

## E-trading

In the first edition of this book our thrust was on detailing the procedures and practices adopted in the new distributive channel. There was a degree of novelty about the mechanism and the number of transactions was not significant. However, the last three years witnessed a tremendous upsurge particularly in the shares trading and introduction of trading in Government of India (GoI) securities and currency trading. The introduction of newer products could certainly be regarded as an additional stimulus to the growth process.

The current financial crisis has, however, pushed the hands of the development clock several notches and a very promising area of development (both for theoretical work and the resultant applications) has received a considerable setback. The removal of capital adequacy requirements and relaxations offered to the leading investment banks by the SEC (securities and exchange commission) in the US resulted in their ultimate downfall. The staggering losses recorded are a sad reflection on greed and avarice leading to their demise. Some US entities have ceased to exist as investment banks. Further, the future is so bleak that at this point of time it is difficult to see technology upgradation and innovation playing a large part in changing the rules of the game or leading to other market developments. This may appear as a mere reiteration of what happened but hopefully should serve as a guide for revival on the lines seen earlier. Recently it has come to light that some large-sized firms have been using 'Super Computers' to undertake trading. It has given them advantages (some would call it pure misuse of technology) in undertaking profitable trade deals. One would like to have this practice regulated. Otherwise only the large players would be able to offer services and any technological

advantage that now accrues to these firms would no longer be there. The field would then be solely dominated by very few firms. This is indeed a truly undesirable change.

This chapter focuses on the impact of the changes not merely on business volumes or commissions charged, but also looks into the wider questions of process of intermediation, competition, exchanges and trading systems, clearing and settlement systems, legal and regulatory frameworks, and so on, as later when the system shows signs of improvement, one could have a holistic approach in dealing with these issues. The term e-trading can be described as follows.

The term 'electronic trading' encompasses a wide variety of systems, ranging from simple order transmission services to full-fledged trade execution facilities. We, therefore, define 'e-trading' in a somewhat broader context. It is a facility that provides some or all of the following services:

- Electronic order routing from users to the system.
- Automated trade execution—translating orders into trade.
- Electronic dissemination of bid/offer quotes and depth.
- Post-trade information (transaction price and volume data).

It is necessary to cover in this definition even those systems, which do not include trade execution facilities. The purpose here is not to examine a system, but to look at e-trading in general and its impact.

Compared to the earlier systems, e-trading has certain advantages and these need to be highlighted before we go into a detailed discussion of the other aspects listed earlier. It would be useful to point out that electronic systems differ from traditional markets in several respects. The use of computer, automates aspects of the trading process and changes the relationship amongst dealers and customers. The effect, however, is not to build a better telephone, but to create a new way of trading different from either floor-based or telephone-based trading. The point we are making could best be illustrated by highlighting the differences (particularly those that are noteworthy).

- E-trading is location neutral.
- It allows multilateral interaction and that too on a continuous basis.
- E-trading is scalable. Electronic systems can be scaled up to handle more trade simply by increasing the capacity of the computer network. In traditional markets, the size of the floor has to be

physically expanded or the number and capacity of the intermediaries has to be increased. The scalability can enhance the reach of the dealers through a greater access to a widening base.

- Operational costs under the ET system can be reduced because economies of scale can be exploited.
- E-trading is integrated. It allows straight-through processing by integrating different parts of the trading system.

The tremendous growth in the volumes of business on the internet has had a number of consequences. It was also felt that there would be structural changes and that the first causality would be the elimination of intermediaries and an end of the brick branches of broking houses. However, there is no let up in the physical presence or the branch network. The model currently in vogue is the brick and click one. Perhaps it is not wrong to say that most stand-alone broking firms find it necessary to develop a physical presence too.

It is now possible that even trading with the help of cell phones would be permitted. However, it is necessary to clearly bring out that there are a few security issues related to mobile trading, on which SEBI seems to be working. There should be no risk of hacking. Also, we should guard against the mobile phones falling into wrong hands. We are geared up with technology, which also involves readiness on part of brokerages and telecom service providers to start mobile trading. Sudhanshu Verma, chief executive officer, Asian CERC Information Technology providers, along with brokerage houses, is also looking forward to meet SEBI officials to sort out the issues. There are few protocols for mobile trading such as SSL certificate in online trading, which ensures the security level of a particular transaction. These matters are currently being looked into by SEBI. The market regulator had allowed net trading in 2000, where upon, the number of trading participants grew significantly, but volumes did not match the growth. At present, mobile services at brokerages are merely seen as a value-add through which customers are given basic stock information.

We are having the basic infrastructure in place, once the SEBI guidelines come, the technicalities would be completed and mobile trading could start. As compared to online trading, mobile trading could boost trading participation, as the latter is much more flexible and easy to use. (Amit Golia, head, E-Broking, Motilal Oswal, Press Report)

Recently, the Bombay Stock Exchange also launched its Mobitrack service, which allows the user to access stock price details such as last traded

price, change and percentage in each scrip, besides giving information about profile of few specific scrips selected by the user. Vinay Agarwal, executive director, E-Commerce, Angel Broking, feels regulations for mobile trading would be more or less similar to online trading as security-related issues are already addressed in the internet trading guidelines. 'I don't think there is much of an issue with security as we have already implemented the online trading successfully,' he said.

A review of the intermediation process is important at this stage. The current theoretical work is directed at embracing traditional intermediaries and markets in one framework and the new approaches/perspectives would enable us to have a better understanding of the system.

The theory of financial intermediation is based on the classical assumption of perfect markets. According to this view, intermediation exists because of market frictions and imperfections and remedial measures are taken by the intermediaries. The impact on costs and the importance of asymmetric information between investors and borrowers is stressed to highlight the role of intermediaries. One, however, feels that this is perhaps too passive an explanation of intermediation. The growth of financial markets and technology changes have dramatically brought down the costs and alleviated information asymmetries. The intermediaries have not only survived, but are in fact growing in strength. This has led to some modifications to the age-old views about intermediation. It would perhaps be right to say that the intermediaries are not merely undertaking matching functions, but are also undertaking other activities like creating and testing new products before they are seasoned enough to be traded in a financial market. A review of literature prior to the current developments suggests that the old assumptions of perfect markets are being discarded, and that more and more financial institutions are being viewed as independent parties, which create products and whose worth to the clients stems from transformation of risks, term, scale, location and liquidity. Perhaps, the future would view the market as a microstructure. The focus here is on how markets are created and how they function. They put the market mechanism under the microscope and analyse specific institutions of exchange, trading rules, price formation, and so on. They also study the impact of information on prices. One could describe the nature of the work done as integration of developments in economics of information, rational expectations and imperfect competition. This information-based game and theoretic paradigm models are the basis on which further developments would have taken place had the system not received the jolt that it did. The shape of current theoretical work in these areas is somewhat hazy.

There is some discussion about the efficient market hypothesis, etc. But the other aspects are not getting the attention they should. The whole context is changed and one would have to wait before making generalizations on important aspects of market developments. At this stage any guess is as good as any other. It is important to highlight that the screen-based trading and settlement system put in place by the Clearing Corporation of India for Government of India Securities has virtually eliminated the broking system in gilt-edged securities.

The behaviour of banks and more particularly of the investment banks and their dealers during the crisis has played havoc with the established rules of the game and has made it necessary to reiterate the basic requirements of a sound trading system under free market conditions. The suggestion that they were economical with the truth may make a sound copy in a newspaper, but one can never forget that it brought the system to the brink of disaster.

## TRANSPARENCY

The question of transparency is also important. It can be defined as the public disclosure of reliable and timely information that enables the users to assess a unit's financial position and performance. To achieve transparency, the institution must provide accurate, relevant and quantitatively and qualitatively sufficient information on a timely basis. When applied to e-trading it assumes certain additional dimensions and these could be well brought out by a reference to a directive issued by the European Commission in this behalf. It would not be wrong to say that this whole question needs to be handled with utmost care as any 'leaks' about large trades could have adverse impact on the price sensitive issues. Equally important is the transmission of information likely to affect the overall market conditions.

It can be said that the approach adopted by the European Union's Financial Market Directive (MIFID)—Article 65, affords a very practical solution to the problem. However, special efforts are necessary to restore the balance and semblance of orderliness. Perhaps, the solution lies in having a framework as visualized by the commission.

Broadly speaking, the pre-trade transparency requirements in MIFID in respect of shares require regulated markets (RMs) and multilateral trading facilities (MTFs) to publish current bid and offer prices for shares and the depth of trading interest at those prices. MIFID also requires

investment firms who are ‘systematic internalisers’ to publish firm quotes in liquid shares, which they systematically internalize. In terms of post-trade transparency, MIFID requires RMs and MTFs to make public the price, volume and time of the transactions executed under their systems in respect of shares which are admitted to trading on an RM. Investment firms that conclude transactions in shares outside of an RM or MTF must also make public information relating to those transactions.

## PRE-TRADE TRANSPARENCY

### Indicative or Tradable

#### *Prices/Indicative or Tradable Quantity*

Prices can either be indicative or firm, tradable prices. If they are indicative then you could usually contact a dealer to obtain a firm and tradable quote. Prices on exchange-traded markets, such as an exchange’s order book, are usually firm prices, but prices in Over the Counter (OTC) markets are usually indicative. One must be able to see the depth of interest in trading. On exchange order books, you can usually see the volume of a security, investors are willing to buy and sell at various prices. In OTC markets you may just see that prices are good for up to certain volume, but if the investor wants to trade in larger size, is the information made available on a real-time basis?

### Price Quantity Real-time or Delayed

#### *Publication*

The prices at which trades have been executed and the size of executed trades need to be published as quickly as possible. In some markets, the size of trades may be subject to some disguising such as indicating that the trade was in excess of a certain threshold. In others it may be the full amount of the trade. Is the information about trading updated instantly or is publication delayed? The degree of delay may depend on the size of the trade.

There is one aspect, which has been attracting the attention of security agencies, authorities, and so on. It is the misuse of these channels by rogue traders/terrorists and hush money peddlers. Normal trade practices and instruments can be put to absolutely perverse ends. Equally worrying is the fact that institutions, themselves, hide their exposures and try to portray a

totally wrong picture by not disclosing the risks. Frankly, one is faced with a peculiar situation here. Bigger the institution the greater is the danger of a contagion effect and the impact on the whole system.

## **INTERNET TRADING (E-TRADING) IN SHARES**

When SEBI allowed e-trading, it was expected that brokers would rush to the websites and trading through websites would increase. On the internet, one can trade instantly and transparently from any part of the world. These expectations have actually been fulfilled. The current market scenario may have dampened the overall activity, but the infrastructure is in place. Trade is confirmed and one could have the rate, the time at which trade took place and even the name of the counter party, and so on. Thus one could be doubly sure about the authenticity of the transaction. There are quicker settlements and collections.

## **ELECTRONIC FUND COLLECTION**

Under this system, the brokers get their funds directly credited to their accounts and the clients can in turn get their accounts credited or debited. This facilitates quicker payments, improves the liquidity position of brokers as he gets funds one day after the payout day. This obviates possible defaults or cash out positions of brokers and sub-brokers.

The website on the basis of investor's portfolio can give him information on the company's results, performance, report cards and company analysis. There will be a number of improvements in the process as well as the products. So far as the process is concerned, there will be settlements on a daily basis and on a rolling basis, electronic settlement and clearance, email for transmission of funds. As far as product improvements are concerned, portfolio of investors may include a number of new products such as derivatives and synthetics (see Joshi and Joshi [2009] for a detailed note on synthetic securities).

The other facilities include basket trading, trading in index funds, voting and non-voting shares, tracker shares and complex derivatives. Tracker shares refer to the separate divisional shares of a company such as IT divisions of Wipro or Tatas. The portfolio tracker for valuation can do so by clicking on to a company/broker website for company analysis and MIS on the companies in one's portfolio represented through the website. There will be automatic borrowing and lending facilities institutionalized

security lending, automatic financing or margin buying and a host of other facilities on the stock exchanges.

## E-TRADING IN FIXED-INCOME SECURITIES

Initially, fixed-income trading was slower to exploit electronic platforms than equities markets. That is because fixed-income markets are very different. In contrast to equities, fixed-income markets provided no opportunities for arbitrage—the simultaneous purchase and sale of the same securities in different markets to profit from unequal prices—because the securities are seldom quoted on multiple markets. Further, the broking system was so deeply entrenched that it was difficult to break the sway they had over the entire system. Electronic trading of fixed-income securities enables investors to secure instant access to all the relevant information about security being traded. Finally, electronic trading could increase efficiency and lower trading costs, particularly for small and odd-lot transactions. Retail online trading in Government of India (GoI) securities through stock exchanges became a reality, when the then finance minister, Jaswant Singh, made the inaugural purchase of 10 units of 11.10 per cent paper with face value of Rs 100 each, that was supposed to mature in April 1995.

In the process, a new milestone in the history of the country's capital markets was achieved, opening up trading in Government Securities—hitherto confined to only banks and institutional players—to retail investors, who can place orders for as low as Rs 1,000. So far, the only option for the retail investor was to approach a primary dealer, who would book orders on his behalf through the Negotiated Dealing System of the Reserve Bank of India (RBI). Further, the investor had to commit himself to a minimum amount of Rs 25,000.

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Generally, electronic platforms, which compete against single-dealer platforms, are of several types:

- Auction or bidding systems that allow dealers and investors to bid directly on new issues.
- Multi-dealer systems that allow institutional investors to trade with dealers, but not with each other.

- Cross-matching systems that allow buyers and sellers to trade or periodically match orders anonymously.
- Inter-dealer broker systems that allow dealers to trade anonymously with each other.

As the number of trading and dealer platforms has increased, financial institutions have conducted arbitrage within single markets by identifying pricing discrepancies.

The aspiration of the major platforms must be to become the market, through the scale of deal flow, such that they provide real trading connectivity between the various fixed-income markets. In the longer term, the result will be consolidation of some of the fixed-income markets as has happened in equities markets. In India, the Clearing Corporation of India has now developed such a sophisticated system that the daily trade and settlement takes place in real time and the system is rated to be almost as good as available in more developed markets. The investor can trade in Government Securities in demat form across 10,000-odd terminals of the three designated stock exchanges—National Stock Exchange, Bombay Stock Exchange and Over the Counter Exchange of India. The settlement cycle has now been shortened to T+1. The minimum order size, keeping in view the small retail investor, has been pegged at 10 units (each of Rs 100 face value) and multiples thereof. To begin with, all outstanding and newly issued GoI securities will be offered for trading in the ‘automated, anonymous, order-driven’ system.

The RBI will provide the designated exchanges and depositories a list of securities that can be traded. Retail online trading in treasury bills, state government securities and other approved securities will also be permitted in a phased manner by the RBI, in consultation with the Securities and Exchange Board of India (SEBI). The RBI has decided to extend electronic trading in gilts—the screen-based anonymous order matching—to insurance companies. By the end of September 2005, 117 members were active on this module. NDS-OM volumes covered around two-thirds of the total outright transactions in dated government securities in the secondary markets.

The insurance companies have now been permitted to participate in the screen-based trading system. The Managing Director of Life Insurance Corporation (LIC), Mr D.K. Mehrotra, said that allowing insurance companies to participate in the debt market would bring about ease in transactions. It is especially useful since confidentiality is maintained and our quotes are kept anonymous. According to sources, insurance companies,

including LIC, had sought the move towards screen-based order matching since it provides for less price manipulation, minimum impact cost with quotes being availed of on a real-time basis. Mr Puneet Nanda, CIO, ICICI Prudential Life insurance said, 'Our company has a large asset-base of over Rs 5,000 crore with substantial investment in G-secs and a move like this would bring it at par with other institutional players.'

We now look at the corporate bond market. So far electronic trading has not been permitted in corporate bonds. It is likely that there are apprehensions about the complex products that are likely to hit the market. Bond investments are not always a suitable investment for retail investors. The diversity of the bond market is an important consideration here. While it is undoubtedly true that many bonds are effectively credit risk-free investments on the grounds that the borrowers, particularly governments and supranational organizations, are extremely unlikely to default on their obligations, many other bonds bring significant credit risk and may not be suitable for all investors, who may not understand the level of risk they are exposed to nor have the financial standing appropriate for such investments. Similarly, the interest rate risk associated with such bonds may mean that they are not suitable investments for retail investors. Perhaps the 'Wall Street Devils' have queered the pitch to such an extent that it may be sometime before bonds trading takes roots in any significant manner.

## FOREIGN EXCHANGE TRADING

The Clearing Corporation has now made it possible for forex transactions to be routed through the internet transactions. Major developments, including derivatives trading, would have taken place after the regulatory issues were sorted out. A joint mechanism needs to be in place. We would begin with the list of new products approved in principle by the SEBI Board (PR No. 297/2007). Further, the RBI/and SEBI standing committee on exchange-traded currency futures (RBI 2008) and the comprehensive guidelines on derivatives are extremely useful. Somehow, there are a whole lot of unsettled legal issues and these have led to a number of court cases being filed against the banks, and so on. These are naturally impacting the developments. The mechanism for undertaking the transactions is certainly in place and these could easily be done through the Internet.

The SEBI Board sanction covers the following products relating to:

- Mini-contracts on equity indices.
- Options with longer life/tenure.

- Volatility index and F&O contracts.
- Options on futures exchange-traded currency futures and options.
- Introduction of exchange-traded products to cater to different investment strategies.

In conclusion it can be said that Clearing Corporation has amply demonstrated that these transactions could safely be put through on the internet and complete anonymity regarding the deals would be maintained. The concerned banks/organizations need to make sure that their back office mechanisms, clear-cut demarcation of duties are in place. Last, but not the least important are the risk management systems.