Report of the Advisory Group on Payment and Settlement System
(Part - II)
December 2000

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Chairman

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Dear Dr. Reddy,

It is matter of great pleasure in forwarding to you the Part II of the Report of the Advisory Group on Payment and Settlement System covering G-30 recommendations on Securities Settlement System.

The Report is mainly in the form of a matrix. In this Report, the Group has examined the positions obtaining relating to trading and settlement of Securities (Equities, Corporate Debt and Government Securities segments) in India vis-a-vis G-30 recommendations on Securities Settlement System. The Group has also taken note of various ongoing as also proposed infrastructural and other changes in securities market, viz., project on Negotiated Dealing System (NDS) and Public Debt Office (PDO) computerisation, setting up of Clearing Corporation for the development of repo market and settlement of retail transactions of securities, developments in rolling settlement in equity segment, real-time gross settlement of payment system, etc. which are at various levels of development. We may reiterate that the views of the Group specifically pertain to the G-30 recommendations on Securities Settlement System. We understand that a joint Task Force comprising officials from the Bank for International Settlements (BIS) and International Organisation of Securities Commissions (IOSCO) on Securities Settlement System is in the process of reviewing G-30 recommendations and is likely to come out with a fresh set of Core Principles on Securities Settlement System which are likely to be released for public comments by end of this year.

The Group is thankful to distinguished members of the Advisory Group as also to senior executives of the RBI for their valuable contributions in preparing the matrix.

With best regards

Yours sincerely
(M. G. Bhide)

Dr. Y.V. Reddy
Chairman
Standing Committee on International Financial Standards and Codes
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<u>Major Issues</u>

In Part I of the Report of the Advisory Group on Payment and Settlement Systems, we have critically examined two issues, viz., status of our clearing house operations as well as responsibilities of the Reserve Bank of India (RBI) in the light of the consultative report on "Core Principles for Systemically Important Payment Systems" released by the BIS first in December 1999 followed by a revised version in July 2000. In continuation of our effort, the Group has now examined the status of existing payment and settlement systems in Indian equity and debt markets including Government securities market and suggested ways for improvements in these markets with a view to achieving compliance with the recommendations made by the G-30 in the context of securities settlement system. These have been captured in a matrix form shown in the Annexure. On a macro basis, the Group has commented on five broad issues as indicated below.

First, with regard to settlement cycle of transactions, the Group holds the view that given our present infrastructure, we could not move from T+5 to T+3 cycle without certain improvements in payment system infrastructures in place. However, the important issue here is how to introduce rolling settlement in T+5 cycle. It is found that at present rolling settlement has been introduced largely in the illiquid segment of securities and, therefore, the Group recommends that there is a need to introduce it in the liquid segment of the equity market. However, simultaneously the payment system also needs to be improved for effective movement of funds by implementing modern systems such as Electronic Funds Transfer (EFT) and Real-time Gross Settlement (RTGS) system.

Second, the Group has deliberated on whether the clearing corporations and the depositories as non-banks could be given access to settlement facility on the books of the RBI. In this regard, it feels that only banks could be granted such facility, and any non-bank wishing to avail of such facility should convert itself at least to become a limited purpose bank. In that eventuality, the RBI will have to indicate the relative regulatory regime and also prescribe the prudential guidelines flowing therefrom so that it does not create any moral hazard problem on the part of limited purpose banks and cause systemic crises. Pending such organisational change, it maintains that clearing corporation could send their instructions for settlement on the books of the RBI, and the RBI could act on those instructions only when it receives clear mandate from banks for effecting such debit clearings on its books. The Group, however, feels that the risk of co-mingling has to be addressed by taking up such debits only after inter-bank clearing is fully processed and settled. In this connection, as a risk reduction measure, the Group indicates that any shortfall in funds would need to be adjusted against the balance to be maintained by the clearing corporation with the RBI for settlement. The clearing corporation in that eventuality will need to appropriately authorise the RBI for this purpose. Accordingly, the Group recommends that the clearing corporation should be given the current account facility with the RBI. However, the Group perceives that the final solution, perhaps, lies in the grant of limited purpose banking licence and accordingly, the suggested course as indicated above should be treated as an interim arrangement only as it offers an improvement over the existing arrangement.

Third, the Group expresses concern that with increasing liberalisation, participants would tend to have multiple exposures in various markets at any particular point of time. Unless there exists an institutional mechanism through which all such information is gathered and prudential norm in the form of cross-margining is applied, financial system may prove to be more vulnerable than ever. In view of this, the Group recommends that a system of centralised collection of information, its availability to the market players and relative prudential guidelines with a view to implementing cross-margining across the markets should be explored in India at the earliest.

Fourth, one of the Lamfalussy Standards prescribe that the deferred net settlement (DNS) system should at least be capable of ensuring timely settlement in the event of default of a single largest net debtor. It has been found that most of the systems under equity segment in India have the ability to settle even in the event of failure by three or more larger members over several settlement cycles. The Group has appreciated that the arrangement obtaining in India is better than the one prescribed by the Lamfalussy standards. It, therefore, recommends that such standard should continue and be emulated in debt segment also.

Fifth, on securities borrowing and lending system, at present institutions are not allowed to borrow securities towards settlement. The Group recommends that it should be put in place in both equity and debt segments in India.

(M.G.Bhide) (A.Shah) (P.K.Bindlish)

ANNEXURE

Positions obtaining vis-a-vis G30 Recommendations on Securities Settlement System

Reference to G30 recommendation	Position obtaining in the Equities segment	Position obtaining in the Corporate debt segment	Position obtaining in the Government Debt segment	Views of the Advisory Group
1. Pre-settlement Risk Comparison of trades between direct market participants should occur as soon as possible after trade execution, preferably on trade date (T+0).	The bulk of the transactions in equities in India, takes place on the stock exchanges located in Mumbai, Delhi, Calcutta, Ahmedabad and Chennai. All stock exchanges are automated and the trades are matched on screen and are locked in on T+0. As such, the trade comparison and confirmation are instantaneous. In the environment of continuous order matching system in vogue, T+0 standard has already been achieved.	The major stock exchanges operate systems facilitating trades both in the Negotiated and Continuous market segments. On Automated on-line trading system, the orders placed on the continuous market segment are compared and matched on the trade date itself (T+0).	Trades on stock exchanges are matched on trade date (T+0). In case of direct deals, trades are settled at the central bank on T plus 0 or latest T plus 1. There is no specific pre-settlement comparison. Project on Negotiated Dealing Screen System and Public Debt Office (PDO) Computerisation is under process. Provision has been made for comparison and confirmation of trades by counterparties immediately after negotiation of deal on the system.	In the case of government securities, the introduction of the new system may be expedited.
2. Trade confirmation/Affirmation Indirect market participants should affirm the trades as soon as possible	While the National Stock Exchange (NSE) provides access to a clearing window to the indirect participants for trade affirmation, the other major stock exchange (i.e., BSE) provides a	As soon as the trade is matched on the system of the stock exchange, in respect of exchange traded deals, trade confirmation is generated.	There is no provision for affirmation of trades by indirect market participants. Only direct market participants who are maintaining Subsidiary General Ledger (SGL) and constituent SGL accounts are	When government securities are settled through Clearing Corporation, it should be possible to introduce affirmation by indirect market participants.

after trade execution, preferably on T+0. Use of automated trade matching and automated links should be established.	telecom linkage between the brokers and the indirect participants. In the exchange based order driven system, the confirmation/ affirmation is instantaneous in domestic market. However, in case of FIIs the confirmation of trade at NSE is T+1 and on BSE it is upto T+2.		only eligible entities for confirmation of trades.	
3. Straight Through Processing (STP) STP should be the objective of Securities Settlement Systems (SSSs).	At present there is no STP. This is however, the desired objective.	At present there is no STP. This is however, the desired objective.	In case of Government securities, there is no STP . This, however, is the desired objective The software development of the project on Negotiated dealing System and PDO computerisation is in process. It is expected that with the operationalisation of full-fledged PDO computerisation and real-time gross settlement (RTGS) system, the STP will be achieved.	In case limited purpose bank status is given to National Clearing Corporation of India Ltd, STP can be achieved in equity segment. Similar status would be achieved in government securities also when Clearing Corporation, proposed to be established, would be provided limited bank status.
4. Settlement Cycles Rolling settlement should be adopted by all SSSs. Final	The markets are dominated by account period trading and are now moving towards rolling settlement in	The SEs offer flexibility on the system to trade on rolling settlement basis subject to T+5.	In case of direct deals not through exchanges settlement has to take place on trade date or on next date. In case of exchanges, trades are not	The market could move from T+5 to T+3 settlement cycle when certain improvements in payment's

settlement should occur on T+3.	phases. In the first phase, a limited set of securities has been moved to a T+5 environment. This would be expanded gradually to include all securities. Presently 163 non-specified scrips are under rolling settlement. In order to include liquid securities in rolling settlement, software development for margins in rolling settlement for carry forward scrips are in the process of development to allow carry forward in rolling settlement and continuous net settlement.		cleared on the exchange and are settled on gross trade by trade basis at the central bank within a period of T +5. The question of rolling settlement therefore does not arise.	infrastructure are in place. The market should move for rolling settlement at the earliest in all scrips, especially liquid ones. However, simultaneously the payment system also needs to be improved for effective movement of funds by implementing modern systems such as EFT and RTGS system.
5. Settlement Rate A SSS is achieving settlements within its specified settlement cycle timeframe only if at least ninety percent of the trades are settled in that time frame.	More than 99 per cent of trades settle within the specified settlement period.	Same as in previous column.	Same as in previous column.	
6. Netting Multilateral netting systems should at a minimum be capable	The rules and bye-laws of the SEs and Clearing Corporation provide for	Concept of netting in debt instruments is not applied in the absence of	Clearing Corporation is proposed to be set up for undertaking multilateral	Setting up of Clearing Corporation may be expedited. The

of ensuring the timely completion of daily settlements in the event of an inability to settle by the participant with the largest single net debit position and should evaluate the need for capability beyond this standard.	netting. The failure of one of the parties to the settlement does not affect the settlements as the Clearing Corporation acts as the legal counter party by substituting the contract between the members by novation. In the systems, where clearing house is not a counter party, guarantee funds have been set up for achieving the settlement. Most of the systems have the ability to settle even in the event of failure by three or more largest members over several settlement cycles	extension of clearing corporation facility.	netting in government securities. The risk management system recommended by G-30 on government securities settlement and even more stringent risk measures would be adopted.	Committee recommends that as the systems in equity segment have the ability to settle even in the event of failure by three or more largest members over several settlement cycles, the same may be emulated in debt segment.
7. Margining Margining and the use of collateral should be used as a method to help protect the SSS against losses resulting from a participant default. The adequacy of	In addition to maintenance of guarantee funds constant positions are constantly monitored and margins insisted upon. Margining requirements include daily margins, concentration margins and additional volatility margins. The mark-to-market margin is computed on the basis of	Not applicable as there is no netting in the settlement	Majority of the trades occur on the Negotiated market and are reported to RBI for settlement on gross trade by trade basis .	There is need for cross margining to deal with multiple exposures in various markets. The group recommends that a system of centralised collection of information, its availability to market players and relative prudential guidelines with a view to

margin requirements should be periodically reviewed. Cross-margining agreements between and among SSSs should be considered as a method to reduce liquidity pressures among common participants.	the potential loss that may arise in case the net outstanding position of the member in all the securities at the end of the day is closed out. The shortfall in the margin is made good by deposit of cheques which are realized on the following day. The adequacy of margins is constantly reviewed by the exchanges and SEBI the market regulator. The SSSs in India are distinct and specific to exchanges and there are no cross-margining agreements between and among them. However, it is a desirable standard to be achieved.			implementing cross margining across the markets should be put in place.
8.Securities Lending Securities lending and borrowing should be encouraged as a method of expediting the	Securities lending was formally permitted in 1997. The National Securities Clearing Corporation Ltd. (NSCCL) offers an automated nation-wide lending scheme. The	There is no such system.	Although a specific securities lending mechanism does not exist as of now, market participants can lend and borrow securities through Repos. It is proposed to institute such a system as part of RTGS.	Security Lending system should be put in place both in equity and debt segments.

settlement of securities transactions. Existing regulatory and taxation barriers that inhibit the practice of lending securities should be removed.	market is nascent and small largely because institutions are not allowed to borrow securities towards settlement. With introduction of compulsory rolling settlements the market is expected to pick up. SEBI, the regulator, for equity and corporate debt market is examining practices inhibiting security lending and borrowing.			
9. Central Security Depository (CSD) A CSD should be in place and the broadest possible industry participation should be encouraged.	There are two central depositories in place. The ownership of the depositories is broad-based and over time it is proposed that shareholding will be further spread over depository participants. The depositories, by virtue of the directions of the regulator, are required to interface seamlessly on a real-time basis for inter-transfer of holdings in respect of the settled trades on the exchanges.	Till recently transfer of debt securities even if held in demat form instrument were subject to stamp duty . The recent Union Budget has clarified that stamp duty will not be applicable for such demat securities ; hence demat in debt segment dormant till now is expected to pick up	The central bank (RBI) acts as the central depository for all government securities in the demat form. The transactions in government securities are free of stamp duty.	

	An important feature is that the dematerialisation route has been adopted as against immobilisation . The regulator has prescribed compulsory trading in demat form of highly liquid scrips. The demat trading will be extended to cover all the scrips. About 58% of delivery accounting for 85% of the value constitutes demat segment.			
10. Delivery versus Payment (DvP) DvP should be employed as the method for settling all securities transactions.	There is no DVP mainly due to the problems on the payments side which is still based on cheques which need to be physically moved. The issue of limited purpose bank status to Depository to facilitate DVP settlement is also being explored within the existing regulatory regime and prudential guidelines to avoid creation of any moral hazard problem. In the interregnum, the Central Bank could act on	Same as previous column	RBI settles transactions in government securities on DvP method for wholesale market participants. Intra-day liquidity and stock lending are proposed to be introduced to avoid settlement failures. At the retail level there is no DVP.	Measures may be put in place to facilitate DVP by giving limited purpose bank status to Clearing Corporations of the exchange and proposed debt Clearing Corporation. In the interregnum, the Central Bank could act on the instructions for payment settlement on its books with clear mandate from clearing corporation for effecting debit clearings amongst

	the instructions for payment settlement on its books with clear mandate from banks for effecting such debit clearings. Any shortfall in funds would be adjusted against guarantee Fund being maintained by the Central Depository. In order to achieve DVP, the solution is to extend limited purpose banking status to central depository with appropriate regulatory and prudential norms.			banks. Any shortfall in funds would be adjusted against balance being maintained by the clearing corporation with the RBI.
11. Same day Funds Payments associated with securities transactions should be made in same-day funds.	There is an overnight gap between securities and funds settlement. The funds are paid out to members in the morning and are available for use by the sellers on the same day. In a rolling settlement environment the pay-out is in the evening. While funds are credited to the account of members, they may not be able to move the funds to other banks or use them for other deals as there are	Same as previous column	The settlement is on DvP basis and funds are immediately available.	The access to fund settlement facility on the books of the Reserve Bank relating to payment associated with securities transactions would help in achieving same day fund settlement. The funds would also be available for use on the same day.

	limitations in the current payments system.			
12.Common Message Standard The standard for securities messages and the international securities identification numbering (ISIN) system developed by the International Organisation for Standardisation should be adopted.	Currently the ISIN numbering system is being used by exchanges and depositories for settlements of securities in demat form. There is need to expand the scope of common messaging standards to deal with the emerging global markets and technologies. Standards may be extended to data syntax/ formats, security identifier code, financial institutions id, technology message standards etc.	No standardized messaging exists. ISIN numbering exists.	It is proposed to adopt ISIN numbering system for all government securities along with standardised messaging formats for communication network.	