Survey on Foreign Exchange Settlement in Latin America and the Caribbean

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AGENDA

1. **Regional context, methodology and structure of the survey**

2. Results of the survey

3. Selected country cases for assuring PVP in FX settlement

4. Conclusions

SOME STILYZED FACTS

Financial liberalization, expanded cross-border capital flows and the continued improvement in trading and IT technology are (among others) driving forces of the exponential growth of FOREX (FX) markets

According to the Triennal Central Bank Survey (BIS, March 2005) on a sample of 52 countries, the global average daily value of FX transactions increased from USD$1.6 trillion in 2001 to USD$2.4 trillion in April 2004

CLS is currently settling FX transactions of 15 currencies for an average daily value of almost USD$2 trillion

IMPORTANCE OF THE SUBJECT FOR LAC

Latin American and the Caribbean (LAC) countries have made substantial improvements in their payments and securities infrastructure.

But there is less information on trading and settlement practices of interbank FX transactions. The subject is relevant because:

- Financial stability concerns

- Efficiency : The development of a more dynamic, liquid and deep market requires a sound and efficient infrastructure.

- Market development: FX trading and settlement systems are the first contact point of foreing investors with all the rest of financial markets in a country.

THE POINT OF REFERENCE - CPSS

By the mid-90s the CPSS carried out an in-depth survey on a number of G-10 commercial banks (more than 80 for the 1996 Report) aimed at documenting current practices for settling FX trades related to: payment cancellation deadlines, receipt identificaction time, management of FX settlement exposures, etc. (CPSS, March 1996 and July 1998)

The survey served to raise awarness on the identification of risks, to measure them and to harmonize efforts among regulators and FX market intermediaries (FXMI) to reduce them by developing new and safer clearing and settlement mechanisms.

The final outcome of this collective international effort among regulators, supervisors and market participants was CLS.

CONCLUSIONS OF THE CPSS REPORT-1996

“Current settlement practices generally expose each bank to the risk that it could pay over the funds it owes on a trade, but not receive the funds it is due to receive from its counterparty...”

“...FX risks clearly have (the following dimensions): credit, liquidity, market, replacement and operational risks...FX market participants must recognize and manage each of these risks... The resulting large exposures raise concerns...”

Definition: “A bank´s actual exposure (amount at risk) when settling FX trades equals the full amount of the currency purchased and lasts from the time a payment instruction for the currency sold can no longer be cancelled unilaterally until the time the currency purchased is received with finality” (CPSS, March 1996)

METHODOLOGY OF THE LAC SURVEY

- The survey is based on a questionnaire that followed similar principles to the ones applied by CPSS to G-10 banks in 1995 (but shorter and simpler), intending to identify FX settlement practices and how FXMI manage and mitigate risks.

- It was complemented with requests of information for the whole FX value chain (starting from trading)

- A more comprehensive survey had been previously carried out in Colombia in 2000 by sending the questionnaire to all FXMI: 31 answers were received from FXMI which performed 96% of the total FX value traded

METHODOLOGY OF THE LAC SURVEY (cont.)

- The “model” survey was delivered to WGPS-LAC Central Banks (CB) requesting them to fill the questionnaire based on the answers received from FXMI.
- Answers were received in different moments between 2004 and 2006
- Many (maybe most) of the LAC CB did not actually applied the survey to their FXMI but answered the questionnaire directly based on the information they had and their knowledge of the market

OBJETIVES OF THE SURVEY

- To collect information on the circumstances under which FXMI trade and settle FX operations.
- Increase market awareness and understanding of FX settlement risks
- Encourage risk mitigation through actions by individual banks, industry groups and Central Banks
- Identify “best practices” among LAC countries and learn from other countries´ experiences.

STRUCTURE OF THE SURVEY

I. CHARACTERISTICS OF THE FX MARKET

- Size of FX market / type of FXMI / currencies traded
- Settlement mechanisms
- Payment method / instruments

II. MARKET INFRASTRUCTURE

- Infrastructure for trading, clearing and settlement
- Mechanisms applied to measure, monitor and mitigate risks
- Duration of exposures (periods of irrevocability and uncertainty)

III. FX CLEARING AND SETTLEMET

- STP from trading to settlement?
- On-line information on account balances?
- PvP?
- Settlement mechanism (DNS, RTGS)
- Clearing process: value, tariffs, risk mitigation methods, etc.

IV. LEGAL FRAMEWORK

- Protection of finality, guarantees and netting
- Access criteria to systems

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PARTICIPANT COUNTRIES

- Thirteen (13) countries participated in the Survey:

  Brazil, Chile, Colombia, Costa Rica, ECCU, Ecuador, El Salvador, Jamaica, Mexico, Peru, Trinidad & Tobago, Uruguay and Venezuela.

- Four (4) countries reported not to have a fully free interbank FX market:
  - Ecuador and El Salvador because they are dollarized economies
  - ECCU Eastern Caribbean Currency Union and Venezuela because they have exchange controls and a fix peg to the USD so that almost all FX transactions are carried out through the Central Bank.

- Only the answers of nine (9) countries were considered for the purpose of the analysis hereinafter.

SIZE OF THE MARKET

Country	Year	Participants				Daily Average	
		Total	Commercial Banks	Other financial institutions /1	Non financial intermediaries /2	Value of transactions in millions of USD	Number of transactions
Brasil [/3]	2005	110	110 (73)		0	1.854	419
Chile	2005	25	25		0	1.564	3.902
Colombia	2005	52	23	9	20	483	694
Costa Rica	2004	32	18	5	9	14	30
Jamaica	2003	n.a.	n.a.	n.a.	n.a.	12	n.a.
Mexico	2005	83	33		50	13.000	n.a.
Peru	2003	14	14		0	134	200
Trinidad & Tobago	2005	20	6		14	16	n.a.
Uruguay	2005	28	15	14	0	11	36

n.a.: not available

/1 It includes Financial Cooperatives, Consumer Finance Companies, Investment Banks, Mutuals and others.

/2 It includes Exhange Houses, Broker-Dealers and Pension Funds

/3 For the case of Brasil the number inside parenthesis corresponds to the number of participants in BMF.

SOME BASIC FEATURES OF THE INTERBANK FX MARKET

Currency Traded

- In ALC 97% of FX transactions are in USD

Market concentration

- 70% or more of the interbank operations takes place among:
  - Only 6 participants in Costa Rica, Mexico, Peru y T&T;
  - 15 participants in Uruguay, 18 in Brazil and Colombia, and 26 in Chile;
  - No information available for Jamaica on this issue

Payment method

- The electronic wire through correspondent banks in the USA (either SWIFT or proprietary systems) is the most widely used for the USD leg, while the domestic leg is settled through the National Payment System

MECHANISMS FOR NEGOCIATING AND REGISTERING TRANSACTIONS

- ***Electronic multilateral trading systems:*** **All countries except Jamaica and T&T.**
- ***Multilateral voice trading systems:*** **Also available in Chile, Colombia, Brazil, Mexico and Uruguay.**
- ***Bilateral phone mechanisms:*** **all countries.**
- ***OTC register:*** **Possible in Central Bank proprietary systems in Brazil, T&T, Jamaica, Peru and Mexico. In the case of Colombia this is also possible in private trading platforms.**

CANCELLATION DEADLINE

The deadlines for reception of payment orders in the national payment system (NPS) of each country are the following:

- **Brazil: 17:30 hours for both BMF (the Brazilian FX CCP) and the CB. Parties to the transactions can opt for settling in T, T+1 or T+2**
- **Chile: correspondent banks accept orders until 18:00 for settling in T+1.**
- **Colombia: 15:00 for same day settlement T+0**
- **Costa Rica: transactions are settled same day in real time PVP at the NPS until 17:00**
- **Jamaica: 14:00 hours for settlement in T+2 (occasionally T+1);**
- **Mexico: 10:00 hours for same day (T) settlement and RTGS closing time for T+1 and T+2. Most transactions are settled in T+2.**
- **Peru: 16:30 hours for same day settlement:**
- **T&T: 13:30 hours for settlement in T+2 ;**
- **Uruguay: 17:10 (closing time of the RTGSS) for same day settlement. Free of payment transfers for settling T+1 in USD and T+2 in EUR can be made until 17:00.**

RECEIPT IDENTIFICATION TIME

The average time elapsed between settlement of the local currency leg in the NPS and the confirmation of reception of funds in the foreign currency abroad goes from:

- 1 hour in Brazil for transactions settled in BMF (FX CCP) through multilateral netting;
- 2 to 3 hours in Jamaica, Chile and Mexico;
- 7 hours in Colombia (in 2000);
- 8 hours in Brazil when settlement is made on a gross basis outside the CCP;
- In Peru, the maximum time is 16 hours and 30 minutes when settlement is carried out outside the national payment system.

In Costa Rica, Peru and Uruguay, settlement of both cash legs can be done simultaneously by recurring to the PVP facility offered by the Central Bank

METHODOLOGIES FOR ASSESSING AND MITIGATING COUNTERPARTY RISK

Commercial banks in most countries declare to have adopted explicit risk based methodologies for managing their relations with their counterparties

Examples of risk mitigation mechanisms are:

- Risk-based bilateral credit limits (Brazil, Chile, Colombia, Jamaica, México, Peru, Uruguay).
- Position limits controled at the trading platform in Uruguay, Colombia and T&T and at the CCP in Brazil.
- Multilateral aggregate position limits (Brazil-CCP, Chile, and Colombia by mid 2007 when the FX Clearing House is expected to start operations).
- PvP settlement (Perú, Costa Rica, Uruguay and Brazil; Colombia e.2007)
- Committed lines of credit, margin requierements / collaterals and loss sharing agreements or guaranttee funds: Brazilian CCP, Colombia (expected for 2007).

MECHANISMS FOR MONITORING ACCOUNT BALANCES

- In Peru, Costa Rica and Uruguay, FX transactions can be settled in Central Banks accounts in domestic currency and USD. Account balances monitoring is possible through CB proprietary systems.

- For all the rest of countries, except the Brazilian CCP, the domestic leg of the FX transaction is settled in CB accounts disconnected from the foreign currency leg which is settled abroad in correspondent banks accounts

  All market participants in Brazil, Colombia, Chile, Uruguay and Peru are able to monitor their balances through SWIFT or the proprietary communication systems offered by correspondent banks.

- In Brazil this service is part of the essence of the CCP service.

- In T&T only one participant declares to be able to monitor its account balances in his correspondent banks.

FX SETTLEMENT PRACTICES

Country	Settlement Mechanisms				STP from trading to settlement	PvP	CB liquidity provision in foreign currency
	Gross settlement disconnected /1	Gross settlement of both legs in CB /2	Protected multilateral netting	Bilateral Netting /3			
Brasil	√		√ CCP (BM&F)	√	√	√	CCP Repo
Chile	√			√			
Colombia	√		√ Clearing House estimated 2007	√	√	√ e 2007 (CH)	
Costa Rica		√		√	√	√	
Jamaica	√			√			
Mexico	√			√			
Peru	√	√		√		√	Repos in USD with collateral in USD
Trinidad & Tobago	√			√			
Uruguay	√	√		√	√	√	o/n credit lines in foreign currency

/1 Gross settlement in local currency in CB accounts and foreign currency settlement in comercial banks´ correspondents

/2 Gross settlement of both legs of transaction in CB accounts (RTGS system)

/3 CBs in the survey report the use of bilateral netting but do not collect information on it

LEGAL FRAMEWORK

- There is a high level, sound and well founded legal basis in Brazil (Payment System Law) and Colombia (the Capital Market Law, which extends the principles of finality, netting, protection of guarantees and others to payments and FX) and Mexico (Payment System Law). It is complemented by regulatory Decrees, CB or Government Resolutions (as exchange authorities) and others
- In the case of Chile and Costa Rica some key legal provisions can be found in the Central Bank Law, the Banking Sector Law and CB regulations.
- In Jamaica, Peru and Uruguay the regulatory basis are interbank agreements materialized in the rules of the FX settlement system issued by the its private administrator. In Costa Rica the system is administered by the CB which also sets the regulation of the system
- In T&T and Uruguay there are on-going efforts to pass before the Congress a Payment System Law

LEGAL FRAMEWORK

Protection of finality and netting

- At the National Law level: Brazil, Chile, Colombia and Mexico.
- CB regulations on finality: Costa Rica, Peru and Uruguay as administrator of the payment system and provider of accounts in both legs of the transaction.
- Included in the Draft Bill in T&T and Uruguay

Access to clearing and settlement system

- Open to all FXMI authorized to hold accounts in the RTGS system in Chile, Colombia, Costa Rica, Jamaica, Peru and T&T. In Uruguay, in addition to FXMI it is also granted authorization to public institutions and enterprises, administrators of pension funds and others.
- Risk-based assessment: in Brazil access to BMF (CCP) is restricted to financial institutions which must pass strict risk controls, including capital and operational requirements

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PVP IN CENTRAL BANK ACCOUNTS IN THE RTGSS IN PERU, COSTA RICA AND URUGUAY

- Peru, Costa Rica and Uruguay have introduced in recent years a PvP facility in their RTGS System in order to allow FXMI to settle their FX transactions in CB accounts in the national currency and in USD (on a voluntary basis)

- These are highly dollarized economies in which the ratio of USD denominated quasi-money to the total quasi-money is more than 40% in Peru and Costa Rica and 80% in Uruguay

- This facility tackles the principal risk but only partially other risks, specially the liquidity risk since only Peru offers intraday repos (overnight in the case of Uruguay)

- This is not an alternative easy to be adopted by less or non-dollarized economies

THE COLOMBIAN FX CLEARING HOUSE

The Central Bank has led an industry effort to develop a comprehensive business model aimed at improving market practices for settling FX more safely and efficiently.

- The Colombian Peso (COP) is not an eligible currency for CLS and the authorities are not aiming to become so
- But they set guidelines for the private sector to develop a model based on best international practices (adapted to the Colombian institutional framework), technologically robust, based on the support of a foreign provider with experience in CLS and which is also familiar with the Colombian market
- For that purpose, a private corporation was created, whose shareholders are the banks (51%), broker-dealers (25%) and the Colombian Stock Exchange (BVC, 24%), the latter also being the project manager
- The “know-how” and technological platform is provided by Citigroup N.A..

COLOMBIA: RISK MITIGATION MECHANISMS

Type of Risk	Risk Mitigation Mechanism
Principal Risk	PvP settlement in T+0 (guaranteed receipt and refund with simultaneous) settlement running at 1:30 to 3 pm for pay-ins and 3 to 4 pm for pay-outs)
Liquidity Risk	a. Multilateral Netting b. Bilateral and multilateral debit limits (controlled also at the trading platform) c. Accumulated loss limit by participant d. Liquidity Providers granting overnight "swaps" in pesos and USD
Market Risk	Pre-funding of collaterals (6% of expected debit position) in USD to withstand price volatility due to the failure of a participant, the costs of the "swap" and fines. Must be deposited at the CH accounts before 8:30 am and adjusted all day-long
Residual Risk	Loss-sharing procedure (allocated only among counterparties of the failing party)
Operational Risk	Standardized netting procedures will reduce the number of (previously bilateral) messages and funds transfers among the participants.
Legal Risk	Finality and netting protected by Law 964/2005, CB Resolutions 7 of 2004 and 4 of 2006, standardized binding contracts and Clearing House Rules

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CONCLUSIONS (cont.)

- It is still the case for a number of LAC countries that current FX settlement practices generally expose banks to significant financial and operational risks that in some cases can last for up to two business
- Such exposures should be more carefully evaluated by public authorities, especially in the case of the largest countries where a significant share of banks´ daily flows of domestic payments is accounted for by the settlement of FX transactions, which can even represent a significant proportion of commercial banks´ capital
- In some countries there is an increasing awareness on risks and actions are being taken to tackle them.

CONCLUSIONS

- Four LAC countries (Brazil, Costa Rica, Peru and Uruguay) are already complying with the standard of PvP settlement which eliminates principal (credit) risk, and one more (Colombia) is close to implement it.

- It would be worth repeating the survey in some countries, aiming at reaching a broader coverage and collecting more detailed information so that more awareness on the subject is developed by FXMI and the authorities themselves.

- Also to make periodical rounds of the survey in order to assess the evolution of the market, risk mitigation practices and to strengthen cooperation among market participants, regulators and supervisors.

THANKS!!