

EXECUTIVE SUMMARY

Indian securities markets have undergone many changes during the last decade. Exponential growth in trading volumes is pushing existing trading systems and processes to capacity and increasing settlement risk. With Indian market moving to a T+3 rolling settlement cycle in line with global markets, SEBI is continuing its efforts to increase the efficiency and transparency in Indian markets. This would result in lowering of trade costs and make Indian markets a more attractive destination for global investors. Indeed it has been SEBI endeavor to make the Indian markets, one of the most competitive and efficient markets of the world.

The move from a 5 day settlement period to a three day period requires firms to streamline trading processes by way of a foolproof, faster, cost effective and universally acceptable mode of communication among market participants. With changes happening in rapid succession, derivatives markets looking to expand, the settlement risk are increasing and this is pushing the need for Straight Through Processing (STP) and making it a pre-requisite for success of smooth functioning of securities market with a settlement period of T + 3 or less.

Straight-through Processing (“STP”) involves electronically capturing and processing transactions in one pass, from the point of first “deal” to final settlement. Current practices involve costly multiple data re-entry from paper documents and other sources that are susceptible to errors, discrepancies, delays and possible fraud.

STP enables orders to be processed, confirmed cleared and settled in a shorter time period, more cost effectively and with fewer errors than under traditional methods such as phone, fax, email etc. that require human intervention. It is the human element that slows the trade processes, introduces errors and delays settlement.

Broadly the benefits of STP can be listed as:

1. Reduced Settlement Cycle

Reducing the settlement cycle, the time between execution to settlement, will eliminate many of the risks associated with trade processing. Achieving seamlessness will be an enabler for these shorter settlement cycles to assist both domestic and cross-border trades in Indian securities. You cannot get to T+1 without seamless connectivity.

2. Transparency / Audit ability

Managing trades within a single automated process will improve the transparency of the trade status for all parties and will enable organisations (and possibly the regulator) to monitor the process in terms of effectiveness, adherence to regulation and will enhance problem resolution.

3. Reduces Counterparty Risk

Once a trade has been executed there is an element of uncertainty between all parties on the status of the trade and, indeed, whether the trade will settle until it is matched at the exchange. We see in many markets that, for a great proportion of the trades, matching does not take place until settlement date, leaving no time to repair the trade for settlement on time. Trades agreed by all parties and set-up ready for settlement will also reduce the exposure in the event of counter party failure.

4. Reduces Operational Risk

Automating the process from execution through to settlement will, by definition, reduce the manual processes and provide a more timely and accurate process. In avoiding the delays and errors in this manual process you and your trading counterparts will substantially reduce the exceptions. Exception processing is costly.

5. More timely exception processing

Whilst STP will not eliminate all the errors, the point that is often missed is that the earlier the trade is processed the earlier the exception will be identified. This will enable the timely resolution of any problems on the trade date to avoid settlement failure and the costly process of resolution, correction and interest claims.

6. Performance Measurement

It is often said that you cannot manage what you cannot measure. This is true of the trade process and counterparty performance. Management of information throughout the process will be the key to determine success, not only in your own process, but also that of your counterparts. Measure against an industry code of practices and peer groups will help to create the discipline in the market. We should not discount the possibility of publishing performance tables - a case of naming and shaming - to further concentrate the mind.

7. Improve attractiveness of Indian market

Markets throughout the world are continually looking for new investment opportunities. Foreign Investment into India will be determined, not only, on investment opportunity but also on the

operational efficiency and risk profiles of the Indian market. Introducing a process with regulatory oversight will only enhance India's profile and therefore its attractiveness to foreign investment.

Critical success factors for STP:

- ? Open standard protocols and message standards that are in compliance with best international standards, and
- ? Cooperation between the different market participants and users to ensure that common practices are established and followed.
- ? A robust financial infrastructure that links the main exchanges and clearing houses together, including direct computer linkage with the payment system.
- ? Cooperation with the regulatory and tax authorities in ensuring that electronic data/documents and electronic signatures are legally acceptable.

The Committee was set out to

- ? Identify components of the current life-cycle of trade from origination to settlement that involves manual intervention.
- ? Identify and establish messaging standards for information communication
- ? Identify options for establishment of a communications backbone that will enable data transfer across participants in a secure and efficient manner and matter connected therewith.

Subsequent to a detailed comparison of the trade cycle for both domestic as well as cross border trades, the committee identified certain areas that needed to be automated on a priority basis.

These are as follows:

- ? Broker contract note information transfer from broker-dealer to sub-custodian and the mutual fund/FII
- ? Pre-match advice to the broker-dealer
- ? Domestic Mutual Funds' trade data flow to/from the sub-custodian

It was agreed that in these processes, certain participants were already enjoying a fair degree of automation especially in case of cross border/FII trades.

The Committee studied a few international experiences in achieving STP. It was observed that most organizations develop their own front and back office systems which communicate in a particular manner. Also, some firms are highly automated while others are not so automated. This will affect achieving higher levels of STP. Further complicating the issue is the availability and proliferation of message standards like FIX, ISO7775, etc. Thus, as there is no standard for the industry as a whole, there is no interoperability between disparate systems which have made it very difficult to get complete and satisfactory connectivity. Here the committee was unanimous that in an industry wherein there are no solutions already in place, it would be worthwhile to mandate messaging standards so that interoperability can be achieved leading to better connectivity between participants. An analogy that can be drawn here is that almost all people know to speak but proper communication is possible only if they speak the same or a common language. A common messaging standard like ISO15022 will go a long way in overcoming this problem. Message templates based on ISO 15022 formats are appended to this report in **Annexure IV**. The proposed ISO 15022 XML standards will also address derivatives and enhancement of scope of STP to this product suite will follow migration to XML.

Recommendations:

1. On-line Connectivity between the depositories to permit easier settlement.
2. Recognition of electronic contract notes as a legal document as an alternative to paper based contract notes.
3. Adoption of ISO 15022 standards for financial messaging.
4. Amendment to the laws/regulations/bye-laws etc. to provide for recognition of paperless form of data and records. The Committee has already identified and made a list of bye-laws/regulations etc. that need to be changed in order to move to a paperless environment. The list is given as **Annexure III**. The list may not be exhaustive and any other amendments to any other law may be brought to the notice of the Board so that the same may be amended.
5. There are certain issues relating to the payment system that need to be addressed on a priority basis. However, these do not fall under the purview of SEBI and the matter has to be referred to RBI for action at their end. The first is the strong need to have the **Real Time Gross Settlement** system in place so that settlement of funds takes place fast. The RBI has already indicated that the RTGS system would be in place by June 2003. This would help in creating better synergy between settlement of funds and securities at the same time and true Delivery v/s

Payment system is achieved. Meanwhile, the Electronic Funds Transfer (EFT) facility of the RBI may be increased in terms of its coverage and the value so that payments may be made faster.

Introduction

The Indian securities market has seen a rapid expansion since the decade of the nineties in terms of the amount of capital raised from the primary market, the number of stock exchanges and other intermediaries, market capitalisation, trading volumes and turnover on stock exchanges and investor population.

Far-reaching developments have taken place in the secondary market also over the past decade. The number of recognized stock exchanges increased to 24. Diverse forms of organizational structures have been chosen by these exchanges. Some of them are body corporate, association of persons, companies limited by shares or guarantees. Considerable corporatisation and professionalisation of broking industry has already taken place. Market capitalisation of securities of Indian companies traded was INR 6122.24 billion as on March 31, 2002. The daily turnover on the stock exchanges was around Rs.60 billion in 2002. The stock exchanges are fully computerised and have screen based automated trading. The trading in the securities market have been dematerialised, for a large number of securities and more than 99% of the deliveries are in dematerialised securities. Margining system has now been moved to a Value at Risk approach.

Currently, the markets are following a T + 3 approach for settlement of trades. All trades executed are settled on T + 3 basis wherein pay-in of funds and securities takes place in the morning and pay-out of funds and securities takes place in the evening. However, the systems followed for settlement and other trade processing are primarily manual in nature and have the following lacunae:

- Manual intervention.
- Trade mismatches.
- Short sales and cancellation of trades

This is a very undesirable scenario and reflects poorly on the efficiency of the capital markets in India.

Recently, the Government has announced its intention of reducing the settlement cycles from T + 3 to T + 2 and finally to T + 1 over the next few years. Shorter settlement cycles will mean more pressure on trade processing systems so that funds/securities are ready for pay-in/pay-out on the next day. In a manual environment, with the current volumes, it is almost impossible to meet tighter settlement deadlines without automating trade processing and removal or reduction of manual intervention.

To overcome the difficulties of the manual processing and smoothly transcend into shorter settlement cycles, it is vital to have Straight through Processing (STP) and Real Time Gross Settlement (RTGS) in place. STP, the move to automate trade processes from initiation to execution to settlement, promises to help market participants adapt to changes successfully and economically. To assess the feasibility and suitability of introducing STP in Indian markets, SEBI set up the Committee on 19-February-2002 under the Chairmanship of Shri R.M. Joshi, Executive Director, SEBI.

The SEBI Committee for implementation of STP in Indian markets was constituted with the aforementioned term. The Committee in their first meeting decided to approach the matter under reference through following steps:

- ? Identification of components of the current life-cycle of a trade that involves manual intervention
- ? Identifying and establishing messaging standards for information communication
- ? Identifying options for establishment of a communications backbone that will enable data transfer across participants in a secure and efficient manner.

The Committee comprised the following:

Shri R.M. Joshi, Executive Director, Securities And Exchange Board Of India

Shri S. Ganesh Kumar, DGM, Reserve Bank of India

Shri Vikram Subrahmanyam, Vice-President, Citibank

Shri Anand Natrajan, Vice-President, Standard Chartered Bank

Shri Hitendra Patil, Vice-President, Central Depository Services (India) Ltd.

Shri Jayesh Sule, Vice-President, National Securities Depository Ltd.

Shri S.T. Gerela, CEO Settlements, The Stock Exchange, Mumbai.

Shri Raghavan Putran, Director, National Stock Exchange of India Ltd.

Ms. Nina Nagpal, Vice-President, JM Morgan Stanley Securities India Limited

The committee also invited other persons from various organizations or associations to provide input on various issues.

The committee's mandate has been confined to STP only. The committee has deliberated on a few issues and its report is based on reducing manual intervention in the trade process, reduction of paper and standardization of messaging protocols. However, the report also finds mention of issues like RTGS, stamp duty, etc. These are mentioned only as ancillary issues and do not directly impact the introduction of STP. Report of the committee regarding matters under reference is produced below:

Components of Post Trade Life Cycle

In the present system, the client places an order with the broker, who in turn inputs them into the screen based trading system of the stock exchanges. After the deal is confirmed, the stock exchange gives the data to the broker who prints contract notes from his database for each client. Thus electronic form of data is converted into physical form. He also sends an ETC (Electronic Trade Confirmation) message to the client, in case of FII trades, who may accept or reject the deal based on his internal tolerances. The contract notes are also faxed to the clients who input these into their system for valuation and accounting (in case of institutional clients). At this time, paper form of data is again converted into electronic form at the clients' level. A copy of the contract note is also sent to the local custodian for his record who again enters the entire contract note into his system, again resulting in re-entry of the same data. The lifecycle of a domestic/cross border trade deal is depicted in **Annexure 1**.

The Committee studied the transaction cycle and identified areas that would require automation on a priority basis.

The following were identified for addressal in the first wave:

- ? Broker contract note information transfer from broker-dealer to sub-custodian and the mutual fund
- ? Pre-match advice to the broker-dealer
- ? Domestic Mutual Funds' trade data flow to/from the sub-custodian

The following elements of a trade life cycle are automated to a large extent, although messaging standards tend to be disparate and communication is determined bilaterally:

- ? Trade Confirmation between Custodian and Clearing Corporation
- ? Securities settlement instruction between Custodian/Depository Participant and the Depository

Contract Notes:

The Committee studied the transaction cycle and identified areas that would require automation on a priority basis. Contract Notes are currently generated in physical form by brokers and manually delivered to the investors and custodians. Contract notes are then input into transaction processing systems by the investor and the custodian. The process of manual generation, delivery and input is operationally cumbersome, and fraught with operational risk, especially when volumes increase.

Efficiency improvement in data transfer requires the following:

- ? Delivery of contract note information electronically in a secure and standard form
- ? Legal recognition to a digitally signed electronic contract on the same footing as a physical contract note.

- ? Consequent to the enactment of the Information Technology Act, 2000 (with the consequential amendment to the Bankers' Books Evidence Act, 1891), SEBI permitted use of electronic contract notes (ECN) in the market as per circular dated December 15, 2000. Further, SEBI is already recommending to its Board to allow maintenance of records in electronic form which would cover all the Regulations of SEBI.

Market participants may be permitted to use electronic contract notes subject to them carrying the same details as a physical contract note. Also, the new ECN may include features/fields for Form A and Form B type of contract notes to differentiate between client and proprietary trades. The Committee is aware that under the current scenario there is a lack of adequate Certifying Agencies (CA) to digitally certify contract notes. However, as implementation of STP gets underway, we expect the market to come up with more CAs. An observation made here was that there were a few international players having the expertise of generating contract notes in electronic form. However, these ECNs were certified by CAs not registered in India. In this regard, a reference may also be made to the government to grant legal recognition to ECNs certified by an overseas CA as existing players related to capital market are global and do not have an existence in India. The Committee has listed in **Annexure III** the various rules and regulations as well as other statutes that require amendment. The Committee is of the opinion that SEBI should take steps to make a reference to the respective legislative authorities so that amendments, if any required, may be done at the earliest.

The members of the committee were of the view that Stamp-duty payable on Contracts may need to be waived as a result of the conversion of the Contract Notes to Electronic form. This matter comes under the purview of respective State Governments in which the contract is

executed / initiated. Keeping in view the fact that issuance and maintenance of contract notes in electronic form requires a considerable one time and recurring investment, imposition of stamp duty would push up the transaction cost which is not desirable and may defeat the very purpose of introducing STP. SEBI may, therefore, consider writing to all State Governments for relaxing this Stamp-duty so as to reduce the transaction cost.

Communication/connectivity:

During a typical trade, a client initiates a trade request with a broker. The broker, upon receipt of the request, handles execution of the trade and then notifies the client as to the outcome. During execution, a series of messages are sent back and forth between the client and the broker to confirm the trade and provide critical details such as portfolio allocations, quantity and pricing. Next, the fund manager / broker must submit this information to the custodian bank and proceed through a series of communiqués to settle the trade and transfer money as necessary. Bringing together the internal and external processes from execution to settlement would necessarily involve multiple communications with multiple counter parties. Thus, the importance of standardized communication format need not be emphasized further. Uniformity in computer protocols and messaging standards that are in compliance with best International Standards and accommodate both cross border and domestic trading are vital to the success of STP. The Committee considered various messaging protocols like FIX, ISO15022, etc. It was agreed that given the universality of ISO 15022 messaging standards as a common language in the financial services sector, ISO 15022 may be adopted as the messaging standard. Further upgradations to better standards or more universal standards may be made as and when they evolve in the market.

It was recognised that internationally an initiative to migrate to XML standards was under way. A working group (WG10) constituted by the ISO Committee in charge of international standards for the securities industry is currently working on evolving ISO 15022 to the new ISO 15022 XML standards. The committee recognises that the market may need to migrate at a later stage to the new standards. However the new standards should not hold back the current migration strategy. It is the opinion of the committee that translation of ISO 15022 to ISO 15022 XML is unlikely to be complex.

The group mapped the messaging requirements with the ISO 15022 standards. These were found to generally meet the Indian market requirement. The messaging standards were already made public through the approach paper released on July 19, 2002. The same are

again given in **Annexure IV** after customizing them for Indian conditions. The ISO15022 standards would require minor modifications to suit the Indian context. The same is being taken up in the Securities Market Practices Group (SMPG) meetings to obtain a local SMPG agreement. In India, SMPG is headed by National Securities Depository Ltd.

The Committee deliberated on the carrier of the messages (solution provider) as well as the base line security standards that the solution provider should satisfy. The Committee realized that in absence of any local solution provider the market would have to look towards the international players. The committee was of the view that no one shall be prohibited from offering their services and the market participants would be free to choose the solution providers.

The Committee also considered various alternatives and their viability which are summarized below:

1. RBI Infinet: This was one of the most preferred options of the members as RBI had a network in place which would facilitate banking as well as securities transactions. However, RBI was currently targeting Infinet only for the banks and would definitely not allow use of Infinet to brokers, funds and institutional investors. In fact, Infinet was devised by RBI only for banks and banking related transactions with a window for the Negotiated Deal Segment (NDS). In such a scenario, it would not be feasible to recommend Infinet as a communication solution.

2. Industry utilities:

The stock exchanges and depositories have invested in substantial infrastructure and have connectivity with many market participants. These institutions could examine offering a communication and messaging service that meets the market participants' requirements. During the meetings, the Committee was informed by NSDL that it has set-up an Internet based service called SPEED-e. Using this common infrastructure, demat account holders (including brokers) can submit delivery instructions to their Depository Participants (DPs) electronically, thus eliminating the need to submit instructions in paper form. The facility features 128 bit SSL for server authentication and data encryption. The facility also features Public Key Infrastructure (PKI) whereby the instructions submitted by the account holders are digitally signed. The facility allows both interactive and batch file based operation with digital signature.

NSDL further informed that it is developing a new module in SPEED-e for transmission of digitally signed electronic contract notes between brokers and custodians. The custodians will

receive the electronic contract notes in ISO 15022 format. This module could be extended to offer further STP solutions to the market.

3. Virtual Private networks (VPNs):

There are various VPN service providers operating in the country, who enable inter-connectivity across market participants by using a public network or a virtual private network across participants, with the necessary security protection. Discussions on the matter indicate a *prima facie* feasibility, from a connectivity perspective, of using these providers as connectivity enablers.

While provision of a secure means of communication is extremely important and the provider must offer data security or protection as per standards that will need to be agreed, the following requirements will also need to be incorporated into a VPN based delivery option:

- a. Have adequate disaster recovery systems in place.
- b. Provide for data validation, routing and audit trailing mechanism, and maintenance of database.

It is again reiterated that the provider would need to satisfy the requirements given in **Annexure II**.

4. Virtual Matching Utilities (VMUs)

International service providers (such as OMGEO) offer trade flow automation services, and have expressed initial interest at extending this service to the Indian market. These options offer possibly the most ready solution in the market. Reuters had also contacted SEBI and informed that they were working on a STP solution globally and that the same could be made available in India.

The Committee decided that it would not recommend the cause of any provider. These providers are free to offer their services in the market and SEBI would neither encourage nor discourage any of these entities. However, as detailed before, these entities would have to adhere to the basic communication requirements as laid down in **Annexure II**.

The Committee members felt that there had to be interconnectivity between various participants so that STP could be effected completely i.e. true seamlessness could be achieved. In this regard they brought to the notice of SEBI the BSNL (formerly DoT) guidelines that levy a very stiff charge for interconnectivity between two Closed-user groups. For e.g. a custodian could not connect his

network directly with the Depository to seamlessly pass settlement instructions. The Committee members apprised SEBI that such charges can be waived by BSNL for certain categories of users and SEBI may take necessary action in this regard.

In this regard, the ANMI and BSE Brokers Association suggested to the Committee that till such time that real time connectivity is established between the depositories, batch runs between the depositories may be increased from the current two batches.

Interoperability:

For an industry wide success of STP, interoperability between alternative solutions/system is imperative. The standardization of messaging standards is a step towards achieving this.

VIABILITY AND ROAD MAP FOR STP

During discussions of the Committee with the other market participants i.e. fund managers, representatives of Brokers Associations it was pointed out that presently STP is in operation in a limited way. That means there is already some amount of connectivity between market participants like investors, brokers, custodians and stock exchange/depositories for e.g. FIIs are connected to custodian via SWIFT and some sort of connectivity between custodian and stock exchanges and broker and stock exchanges also exists. However, messaging standards are different and non-standardised.

Hence, it is a matter of having connectivity with all the markets participants with a common set of messaging standard in order to implement STP in real sense. Since it has been decided by the committee to adopt ISO 150 22 messaging standard and various alternatives available in the area of connectivity amongst the market participants (it is however, reiterated that choosing of solution provider is left to the market participants), the only issue remaining is interconnecting these entities so that seamlessness is achieved. In this regard a road map for STP implementation is suggested below:

MILESTONES	RESPONSIBILITY	COMPLETED BY
Agree gaps in the current process cycle and prioritize automation	STP Committee	31 July 2002
Agree messaging standards and obtain local SMPG agreement	STP Committee	30 September 2002
Establish baseline security standards for adoption by message carrier	SEBI	30 September 2002
Publish messaging and security standards	SEBI	30 September 2002
<i>Identify availability of message carrier with a service that meets the criteria</i>	<i>SEBI</i>	15 September 2002
Brokers, custodians and fund houses sign up to message carrier	Participants	30 October 2002

Completion of development of messages (and interfaces) by brokers and custodians	Participants	20 November 2002
Convert to live (inter se pilot fund managers and brokers/custodians)	Participants	02 December 2002

Key Dependencies/Comments

- ? The carrier must be able to deliver a consistent communications platform that meets the security criteria recommended, and offers connectivity to all participants.
- ? The carrier must be cost-efficient.
- ? While there is no constraint on the number of carriers, each carrier must, before launch, establish continuous connectivity with other carriers, so that a participant needs only to sign up to one carrier.

Acknowledgements:

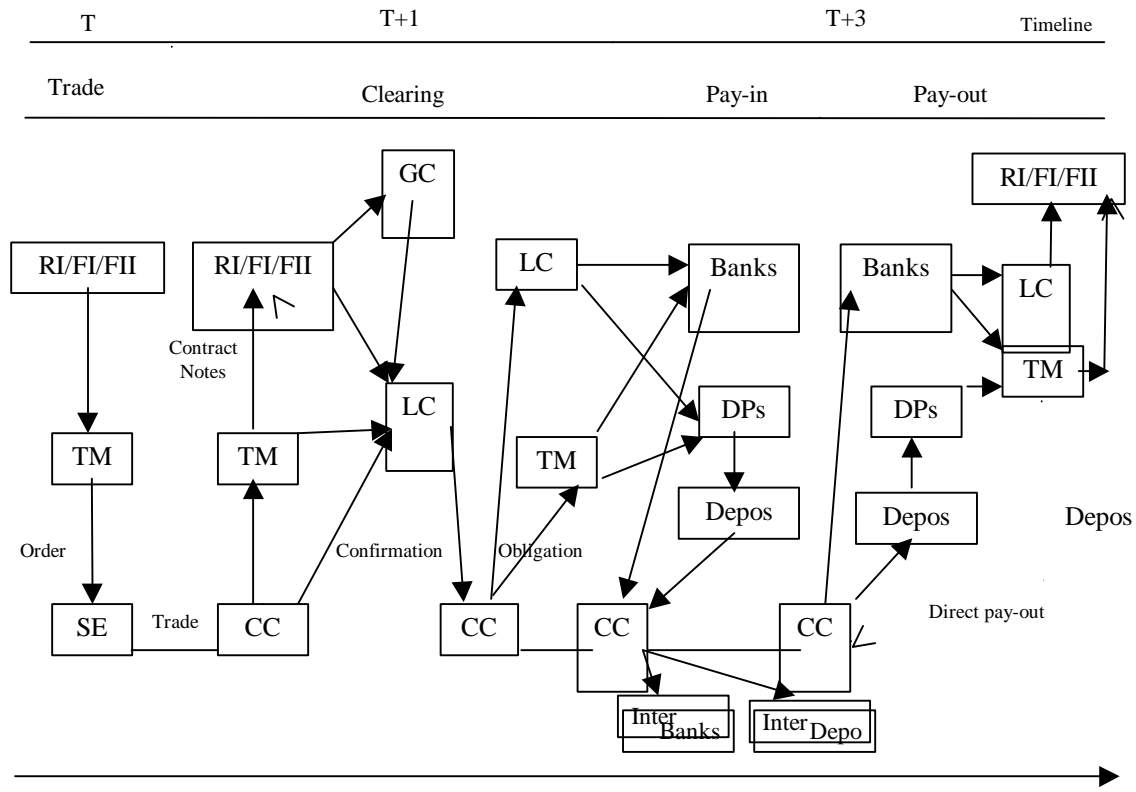
At the outset, the Committee would like to place on record the appreciation and gratitude to Shri D.R. Mehta, former Chairman and Shri G.N. Bajpai, Chairman SEBI for his initiative and inspiration and continuous encouragement which made the committee come to its conclusion faster than anticipated and provided immense motivation.

The Committee would like to make special mention of Mr. S. Sriram, Manager, UTI Mr. Drupad Mahadevia, ANMI and Mr. H. Shriram, Vice President, Prudential ICICI who gave insight into the domestic issues that needed to be addressed to implement STP in India. Mr. Ravi Kanth Konteti, Vice-President, JP Morgan Investor Services who gave his inputs regarding the role of cross border trades and global custody with respect to STP.

The committee is also thankful to all the committee members without whose support, co-operation and comments, this report would not have been possible.

The Committee is also thankful to the staff members of the FII division of SEBI for their assistance in organizing the meetings of the committee as well providing all other necessary assistance to make this report possible.

Securities Transaction Cycle



Basic Requirements for the communication platform

Description of the service required

The primary requirement of this solution is the provision of a communication platform, which would have the ability to deliver standardized messages from and to multiple market participants. Hence, the target market of the application would be –

- ✍ Custodians
- ✍ Brokers
- ✍ Investors (Local Institutional Investors – Mutual Funds / Insurance funds, Foreign Investors etc.)
- ✍ Exchanges / Clearing Houses
- ✍ Depositories
- ✍ Banks

The Committee has attempted to arrive at a few basic features that a solution should possess. These are listed below:

- 1) The application would be hosted by the Solution Provider (SP).
- 2) The various entities (Broker-dealers, Custodians, Funds, Clearing Houses, Exchanges and Depositories) would have the ability to access the system / database via various routes –
 - a) Dial Up VPN access.
 - b) Leased line VPN access
 - c) Internet based access
- 3) Any eligible solution / system being offered should automatically be compatible with other eligible solutions, so as to ensure inter-operability across multiple solutions so that a single market participant does not have to interface with multiple systems. The data transfer between the different solutions should be online or near real time.
- 4) An eligible solution would facilitate a process flow similar to the following:
 - a) Market Participants (MP) would generate files containing messages from their back office systems, which would conform to the standards defined by the committee (Appended as **Annexure IV**). Each file could contain multiple messages meant for multiple users, and be of various types.

- b) MPs would be able to access the system (through their preferred mode of access as explained above) and upload the said files.
 - c) The system would perform basic validations, which would ensure that only valid messages compatible with the messaging standards are accepted. Any messages not accepted would have to be communicated to the sender with the appropriate reason codes, through the use of error queues / error messages etc. Only the specific message would be rejected and not the entire file.
 - d) Once the validation has been performed, the system should also be able to identify messages meant for users with other providers and route them to other providers / systems (as mentioned in point 3 above).
 - e) As and when the receivers access the system, they would be able to download the messages meant for them, which they can then upload into their back office systems.
 - f) All messages would be stamped with time and date of dispatch and delivery. Users should be able to access delivery confirmations of all messages sent to / received by them.
- 5) The application / network would have to have the highest level of security as the information is extremely sensitive:
- a) At the network levels, the channel would have to be secure during all transmission, whatever the mode of access. A minimum level of 128-bit SSL encryption should be maintained.
 - b) At the application level PKI and digital signatures (using digital certificates issued by recognized certification authorities) would have to be employed for authentication (non repudiation).
 - c) Audit trails would be maintained, which would be subject to external audits.

- 6) Connectivity provided by the Solution Provider should be as per DoT regulations.
- 7) Redundancies would have to be built in, from a database / network perspective. Contingency access options would be made available to users. Disaster recovery solutions are to be made available.
- 8) Various reports would be made available, e.g. activity reports, error messages, history reports etc. Online query access to be provided to users. Audit trails would include information of messages sent to / received from different systems / platforms.
- 9) The system / provider would be subject to audits, by external auditors including SEBI.
- 10) Messages and their audit trails would be saved in the database (which would be hosted along with the application), for a reasonable period and users should be able to access them whenever necessary.
- 11) The user database would be a live database, which continuous updations to the same.
- 12) The Solution Provider would have the ability to upgrade and adapt to the changing needs of the market / new technology eg. XML standards for messaging, changes in settlement cycles, validation routes etc.

Regulations, Rules governing Contract notes

1. NSE Bye-laws
 - ? Chapter III 2 (e), contract note regulations
 - ? Chapter VII, Dealings by trading Members - Jurisdiction
 - ? Chapter IX , clause 8 on contract notes
 - ? Chapter X- Rights and Liabilities of members and constituents
 - ? Chapter XI - Arbitration

2. NSE Regulations – Part A
 - ? 3.5 Contract Note
 - ? 5.3A Jurisdiction of courts
 - ? 7.1.2 Inspection

3. BSE Bye-laws
 - ? 219 (a), (b) Contract notes issued by Firms
 - ? 223 Signing of contract notes
 - ? 226 (a), (b), (c) Bombay Jurisdiction
 - ? 274 Operation of contract notes

4. BSE Regulations
 - ? 14.2 Form (A) and Form (B) contract notes
 - ? 14.3 Form (C) confirmation memo issued by Sub-broker acting for clients/ constituents
 - ? 248 (a), (b), (c), 249 (i.) (a), (b) – Arbitration
 - ? 274 Operation of contract notes

5. Bombay Stamp Act 1958
 - ? Articles 43 (f) of schedule I

6. Service Tax - As per the Central Sales Tax Act, 1956
 - ? Section 83 of the Finance Act 1994 (Service Tax) provisions

7. Securities Contracts (Regulations) Act, 1956
 - ? Section 13, 14 – Contracts in notified areas

8. Securities Contracts (Regulations) Rules, 1957
 - ? Rules 15-16 Books of Account and other documents maintenance

9. SEBI (Stock brokers and sub-brokers) Regulation, 1992
 - ? 17 General obligations and responsibilities

Shri R.M. Joshi
Chairman

Shri P.K. Bindlish
Member

Shri S. Ganesh Kumar
Member

Shri Anand Natrajan
Member

Shri Hitendra Patil
Member

Shri Jayesh Sule
Member

Shri S.T. Gerela,
Member

Shri Raghavan Putran,
Member

Ms. Nina Nagpal,
Member

Shri Vikram Subrahmanyam
Member