements, interchange commissions, and conflict resolution;
- Review the overall legal and regulatory framework and assess whether it effectively supports the various components of the new system;
- Facilitate its settlement services to the new system so that the final positions of participants are settled in the RTGS system.

24. The authorities should develop a holistic strategy for modern, comprehensive retail payments systems. Cash is still the most used payment instrument by far and the use of cheques keeps growing. Meanwhile, payments through credit and debit cards are stagnant or increasing at a slow pace and Internet banking is at an embryonic stage. The BCR should further support the creation of an automatic clearing house (ACH) by some banks. An ACH is fundamental for the development of retail payment instruments, in particular for increasing the usage of electronic payment instruments. Authorities might also consider creating nonbanking correspondent schemes to expand the network for disbursement of remittances and guarantee access to financial services in remote areas. New technologies, such as card and mobile phone-based solutions,

should be fostered to reduce the dependency on cash and increase efficiency in the retail area. The joint adoption of these measures would increase the possibility for the market to create financial products specifically linked to remittances (saving and checking accounts, microloans, life and health insurances, education loans, and the like) and to provide financial access to a wider part of the population. A holistic approach would both considerably reduce costs for the system and increase access to financial services for the population. The World Bank will soon publish guidance on retail payment systems and services.

25. Securities settlement has also been improved in the last few years with the dematerialization of securities. However, the system does not count on a real DvP mechanism. Virtually all securities of the country have been dematerialized following the introduction of the Ley de Anotaciones Electrónicas de Valores en Cuenta (Decreto No. 742/2002).⁵ Securities transactions are currently settled through the direct link between the Bolsa de Valores de El Salvador (BVES) and the RTGS system operated by the BCR, with settlement occurring at T+0. However, DvP is not achieved at the moment, which is a major limitation of the securities settlement systems. At 3.30 pm, when the negotiation period is over, the BVES transfers the payment instructions to the RTGS and funds are debited in the account held by the BVES in the BCR and credited to the accounts of the commercial banks. Once the confirmation of the transfer of funds has been received by the BVES, this instructs the CEDEVAL to operate the exchange of the securities in the respective accounts. DvP is not yet achieved, as the securities leg and the cash leg are settled separately due to the lack of inter-linkage between the RTGS system and the CEDEVAL. The team has been informed that CEDEVAL is undertaking a project for the creation of a direct link to the RTGS system, in order to allow the direct settlement of the securities.

C. Payment Systems Oversight and Cooperation

26. Authorities should introduce the appropriate reforms to allow the BCR to operate and oversee the national payments system under any circumstances. Authorities should consider the joint effect of the following factors: (i) the possibility for the banks to transfer abroad the first two operative tranches of the reserves of liquidity; (ii) the fact that the BCR is not the issuer of the main settlement asset (the currency); (iii) the legal prohibition barring the BCR from granting any kind of credit to commercial banks and allowing BCR to undertake repo operations only in abnormal circumstances; and (iv) the lack of BCR's powers to operate an adequate pricing scheme aimed at reinforcing guidelines to control liquidity risk. These factors not only hamper the BCR's capacity to provide liquidity assistance in emergency situations, but may also pose systemic risks.

27. If the banks decided to transfer part of their reserves out of the country, the question arises as to whether a domestic payments system in the country would remain, under extreme scenarios. Banks might find it more convenient to settle their interbank payments abroad in an offshore settlement bank or execute transfers via Fed wire in the United States. In addition, the recent implementation of the RTGS system brings to light the risk that, in such an environment, there might be difficulties in implementing the system because it is

⁵ The only exception is the stocks of banks conglomerates, which in any case are not negotiable in the stock exchange by law.

impossible for the BCR to award collateralized intra-day credit on a continuous basis. Thus, within the limits established by the current legislation, the BCR should consider creating services that both provide incentives for not moving reserve balances out of the country and at the same time allow a smooth and efficient functioning of a RTGS system. Such services might include an array of tools both to ease high-quality cash management by the treasurers of financial institutions and perhaps some form of intra-day liquidity for the RTGS system: for example, via a specially designed intra-day repo facility to be conducted on a regular basis. Modifying which reserve tranches can be maintained abroad should also be considered. To ensure control over the payment systems, banks should maintain the first tranche of the reserve at the BCR, while they could maintain part of the last tranche—to be used only in exceptional cases—abroad.

28. The BCR oversight function on the national payments systems should be strengthened as the BCR does not fully observe Responsibilities A, B, C, and D of the CPSIPS—despite the efforts undertaken in the last few years in this direction. Further actions and measures could be taken to implement the oversight function better. The oversight function should be designed taking into consideration the general principles for effective oversight issued by the CPSS. The Treaty on the Payment and Securities Settlement Systems for Central America and the Dominican Republic gives the BCR legislative authority for the oversight of payment systems in the country. In addition, the BCR is well-positioned to act as overseer, given its deep knowledge of the systems and its role in the development of government policies aimed at the inclusion of new financial intermediaries in the national payments system.

29. The BCR should clarify in detail its policy stance and action plan for payment system oversight in a publicly available document. In the context of establishing the oversight function, the BCR should determine and disclose publicly the scope of its actions and its plans to achieve its objectives in payment system matters. With regard to the scope of its oversight role, the BCR should apply its authority over all payments and securities settlement systems in the country (in cooperation with the SSF for securities settlement systems). This should include retail systems, which are especially important in supporting economic activity and public trust in the currency. With regard to policy objectives, consideration could be given to broadening the scope beyond the two traditional main objectives of efficiency and reliability of payment systems to a wider set of issues including the promotion of competition in the payment services market and the protection of consumer interests. These objectives might be pursued by the central bank, as overseer of the payment system, especially in those cases not covered by other authorities. In particular, the BCR should:

- Ensure that an adequate degree of participant cooperation exists and is sufficient to promote and realize the desired organizational and operational arrangements;
- Verify that individual payment systems satisfy user needs as well as risk and efficiency requirements through appropriate interventions, both at the development stage and during the ongoing system implementation and operational phases;
- Define and implement appropriate actions if participants do not comply with published rules and regulations (such as the application of predetermined penalties and sanctions for compliance failures);

- Collect and distribute relevant statistical information to demonstrate the use being made of each system and the extent to which the systems are satisfying end-user and other market needs; and
- Disclose information and public policy statements relating to all substantial payment system matters in a manner that assures wide dissemination among stakeholders and the general public (such as in a payment system chapter of the annual report or other appropriate publication).

30. **The process of establishing the oversight function should be done in parallel with the efforts to improve the NPS**, as the BCR should move toward compliance of all systemically important payment systems in the country with international standards. In particular, the BCR will continue to be a direct provider (owner and operator) of clearing and settlement services.

31. **In performing the oversight function, the BCR should ensure that transparency of policies and conditions for payment services offered is available to the population of El Salvador.** The central bank, banks, and other financial institutions should be encouraged to provide information to the public on the services they offer in the payments system. In this context, the BCR, as payment system overseer, should harmonize its action with its banking supervision department and cooperate with other relevant authorities to ensure that payment services and instruments are appropriately covered by the new arrangements.

32. **The BCR should define more clearly—possibly by regulation—its powers to collect data and information from the participants of the system and to perform an adequate level of oversight of the payment systems, particularly at the retail level.** Currently, information is provided by the private sector on a voluntary basis, without the possibility for the BCR to apply specific methodologies or request periodic updates.

33. **Cooperative arrangements in the national payments system need to be formalized.** The BCR should reinforce its dialogue with all the players in the area of payment systems through the creation of the National Payments Council (Comité de Pagos), gathering relevant authorities and private sector stakeholders as per the provisions of the Treaty on the Payment and Securities Settlement Systems for Central America and the Dominican Republic. The team verified that the BCR maintains an intense and productive dialogue with the private sector and with all the financial institutions and users of the payment systems. Nevertheless, such dialogue originates mainly in tandem with the reforms that the BCR intends to introduce. It does not follow a regular calendar and is not formalized in a specific arrangement, such as a National Payments Council. The creation of such forum is vital to facilitate the dialogue between the BCR and the private sector, which in turn would encourage a shared vision of policy to develop the payment systems, foster the use of electronic payment systems at both the large-value and retail level, and reinforce the role of the BCR as a credible and reliable regulator and overseer.