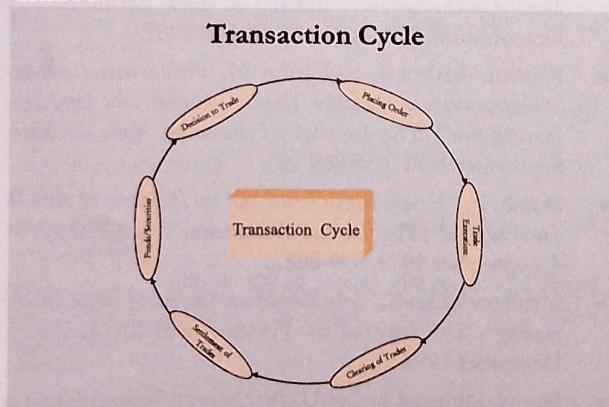


The securities settlement systems (SSS) in the corporate securities market in India have witnessed several innovations during the last decade. These include use of the state-of-art information technology, compression of settlement cycle, dematerialisation and electronic transfer of securities, securities lending and borrowing, professionalisation of trading members, fine-tuned risk management system, emergence of clearing corporation (CC) to assume counterparty risk etc., though many of these are yet to permeate the whole market. The discussion in this paper is, however, largely based on the settlement systems adopted by the National Securities Clearing Corporation Limited, the only CC in the country and by the National Securities Depository Limited, the lead depository.

## Transaction Cycle

A securities transaction cycle is presented in Chart 1. A person holding assets (securities/funds), either to meet his liquidity needs or to reshuffle his holdings in response to changes in his perception about risk and return of the assets, decides to buy or sell the securities. He finds out the right broker and instructs him to place buy/sell order on an exchange. The order is converted to a trade as soon as it finds a matching sell/buy order. The trades are cleared to determine the obligations of counterparties to deliver securities/funds as per settlement schedule. Buyer/seller delivers funds/securities and receives securities/funds and acquires ownership over them.

Chart 1:



## Settlement Process

While the stock exchange provides the platform

for trading to its trading members, the CC determines the funds/securities obligations of the trading members and ensures that trading members meet their obligations. The clearing banks and depositories provide the necessary interface between the custodians/clearing members (CM) for settlement of funds / securities obligations of trading members. The core processes involved in the process are:

**Trade Recording:** The key details about the trades are recorded to provide basis for settlement. These details are automatically recorded in the electronic trading system of the exchanges.

**Trade Confirmation:** The counterparties to trade agree upon the terms of trade like security, quantity, price, and settlement date, but not the counterparty which is always the CC. The electronic system automatically generates confirmation by direct participants. The ultimate buyers/sellers of securities also affirm the terms, as the funds/securities would flow from them, although the direct participants are responsible for settlement of trade.

**Determination of Obligation:** The next step is determination of what counter-parties owe, and what counter-parties are due to receive on the settlement date. The CC interposes itself as a central counterparty between the counterparties to trades and nets the positions so that a member has security wise net obligation to receive or deliver a security and has to either pay or receive funds.

**Pay-in of Funds and Securities:** The members bring in their funds/securities to the CC. They make available required securities in designated accounts with the depositories by the prescribed pay-in time. The depositories move the securities available in the accounts of members to the account of the CC. Likewise members with funds obligations make available required funds in the designated accounts with clearing banks by the prescribed pay-in time. The CC sends electronic instructions to the clearing banks to debit member's accounts to the extent of payment obligations. The banks process these instructions, debit accounts of members and credit accounts of the CC.

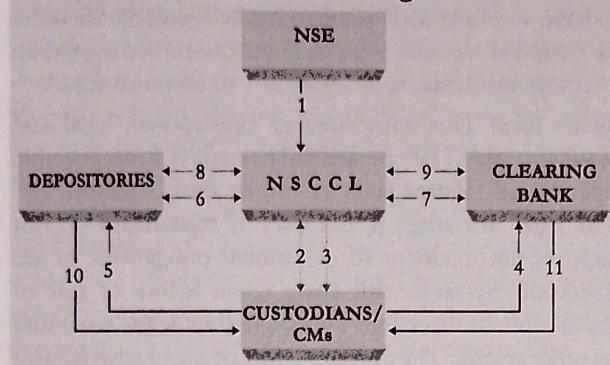
**Pay-out of Funds and Securities:** After processing for shortages of funds/securities and arranging for movement of funds from surplus banks to deficit banks

\* Economic Adviser, NSE. The views expressed and the approach suggested in this paper are of the author and not necessarily of his employer.

through RBI clearing, the CC sends electronic instructions to the depositories/clearing banks to release pay-out of securities/funds. The depositories and clearing banks debit accounts of the CC and credit accounts of members. Settlement is complete upon release of pay-out of funds and securities to custodians/CMs. The settlement process for transactions in securities in the CM segment of NSE is presented in the Chart 2.

**Chart 2:**

**Settlement Process in CM segment of NSE**



**Explanations:-**

1. Trade details from Exchange to NSCCL (real-time and end of day trade file).
2. NSCCL notifies the consummated trade details to CMs/ custodians who affirm back. Based on the affirmation, NSCCL applies multilateral netting and determines obligations.
3. Download of obligation and pay-in advice of funds/securities.
4. Instructions to clearing banks to make funds available by pay-in time.
5. Instructions to depositories to make securities available by pay-in time.
6. Pay-in of securities (NSCCL advises depository to debit pool account of custodians/CMs and credit its account and depository does it)
7. Pay-in of funds (NSCCL advises Clearing Banks to debit account of custodians/CMs and credit its account and clearing bank does it)
8. Pay-out of securities (NSCCL advises depository to credit pool account of custodians/CMs and debit its account and depository does it)
9. Pay-out of funds (NSCCL advises Clearing Banks to credit account of custodians/CMs and debit its account and clearing bank does it)
10. Depository informs custodians/CMs through DPs.
11. Clearing Banks inform custodians/CMs.

**Risk Management:** A sound risk management system is integral to an efficient SSS. The CC ensures that trading members' obligations are commensurate with their net worth. It has put in place a comprehensive risk management system, which is constantly monitored and upgraded to pre-empt market failures. It monitors the

track record and performance of members and their net worth; undertakes on-line monitoring of members' positions and exposure in the market, collects margins from members and automatically disables members if the limits are breached.

**Settlement Agencies**

The CC, with the help of clearing members, custodians, clearing banks and depositories settles the trades executed on exchanges. The roles of each of these entities are explained below:

**CC:** The CC is responsible for post-trade activities of a stock exchange. Clearing and settlement of trades and risk management are its central functions. It clears all trades, determines obligations of members, arranges for pay-in of funds/securities, receives funds/securities, processes for shortages in funds/securities, arranges for pay-out of funds/securities to members, guarantees settlement, and collects and maintains margins/collateral/base capital/other funds.

**Clearing Members:** They are responsible for settling their obligations as determined by the CC. They have to make available funds and/or securities in the designated accounts with clearing bank/depositories, as the case may be, to meet their obligations on the settlement day.

**Custodians:** Custodian is a clearing member but not a trading member. He settles trades assigned to him by trading members. He is required to confirm whether he is going to settle a particular trade or not. If it is confirmed, the CC assigns that obligation to that custodian and the custodian is required to settle it on the settlement day.

**Clearing Banks:** Clearing banks are a key link between the clearing members and CC for funds settlement. Every clearing member is required to open a dedicated clearing account with one of the clearing banks. Based on his obligation as determined through clearing, the clearing member makes funds available in the clearing account for the pay-in and receives funds in case of a pay-out.

**Depositories:** Depositories help in the settlement of the dematerialised securities. Each custodian/clearing member is required to maintain a clearing account with the depositories. He is required to make available the required securities in the designated account on settlement day. The depository runs an electronic file to transfer the securities from accounts of the custodians/clearing member to that of CC. As per the schedule of allocation of securities determined by the CC, the depositories transfer the securities on the pay-out day from the account of the CC to those of members/custodians.

## Risks in Settlement

The following two kinds of risks are inherent in a SSS:

**Counterparty Risk:** This arises if parties do not discharge their obligations fully when due or at any time thereafter. This has two components, namely replacement cost risk prior to settlement and principal risk during settlement. The *replacement cost risk* arises from the failure of one of the parties to transaction. While the non-defaulting party tries to replace the original transaction at current prices, he loses the profit that has accrued on the transaction between the date of original transaction and date of replacement transaction. The seller/buyer of the security loses this unrealised profit if the current price is below/above the transaction price. Both parties encounter this risk as prices are uncertain. It has been reduced by reducing time gap between transaction and settlement and by legally binding netting systems. The *principal risk* arises if a party discharges his obligations but the counterparty defaults. The seller/buyer of the security suffers this risk when he delivers/makes payment, but does not receive payment/delivery. This risk can be eliminated by delivery vs. payment mechanism which ensures delivery only against payment. This has been reduced by having a central counterparty which becomes the buyer to every seller and the seller to every buyer. A variant of counterparty risk is *liquidity risk*.

which arises if one of the parties to transaction does not settle on the settlement date, but later. The seller/buyer who does not receive payment/delivery when due, may have to borrow funds/securities to complete his payment/delivery obligations. This has been reduced by provision for stock lending and margin trading. Another variant is the *third party risk* which arises if the parties to trade are permitted or required to use the services of a third party which fails to perform. For example, the failure of a clearing bank which helps in payment can disrupt settlement. This risk has been reduced by allowing parties to have accounts with multiple banks. Similarly, the users of custodial services face risk if the concerned custodian becomes insolvent, acts negligently or commits fraud.

**System Risk:** This comprises of operational, legal and systemic risks. The operational risk arises from possible operational failures such as errors, fraud, outages etc. The legal risk arises if the laws or regulations do not support enforcement of settlement obligations or are uncertain. Systemic risk arises when failure of one of the parties to discharge his obligations leads to failure by other parties. The domino effect of successive failures can cause a failure of the settlement system. These risks have been contained by enforcement of an elaborate margining and capital adequacy standards to secure market integrity, settlement guarantee funds to provide

**Table 1: Settlement Cycle in CM Segment of NSE**

Day	Activity				
Day 1, Monday	Trading	—	—	—	—
Day 2, Tuesday	—	Trading	—	—	—
Day 3, Wednesday	Custodial Confirmation; Determination of obligations	—	Trading	—	—
Day 4, Thursday	—	Custodial Confirmation; Determination of obligations	—	Trading	—
Day 5, Friday	—	—	Custodial Confirmation; Determination of obligations	—	Trading
Day 8, Monday	Securities/funds pay-in/ pay-out	—	—	Custodial Confirmation; Determination of obligations	—
Day 9, Tuesday	Auction for shortages	Securities/funds pay-in/ pay-out	—	—	Custodial Confirmation; Determination of obligations
Day 10, Wednesday	—	Auction for shortages	Securities/funds pay-in/ pay-out	—	—
Day 11, Thursday	Auction pay-in/pay-out	—	Auction for shortages	Securities/funds pay-in/ pay-out	—
Day 12, Friday	—	Auction pay-in/pay-out	—	Auction for shortages	Securities/funds pay-in/ pay-out
Day 15, Monday	—	—	Auction pay-in/pay-out	—	Auction for shortages
Day 16, Tuesday	—	—	—	Auction pay-in/pay-out	—
Day 17, Wednesday	—	—	—	—	Auction pay-in/pay-out

counter-party guarantee, legal backing for settlement activities, business continuity plans, etc.

### Settlement Cycle

The NSCCL clears and settles trades executed on NSE as per well-defined settlement cycle. The settlement cycle for the CM segment of NSE is presented in Table 1. The NSCCL notifies the consummated trade details to clearing members/custodians on the trade day. The custodians affirm back the trades to NSCCL by T+2 day. Based on the affirmation, NSCCL nets the positions of counterparties to determine their obligations. A clearing member has to pay-in/pay-out funds and/or securities. A member has a security-wise net obligation to receive/deliver a security. The obligations are netted for a member across all securities to determine his fund obligations and he has to either pay or receive funds. Members' pay-in/pay-out obligations are determined latest by T+2 day and are forwarded to them on the same day so that they can settle their obligations on T+5 day. The securities/funds are paid-in/paid-out on T+5 day and the settlement is complete in 5 days from the end of the trading day.

### Settlement Efficiency

During last couple of years, the SSS in India has improved considerably. This is evident from the benchmarks of settlement efficiency (Table 2). These benchmarks, which are expressed as a score out of 100, provide an indication of the aggregate level of post-trade operational efficiency in securities markets. The settlement benchmark tracks the evolution of settlement performance over time. It improved from 8.3 in 1994 to 59.6 in 2000. The safekeeping benchmark indicates the efficiency of a market in terms of collection of dividends and interest, reclamation of excess withheld taxes, and protection of rights in the event of a corporate action. India's score for safekeeping improved from 71.8 in 1994 to 81.9 in 2000. The operational risk benchmark takes into account the settlement and safekeeping benchmarks and also other operational factors such as the level of compliance with the G30 recommendation, the complexity and effectiveness of the regulatory and legal structure of the market, and counterparty risk. India scored 51.4 out of 100 in operation risk benchmark in 2000 as compared to 28 in 1994.

**Table 2: Benchmarks of Settlement Efficiency**  
(Scores out of 100)

Benchmark	1994	1995	1996	1997	1998	1999	2000
Settlement	8.3	-16.8	-0.7	-1.2	10.0	41.9	59.6
Safekeeping	71.8	75.0	76.6	76.8	69.7	78.1	81.9
Operational Risk	28.0	0.0	16.8	23.5	47.3	43.6	51.4

Source: S&P Emerging Stock Markets Factbook 2001

### International Standards

The international standards have been instrumental in improving safety and efficiency of the SSS. There are two major streams of standards - one initiated in the private sector and the other in the public sector - which culminated in the ISSA Recommendations 2000 and the BIS-IOSCO Recommendations 2001 respectively.

In the wake of failures in the market around the world in 1987, G30, a private sector group, laid down in 1989 the clearing and settlement standards. These standards aimed at reducing risk, improving efficiency and performing greater standardisation in securities settlement. The standards included comparisons of trade between direct market participants by T+0, an effective and fully developed central securities depository, a trade netting system, a DvP system, "same day" funds convention for payments, T+3 rolling settlement, securities lending and borrowing mechanism, adoption of ISO standard for securities messages and the ISIN numbering system for securities transactions. The Federation Internationale des Bourses des Valeurs (FIBV) updated G30 recommendations in 1996. The International Securities Services Association (ISSA) reviewed G30 recommendations in the light of changes in key risks in the clearing and settlement and infrastructure and replaced them by ISSA Recommendations 2000. These recommendations cover issues of securities systems' governance, technology, technical standards, market practices, settlement risk, market linkages, investor protection and legal infrastructure.

The initiatives in the public sector have genesis in the 30 principles of securities regulations enunciated by IOSCO in 1998. The Committee on Payment and Settlement Systems (CPSS) of BIS evolved core principles for systemically important payment systems in 2001. In view of potential of the SSS to be a source of systemic disturbance to other payment and settlement systems, BIS and IOSCO constituted a task force to promote implementation of such measures as would enhance international financial stability, reduce risks, increase efficiency etc. The task force has made 19 recommendations in 2001 covering legal risk, pre-settlement risk, settlement risk, operational risk and other issues. It is yet to come up with a comprehensive methodology for assessing progress towards implementation of these recommendations.

**Table 3: Indian Securities Settlement Systems vis-à-vis ISSA Recommendations 2000**

**Governance:** The SSS (Depositories/CC) have a primary responsibility to their users and other stakeholders. They must provide effective low cost processing. Services should be priced equitably.

**Q.** Are the boards that govern the SSS answerable to its users?

**A.** The boards are not explicitly answerable to its users, but to their promoters and the regulators. The promoters are, however, banks, insurance companies and financial institutions.

**Q.** Does any single organisation, or a sector have a large voting position at the board of the SSS?

**A.** There are dominant shareholders in the depositories/CC.

**Q.** Is there cross subsidisation of products (e.g. international services subsidised by local ones or transaction costs subsidised by asset servicing charges)?

**A.** The depositories do not charge the investors and clearing members directly but charge its participants uniformly, who are free to have their own charge structure for their clients. However, the charges levied by depositories from participants and by participants of the same depository from clients vary widely.

The CC does not levy any fee directly from members, but shares the transaction fee levied by the exchanges.

These charges have reduced drastically over time with increase in volumes.

**Q.** What process is in place at the SSS to ensure that it meets the needs of all its stakeholders (e.g. institutions, broker dealers, retail investors, issuers)?

**A.** The SSS, being companies, are governed by the Companies Act, 1956 which prescribes operational and financial standards. Besides, a depository is governed by the Depositories Act, 1996 and the regulations made there under. A CC is governed by the rules and regulations made under the SCRA, 1956. They generally evolve policies in consultation with the regulator and various committees which comprise of representatives of users and eminent persons.

**Q.** What is the communications strategy of the SSS to its stakeholders and how is this run?

**A.** The SSS maintain websites and disseminate

information through press releases, circulars and newsletters. They hold annual general meetings and publish annual reports detailing its actions and plans as well as financials.

**Technology – Core Processing:** Securities Systems must allow the option of network access on an interactive basis. They should cope with peak capacity without any service degradation, and have sufficient standby capabilities to recover operations in a reasonably short period within each processing day.

**Q.** How often, over the last twelve months, have the SSS been required to change its published settlement timetable?

**A.** There has been no disruption of settlement schedule drawn by CC. The depositories adhere to the settlement schedules.

**Q.** Do the SSS operate real time or multiple batch processing for settlement?

**A.** The CC settles the trades in batches. But the depositories process the batches on real time. They also do real time settlement for off-market trades.

**Q.** Do the SSS allow interactive communication (on line real time) with its users, enabling settlement input and amendment?

**A.** Though securities are settled in batches, there is online real time interactive communication between the CC and the depositories, clearing bank and clearing members/custodians. The depositories also have interactive communication with their participants, and allow demat account holders to submit delivery instructions directly on the internet.

**Q.** Have the SSS ever failed to recover an outage within a reasonable time and what steps have been taken to prevent a similar event in the future?

**A.** This has never occurred. The depositories and the CC, however, maintain disaster recovery sites.

**Technology – Messaging and Standards:** The industry worldwide must satisfy the need for efficient, fast settlement by full adherence to the International Securities Numbering process (ISO 6166) and uniform usage of ISO 15022 standards for all securities messages. The industry should seek to introduce a global client and counterpart identification methodology (BIC-ISO 9362) to further facilitate straight through processing. Applications and programmes should be structured in such a way as to facilitate open inter-action between all parties.

**Q.** Does the market use ISIN as the primary securities identification code?

**A.** The market uses ISINs for all demat securities. Over 99% of value of securities are settled in demat form.

**Q.** Are the major participants in the market linked electronically?

**A.** The major exchanges provide nation-wide satellite links. The exchanges are also connected to CC which is connected to clearing banks, depositories, custodians and members electronically. Paper instructions are generally not used.

**Q.** Do the SSS communicate using true (i.e. not bilaterally agreed on sub-standards) ISO standards for securities messaging?

**A.** The depositories have bilaterally agreed automatic interfaces with participants and clearing agencies. The message structure is based on SWIFT standards. ISO standards are yet to be adopted in India.

**Q.** Does the market operate standard identification codes for counterparties or client accounts and, if so, how do these fit into a single global identification methodology?

**A.** The regulator has made it mandatory for all brokers to use unique client code for all clients. The depository participants have a unique identification numbers and they, in turn, allot client identification numbers. The market is yet to adopt universal client identification/global identification methodology.

***Uniform Market Practices:*** Each market must have clear rules assuring investor protection by safe guarding participants from the financial risks of failed settlement and ensuring that listed companies are required to follow sound policies on corporate governance, transfer of economic benefits and shareholder rights.

**Q.** Does the market have securities lending and borrowing schemes in place, and are these open to all market participants and their settlement agents?

**A.** There is a securities lending and borrowing scheme in place. The FIIs can lend, but can not borrow.

**Q.** Does the settlement system mark fail trades to market and collect margin from the failing counterparty to protect the innocent counterpart's interest?

**A.** The CC identifies the short deliveries and conducts

a buy-in auction on the day following the payout day. The clearing member is debited on the pay-out day by an amount equivalent to the securities not delivered, and valued at a valuation price based on the closing price on the previous day. If the buy-in auction price is more than the valuation price, the clearing member is liable for the difference. All shortages not bought in are deemed closed out at the highest price between the first day of the trading period until the day of squaring off, or closing price on the auction day plus 20%, whichever is higher. This amount is credited to the receiving member's account on the auction payout day.

**Q.** Does the market operate a guarantee fund or have an equivalent procedure to protect against the cost of failed transactions; and which sectors of the market does it cover?

**A.** The exchanges maintain Settlement Guarantee / Trade Guarantee Funds and use these funds for meeting shortages arising out of non-fulfillment/ partial fulfillment of the funds obligations by the members in a settlement before declaring him a defaulter. There is no limit on pay-out per incident and all legitimate claims are honoured.

The exchanges can use up to 25% of their guarantee funds to cover failures of payment during the allotment of IPOs for shares offered through them.

Exchanges maintain an Investor Protection Fund to take care of investors' claims arising out of non-settlement of obligations by a defaulter member. There is a limit on the amount payable per investor claim.

**Q.** Are the stock transfer agents (share registrars) linked electronically to the depository?

**A.** Registrars and transfer agents are electronically linked to both the depositories. The depositories transfer securities electronically.

**Q.** Is there a legal maximum time period to complete ownership transfers in the books of the issuer? If so, does market practice adhere to the deadline?

**A.** The Companies Act, 1956 requires companies to effect the transfers within 60 days. The listing agreement requires transfer within 30 days. However, the dematerialized securities are freely transferable and depositories effect such transfers



instantaneously. Over 99% of securities transactions are currently settled in demat form.

**Q.** Are investors entitled to all benefits arising on a security from the point of purchase; and how are these rules enforced?

**A.** Based on the record date/book closure, the exchanges determine 'no-delivery' period during which securities are traded ex-benefits and before that cum-benefits. The purchaser gets all the benefits from the date of purchase before no-delivery period. Physical securities require registration of transfer in favour of purchaser in order to entitle him to corporate actions.

**Q.** Is proxy voting permissible in the market and can such proxies be lodged by post or other remote delivery method?

**A.** A proxy can attend and vote at the meeting of the company, but can not participate in the deliberations. The document appointing a proxy need to be deposited at least 48 hours before the meeting. It is possible for a member to caste his vote by post also.

**Q.** Are there binding rules in the market stating the minimum and maximum lapsed time between the announcement and completion of key events, including registration, the calling of shareholder meetings, the payment of dividends or interest, rights issues, tender offers and other voluntary corporate actions?

**A.** These are prescribed in the Companies Act, 1956 and the listing agreements. For example, a share transfer shall be registered within 60 days of presentation, the dividend shall be paid to shareholders within 30 days from the date of declaration, annual general meeting shall be held every year and not more than 15 months shall lapse between two such meetings, at least 21 days' notice shall be given for general meetings, book closure not more than 45 days in a year and not more than 30 days at a time, etc.

**Q.** Are all voluntary corporate actions advised through a central mechanism assuring consistent information to all investors?

**A.** Ex-dates for voluntary corporate actions are announced by the exchanges. These may differ among exchanges and on the same exchange for

physical and dematerialized shares. These are disseminated through the web sites of the company, exchanges and depositories.

The regulator is working towards putting in place an integrated source of company information, which will be accessible through a web site on lines similar to that of Electronic Data Gathering, Analysis and Retrieval (EDGAR). All company related information, which is mandatorily required to be filed by the companies with the exchanges under the listing agreement, would be available at one location in electronic form.

**Q.** Is information on corporate actions available electronically, and is the minimum lapsed time for responding to such actions sufficient to enable all domestic and foreign investors to respond in a timely and considered fashion?

**A.** The exchanges notify members of corporate actions through their websites and circulars. These are also available on the web site of the company and the depositories. Generally, sufficient time is available to all investors to respond to corporate actions.

*Reduction of Settlement Risk: The major risks in securities systems should be mitigated by five key measures, namely real delivery versus payment, trade date plus one settlement cycle, the minimisation of funding and liquidity constraints, scrip-less settlement, and mandatory trade matching and settlement performance measures.*

**Q.** Does the market use DvP settlement procedures in accordance with one of the recognised BIS models?

**A.** The market uses a variant of BIS model 3 that settles transfer instructions for both securities and funds on a net basis, with final transfers of both securities and funds occurring at the end of the processing cycle. The CC applies multilateral netting to determine obligations of members who have a security wise net obligation to receive/deliver and a fund obligation to pay/receive. The members pay-in fund/securities to the CC which in turn effect pay-out funds/securities to them. The CC has full control over receipts and payments and does not make pay-out unless pay-in has been received. This is akin to DvP in the sense that there is no principal risk, that is, a member making pay-in is guaranteed of pay-out.

**Q.** Does the market have a rolling settlement cycle of T+3 or shorter for all exchange traded instruments?

**A.** 414 active securities are traded under T+5 rolling settlement till recently. All other securities followed account period settlement, but have moved to T+5 rolling settlement from December 2001.

**Q.** Could the market reduce the current settlement period to T+2 or below, without increasing fails rates? If so, how would this be achieved, and what plans are there to shorten the existing settlement cycle?

**A.** Limited availability of EFT constrains shorter settlement cycle. EFT is available only at 15 centres covering 8500 bank branches and that too, for values not exceeding Rs. 2 crore per transfer. The regulator is working towards moving to T+3 rolling settlement from April 2002 and to T+1 rolling settlement by the end of 2002.

**Q.** Is matching of trade details achieved on trade date, at least for direct market participants; and by trade date plus one for indirect participants?

**A.** Trades are executed on screen and matched trade details are linked to settlement system electronically. Hence matching of trades for direct participants is instantaneous. The custodians affirm trade details on T+2 basis.

**Q.** Is the depository scrip-less, and, if not, is it working to enable scrip-less settlement?

**A.** The depositories maintain ownership records of dematerialised securities and transfer the ownership electronically in book entry form.

**Q.** Does the market allow partial settlements?

**A.** The participants accept partial deliveries. There is a mechanism to deal with short deliveries.

**Q.** Can the depository accommodate same day turnarounds?

**A.** The depositories do so for off-market transactions. Since institutions are required to do only delivery based transactions on exchanges and CC processes settlement in batches, same day turnaround is difficult.

**Market Linkages:** Convergence of Securities Systems, both within countries and across borders, should be encouraged, where this eliminates operational risk, reduces cost and enhances market efficiency.

**Q.** Is the depository linked electronically and in real time with other segments of the core market infrastructure (e.g. trading platforms, netting systems, payment systems)?

**A.** The depositories have secured real time linkages with CC which is connected with trading platform, netting and payment system.

**Q.** Is there one or more depository or settlement system in the market?

**A.** Each stock exchange has its own clearing agency. There are two depositories which are linked to most of the exchanges/clearing agencies.

**Q.** If there are several, has a consolidation been considered? If yes, by when?

**A.** The consolidation of trading and settlement system is left to market forces. There are 24 stock exchanges with equal number of clearing agencies and two depositories. The law encourages multiple agencies in the interest of competition.

**Q.** Does the securities system allow foreign systems to establish direct links on an equal basis to local members?

**A.** The system does not allow external agencies to participate in the securities system.

**Q.** Does the securities system allow foreign market participants to become direct participants?

**A.** The system does not allow foreign intermediaries to become direct market participants. They become direct participants through their local subsidiaries or joint ventures with local partners.

**Investor Protection:** Investor compliance with the laws and regulations in the home countries of their investments should be part of their regulators' due diligence process. Investors, in turn, should be treated equitably in the home country of their investments especially in respect to their rights to shareholder benefits and concessionary arrangements under double tax agreements.



**Q.** Do domestic regulators monitor the procedures in place at their locally based cross-border custodians to assure compliance with the laws and regulations of the home countries of their investments?

**A.** SEBI regulates locally-based cross border custodians and RBI maintains oversight for foreign and local banks licensed to operate in India.

**Q.** What are the areas (e.g. benefits, investor compensation) where foreign investors are not treated in the same way as local investors?

**A.** The foreign investors are generally treated at par with domestic institutional investors. However, there are ceilings on investments by OCBs, NRIs, PIOs, and FIIs. The FIIs can not engage in short selling, turnaround trading and securities borrowing.

**Q.** Can sales proceeds and income be repatriated without any restrictions?

**A.** These can be repatriated only after certain tax compliance.

**Q.** Are double tax agreements simple to apply, and do foreign investors receive promptly their full entitlement to dividends and interest payments?

**A.** The double taxation agreements are simple to apply. The dematerialisation has helped foreign investors to receive their entitlements promptly.

**Legal Infrastructure:** Local laws and regulations should ensure that there is segregation of client assets from the principal assets of their custodian; and no possible claim on client assets in the event of custodian bankruptcy or a similar event.

**Q.** Under local rules and regulations, what are the segregation requirements for keeping client assets and custodian assets in the depository?

**A.** The brokers and depository participants are required to segregate their assets from those of their clients.

**Q.** How are clients' assets protected in the event of insolvency of a custodian or depository?

**A.** The securities held with a custodian or depository can not be attached in case of insolvency, as they are not legal owners.

**Q.** Does local law recognise the existence of beneficial owners who may differ from the legal owner of a security?

**A.** The Depositories Act, 1996 explicitly created legal

owners and beneficial owners for dematerialized securities. While the depository is the registered owner of the securities, the investors are beneficial owners.

**Q.** Does local law clearly define the point of time when a settlement, both for the security and the cash involved, achieves finality and thus cannot be unwound?

**A.** The settlement is complete with pay-out of securities/funds to members. In fact once a trade is executed bona fide; it is eventually be settled and can not be unwound in between.

**Q.** Does a pledgee have an absolute right to realise their security at all times?

**A.** The pledgee generally has such a right. On receipt of a notice from the pledgee, the depository records him as the beneficial owner in respect of pledged securities.

**Q.** Does the depository have loss sharing provisions in its rules, and how would these be applied?

**A.** The depositories indemnify the beneficial owners of securities for any loss caused to them due to the negligence of the depositories or their participants. The depository can, however, recover the loss from the participant responsible for loss. Besides, the depositories have taken comprehensive insurance for business risk and system risk.

Table 3 attempts to assess Indian SSS for corporate securities in terms of ISSA recommendations, which have become universal benchmarks. The Indian SSS seems to have met most of the recommendations in spirit, if not in letters. For example, the SSS may have dominant shareholders or their boards may not be accountable to users directly, but there are systems in place in the form of executive committee or Committee on Settlement Issues to receive input from users. The key areas where substantial improvements are required to fully comply with ISSA standards are governance of SSS, messaging standards, and risk management. More importantly, the SSS model, as implemented by NSCCL, needs to be replicated for the whole market.

**Reference:** International Securities Services Association (2000), Recommendations 2000.

