

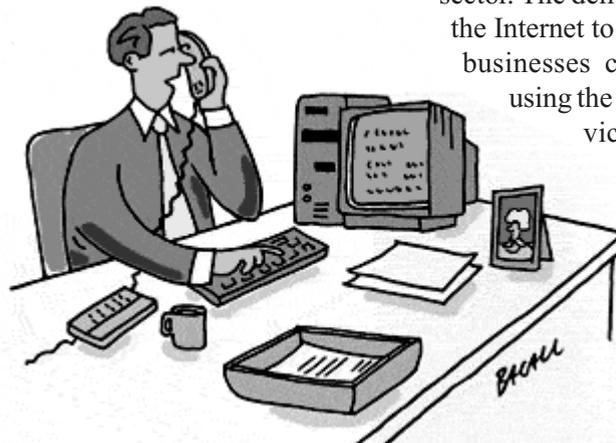
# Electronic Stock Broking all set to bloom in India

—Dr. Madan Bhasin

Perhaps nowhere else is the impact of Internet felt as much as in marketing of services sector. Internet stock-trading in India is a recent phenomenon but is set to expand tremendously in years to come in line with advanced countries. The article focuses on financial service with special emphasis on e-broking of stock.

The author is the Head, Department of Accounting, Maznoon College for Management & Applied Sciences, Muscat. He can be reached at [madan.bhasin@rediffmail.com](mailto:madan.bhasin@rediffmail.com)

Over the last few centuries, human beings have experienced two major revolutions – *industrial* and *electronic*. “As we enter the 21<sup>st</sup> century, we are seeing the beginning of a new revolution, namely the network revolution. It interconnects different parts of the world, enabling the seamless flow of information. The Internet is the engine of this revolution and electronic commerce (e-commerce) is its fuel,” observes Turban (et al, 2000). In the mid-1990s, the term “web economy”



had not yet been coined; it is now a common phrase in business circles.

It was unfortunate that the media was as prompt in writing-off the Internet as it was in canvassing for it. However, the truth is that the Internet is neither a sweeping change that could change the face of business overnight, nor as banal a force as the media would now have us believe. Professor Hanson, in his classic book (2001)

Principles of *Internet Marketing* beautifully sums up the real situation as: “The Internet is definitely a force with potential to change the ways the world operates, though not overnight...It is slowly entering our lives and becoming as ubiquitous as electricity ...It is improving cost-efficiencies, catalyzing disintegration, and increasing convenience for businesses and their consumers.”

Perhaps nowhere else is the impact of the Internet felt as much as in the marketing of the services sector. The delivery of a service via the Internet to consumers or other businesses can be referred to, using the generic term “e-services” (Amor, 1999).

There is a wide range of e-services currently offered through Internet and these include banking, stock trading, jobs and career sites, travel education, consultancy advice, insurance, real-estate, broker services, on-line publishing and on-line delivery of media contents (such as, video, computer games, etc).

This list is by no means an exhaustive one and it is growing all the time. A research report by the Tower Group in 2004 (visit [www.towergroup.com](http://www.towergroup.com)) portrays an optimistic forecast for the services industry – “After steering through

difficult years in a cost containment mode, the financial services industry across the globe is selectively sparking a new wave of innovations in 2004 ... Strategic cost management efforts are paying off, as banking, securities, and insurance institutions are dedicating an increasing portion of their total technology investments to new developments that deliver tangible customer, as well as, bottom-line performance”.

The Internet has, in fact, opened new channels for service delivery, shortened turnaround times, and offered unprecedented convenience to consumers. The financial services sector has leveraged the Internet and exploited its many benefits. “E-broking is the financial service most amenable to e-enablement. It has already witnessed meteoric growth in the United States and is staging a similar show in other economies,”(Kalakota, et al 1999). Indian too, will not remain untouched by these changes. E-broking also offers tremendous benefits to the Indian investor (such as more convenience, competitive prices, customization of service, portfolio, etc. and will probably expand the market segment itself.

## What is e-broking

In the words of Prof David Whiteley (2000): “An electronic market is an attempt to use information and communication technologies to provide geographically dispersed traders with the information necessary for the fair operation of the market”. The e-market is, in effect, a brokering service to bring together suppliers and customers in a specific market segment. These

markets give the customer or customer’s intermediary, easy access to comparative data on prices, and other attributes of the goods or services on offer. E-markets are exemplified by airline broking systems. They are also used in the financial and commodity markets and again the dealing is done via intermediaries – to buy stocks and shares a member of the public uses the services of a stockbroker.

An electronic broker is an intermediary who:

- May take an order from a customer and pass it on to a supplier
- May put a customer with specific requirements in touch with a supplier who can meet those requirements
- May provide a service to a customer, such as a comparison between goods, with respect to



particular criteria such as price, quality, etc.

Thus, e-brokers provide comparison-shopping, order taking and fulfillment, and services to a customer. That is the reason why they are sometimes referred to as “electronic” intermediaries. Examples of e-brokers (or intermediaries) include [priceline.com](http://priceline.com), [my Simon.com](http://my.Simon.com) and [bestbookbuy.com](http://bestbookbuy.com). This class of e-retailers is currently an extension of the notion of a broker in the physical to the cyber world.

Although on-line trading

strictly refers to the electronic execution of trade, an eco-system of e-stock trading has three dimensions:

- Electronic execution of the trade,
- Payment of transaction through a payment gateway, and
- Transfer of shares in electronic form. Current developments are, essentially, converting off-line practices to an online equivalent.

By examining the major developments in the sphere of Internet-based share dealings in the new global market place, as reported by Peter Temple in his book *The new Online Investor*; we find that there have been three distinct phases in the development of e-broking. These are:

**Phase 1:** The open-outcry system with the transactions taking place manually in the ring.

**Phase 2:** The electronic system, enabling brokers to place orders online<sup>4</sup>.

**Phase 3:** The e-broking system, empowering customers to transact online.

The mechanics of the e-trading system begins with the user logging onto the Electronic Communication Network (ECN) through the Internet. The user then accesses his e-trading account with the help of a secure customer password. The user is now connected directly with the exchange and any transactions would be instantaneous and irrevocable. The user also has access to real-time price movements of various stocks, and other contextual information to assist him in his decision-making. Lee suggests in his book *‘Doing Business Electronically: A Global Perspective of E-commerce’* that “an integrated e-broking system

consists of not only a transaction enabler but also a payment gateway for funds transfer and a 'demat' account for the transfer of stocks. Such a service enables smooth, convenient and transparent operations".

It is a healthy sign for the service industry that the number of e-trading sites and the usage of them are mushrooming all over the globe. Several companies, such as E\*Trade,



Datek.on-line, American Express Financial Services, etc. allow you to trade stocks, bonds, mutual funds, etc. on the Internet. Figures for 2002-03 show 17 million online traders in the US alone, and a rapid growth in the UK since the first site opened at the start of 1998.

### Amenability for E-enablement of a service

First and foremost, we are endorsing the Six 'S' Model developed by Allgood (1999) to provide a conceptual framework for analyzing the amenability of a service for e-enablement.

This model is based on the proposition that a service which offers the best potential for e-enablement does not require sophisticated skills, is standardized, has a wide geographic spread of clients, and a high number (statistic) of clients who use the service very frequently (scope) and whose

automatic processes account for a high proportion of costs (savings).

- **Corporate Banking:** The corporate banking industry involves understanding client needs, analysis of the project proposal, evaluation of various alternatives, and finally, recommendation of a suitable alternative. The task involves application of high-level skills, is not highly standardized, and therefore, not amenable to automation. However, the number of corporate clients per entity and frequency of transactions is limited, even though the geographic spread may be diverse. Thus, we can say that corporate banking does not seem to be amenable to e-enablement.

- **Investment Banking:** For the reasons cited above regarding corporate banking, investment banking does not appear to be a suitable subject for e-enablement.

- **Retail Banking:** The retail banking industry (mainly comprising credit cards, management of savings accounts, etc.) is characterized by a large number of clients, spread geographically, and utilizing simple, repeatable and standardized services. For serving the customer base, specialized skills are not required, and automation processes comprise a significant proportion of the overall costs of service. By using the above stated framework, it appears that retail banking sector would be highly amenable to e-enablement.

- **Stock Broking:** McAfee and McMillan (1997) suggest, "A stock broker basically collates orders from the various customers and executes the same through a trading terminal. Customers typically place orders over the tele-

phone and a representative of the broker executes the order on behalf of the client via the trading terminal". The 'skill-set' used by the representative is not highly specialized, as the action being considered is merely the execution of the order and usually not client advisory. While other processes (such as, risk, exposure and client monitoring) are also involved, they are typically automated for and easily repeatable. Although the frequency of transactions by the customers is moderate, if not high, the geographic span of the clients is widespread, and so there is significant scope for a reduction in overall costs through automation. All these characteristics, therefore, make broking highly amenable to e-enablement.

### Benefits and Problems of E-broking

In recent years, the use of the Internet has spread among investors in stocks and shares. The Internet can make up-to-the-minute information available to a large number of investors that until recently had only been available to those working in financial institutions. **Komenar (1999)** concludes: "The use of online brokerage services automates the process of buying and selling, and hence, allows a reduction of commission charges. Also, the commodity being traded is intangible, the ownership of stocks and shares can be recorded electronically, so there is no requirement for physical delivery". However, it should be noted that the supply chain for online share dealing remains unchanged, use of the Net just speeds up the whole process and that can be vital in some

share deals. Switching over to e-broking results in several benefits, both to the user and to the broker.

## Benefits to Users

- 1. Lower transaction costs:** Typical brokerage-rates in India are in the range of 1.0 to 1.5%, whereas the rates for e-broking are as low as 0.1%. In the US, the brokerage costs, before e-trading was introduced, were as high as 7%. But

The Bombay Stock Exchange and the National Stock Exchange have recently developed 'proprietary' trading engines' called 'Webex' and 'Dotex' respectively. These engines will obviate the need for a broker to develop his own engine.

it has now come down to about 1%. E-broking, in addition, not only brings down the cost of the execution of the transaction but also speeds up the electronic transfer of securities.

- 2. Transparency:** E-broking empowers the customers to transact directly on the stock exchange and delays the whole process thereby improving transparency. "The user does not need to rely on the broker's 'word-of-mouth' or 'transaction' slip for confirmation of the price at which his trade was conducted, observes Dr. Lucas (1999).
- 3. Convenience:** Online share trading is available

merely at the click of a button, in the comfort of home/office, thus, making it much more convenient for the customers to trade anytime. Also, with 'limit-based' orders being allowed, customers can place their orders even during the 'non-trading' hours, which are executed at the earliest trading possibility.

- 4. Procedural benefits:** Unlike the earlier scenario, where the customers had to physically go to the broker to complete the formalities of trade, under the e-trading paradigm, these procedures are done away with. As Chan (*et al.*, 2001) in the book titled "*E-Commerce: Fundamentals and Applications*" (2001) concludes: "The entire cycle-of-trade (like placing the order, transfer of funds, transfer of securities, etc.) is done electronically, and it speeds up the whole process."

## Benefits to Brokers

- 1. Easier risk management:** Peter Temple sums it up as: "Under the online mechanism, the system would first check the status of funds available with the client in his bank account and only then allow the trade to take place. This process, thus, substantially reduces the exposure of the broker to client-related credit and payment risks".
- 2. Greater business potential:** The new paradigm of e-broking, which allows simple, convenient, and transparent transactions, may encourage more participants to trade. It is expected that the introduction of e-broking will expand the

market horizon, thus resulting in better business for brokers in the long-term.

- 3. Lower staff costs:** Automation of the broking processes results in reduced manpower requirements, flexibility of time, less infrastructure cost, etc. offering significant cost-savings to the broker.

The *major problem* with e-stock trading is that it increases the temptation on the part of influential speculators & stockbrokers to indulge in short-term speculation rather than long-term investment. The history of stock markets (both NSE and BSE) in India is replete with at least a dozen cases of scams, where stockbrokers and bankers joined hands to squander the savings of millions of small and institutional investors. As Dr. Lucas has rightly pointed out in his book (1997) *Internet Trading and Its Threat to Traditional Stock Brokers* – "Consumer and business concerns about Internet security are well founded. Amid an explosive upsurge in scams, fraudsters continue to take advantage of the Internet's anonymous transaction environment – with everyone from one-time hackers to organized crime testing the market's boundaries." However, the problems are further compounded by the different legislative frameworks, which are prevalent in countries across the globe.

## Security Concerns for E-broking

Some leading technology companies have already developed "online transaction processing" and "straight-through processing" applications that allow real-time transaction execution. Both allow the user

to directly interact with the central system of any market place, without any manual intervention. As Professor David Whiteley (2000) suggests: "Straight-through processing technology permits financial software products to directly interact with the stock exchange system by communicating with the exchange market structures. This is achieved by developing application programming interfaces (APIs) that talk to the exchange server. "One of the leading technology providers for online trading in India is *Financial Technologies India* (visit [www.ftIndia.com](http://www.ftIndia.com)) with a product called "FT Engine".

It would suffice to say that the cycle of e-broking has to pass through three layers; (a) The Client Interface Layer: the front-end, (b) The Middle Layer: risk management systems that access data from banks and depository participants, calculate client exposure at the instant, and give 'Go/No go' advice on the trade, and (c) The End-Layer, the back-end, where the accounting modules, pay in or pay out schedules etc. operate.

It must be noted at the outset by the readers that from a technical perspective, there are three key success factors for e-broking. They are briefly described below:

- **Scalability and robustness of the trading system:** It becomes imperative for any Net-based application to have a proven capability for scalability and robustness of a trading system that ensures the ability to handle and process requests from multiple users at any given point in time.
- **Bandwidth optimization:** The

application software should demonstrate intelligence in optimizing the available bandwidth by deploying advanced technologies like streaming.

- **Integration with third-party systems:** On the Net, with information feeds available from multiple points, it is prudent to deploy applications that are built on open architecture methodology for interfacing with third party systems.
- **For any e-trading system** to be successful, it should provide security, reliability and confidentiality of data (Chan, et al., 2001). This can be achieved through the use of 'encryption' technology before the online trading begins. The major security requirements of e-broking are: (a) trusted means of authentication over open networks, (b) confidentiality of the transaction, (c) means to ensure integrity of data in-transit, and (d) means to ensure non-repudiation' of payment or its receipt (visit [www.odysseytec.com](http://www.odysseytec.com)).
- Various security models are adopted to ensure safe and reliable e-broking transactions. The commonly employed security models in e-Broking are: passwords, Secure Sockets Layer (SSL), Kerberos, Pretty Good Privacy (PGP), Public Key Infrastructure (PKI), Custom Implementations, Linux, etc.

### E-broking Scenario

**E-Broking in US:** The ECN, Instinet ([www.Instinet.com](http://www.Instinet.com)) was first used in 1969 by institutions to transact with each other but today it also includes a select group of smaller brokers. However, e-

Although there are more than 40 e-brokers in India, the industry is still in a nascent stage as online trades account for merely Rs. 700 million, which is a negligible percentage of the total stock trade.

broking was pioneered in by the E\*Trade Securities (visit [www.etrade.com](http://www.etrade.com)), which first started operations and offered online investing services through *America Online*, *CompuServe*, and even launching its own Website in 1996. Charles Schwab, now the largest in the US with 2.24 million online accounts and \$174 billion under management via the Internet, also launched its online trading ([www.aboutschwab.com](http://www.aboutschwab.com)) venture in 1996. In addition, there are now over 112 on-line brokerage firms in the US offering e-broking services to consumers. Today, about half of all transactions made by US retail investors are done through the Internet. *International Data Corporation*, for example, predicts that "the number of US households using on-line brokerages to meet their financial needs will grow from the 2000 figure of over 7 million to 19 million in 2004, with over \$2.5 trillion of assets managed online."

It is heartening to note that the number of US online brokerage accounts continues to grow consistently. After an initial period of astounding growth, the number of online brokerage accounts is still steadily increasing. Tower Group estimates show that by 2005, there will be more than \$30.5 million online brokerage accounts in the US.

According to the above study, Japan has the necessary traits for E-brokerage to thrive. These traits include high personal wealth and rising Internet usage rates.

**E-broking in India:** Internet stock-trading in India is a recent phenomenon and began as recently as January 2000. Although there are more than 40 e-brokers, the industry is still in a nascent stage as online trades account for merely Rs.700 million, which is a negligible percentage of the total stock trade. It is estimated that the customer-base for all the portals put together is a mere 120,000 compared to 2.5 million customers in Japan and 14.4 million in the US. **The leading e-brokers in the Indian markets are ICICIDirect, India Bulls, MotilalOswal, 5Paisa, etc.**

*Hindrances to the growth of e-broking in India can be summed up as:* **First**, the low density of telephones, low Internet penetration, and low installed base of computers are responsible for the poor availability of the Internet. **Second**, very few online payment gateways are available, hindering the smooth growth of the industry. Integrated service providers (like ICICIDirect.com), which provide combined banking, broking and 'demat' services, have an advantage over other non-integrated service providers, who have to scout for partners for providing gateway services. **Third**, data privacy can be ensured through server side certification and here the situation appears to be satisfactory. However, most of the sites restrict access through passwords and identification numbers, but these are not considered adequate and foolproof. **Fourth**, Institutional investors comprise over 80% of the

total investors in the country. The remaining 20% of retail investors, the focus segment of e-brokers, do not contribute significantly to the overall stock-turnover of the country. Thus, there is a theoretical limit to the overall penetration of e-broking, *Last* but not least, the concept of trading on computers through the Internet requires a change in the habits of people; enhancing trust in these techniques may take more time.

## Prospects for E-broking Industry

It is heartening to note that efforts are being made by the leading international stock exchanges across the globe to realize their cherished dream of 'consolidation' in the Global Equity Markets. The *Tokyo that Stock Exchange* reported in June 2000 (visit [www.TSE.or.jp](http://www.TSE.or.jp)) "stock exchanges across the globe are exploring an alliance that will create a 24-hour Global Equity Market. The New York Stock Exchange and exchanges from three main time zones – Australia, Tokyo and Hong Kong in the Asia-Pacific; Sao paulo, Mexico and Toronto in the Americas; and Euronext, the combined Amsterdam, Brussels and Paris exchanges in the world's global companies.

E-broking is still an evolving industry in India and the survivors are likely to be those brokers who offer integrated/consolidated services and are financially resilient. The future of the e-broking industry, thus, largely depends on the extent of the penetration of the Internet in the near future. Moreover, the *Bombay Stock Exchange (BSE)* and the *National Stock Exchange (NSE)* have

recently developed 'proprietary' trading engines called 'Webex' and 'Dotex', respectively. These engines will obviate the need for a broker to develop his own engine, and thus, result in capital investment savings. However, a user can log on to these engines using the website of the broker and trade electronically. These developments are, therefore, expected to give a strong fillip to the e-broking industry in India. Application of superior technology and establishing integrated systems to provide a one-stop solution to clients will be a key determinant of success.



The business intelligence major, *International Data Corporation*, has predicted that: "The IT-enabled services market globally will account for revenues of US \$1.2 trillion by 2006. Despite the adverse global economic conditions, Indian players logged in high growth rates. Overall, this sector grew at over 65%, upping from Rs.71 billion in 2001-02 to touch Rs.117 billion in 2002-03," concludes NASSCOM. In yet another study, titled "*e-Commerce and Development Report 2002*" conducted by UNCTAD, it was revealed that the global e-commerce market was worth around US \$615.3 billion and expected to

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grow to US \$4,600 billion by 2005. Another estimate by *Forrester Research* indicates that global online sales accounted for approximately US \$2,291.5 billion of world trade during 2002 (as reported by [www.Nasscom.org](http://www.Nasscom.org)). Despite the development of Internet e-commerce and the hype that surrounds it, the amount of business done online as a proportion of all retail sales remains stubbornly small.

The e-brokerage industry con-

**Various security models are adopted to ensure safe and reliable e-broking transactions. The commonly employed security models in e-Broking are - 'passwords', 'Secure Sockets Layer', 'Kerberos' and 'Pretty Good Privacy'.**

tinues to be battered by several *complex challenges*, such as, collapse in pricing structures, reduced return on IT investments, shaken value propositions, and crisis in

consumer confidence. A research report from the Tower Group, 2004 (visit [www.Towergroup.com](http://www.Towergroup.com)), for example, very strongly asserts that these challenges may change not just the way brokerage firms conduct their day-to-day business, but may begin to re-define the e-broking industry as a whole. They must make tough decisions as to where to deploy their IT dollars, as well as what strategies and what customers to pursue. They must re-invent themselves in a real-life world where 'service' is the key differentiator. Despite all the challenges, e-broking industry seems like a sector set to grow day-by-day. ■

## National Conference on 'Adding Values - Gaining Competence'

**Organised by Fiscal Laws Committee of The Institute of Chartered Accountants of India**

**Supported by Central India Regional Council and Western India Regional Council of the ICAI**

**CPE CREDIT**

**Venue** Anand Mohan Mathur Auditorium, Opp. : Hotel Fortune Landmark, Suklia, Indore

**Hosted by** Indore Branch of the ICAI      **Date** January 7th & 8th 2005

**9 HOURS**

### DAY ONE

**Registration**  
03 to 4 p.m.  
**Inaugural session**  
4 p.m. to 5 p.m.  
**Tea Break**  
5 p.m.

### Technical Session I: 5.30 p.m to 7.30 p.m

**Chairman:** Shri N.D. Gupta, Past President, ICAI

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|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| (a) Emerging Opportunities in BPO-Accounting and Taxation Services<br><br>(b) Conversion of Local Body Accounts | <b>Speaker:</b> Shri Jai Kumar Mansharamani, FCA, Noida<br><br><b>Speaker:</b> Dr. B. Chakravarty, ICAI |
|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|

*Dinner and Entertainment: 7.30 p.m*

### Conference Committee

**Chairman:** Shri Harish Motiwalla; **Co-Chairman:** Shri Anil K. Khandelwal; **Secretary:** Shri Hitesh J. Mehta; **Director:** Shri Manoj Fadnis; **Co-Directors:** Shri Ashok Mangal, Shri Nihar Jambusaria; **Coordinator:** Shri Ashok Sodhani

### DAY TWO

**Breakfast**  
09 a.m. to 9.30 a.m.  
**Lunch**  
12.30 p.m.-1.30 p.m.  
**Valedictory Address**  
Shri Kamlesh. S. Vikamsey, Vice President of Institute of Chartered Accountants of India

### Technical session II : 9.30 a.m to 12.30 a.m

**Chairman:** Shri Subhash Deshpande, FCA, Indore

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|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| (a) Business Income - Recent Issues<br><br>(b) Recent Judgments in Direct Taxes | <b>Speaker:</b> Shri Sunil Talati, FCA, Ahmedabad<br><br><b>Speaker:</b> Shri Ved Jain, FCA, New Delhi |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|

### Technical session III : 1.30 p.m to 3 p.m

**Chairman:** Shri Harish Motiwalla, FCA, Mumbai, Member, Central Council, ICAI

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|------------------------------------------|-------------------------------------------------|
| International taxation - Bird's Eye-view | <b>Speaker:</b> Shri Pinakin Desai, FCA, Mumbai |
|------------------------------------------|-------------------------------------------------|

### Technical Session IV : 3.30 p.m to 6.00 p.m

**Chairman:** Shri Kamlesh S. Vikamsey, Vice President, ICAI

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|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| (a) E-Filing in Direct Taxes<br><br>(b) Practical Issues under Survey | <b>Speaker:</b> Shri Manish Dafaria, FCA, Indore<br><br><b>Speaker:</b> Shri Harish Motiwalla, FCA., Mumbai |
|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|

### Delegate Fees

|                    | Up to 27.12.2004 | After 27.12.204 |
|--------------------|------------------|-----------------|
| <b>FCAs</b>        | Rs. 1050         | Rs. 1150        |
| <b>ACAs</b>        | Rs. 950          | Rs. 1050        |
| <b>Students</b>    | Rs. 750          | Rs. 850         |
| <b>Non-members</b> | Rs. 1250         | Rs. 1350        |