

# WESTERN HEMISPHERE PAYMENTS AND SECURITIES SETTLEMENT FORUM



## WORKING PAPER 5:

### STANDARD METHODOLOGY FOR COUNTRY TABLES ON PAYMENT AND SECURITIES SETTLEMENT SYSTEMS AND FOR COMPARATIVE TABLES<sup>1</sup>

*This working paper presents a detailed standard methodology for Country Tables and Comparative Tables on Payment and Securities Settlement Systems. This model is part of the methodology used for the assessment of the payments and securities settlement systems in the context of the Western Hemisphere Payments and Securities Settlement Forum (WHP). The World Bank in partnership with the Centro de Estudios Monetarios Latinoamericanos (CEMLA) leads this Forum. The objective of the Forum 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 the World Bank has sponsored an International Advisory Council (IAC) comprised of several institutions with high expertise in payments and securities clearance and settlement system.<sup>2</sup>*

*This document was prepared by José Antonio García (Senior Economist, CEMLA) and has benefited from comments by Massimo Cirasino (Senior Financial Sector Specialist, World Bank) and Mario Guadamillas (Senior Financial Economist, World Bank). The methodology is based on that of the document “Statistics on Payment Systems in the Group of Ten Countries” of the Committee on Payment and Settlement Systems (CPSS) of the Bank for International Settlements.*

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<sup>1</sup> Second version updated on July 2005. Since June 2003, the Western Hemisphere Payments and Securities Clearing and Settlement Initiative (WHI) were changed into the Western Hemisphere Payments and Securities Settlement Forum (WHF). The main modifications between the original version and the updated version are related with the change of the name and the updated of some dates. The updated was done by Ana Laura Sibaja-Jiménez, WHF coordinator, (CEMLA)

<sup>2</sup> World Bank, CEMLA, Bank for International Settlements, Bank of Italy, Bank of the Netherlands, Bank of Portugal, Bank of Spain, Council of Securities Regulators of the Americas (COSRA), European Central Bank, Federal Reserve Board, Federal Reserve Bank of New York, Inter-American Development Bank, International Monetary Fund, International Organization of Securities Regulators (IOSCO), Securities Commission of Spain, Swiss National Bank, and U.S. Securities and Exchange Commission (US SEC).

*Although the models and methodologies of the CPSS and the WHP are similar, there are several relevant differences. Changes to this tool as a result of comments received or new experienced gained from country assessments under the Forum will be included.*

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## I. INTRODUCTION

This document presents the detailed standard methodology for Country Tables and some Comparative Tables on Payment and Securities Settlement Systems. This methodology is being used by the WHP as a tool for its country assessments and for public country reports (“Yellow Books”). It is also being used by the Working Group on Payment System Issues of Latin America and the Caribbean (WGPS-LAC) to produce a document on Comparative Tables on Payment and Securities Settlement Systems for the countries in the LAC Region.

The *Statistical Country Tables* comprise two series. Series “A” are statistics on payments and securities clearance and settlement in the country and should be completed following a standardized model of 17 Tables, also prepared by the WHP’s Core Team. This methodology was developed for this Table Series.

Series “B” is more general statistics related to the financial sector and might be prepared on a country-by-country basis. However, the general editorial conventions and definitions outlined in Section I of this document must be followed.

The WHP has also developed a model of *Comparative Tables on Payment and Securities Settlement Systems*. Comparative Tables 1 to 11, 16a and 16b are to be filled out with the information provided in the Country Tables. Comparative Tables 12, 13, 14 and 15 comprise qualitative information (e.g., the various features of the systems) that has not been requested in the Country Tables and thus must be provided separately.

Finally, Comparative Table 17 is referred to the Latin-American Association for Integration (*Asociación Latinoamericana de Integración, ALADI*), which only applies to central banks that are members of this organization.

The rest of the document is organized as follows: Section I presents general conventions, Section II presents the detailed standard methodology for country tables and Section III includes the detailed standard methodology for comparative tables.

## SECTION I

### GENERAL CONVENTIONS

1. The annual issue of the paper Comparative Tables compile the five most recent years Country Tables to the paper year issued.
2. For Comparative Tables 12-15 and 17, information is requested only for the most recent year.
3. All tables should conform to this methodology. If for any reason this is not possible, details of exceptions should be indicated in the table(s) concerned.
4. The source or sources of data should be indicated in a footnote for each table.
5. Definitions: for concepts not explicitly defined in each table's methodology, reference should be made to the document "A glossary of terms used in payment and settlement system" published by the Committee on Payment and Settlement Systems of the Bank for International Settlements in January 2001. When necessary, include country-specific definitions in footnotes to the table(s) concerned.
6. Volume of transactions: means number of transactions.
7. Value of transactions: means the amount of transactions.
8. USD: means U.S. dollars.
9. Billions: in the context of these Tables billions are to be interpreted as figures with ten or more digits, e.g., 1 billion = 1,000,000,000
10. Estimated data: where data are broadly estimated and thus only indicative, this should be indicated in a footnote to the table(s) concerned.
11. Where data are not available, this should be indicated by "n.a."
12. Where data are not applicable, this should be indicated by "."
13. Where data are very small relative to other relevant data in the table concerned, this should be indicated by "neg."
14. Where data mean *exactly* zero, this should be indicated by "0"

## SECTION II

### COUNTRY TABLES (A Series)

**Table 1: Basic Statistical Data**

<i>Population</i>	Figures should be averages for the year or at a point in the year as indicated (e.g., June).
<i>GDP</i>	Include nominal GDP expressed in USD.
<i>GDP per capita</i>	This figure equals the <i>GDP</i> figure divided by the <i>population</i> figure.
<i>Exchange rate</i>	The exchange rate of the local currency against the USD.  Should be expressed as units of local currency per 1 USD.  Provide both the year-end figure and the year average figure.

## Table 2: Settlement Media Used by Non-Banks

All figures in this table are year-end, i.e., stocks at the end of each year.

<i>Total Notes and Coin Issued</i>	Represents the value of cash issued by the central bank. It excludes the value of notes and coin kept in vaults at the central bank.  Breakdown in “ <i>held by the public</i> ” represents the cash in circulation in the economy. It <u>excludes</u> notes and coins kept in vaults at central banks or at banks, <u>but includes</u> the value held by non-residents.
<i>Transferable Deposits in Local Currency</i>	These are transferable deposits that can be used to make cashless payments using one of the instruments mentioned in Tables 8 and 9.  Breakdown of holders (e.g., <i>households, corporate sector and others</i> ) should be provided if possible.
<i>Narrow Money Supply</i>	Notes and coin and transferable deposits held by non-banks, including non-residents.
<i>Transferable Deposits in Foreign Currency</i>	Apply the same criteria than for <i>Transferable Deposits in Local Currency</i> above.
<i>Broad Money Supply</i>	Footnotes to individual Tables should indicate the definition of broad money supply used and how it differs from <i>narrow money supply</i> .

### **Table 3: Settlement Media Used by Banks**

All figures in this table are year-end, i.e., stocks at the end of each year.

<i>Required Reserves at the Central Bank</i>	<p>Deposits held by banks at the Central Bank which are used to comply with mandatory reserve requirements.</p> <p>If applicable, breakdown in local currency and foreign currency.</p> <p>Further below, in “<i>of which usable for settlement</i>” provide the value of required reserves that can be used for payment purposes.</p> <p>If applicable, breakdown the latter in local and foreign currency.</p>
<i>Excess Reserves at the Central Bank</i>	<p>Funds held voluntarily at the Central Bank that can be used for payment purposes.</p> <p>If applicable, breakdown in local currency and foreign currency.</p>
<i>Institution’s Borrowing from the Central Bank</i>	<p>Institution’s borrowing from the Central Bank which can be used for payment purposes.</p> <p>In footnote describe the forms under which such loans are granted.</p>
<i>Transferable Deposits at Other Institutions</i>	<p>Deposits held at other banks in the country (not at the Central Bank) which can be used for payment purposes.</p>

#### **Table 4: Institutional Framework**

All figures in this table are year-end, i.e., stocks at the end of each year.

<i>Categories</i>	Provide information for the indicated categories. Particular categories should be explained in a footnote where this is felt to be necessary.
<i>Column 1: Number of Institutions</i>	Any institution which executes cashless payments for customers should be mentioned, even if it does not hold deposits for customers.
<i>Column 2: Number of Branches</i>	All branches of an institution. The head office of an institution is to be counted as a branch if it offers cashless payment services.
<i>Column 3: Number of Accounts</i>	The accounts which are mentioned here are those which: -are held by the institutions for non-banks; -can be debited directly using one of the instruments mentioned in Tables 8 y 9.
<i>Column 4: Value of Accounts</i>	Aggregate amount of deposits held on accounts mentioned above in Column 3. NOTE: The total value of accounts for all categories in this Table should be identical to “ <i>Transferable Deposits</i> ” in Table 2.

## Table 5: Banknotes and Coin

All figures in this table are year-end, i.e., stocks at the end of each year.

*Total Banknotes and Coin Issued* Apply the same criteria than for “*Notes and Coin Issued*” in Table 2.

*Banknotes Issued:* Following the same criteria than for “*Notes and Coins Issued*” in Table 2 and/or “*Total Banknotes and Coin Issued*” in this Table, provide only the total of banknotes issued.

Provide a breakdown by denomination of banknotes.

*Coin Issued:* Following the same criteria than for “*Notes and Coins Issued*” in Table 2 and/or “*Total Banknotes and Coin Issued*” in this Table, provide only the total of coin issued.

Provide a breakdown by denomination of coin.

NOTE: The total value of *Banknotes Issued* and *Coin Issued* should be identical to “*Total Banknotes and Coin Issued*”.

*Notes and Coin Held by Banks* Banknotes and coin held by banks (not the Central Bank) in vaults.

*Notes and Coin Circulating Outside Banks* This figure is identical to “*Notes and Coins Held by the Public*” in Table 2.

NOTE: The total value of *Notes and Coin Held by Banks* and *Notes and Coin Circulating Outside Banks* should be identical to “*Total Banknotes and Coin Issued*”.

**Table 6: Cash Dispensers, ATMs and EFTPOS terminals**

All figures in this table are year-end, i.e., stocks at the end of each year.

All items should include systems operated by banks and by non-banks.

*Cash Dispensers and ATMs*      Cash Dispensers and ATMs may be operated online (with real-time reference to an authorization database) or offline. No data is to be provided in this line.

*Number of Networks*      A network of ATMs is defined as a group of ATMs managed by one or more service providers for a bank or group of banks.

If applicable, provide a breakdown for networks with nation wide coverage and regional coverage.

*Number of Terminals*      As a rule, each terminal is counted as one machine.

*EFTPOS*      A terminal at a retail location which is designed to capture, and in some cases also transmit, debit card transactions by electronic means. No data is to be provided in this line.

*Number of Networks*      An EFTPOS network is defined as a group of EFTPOS terminals managed by one or more service providers for a bank or group of banks.

If applicable, provide a breakdown for networks with nation wide coverage and regional coverage.

*Number of Terminals*      As a rule, each EFTPOS terminal is counted as one machine.

## Table 7: Number of Payment Cards in Circulation

All figures in this table are year-end, i.e., stocks at the end of each year.

A card which has several functions is counted in each relevant line.

*Cards with a Cash function* All card enabling the holder to withdraw cash from a cash dispenser.

*Cards with a Debit/Credit Function* All card which have a debit function, credit function or both.

of which:

*Cards with a Debit function* Cards enabling the holder to have his purchases directly charged to funds on his account at a bank.

*Card with a Credit function* Includes both credit cards and charge cards (the alter are also sometimes called delayed debit cards or travel and entertainment cards).

*Cards with a Cheque Guarantee Function* Transactions with this card are guaranteed by the issuing bank up to a specific amount.

*Retailer and Fidelity Cards* Cards issued by non-banking institutions to be used with specific retail stores or merchants. These cards do not generally enable the holder to make all types of purchases outside the specified establishments, in contrast to credit and other general-purpose cards.

*Stored-value Cards* Cards in which transferable funds may be registered and such funds may be increased or decreased. Also know as electronic purse. Single purpose stored-value card (e.g., those issued by some telephone companies) should not be included here.

**Tables 8 and 9: Indicators of Use of Various Cashless Payment Instruments (volume and value)**

All figures in this table are flows, i.e., the activity (volume and value) of each instrument in each year.

Figures concerning only a sample of banks or customers should be projected to figures covering the whole volume and value of payment instruments used in the economy.

In general, the information in this Table should exclude any funds transfer in which the originator and the beneficiary are the same. For example, any instrument that is used by banks' customers to obtain cash (e.g., ATM withdrawals, cheques) from their own current accounts should not be included.

An exception to the previous rule would be transfer between accounts in the same name but where the accounts are held at **different** institutions, since in practice it is usually impossible to exclude them from the data.

The concept "cashless payment instruments" in this context is applicable to the interbank settlement.

*Cheques Issued* All types of cheques, including travelers' cheques, bankers' draft and money orders should be included under cheques.

Provide a breakdown by denomination for cheques issued in local currency and cheques issued in foreign currency.

*Payments by Cards* Provide a breakdown for credit cards (including charge cards), debit cards and stored-value cards. For the alter use the definition described in Table 7.

*Paper-based Credit Transfers and Paperless Credit Transfers* The distinction between "paper-based" and "paperless" credit transfers is based on the interbank exchange. Credit transfer orders which are exchanged on a paperless basis between banks are deemed to be paperless even if the originator and/or the beneficiary submitted or received a piece of paper.

"Customer initiated" transfers are to be understood as those in which the originator was not an entity which provides payment services.

*Direct Debits* Pre-authorized debit on the payer's account by the payee.

*E-money* Following the definitions used in this methodology, payments made with electronic purse would be included under "stored-value cards". Therefore, in this row include payments with e-money stored in instruments different from cards (e.g., a hard disk of a PC).

**Tables 10 and 11: Payment Instructions Handled by Selected Interbank Transfer Systems (volume and value)**

All figures in this table are flows, i.e., the activity (volume and value) of each instrument in each year.

Major payment systems are mentioned here, both those managed by the Central Bank and those managed by private operators.

Provide the name of each system.

If an operator manages several payment systems (e.g., some Automated Clearinghouses may operate cheques, credit transfers, direct debits), provide a breakdown for each of these systems.

With regard to the volume and value of transactions, each payment instruction should be counted once, i.e., the debit from the payer's account and the credit to payee's account should not be counted separately.

**Table 12: Securities and Accounts Registered in Central Securities Depositories**

All figures in this table are year-end, i.e., stocks at the end of each year.

If applicable, the data for each CSD in the country should be provided separately.

Provide the name of each system.

*Number of Securities Registered* Represents the number of deposited issues.

*Number of Participants* Represents the number of direct participants that are able to make transactions in the System.

*Number of Accounts* Include all accounts (including sub-accounts) registered in the System.

*Number of Foreign Investors* The number of sub-accounts held by non-residents.

### **Table 13: Securities Holdings in Central Securities Depositories**

All figures in this table are year-end, i.e., stocks at the end of each year.

All figures are to be expressed on nominal value at year-end.

<i>System A</i>	The value of issues registered in CSDs. If there is more than one system, provide the data separately.  Provide a breakdown for Government Securities, Corporate Bonds, Equities and Others.
<i>Memorandum Items</i>	Total value of outstanding issues in the market, whether they are deposited at a CSD or not.

### **Tables 14 and 15: Transfer Instructions Handled by Selected Securities Settlement Systems (volume and value)**

All figures in this table are flows, i.e., the activity (volume and value) of each instrument in each year.

Major payment systems are mentioned here, both those managed by the Central Bank and those managed by private operators.

Provide the name of each system.

Provide a breakdown for each instrument type (e.g., Government Securities, Corporate Bonds, Equities and Others).

Transfer instructions comprise all transactions entered in the system, including free deliveries.

With regard to the volume and value of transactions, each transaction should be counted once, (e.g., the first and second parts of a repurchase agreement must be counted only once).

### **Tables 16 and 17: SWIFT Information.**

As indicated in the source of these Tables, these figures are provided by SWIFT.

Figures in Table 16 are year-end, i.e., stocks at the end of each year.

<i>Members</i>	Financial institutions which are shareholders of the SWIFT global network.
<i>Sub members</i>	Domestic users sponsored by members abroad.
<i>Participants</i>	Participants are not shareholders in SWIFT and their message traffic over the network is restricted.

Figures in Table 17 are flows for each year.

<i>Category I</i>	Messages used by banks to transfer funds to an account of a customer (i.e., messages relating to payments that are category I messages, e.g., MT100 messages).
<i>Category II</i>	Messages used by banks to transfer funds to an account of another bank (i.e. messages relating to payments that are category II messages, e.g., MT200 messages).
<i>Domestic traffic</i>	Messages sent to/received from domestic users.

## SECTION III

### COMPARATIVE TABLES

**Table 12: Features of Selected Interbank Funds Transfer Systems**

Major payment systems are mentioned here, both those managed by the Central Bank and those managed by private operators.

Provide the name of each system.

<i>Type</i>	<p>Refers to whether the system is large value or retail.</p> <p>If the system is large value, indicate with “L”.</p> <p>If the system is retail, indicate with “R”.</p> <p>If the system is both large value and retail, indicate with “L+R”</p>
<i>Owner / Manager</i>	<p>If the owner/operator is the Central Bank, indicate with “CB”.</p> <p>If the owner/operator is a bank, indicate with “B”.</p> <p>If the owner/operator is a service provider owned by banks, indicate with “AS”.</p> <p>If ownership/management is shared, indicate the relevant parties with a plus sign (e.g., CB+B)</p>
<i>Processing</i>	<p>Refers to the processing method for each system.</p> <p>If manual, indicate with “M”.</p> <p>If processing is ACH-like (offline), indicate with “ACH”.</p> <p>If processing takes place with real-time transmissions, indicate with “RTT”.</p>
<i>Settlement</i>	<p>Refers to how settlement takes place in each system.</p> <p>If multilateral net, indicate with “N”.</p> <p>If bilateral net, indicate with “BN”</p> <p>If real-time gross settlement, indicate with “RTGS”.</p> <p>If other gross settlement, indicate with “GS”.</p>
<i>Membership</i>	<p>If membership is open (i.e., any bank may apply), indicate with “O”.</p> <p>If membership is restricted (i.e., subject to criteria), indicate with “RM”.</p>
<i>Degree of Centralization</i>	<p>Refers to geographical access to the system.</p>

If access is centralized (one processing center only), indicate with “C”.

If access is decentralized, indicate with “D”.

*Pricing*

Refers to prices charged to participants.

If full costs are charged (including investments), indicate with “F”.

If only variable costs are charged, indicate with “V”.

If only a symbolic cost is charged (below variable cost), indicate with “S”.

If there are no charges, indicate with “N”.

NOTE: Value of transactions should be expressed in USD billion using the average exchange rate for the relevant year.

**Table 13: Operating Hours of Selected Large-Value Interbank Funds Transfer Systems.**

Major payment systems are mentioned here, both those managed by the Central Bank and those managed by private operators.

Provide the name of each system.

*Time of Settlement* For net settlement systems.

*Finality*

*Standards Money* Refers to the time period in which domestic interbank transactions are normally carried out. Therefore, they do not relate to particular interbank funds transfer systems.

*Market Hours*

**Table 14: Indicators of Equity Markets.**

Figures to be expressed in USD billion using the average exchange rate for the relevant year.

**Table 15: Features of Selected Securities Settlement Systems.**

Major securities settlement systems are mentioned here separately.

Provide the name of each system.

<i>Type</i>	Refers to the type of securities that are traded and settled in the system.  If only government securities, indicate with “G”. If only equities, indicate with “E”. If only other securities, indicate with “O”. If several of the above, indicate each followed by a comma (e.g., E, G).
<i>Owner / Manager</i>	If the owner/operator is the Central Bank, indicate with “CB”. If the owner/operator is a bank, indicate with “B”. If the owner/operator is a stock exchange, indicate with “SE”. If ownership/management is shared, indicate the relevant parties with a plus sign (e.g., CB+B)
<i>Settlement of Cash Leg and Delivery</i>	For each leg (payment and delivery), if settlement is net indicate with “N”.  For each leg (payment and delivery), if settlement is gross indicate with “G”.
<i>Settlement / Agent for the Cash Leg</i>	If the settlement agent is the Central Bank, indicate with “CB”.  If the settlement agent is a bank, indicate with “B”.  If other arrangements are in place, indicate with a footnote.

NOTE: Value of transactions should be expressed in USD billion using the average exchange rate for the relevant year.