Report of the Advisory Group on Payment and Settlement System
(Part - III)
July 2001

M.G. Bhide
Chairman

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Dear Dr. Reddy,

It is a matter of great pleasure in forwarding you the report of Advisory Group of Payment and Settlement System covering BIS guidelines on core principles for systemically important payment systems.

In this report, the Group has critically examined the existing arrangements for settlement of foreign exchange transactions prevailing in India, deficiencies in the present system, international practices, etc. and the emergence of the Clearing Cooperation of India (CCI). It is expected that the CCI would play a major role in risk mitigation in the forex area. Based on the assessment, the Group has recommended a set of actions which could be initiated by the CCI. Some of the important measures include establishment of a Clearing Agent abroad by the CCI, institution of a separate guarantee fund for the forex clearing and appropriate integration between the participating banks and the CCI and their interface with the RTGS system. The present Report does not discuss the risks associated with transactions where one of the counter-parties is located overseas. Therefore, it deals with risks emanating from those transactions which are located in India only.

The Group is thankful to Shri P.K.Jena, DGM, ECD for providing excellent background material for preparing the Report.

With best regards

Yours sincerely,
(M.G. Bhide)

1. **Report on Foreign Exchange Settlement System**
2. **Memorandum**

Foreign Exchange Settlement System

One of the important components of a payment system involves settlement of cross border transactions. The turnover, both in terms of volume and value, in cross border payments have been on the increase. While cross border trade used to be the prime underlying reason for cross border payments, mobility of capital has also contributed significantly to the increasing volume of such transactions. In recent times, with the developments in technology and increasing globalisation, capital mobility has become so nimble that its contribution to the cross border turnover has become phenomenal. In the Indian context, commensurate with the international trends, cross border trades have also recorded a steady and secularly increasing trend. This has been largely due to the economic reform process which has brought in several relaxations in capital mobility as also the gradual deregulation of system involving forex transactions in the banking system.

2.Cross Border Payment Arrangements

Despite such phenomenal value of the transactions, internationally there is no cross border payments 'system' as such, in the sense that we use the terms 'systems' to describe the payment systems in a country like cheque clearing system or securities clearing system. Historically, the cross border payments were settled in gold and precious metals. After the growth of banking, the cross border payments are now settled through correspondent banking arrangements. These arrangements are primarily bilateral arrangements.

In correspondent banking arrangements, a bank enters into an agreement with another bank across the border to receive and/or pay moneys in its local currency on behalf of the other bank. Each transaction is settled individually. These operations may be on account of underlying customer transactions or on their own behalf. Thus each bank having foreign exchange operations enters into a number of such correspondent banking arrangements in the currencies in which they operate. The correspondent banking arrangements stand on the legal principle of a contractual obligations. The legal jurisdictions of the two countries also come into play. There are no 'multilateral clearing and settlement system' for such cross border payments anywhere in the world (until recently). This is primarily because of the complications arising out of the presence of two currencies, two legal jurisdictions and two central banking/monetary authorities. This is also because of the fact that currencies cannot be delivered for final settlement except in their own countries.

The principal alternative settlement method is to use bilateral netting. Banks enter into legally binding agreements to net settlement payments bilaterally. This permits the banks to offset trades against each other so that only the net amount in each currency is paid or received by each institution. Bilateral netting arrangement is most valuable when the counterparties have considerable two-way flow of business.

Consequently, there are no international codes or standards for cross border payments system. Nevertheless, the present settlement arrangements have considerable risk. Under the correspondent banking arrangement, banks typically manage their risks based on their own internal risk management policies and the risk management guidelines, if any, prescribed by their regulators.

While banks have attempted to up-grade their operational capacities to settle their forex payment, current settlement practice largely exposes each trading bank to the risk that it could pay over the funds it owes on the trade but not receive the funds due to receive from the counter party. The vast size of foreign exchange trading combined with the global inter-dependency of the forex market and payment system, participants have raised significant concerns regarding the risk stemming from the current arrangements for settling these trades. These concerns include the effects on the safety and soundness of banks, the adequacy of market liquidity, market efficiency and overall financial stability. The risk to domestic payment systems and to the international financial system posed by the forex settlement process have also been brought to the fore since 1974 (failure of Bankhaus Herstatt). The more recent examples have been the failure of BCCI and Barings Bank.

The international concerns to address the risks caused by forex trades have led central banks to work out comprehensive strategies to preempt systemic failures. The Committee on Payment and Settlement Systems (CPSS) of the central banks of the G-10 countries attempted to address these concerns and have recommended strategies which will minimise, if not eliminate, the forex settlement risks by following certain suggested prescriptions.

In its report, the CPSS suggested a three-fold strategy for managing foreign exchange settlement risks.

(i) Action by individual banks to control their foreign exchange settlement exposure.
(ii) Action by industrial groups to provide risk reducing multi-currency services.
(iii) Action by Central Bank to induce rapid private sector progress.

Bank for International Settlements (BIS) has also compiled a set of guidelines titled "Supervisory Guidance for Managing Settlement Risk in Foreign Exchange Transactions". These comprehensive guidelines cover various aspects of managing settlement risks in foreign exchange transactions like measurement of settlement risk, setting and using limits, procedures for managing fails and other problems, use of bilateral netting, etc.
As a part of industry efforts to facilitate bilateral netting, FXNET, SWIFT and VALUENET provided netting services to numerous banks. For multilateral netting, ECHO (1995) and Multinet (1997) offered multilateral netting services for foreign exchange contracts. Another attempt in this direction is the establishment of the Continuous Linked Settlement System (CLSS). Major international banks in USA, UK, Europe and Japan and some other countries have, in a cooperative venture, set up the CLS bank which is expected to considerably reduce settlement risk in foreign exchange transactions by implementing a payment vs. payment system.

Yet another attempt is by Hong Kong where a US Dollar clearing and settlement system has been established in Hong Kong itself.This is the first of its kind to clear and settle cross border payments on a multilateral basis in one country itself in a systemic manner.

3. Indian Scenario

In India, the banks can deal in foreign exchanges only when authorised by the Reserve bank under the Foreign Exchange Management Act, 2000 (FEMA). All such authorised dealers have entered into correspondent banking arrangements with banks in the countries of the currencies in which they deal.

The present structure of the Indian forex market consists of hedgers i.e. those with underlying exposures to exchange rate risk, arbitrageurs i.e. those who earn riskless profit by exploiting market imperfections and speculators who take a view on the exchange rate movement. These are either ADs or the corporate users of foreign exchange.

The forex market of India and the risk management structure therein is not very well developed. Although the US$ - Rupee forward contract market is fairly deep and liquid, the same is available for a period upto 6 months. The interest rate swaps on a matched basis are also available although the market is not liquid.

Broadly, the payment and settlement system in foreign exchange in India have not followed the exact prescriptions suggested by the Committee on Payment and Settlement Systems (CPSS) of the Bank for international settlement. However, attempts have been made in this direction by evolving suitable guidelines on risk management and setting up of multilateral netting arrangement. Reserve Bank has taken measures to establish suitable risk management system in the banking industry by way of issuance of internal control guidelines and subsequent follow-up towards its implementation. Further, towards establishing an appropriate settlement system, steps were taken by Reserve Bank to set up a forex clearing house in Mumbai for settlement of inter-bank forex transactions. A recommendation, in this regard, was also made by the expert group on forex markets in India under the chairmanship of Shri O.P. Sodhani, the then Executive Director of the Bank.

Accordingly, the Forex Clearing House (FCS) was set up by the Reserve Bank. The FCS was a multilateral netting arrangement of the participating banks to settle inter-bank transactions in US$ which comprised approximately 85% of the forex transactions in India. Apart from risk reduction measures based on Lamfalussy standards, the Forex clearing house sought to drastically reduce the transactions costs for the Indian banks and also ensure reconciliation of Nostro Account balances. Although the proposal was in an extremely advanced stage and trial runs were conducted; due to certain legal issues linked to the RBI Act, the same could not become operational.

Another effort in this direction is the creation of a separate body, viz. Clearing Corporation of India (CCI) for which initiatives were taken by the Reserve Bank. Although, CCI was originally contemplated to manage only security settlement, foreign exchange settlement would also be done by it. State Bank of India has agreed to take the lead in this direction at the instance of Reserve Bank and a core group comprising the representatives from State Bank of India, Bank of India, IDBI and FEDAI, etc. has been formed to examine the various related issues. Reserve Bank of India is represented in the meetings of the core group by invitation.

4. Proposed Action

CCI may address the specific needs of the forex transactions of banks(situated in India) both in the short as well as in the long run and should attempt to achieve the following broad objectives.

- Integration of forex transactions of Indian banks with the domestic payment system.

- Putting in place sound risk management systems and procedures for forex transactions .
- Reduction of transaction costs by having a multilateral netting arrangement which will reduce the cost of transmission of message through SWIFT and also reduction in the number of NOSTRO A/c transactions and the commission thereof.

The above objectives will ensure that a multilateral netting arrangement as well as a settlement system with adequate risk control measures is in place in respect of all interbank deals.

The arrangement should also attempt through novation to bring down the overnight domestic credit risk of banks, minimise the dealing room back-office operations and simplifying NOSTRO A/c reconciliation .

The proposed mechanism does not address the risks associated with transactions between a participant resident in India and other residing outside India.

Novation

CCI may contemplate an arrangement by way of novation in order to ensure that the settlement takes place with CCI itself. CCI may act as the common counterparty and arrive at the netted amount for all inter-bank transactions at the end of the day in respect of each member bank. Settlement of the netted amount in foreign exchange may be done by CCI itself through its Clearing Agent (CA) abroad while the rupee leg will be settled locally through the Central Bank account.

Settlement Guarantee Fund

A Settlement Guarantee Fund of adequate size may be created in the event of any default. In fact, such a guarantee fund could be the outcome of a detailed risk reduction framework in which net bilateral, multilateral and system caps for each participant are embedded.

The operational issues involved in this arrangement, such as appointment of clearings agent, Back up Credit, Standby Line of Credit, funding of Settlement Guarantee fund and opening of account by CCI with the Central Bank need to be addressed by CCI.

An issue which will be of significant consequence is the possible impact of a clash between the settlement of the net amount arrived at the CCI on account of forex clearing and the net amount arrived at the Rupee Clearing House. However, this problem could be avoided if all flows are settled in RTGS system in a batch mode. Nevertheless, it is felt that if rupee leg arising out of forex clearing and normal rupee clearing are settled in different batches, a gridlock situation could arise. Therefore, it is recommended that these two clearing adjustments should be placed in the same batch for settlement in RTGS system. It is desirable to have a predetermined view in this regard in consultation with the Reserve Bank and appropriate measures/safeguards are required to be built in to the arrangement.

The proposed arrangement will ensure that only the netted amount is debited/ credited to the Nostro A/c resulting in substantial reduction of the transaction costs involved in effecting each interbank deal. In this framework, the settlement of forex leg of transactions would be performed by the Clearing Agent (CA) abroad appointed by the CCI for the purpose. Further, under the above scheme of arrangement, the CCI will assume the liquidity as well as credit risk upon itself. Each bank will, however, have to fix exposure limits for its counter parties for all transactions involving credit risks for its forex transactions. These limits will have to be internally monitored and controlled by the respective banks and will be subject to on-site supervision by RBI as well as offsite surveillance. In order to ensure that the credit risk is minimised within the clearing system itself, a cap on the gross payables by any member may be specified based on the size of the bank's operations, its financial position etc.

Liquidity to the System

With a view to meeting the requirement of the Federal Reserve that any clearing system outside the US in USD must have secured arrangements to provide liquidity to the system in case of default by the single largest net debtor to the clearing house, CCI may assess its liquidity position and evolve a suitable back up mechanism for its liquidity support. This aspect may also be kept in view while fixing the debit cap.

Exposure to CA

In order to address the risk relating to the possible failure of CA, payouts from the clearing account may be made first and the clearing account could be funded separately. This will ensure that at no point of time CCI will have exposure to CA. Operational issues relating to the resultant intra day overdraft in the clearing account upto the daily settlement account may be discussed with the CA.

5. How minimum standards outlined in the Lamfalussy Report will be adressed ?

I) Netting system should have well founded legal basis under all relevant jurisdictions :

There are two aspects to this requirement :

a) the netting concept should have a well founded legal basis,

b) such concept should be legally upheld in all relevant jurisdictions.

The CCI will have only authorised dealers in India as members. The Lamfalussy report while discussing jurisdiction has stated that the law of the country in which the counter party is branch of a foreign bank the location will be relevant. The proposed clearing will have no counter party located outside India. Accordingly, the relevant jurisdiction is only Indian law as (i) the underlying contracts arise in India (ii) the parties to the underlying contracts are located in India and are either incorporated in India or are branches in India of banks incorporated outside India . Branches of banks incorporated outside India have the status of 'resident' and are governed by the provisions of Foreign Exchange Management Act,2000.

Besides, the ruling of the US court in 1992 that the Citi bank branch in India has to settle their dispute arising out of their Indian securities transactions in India and that Indian courts alone has jurisdiction adds strength to the fact that members of the proposed clearing or their liquidator cannot drag any dispute to a foreign court .

In this connection, CCI should ensure that netting has a well founded legal basis under Indian Law.

II) Multilateral Netting systems should have clearly defined procedures for the management of credit and liquidity risks which specify the respective responsibilities of the clearing of the netting provider and the participants . These procedures should also ensure that all parties have both the incentives and the capabilities to manage and contain each of the risks they bear and that limits are placed on the maximum level of credit exposures that can be produced by each participant.

The CCI could clearly bring out the liquidity and credit risk responsibilities of the provider and the participants of the arrangement. Accordingly, every member bank should be required to set exposure limits to counterparty banks as approved by its Board . The adherence to counterparty exposure limits is expected to be internally monitored by them which will be subjected to supervision by Central Bank. Besides, the fact that each bank will have exposure limits for each counterparty, it will be appropriate to fix a cap on the gross payables for any bank which will be far more conservative than a cap based on net positions.

III) Multilateral netting systems should at a minimum be capable of ensuring the timely completion of daily settlements in the event of inability to settle by the participants with the largest net debit position.

The proposed arrangement should settle the transaction on spot basis i.e. T+2 . The process of receiving, inputting, conveying and rectifying the error would be completed by 13.00 hours on day T +1 leaving enough time for sending payment instructions to CA on T+1 day ; the settlement day being T+2 day. The timely completion of daily settlement in the event of inability to settle by any participant with the largest debit position may be done by invoking the “guarantee fund” to be maintained by the CCI for the purpose. This is proposed because the CCI is expected to provide novation to all transactions to be settled through it.

IV) Multilateral netting system should have objective and publicly disclosed criteria for admission which permit for open and free access.

The objectives of the clearing system should be clearly explained in the regulations of the institution proposed to be created to which the consent of the member banks should be obtained. Further, the clearing arrangements should be in conformity with the M &AA of the institution created specifically for this purpose. The membership of the clearing house may be made open to all banks who are authorised to deal in foreign exchange in India and who are willing to abide by the regulations which will be designed for this purpose.

V) All netting schemes should ensure the operational reliability of technical systems and the availability of backup facilities capable of completing the daily processing requirements.

This should engage the attention of CCI while instituting the system.

6. Risk Control Measures

Addressing the risks and other operational issues involved in the forex transactions are critically important to give strength to the payment system and it is essential to establish a mechanism specifically addressing these issues particularly in view of the time lag in the different legs of the transaction. Besides, the bilateral caps, multilateral caps, etc. CCI may explore the possibilities of the following arrangement to prevent a possible systematic future.

Extended Time Zone

Although, this will require active RBI cooperation, CCI may consider initiating dialogue with the RBI in this direction. Internationally, steps have been taken to reduce the risk by extending the banking hours. The CLS is making attempts to settle forex trades based on this principle.

Loss sharing Arrangement.

A loss sharing arrangement among the participants is another important risk reducing measure adopted internationally . Since the participants of the CCI are fixing counterparty exposure limits, any loss on account of a failure of a member could be shared proportionately among the survivors . The details in this regard may to be finalised after discussions with the members .

Creation of contigency fund

A contigency fund could be created by prescribing an annual fee from the members . Alternatively, CCI could decide upon a nominal transaction fee in order to build up a corpus in the long run . This amount could also supplement the funding arrangement to meet any loss .

Integration with the proposed RTGS System

Since forex transactions are generally of high value it has immense implications for the payment system of the country as a whole and it is essential that an integrated approach is followed in this direction.

DEPUTY GOVERNOR

RESERVE BANK OF INDIA
CENTRAL OFFICE
SHAHEED BHAGAT SINGH ROAD,
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MEMORANDUM

Constitution of Advisory Group on "Payment and Settlement System"

A Standing Committee on International Financial Standards and Codes has been set up by Governor, Reserve Bank of India on December 8, 1999 with the objectives of identifying and monitoring developments in global standards and codes pertaining to various segments of the financial system, considering all aspects of applicability of such standards and codes to the Indian financial system, chalking out the desirable road map for aligning India's standards and practices in the light of evolving international practices, periodically reviewing the status and progress in regard to codes and practices, and making available its reports to all concerned organizations in public or private sector.

The Standing Committee in its first meeting held at New Delhi on January 13, 2000 decided to constitute non-official Advisory Groups in ten major subject areas encompassing 43 different standards/codes. In this regard, one of the subject areas identified is "Payment and Settlement System". Accordingly, an Advisory Group on "Payment and Settlement System" under the Chairmanship of Shri M.G.Bhide, Chairman, NIBM, Pune is constituted with effect from February 8, 2000 with the following as members.

1. Dr. R.H. Patil, Former MD, NSE, Mumbai
2. Dr. Ajay Shah, Professor, IGIDR, Mumbai
3. Shri Vishnu Deuskar, MD, ABN Amro Securities Pvt. Ltd.
4. Shri Rajendra P. Chitale
   Chartered Accountant, C/o M.P. Chitale & Co., Mumbai.

Shri K. Kanagasabapathy, Adviser-in-Charge, Monetary Policy Department, Reserve Bank of India/Dr. R. Kannan, Adviser, Department of Economic Analysis and Policy will be convenors to the Advisory Group.

The terms of reference of the Advisory Group are as follows:

(i) to study present status of applicability and relevance and compliance of relevant standards and codes,

(ii) to review the feasibility of compliance and the time frame over which this could be achieved given the prevailing legal and institutional practices,

(iii) to compare the levels of adherence in India, vis-à-vis in industrialized and also emerging economies particularly to understand India's position and prioritize action on some of the more important codes and standards,

(iv) to advise a course of action for achieving the best practices appropriate to us; and

(v) to help sensitize the public opinion on the above matters through its reports.

The Chairman may co-opt other non-officials as members and officials as special invitees and decide to have meetings on schedules and at places of his convenience.

Secretarial assistance to the Advisory Group will be provided by the Reserve Bank of India. The Reserve Bank will also provide the following facilities to the Chairman and Members and special invitees to the Advisory Group:

a) reimbursement of return air fare by executive class to attend the Advisory Group meetings
b) provision of local transport and local hospitality
c) reimbursement of a sum of Rs.500 per diem to outside members to meet incidental expenses
d) necessary arrangements for conducting the meetings preferably in the RBI premises.

The Advisory Group is expected to submit its Reports as and when they are ready and a final report in any case within a time frame of one year from the date of the first meeting.

(Y.V. Reddy)

May 25, 2000

***Note*: For the purpose of Part III of the Report, Shri Bhide Chairman reconstituted the Advisory Group with Dr. R.H.Patil, Former Managing Director, National Stock Exchange of India, Mumbai as a Member.**