

INTERNET TRADING IN STOCKS

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IN US, e-Trading was started on 11th July, 1983. In fact On Line Trading has attracted the attention of Investors world-wide. In US.A. more than 25% of the trades are done through Internet by over six million investors with total assets of over US \$ 200 billion. The Securities and Exchange Commission (SEC) is very particular about the problems faced by investors in the capital market with reference to market volatility, IPOs, Internet stocks etc. It is very much concerned about protecting the interest of small investors. In the areas of Internet trading SEC has created a special Cyber Force, consisting of attorneys, accountants and analysts to search for Internet frauds. There are countries like Korea where more than 60% of the trades takes place through the net. Germany has also large number of Net investors whose number is more than one million. In Japan also more than 90,000 investors are making use of internet system of trading. Their number is expected to increase more than five million by the year 2002. On NASDAQ, about 30% of E-Banking business is done on Internet.

Background

The growth of the Internet in our country is of recent times. The growth of Web Sites and individual users of the Internet have increased manifold during the last about five years. Earlier, the word "Internet" was almost unknown due to the reason that information technology was not much developed in our country. Its use is now increasing at a very high speed. According to an estimate of WTO, there will be more than 300 million Internet users world over by the end of year 2000. The common IT words such as Internet, World Wide Web, E-mail, Cyber Space, Information Super Highway are being used in the media every day. Thus, the growth of the Internet and its increasing popularity particularly in the financial services sector i.e. (the use of the word, World Wide Web (www) has created significant interest in the development of this new channel. The Financial services sector can not remain and work in isolation unless it makes use of the latest information technology device. In India, there are about 1.8 million Net users and this number will be over 6 million during next 3 years.

Two major events/innovations started in Indian Capital Market shortly will change the entire gamut of trading in stocks. These are introduction of Index based futures and trading on internet. Trading on Internet means that the investors will actually buy and sell stocks On Line through the net. The SEBI Committee/Panel on Internet Trading suggested to link the Internet System to the trading systems of the Exchanges so as to minimise the delay in order execution which exists in the present system. The Securities and Exchange Board of India has given clearance to the suggestions for trading through Internet and issued necessary guidelines for its operation. However, its performance will be visible only after a year or so.

Table 1: Internet Trading - Broking Firms/Companies

	Date of launch	Margins (%)	Brokerage (Delivery)*	Brokerage (Trading) %	Min. Brokerage (Rs)	Reg. Charges (Rs)	Bank	Depository	Encryption Level (BIT)
ICICI Direct	Apr-00	100 0.20	-0.85	0.43	25	750	ICICI	Own DP	128
Investment	Feb-00	25-30	0.75	0.25	25	810	HDFC	Own DP	128
Equity Trade	Jul-00	25	0.50	0.10	NA	2000	HDFC/ Citi Bank	HDFC	40
FGlobal	Nys*	25-30	1	0.11	10 Paisa/Share	750	HDFC	Own DP	128
Sharekhan	Aug-00	25	0.25#	0.10	NA	500	HDFC or GTB	Own DP	128
Geojit Securities	Feb-00	30	0.50	0.07	NA	NA	HDFC/ Citi Bank	Own DP	40
Motilal Oswal	Nys*	30	0.3-0.4	0.10	50	NA	HDFC/ Citi Bank	Own DP	40
Anandrathi Direct	Sep.00	25	0.25	0.05	NA	NA	HDFC/ Citi Bank	Own DP	128
Moneyopore	Sep-00	40	0.500	0.05-1+	NA	1000	HDFC	Any	40
Kotak Street	Aug-00	33	0.25	0.10	NA	500	HDFC/ Citi Bank	Own DP	40

or Rs 1000 per month * Operations not yet seamless + statutory charges

Source: Capital Market Oct. 30 - Nov. 12, 2000.

Table 2: What these Brokerage Houses Forsee

e-trading volumes of total market turnover, in the next one year

Firm	(%)
Geojitsecurities	10-15
Investment	10-15
Equity Trade	15-20
First Global	10
Motilal Oswal	10
Sharekhan	25-30#
Anandrathidirect	20-25#
Moneyopore	20#
Kotakstreet	15#
ICICIdirect	20-25#

over next 2-3 years

Source: Capital Market Oct. 30 - Nov. 12, 2000

What Exactly is Internet

In a common man's language, it is just routing orders through internet to the broker on a real time basis, instead of routing them through telephone calls. The internet is a self governing net work of information technology world wide connecting thousands of smaller networks and millions of computers and people to larger sources of information. Thus, it is a technology that narrows vast distances. It is a technology which is to be adopted by all the countries of the world with the passage of time. The Internet helps companies and business entities to build up relationship with the clients throughout the world. In fact, it is a process to produce combination of digital information without incurring the traditional cost that exist in the physical world. The services of Internet are basically through Electronic Exchanges and they can be delivered at a very low cost.

With regard to uses, the Internet Technology is expected to bring changes in every functional area of business activity including general management of Corporate Sector and more particularly in the areas of financial services sector.

The use, of Information Technology is bringing evolutionary changes in the Investment and Finance Industry, giving Portfolio Managers greater control over their activities and even more time to be spent on other important and innovative activities. Moreover, value investing is benefitting from Electronic devices and their uses. In this age of competition, everyone is forced to be more creative.

All over the world, service providers are busy in upgrading their existing systems and the technology to satisfy their clients. The Intermediaries in the Indian Capital Market are also to plan for the use of new technology such as "Internet". This technology can be adopted by the Securities Industry in the areas such as brokerage, trading and investment related activities including portfolio management.

Usefulness of Internet in Stock Exchanges

The Internet offers a means for brokerage firms and consumers to do Stock and Share trading and at a lower cost. It also offers secured mechanism for financial institutions to do Electronic funds transfer in the process of Purchase and Sale of Securities settlement. Now retail investors like house wives, college students and retired people would be able to make more productive use of savings by trading in shares through internet. Now new internet traders can also do business with a very small difference. The net trading has a potential to bring about a remarkable change in the life style and spending pattern of the retail investors. Only those investors would be benefitted by trading in stock exchanges over Internet, having internet connections. Therefore, those investors of Stock Market having internet access, even if residing in remote areas including the NRIs will be beneficiary. Benefits of net trading are so lucrative that it will fast spread among the investors of Stock. Thus, the investors and the Stock Brokers both will be benefitted with trading through internet, particularly in terms of lower costs and near real time basis transactions.

The position of Stock Exchanges is also equally bright. The net trading of course in stocks would increase the turnover manifold. It will also help in widening the base of Stock Brokers and ultimate spread of the equity cult among the large number of people. The scenery of the Securities Industry will change drastically. It is expected that the turnover would increase by 50% over a period of one year. The use of internet would revolutionalise the markets and growth in volume of trade.

In Internet Broking, Investor has access to a large amount of information. It gives investors tips on how to select a scrip. E-Broking is more convenient for those who are always on the move. It attracts low brokerage charges and the system is more transparent. Though E-Broking appears to be a real boon to the investors it has certain problems also like that of securities.

The sub-brokers and jobbers working in the stock exchange would be immensely benefitted as they will now shift to On Line Trading. The use of Internet would be useful to both the members of the stock exchange and the clients as well. There will be revolution for spread of Internet culture over a period of time. The entire market is expected to become customer driven and trade execution expertise would shift from brokers to the client.

The Stock Exchange, Mumbai and the National Stock Exchange are technically qualified to trade on Internet, with all infrastructural facilities and software systems. These Stock Exchanges feel that the turnover will increase after the start of net trading of stocks. The National Stock Exchange has already started trading on Internet facility.

Basic Requirements for Investors

An investor can not start trading unless he has some basic software installed for this purpose and got certain clearances under the system. Therefore, the following pre-requisites are to be arranged before actual start of trading on Internet.

- (i) Installation of a computer of the required specifications.
- (ii) The installation of Modem System.
- (iii) Telephone connection for this purpose.
- (iv) Registration with the broker after complying with the conditions prescribed by the Securities and Exchange Board of India.

Therefore, every investor can not take the benefit of this system. Similarly, stock broker can also not entertain every client for this purpose. He will provide facility of trading on Internet through him to such clients who are having high networth and are able to deposit the required margins with the broker. It should be understood that every stock broker can also not use this system automatically. There are certain requirements to be fulfilled by him also. The broker will be required to set up a "website" and has to pay an additional deposit of Rs 50.00 lacs to the stock exchange. Therefore, in the beginning every stock broker may not take the benefit of trading on internet.

Basic Requirements for Stock Brokers

Internet based trading will be on the existing Stock Exchanges through order routing system for execution of trades. Therefore, Stock Brokers are to comply with the following before the start of Trade on Internet.

- (i) Obtaining permission for their respective Stock Exchanges after making a formal application.
 - (ii) The broker must have a networth of Rs 50.00 lacs if he wants to avail the facility of internet trading for his own business.
 - (iii) Provision for maintenance of adequate back up system.
 - (iv) The Software System to be used by him should be secured and reliable and licensed.
 - (v) To employ the qualified staff for this purpose.
 - (vi) To send order/trade confirmation to the client also through E-mail.
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- (vii) The contract notes must be issued to the clients as per existing regulations within 24 hours of the execution of trades.
- (viii) The broker and his clients should use authentication technologies.

The above are some of the important pre-requisites for the Stock Brokers who intent to take benefit of trading on Internet.

The Software of Stock Exchanges

Every Stock Exchange can not start Cyber trading unless it is fully computerised and automated with the hardwares of the required technology and software system in place.

The National Stock Exchange (NSE) is the first Stock Exchange in the country which has the necessary hardware and software in place for starting trading on Internet. It is providing the Software to brokers interested in internet trading. The subsidiary of NSE has developed a system for this purpose i.e. "NEAT - IXS" which is a Web-based order routing real time market information system. NEATIXS, in its existing version routes orders and display real time market information from the NSE.

Some other softwares may also be developed in due course of time but at present people will prefer the software because of its integration with the systems of National Stock Exchange. The Bombay Stock Exchange has its own software for this purpose which is known as "Interface Software".

In due course of time, the software system may also require certain changes and amendments. At that time, the real problems and difficulties will be known. In the system, the investors registered with an NSE. Broker, which "NEATIXS" can directly trade on NSE after appropriate risk management by the concerned stock broker. The investors are free to issue New Orders, modify and delete the then pending orders, view trades, view real time market information and can create a portfolio which they want. The existing software of NSE, i.e. NEATIXS updates the portfolios real time and displays current value of portfolio as well as the loss or gain.

Internet Trading Procedure

How the actual Internet Trading done on the Stock Exchange is explained below step by step.

- Step - 1.** Those investors who are interested in doing the trading over internet system i.e. NEAT - IXS, should approach the brokers and get himself registered with the Stock Broker.
 - Step - 2.** After registration, the broker will provide to him a Login Name, Password and personal identification number called PIN.
 - Step - 3.** Third step is actually placing an order. An order can then be placed by using the place order window as under:
 - (a) First, by entering the symbol and series of stock and other parameters like quantity and price of the scrip on the place order window.
 - (b) Second, fill in the symbol, series and the default quantity.
 - Step - 4.** It is the process of review. Thus, the investor has to review the order placed by clicking the review option. He may also re-set to clear the values.
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- Step - 5.** After the review has been satisfactory the order has to be sent by clicking on the send option.
- Step - 6.** Therefore, the investor, will receive an “Order Confirmation” message alongwith the order number and the value of the order.
- Step - 7.** In case the order is rejected by the Broker or the Stock Exchange for certain reasons such as invalid price limit, an appropriate message will appear at the bottom of the Screen. At present, a Time Lag of about 10 seconds is there in executing the trade.
- Step - 8.** It is regarding unchanging payment, for which there are different modes. Some brokers will take some advance payment from the investors and will fix their trading limits. When the trade is executed, the broker will ask the investor for transfer of funds by the investor to his account.

There is another mode of payment which brokers may follow. They ask the investors to open an account in a particular designated bank through which electronic transfer of funds can be done.

The facility of transfer of funds is also provided by some automated bank branches which are now entering to provide this facility to its customers over internet. This can be done when an investor executes a trade on the net, money is automatically credited or debited to his account which he has opened with the bank. But this type of facility is a available for the stocks of D-Mat Category. This Stocks can also be transferred from one account to another by the broking firm which either has its own depository or through the depository with which it has an arrangement. It is a fact that the cost of transactions vary between broker and their respective clients.

Settlement System

Trades can be settled as per the procedure outline above. However, till the above facility is available at all the places, the settlement system will continue as before. For making payments, the investors is to issue cheques and give written instructions to depository participant (DP) for selling D-Mat shares. In due course of time, it will also be covered by the process of cyber space. This will be possible when the three participants i.e. Broker - Banks and D.P. will be integrated when one can give instructions to this bank for making payments and give debit note to the depository on the net. Some of the banks such as ICICI Bank has launched ICICI Direct.Com its net trading site.

Settlement

It is done as per the existing system of making/receiving payments and giving/taking deliveries viz. giving the cheque and delivery to the broker on the settlement day and receiving the delivery and payment from the broker after one week of the settlement day. This system has to be followed by the investors trading through the websites namely www.investmartindia.com, www.nsebs.com and www.sharebazaar.com.

SEBI has also introduced the system of rolling settlement and has come out with a list of scrips for compulsory rolling settlement. Keeping in view of this system and the expected growth of trading through the internet, the system introduced by ICICI through its website www.icicidirect.com provides a complete facility of settlement through the internet only. The only thing which the investor has to do is to open a bank account with ICICI Bank Limited and a depository account with ICICI Limited's Custodian Division. In this system once the investor places the order on the

web to be executed by IBSL, money would move from/to his bank account automatically and shares would move from his demat account without any more instructions and paperwork e.g. the investor places a buy order for 100 shares on Reliance Industries @ 300/- per share, now as soon as he confirms the order and it is executed on the internet than his bank account with IBANK will be debited by Rs 30,000/- (excluding the brokerage) and his Demat Account with ICUST will be credited by 100 shares of Reliance Industries. On the other hand if the same investor places a sell order for 100 share of MTNL in his Demat account and on confirming his sell order his bank account will be automatically credited by Rs 35,000/- @ Rs 350 and his demat account will be debited by 100 shares of MTNL. On the net he would also be able to see the statement of his bank account, demat account and also the effect of these transfers. The investor who has purchased 100 shares of Reliance Industries can easily see the effect of his transaction in his bank account and demat account promptly on the internet. Thus with one click of the mouse the investor would now be able to trigger transaction with broker, bank and DP.

To make the above system successful and safe SEBI has approved the recommendations of the committee set up for this purpose.

Internet and Stock Holding Corporation

The SHCIL's "Stock-Direct" is based on smart card technology. It gives a smart card to the investor which will permit him authentic identification in the system. The investor can have a view of the On Line Rates which appear with a time lag of a few minutes like actual net trading providing real time quotes. He can also see his statement of holding of his DP A/c when the investor places a buy order, it gets routed through the investors bank which checks the account balance to trade on the exchange. The investor then receives a confirmation on execution of the order. In case of sale transaction by the investor, the reverse procedure is to be followed.

The Stock Holding Corporation of India has already made arrangements with some banks and brokers to provide this service. To avail of this facility, the investor has to register with one of the brokers with which SHCIL has tied up and also have an account with one of the designated banks.

Stock Holding Corporation of India Ltd. has launched "Stockdirect" facility, a product to facilitate shares trading through the internet. Stockdirect envisages combining the Investor's bank, Investor's broker, Investor's stock exchange, Investor's depository and investor's depository participant together under one roof. On an average, 20 trades are put through the Internet daily by investors located in India and abroad.

Element of Security of Trade

There are apprehensions and doubts in the minds of investors about the element of security of trade and changes of misuse of this mode of trading in stocks. It is felt that this type of problem may come up in the process of trading. But for the safety of investors there should be provided a Long Password of minimum six characters. Their personal identification mark or number called PIN should also be changed frequently by using the password navigation option. In case an investor do not recollect his Pass Word, then it can be reset and sent to the investor through an E-mail available during the tenure of registration.

Advantages of Internet Trading

The following are the advantages of Net Trading:

- (i) It will help reducing transaction costs phenomenally, particularly for overseas investors.
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- (ii) It will provide the facility of real time quotes and online transacts saving on telephone lines/ bills.
- (iii) Facility of transacting business from the terminal of the Investor will help him for making rational judgement or decisions.
- (iv) It will bring down the broking fees and increase the trading volumes.
- (v) It will reduce the procedural hassles of trading with lot of paper work, continuous follow up with the broker and monitoring etc.

In the above advantage of trading on Internet will definitely increase the volume and liquidity and will reach to the rural investors in a big way. However, there can be certain constraints also such as obtaining dial up connections, handling of large data, traffic build up on the concerned sites. Likewise, the strength of security checks and systems are also be made more secure. Some costs will also to be involved such as opening of bank account with the designated banks, D-mat account with the Depository Participants.

The Recent Providers

GEOJIT Securities, a Cochin based broking firm has started offering the service to its existing clients for a brokerage of 0.75 per cent for domestic investors and @ 1 per cent to NRI Clients. ICICI Securities, Motilal Oswal, Anand Rathee Securities, SSKI & Co. KBS Securities are also planning to start trading on net. IL & FS is also in the queue for this type of innovative trading. Likewise Tata Finance, Prime Broking, UTI Securities and ASK Securities have also geared themselves up for Internet trading. The SEBI Chairman, Shri D.R. Mehta recently inaugurated by punching in the first internet through Cochi based broker, Geojit Securities Mercantile Securities Ltd, a brokerage firm of Chennai is planning to launch On Line Trading facility in March to help investors.

Immediately after this, first over overseas internet trade on an Indian Exchange was put through punched in from Sharjah, Dubai through Geojit. Both the trades were done on National Stock Exchange (NSE).

Geojit's internet trading module is based on the Internet trading software developed by NSE, IT, the IT Company recently floated by NSE. The software allows web-based, order routing, real time market information display, portfolio management and client information display system. It has also a separate module for risk management.

Internet and Banking Sector

The Private Sector Banks in India are making most out of opportunities thrown up by the Internet leaving behind their slow moving Public Sector Banks. The technology driven Banks such as HDFC Bank, ICICI Bank, Global Trust Bank, IDBI Bank are having the latest technology for fund transfers. The internet and its underlying technologies will change the business and products of these banks. ICICI Bank was the first bank to offer internet banking in India. It has more than 10000 regular Internet accounts of which more than 50% are those of NRIs. This bank has also started - Internet Payment i.e. e-payment over the net. UTI Bank also has similar facilities, in its branches. The Global Trust Bank has also started its Internet Banking Service including customer access to their depository accounts. Thus, E-Banking culture is now spreading in the Banking Industry.

Therefore, it can be summarised that in the banking industry, the internet has removed boundaries of geography, time and function. The Internet has simplified to compare banking products as

commodities. The Internet will help the banking industry and its customers in the years to come. It will help as to how the customer will interact with the Banks. It has made easy for some non-bankers to enter banking and helped the Banks to face the challenges of the new Information Technology age.

Risk Associated with the Use of Internet

It is urged that the system of using Internet is not fully secured. Thus, the users should know the probable risks which this system may carry. The management should be able to assess and decide the appropriate measures from time to time. The Customer Security Institute in San Francisco offers various tips for net work security. These are given hereunder for the information of the readers.

The Computer Security Institute's Tips for Net Work Security

The following points are worth noting:

- (i) Secure Pass Words. Use Strong Pass Words and change them regularly.
- (ii) Prevent virusus - Install antivirus software at both the net work server and work stations level.
- (iii) Protect Net work communications. Encrypt sensitive data sent over network.
- (iv) Defend against unauthorised Internet access during firewalls and other defence mechanism.
- (v) Audit Conduct regular reviews of Security Logs and audit trials. Institute an incident report procedure.
- (vi) Enforce policies. Develop and enforce comprehensive policies and procedures for all aspects of information securities.
- (vii) Educate your users. Raise the awareness of your use with a companywide training campaign.

Securities and Exchange Board of India has issued guidelines for the Security of Trades done through Internet. The Stock Exchange and the member brokers have been advised to follow the guidelines.

SEBI Guidelines for Internet Trading

Following are the guidelines issued by the Securities and Exchange Board of India for Brokers and Investors trading through Internet.

(1) Approval of SEBI Board on Report on Internet Trading Brought Out by SEBI Committee

The SEBI Board has approved the report on Internet Trading brought out by the SEBI Committee on Internet Based Trading and Services.

Internet Based Trading can take place through order routing system, which will route client orders, to exchange trading systems, for execution of trades on the existing stock exchanges. SEBI Registered Brokers can introduce the service after obtaining permission from respective Stock

Exchanges. Exchanges while giving permission will be required to ensure minimum conditions specified in the report which is available on the SEBI's web site. The salient conditions to be met are:

Application for Permission by Brokers

SEBI registered Stock Brokers interested in providing Internet based Trading services will be required to apply to the respective stock exchange for a formal permission. The Stock Exchange should grant approval or reject the application as the case may be, and communicate its decision to the member within 30 calendar days of the date of completed application submitted to the Exchange.

The Stock Exchange, before giving permission to broker to start Internet based services shall ensure the fulfillment of the following minimum conditions:

Networth Requirement

The broker must have a minimum net worth of Rs 50 lacs if the broker is providing the Internet based facility on his own. However, if some brokers collectively approach a service provider for providing the Internet trading facility, net worth criteria as stipulated by the stock exchange will apply. The net worth will be computed as per the SEBI Circular No. FITTC/DC/CIR-1/98, dated June 16, 1998.

Operational and System Requirements

Operational Integrity: The Stock Exchange must ensure that the system used by the broker has provision for security, reliability and confidentiality of data through use of encryption technology. (Basic minimum security standards are specified in following paras). The stock exchange must also ensure that records maintained in electronic form by the broker are not susceptible to manipulation.

System Capacity: The Stock Exchange must ensure that the broker maintain adequate backup systems and data storage capacity. The Stock Exchange must also ensure that the brokers have adequate system capacity for handling data transfer, and arranged for alternative means of communications in case of Internet link failure.

Qualified Personnel: The Stock Exchange must lay down the minimum qualification for personnel to ensure that the broker has suitably qualified and adequate personnel to handle communication including trading instructions as well as other back office work which is likely to increase because of higher volumes.

Written Procedures: Stock Exchange must develop uniform written procedure to handle contingency situations and for review of incoming and outgoing electronic correspondence.

Signature Verification/Authentication: It is desirable that participants use authentication technologies. For this purpose it should be mandatory for participants to use certification agencies as and when notified by Government/SEBI. They should also clearly specify when manual signatures would be required.

Client - Broker Relationship

Know Your Client: The Stock Exchange must ensure that brokers comply with all requirements of "Know Your Client" and have sufficient, verifiable information about clients, which would facilitate risk evaluation of clients.

Broker - Client Agreement: Brokers must enter into an agreement with clients spelling out all obligations and rights. This agreement should also include inter alia, the minimum service standard to be maintained by the broker for such services specified by SEBI/Exchanges for the Internet based trading from time to time.

Exchanges will prepare a model agreement for this purpose. The broker agreement with clients should not have any clause that is less stringent/contrary to the conditions stipulated in the model agreement.

Investor Information: The broker web site providing the internet based trading facility should contain information meant for investor protection such as rules and regulations affecting client broker relationship, arbitration rules, investor protection rules etc. The broker web site providing the Internet based trading facility should also provide and display prominently, hyper link to the web site/page on the web-site of the relevant stock exchange(s) displaying rules/regulations/circulars. Ticker/quote/order book displayed on the web-site of the broker should display the time stamp as well as the source of such information against the given information.

Order/Trade Confirmation: Order/Trade Confirmation should also be sent to the investor through email at client's discretion at the time period specified by the client in addition to the other mode of display of such confirmations on real time basis on the broker web-site. The investor should be allowed to specify the time interval on the web-site itself within which he would like to receive this information through email. Facility for reconfirmation of orders which are larger than that specified by the member's risk management system should be provided on the Internet based system.

Handling Complaints by Investors: Exchanges should monitor complaints from investors regarding service provided by brokers to ensure a minimum level of service. Exchange should have separate cell specifically to handle Internet trading related complaints. It is desirable that exchanges should also have facility for on-line registration of complaints on their web-site.

Risk Management

Exchanges must ensure that brokers have a system-based control on the trading limits of clients, and exposures taken by clients. Brokers must set pre-defined limits on the exposure and turnover of each client.

The broker systems should be capable of assessing the risk of the client as soon as the order comes in. The client should be informed of acceptance/rejection of the order within a reasonable period. In case system based control rejects an order because of client having exceeded limits etc. the broker system may have a review and release facility to allow the order to pass through.

Reports on margin requirements, payment and delivery obligations, etc. should be informed to the client through the system.

Contract Notes

Contract notes must be issued to clients as per existing regulations, within 24 hours of the trade execution.

Cross Trades

As in the case of existing system, brokers using Internet based systems for routing client orders will not be allowed to cross trades of their clients with each other. All orders must be offered to the market for matching.

It is emphasised that in addition to the requirements mentioned above, all existing obligations of the broker as per current regulation will continue without changes. Exchanges may also like to specify more stringent standards as they may deem fit for allowing Internet based trading facilities to their brokers.

Net work Security Protocols and Interface Standards.

At present the Indian laws are silent on the security of Internet information. However, the draft E-Commerce Act focuses on this issue and prescribes the requirements like electronic certification, digital signatures etc. which will play an important role on the authenticity of such information gathered from the internet. These requirements will also have to be met by Internet trading systems, as and when they come into force.

Network Security

The following security features are mandatory for all Internet based trading systems:

- (i) User ID
- (ii) First Level password (Private Code)
- (iii) Automatic expiry of passwords at the end of a reasonable duration. Reinitialise access on entering fresh passwords.
- (iv) All transaction logs with proper audit facilities to be maintained in the system.
- (v) Secured Socket Level Security for server access through Internet.
- (vi) Suitable Firewalls between trading set-up directly connected to an Exchange trading system and the Internet trading set-up.

The Following advanced security products are advisable:

- (a) Microprocessor based SMART cards
- (b) Dynamic Password (Secure ID Tokens)
- (c) 64 bit/128 bit encryption**
- (d) Second Level Password (personal information e.g. village name, birth date etc.)

** DOT Policy and regulations will govern the level of encryption.

Standards for Web Interfaces and Protocols

Between a Training Web Server and Trading Client Terminals, Interface Standards as per recommendations of IETF (Internet Engineering Task Force) and W3C (World Wide Web Consortium) may be adopted e.g., HTTP Ver 4 or above HTML Ver 4/XML.

Systems Operations

- (a) Brokers should follow the similar logic/priorities used by the Exchange to treat client orders.
- (b) Brokers should maintain all activities/alerts log with audit trail facility.
- (c) Broker Web Server should have internally generated unique numbering for all client order/trades.
- (d) Brokers should seek permission from the Exchange before commencement of Internet trading facility after providing complete details of the features of implemented systems.
- (e) Brokers should make periodic reporting to the Exchange as specified by the Exchange.

Exchanges are requested to make necessary arrangements for early approval of Internet Trading System submitted by their members for examination, so that Internet Trading Services and commerce without delay.

Source: SEBI Letter No. SMDRP/Policy/Cir-6/2000 Dated 31.1.2000

Minimum Requirements for Brokers doing Trading through Internet

The SEBI Committee on Internet Based Trading and Services in its meeting held on August 2, 2000 approved the following minimum requirements for brokers offering securities trading through wireless medium on Wireless Application Protocol (WAP) Platform.

Eligibility Criteria

A broker providing stock trading through WAP must be a SEBI Registered broker who also has an Internet website which complies with all the requirements laid down by SEBI in its circular NO. SMDRP/Policy/Cir-06/2000 dated 31 January 31, 2000.

All these requirements will be applicable in the case of WAP based systems also with the following modifications/further restrictions:

Network Security

1. The break in data encryption at the WAP gateway server raises security issues. Until the shortcoming is addressed by WAP, the WAP server should be hosted by the broker itself and not by a third party.
 2. Suitable firewalls should be installed between trading set-up directly connected to an Exchange trading system and the WAP server.
 3. WTLS (Wireless Transport Layer Security) level security or a higher level of security (as and when available) for wireless communication is mandatory for wireless transactions.
 4. The WTLS encrypts data upto the WAP Gateway server. Transmission from the WAP Gateway server to the Internet server should be secured using Secured Stock Level Security, Preferably with 128 bit encryption, for server access through Internet. Alternatively, the WAP Gateway server and Internet server may be co-hosted. The server resource should not be shared for any other applications.
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5. The following security measures applicable for fixed Internet based system should be made mandatory.
 - (i) User ID
 - (ii) First Level password (Private code)
 - (iii) Automatic expiry of passwords at the end of a reasonable duration. Reinitialize access on entering fresh passwords
 - (iv) All transaction logs with proper audit facilities to be maintained in the system.
6. Digitally signed transaction ensure client authentication and support non-repudiation. Digital certification should be mandatory for participants as and when certification agencies are notified by Government/SEBI.
7. In case of failure of the network, alternative means of communications such as telephone, internet or e-mail should be available.

Price Quotes/Order/Trade Confirmation

1. Stock quotes should be time-stamped.
2. All orders and trades must be identified by a unique ID). Order confirmation must be provided to the user on submitting the order. Order modification/cancellation facilities must also be provided. This may be provided using alternate protocols in case the same is not supported by WAP.
3. Trade confirmation should be provided to the user through e-mail and/or on the mobile phone.

Systems Operations

1. Brokers should follow the similar logic/priorities used by the Exchange to treat client orders.
2. Orders/trades placed through either fixed Internet or WAP system should be accessible from both systems.
3. Brokers should maintain all activities/alerts log with audit trail facility.
4. Broker Web Server should have internally generated unique numbering for all client order/trades.

Risk Management

It is emphasised that risk management should be comprehensive and the risk management systems should take into account the overall positions of clients, irrespective of the medium of trading.

Investor Information

It may not be possible to give detailed investor information on WAP Systems due to limitations of

WAP. In such cases, minimum information may be given with addressed of the Internet web site/ web page where detailed information would be available.

A broker/member who desires to provide trading facility through wireless medium will be required to take approval from respective exchanges. Exchanges are requested to make necessary arrangements for approval of broker systems for WAP based trading, keeping in view the above minimum requirements.

Source: SEBI Letter No. SMDRP/Policy/Cir-48/2000 dated 11.10.2000

Future of Internet in India

In India, future of Internet System is very bright. It has great potential and capability to change the nature and capacity of Stock Broking business. So far, its use in our country was limited as a medium of communication between a client and a broker. The client E-mails his order to the broker who punches orders in his terminal. This was subject to delay factor in the process and stages involved. The internet will now provide On Line facility of trading cutting the time lag.

The main benefits of Internet Trading System for brokers will be, lower transaction costs, office costs-set-ups, wider client reach, hands off servicing and offering more services. Internet trading will change the system and the way markets work. The leakage of information of Institutional Traders which may lead to sharp volatility and fluctuations in the market, will be reduced. The Fund Manager will also be in a position to order his trade from his room instead of going to the office or table of the concerned broker. The volume of trade will also increase considerably. The Internet may also provide depth to the market. Therefore, it can be concluded that in a country like India, the Internet Trading will make the Stock Market most automated and also at the reach amongst large segment of the population.

References

Capital Market, October 30 - November 12, 2000.

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SEBI Letter No. SMDRP/Policy/Cir-6/2000, Dated 31.1.2000.

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