
Globalization of banking sector and online banking

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Introduction

Internet banking refers to the use of internet as a remote delivery channel for banking services. Web based or internet banking is poised to become the future face of banking services. The number of visits to the bank can be minimized effectively by operating from the internet account. Thus the number of contacts required to perform a transaction and solve a problem has been reduced through online banking. The usual branches of banks have culminated into PC networks, whereby the consumer can draw all the benefits and services of the bank at a single click of the mouse.

The number of individuals utilising internet services has increased considerably. In 2006, about 12% of the 38.5 million internet users in India were banking online¹ and the figure for online banking was estimated to rise to 16 million by 2007-08. The internet population itself is set to grow to 100 million by 2007-08.

Year	Users	Population	% penetration
1998	1,400,000	1,094,870,677	0.1 %
1999	2,800,000	1,094,870,677	0.3 %
2000	5,500,000	1,094,870,677	0.5 %
2001	7,000,000	1,094,870,677	0.7 %
2002	16,500,000	1,094,870,677	1.6 %
2003	22,500,000	1,094,870,677	2.1 %
2004	39,200,000	1,094,870,677	3.6 %
2005	50,600,000	1,112,225,812	4.5 %
2006	40,000,000	1,112,225,812	3.6 %
2007	42,000,000	1,129,667,528	3.7 %

Table 1: Internet Penetration in India.²

Multiple services can be offered through online banking such as – bill payment services, Fund transfer, railway pass (Indian rail has tied up with ICICI bank to make railway pass online for local trains³) etc.

Technology in Indian Banking

The technological development⁴ in banking can be traced as follows:-

1960 - Mechanised banking introduced.

1970 - Introduction of computer based banking industry.

1980 - Introduction of computer-linked communication based banking.

Advent of computer technology has created a major impact on working of banks. The computerization and subsequent development in history of Indian banks can be traced back to 1966 when Indian Bankers Association (**IBA**) along with exchange banks association signed first wage settlement with the unions, which accounted for the use of IBM or ICT accounting machines for inter-branch reconciliation etc. IN 1970s, SBI installed a ledger-posting machine along with a mainframe computer at selected branches. A committee on computerization and mechanisation was appointed by RBI in 1983 under chairmanship of Dr. C. Rangrajan. Its objective was to chalk out a plan for mechanization of Indian banking industry. It was recommended that computerization and installation of Advanced Ledger Posting Machines (ALPM) at branch, regional and head offices of banks will bring around a new era in banking. Narsimhan committee in 1991 paved way for reform phase in banking. Saraf committee was constituted by RBI in 1994 that recommended the use of Electronic Fund Transfer System (**EFT**), introduction of electronic clearing services and extension of Magnetic Ink Character Recognition (**MICR**) beyond metropolitan cities and branches.

The rate of adoption of IT by foreign and private sector bank in the country has been significant over the last five years, which can be attributed to fierce competition and the internet phenomena worldwide. The arrival of private and multinational banks with their superior state of the art

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technology based services pushed the Indian banks to follow the suit by going in for the latest technologies to meet the threat of competitors and retain their customer base.

Technology was the rational for bank introducing ATM and POS (Point of sales) in 1970s, telephone banking in 1980s and internet banking in 1990s⁵. In Mumbai, Shared Payment Network System (SPNS) was set up in February 1997. It was a network of 28 ATMs with 11 banks. The ATM card was branded as 'SWADHAN'. SPNS could link with international hubs such as VISA and MASTERCARD. CITIBANK a US multinational was first bank in India to offer ATM card facility in 1985.⁶

"The last four years have seen dramatic changes, making customers' convenience critical aspect of banking"⁷. Indian metros are surging ahead in online banking usage. Today the delivery channel of banks include direct dial up connections, private networks, public networks etc. and the devices include telephone, Personal Computers including Automated Teller Machines, etc. Technology has thus initiated a paradigm shift from branch banking to 'Anywhere Anytime' banking. Thanks to technology, today banks are able to manage in much better way, thereby gaining greater efficiency in operations.

Impact of Technology

The major impact of technological revolution in banking can be stated in terms of:

- * Paradigm shift from traditional banking to customized banking as the services can be delivered via computer and

- * Convenient banking i.e. "**Anytime, Anywhere banking**". A customer can check balance by logging into banks website through a user name and password. In this way he can enquire balance, status of cheques, perform funds transfers, order drafts, request issue of cheque books etc. It has been observed that customers who adopt online banking are typically more profitable to the bank, stay with the bank longer and use more products strengthening the bank customer relationship⁸. Information Technology and Internet banking has bridged the information gap, which was interestingly because of human involvement. Banks can make the information of products and services available on their site, which is, an advantageous proposition. Prospective customer can gather all the information from the website and thus if he comes to the branch with queries it will be very specific and will take less time of employee. Customer can visit these websites and can compare the services offered by a bank with that of another. Customer can get all the information, by saving money and time. The trend thus emerging out is that of virtual corporate system where the human role is minimized to maximum effect.⁹

The overall banking size and structure has increased considerably. It can also be accredited to the current market characteristics. More private players and multinational banks are establishing their base in India. Earlier nationalized bank dominated the scenario. Now after deregulation private banks have emerged as a powerful force. For example with over a million customer accounts, 600 branches and a network of 2,000 ATMs across country ICICI bank leads the way¹⁰ in private bank category. As a result, there is a fierce competition among these players for capturing the savings of individuals and current accounts of organisations. This has been spearheaded by the liberalization in the insurance industry. Insurance industry is giving fierce competition through their offerings on various policies. This sudden surge has necessitated the use of technology in offering better services competitively. Most of the banks have coupled IT with their offering to add value.

Several banks have been positioning themselves as a one-stop shop financial service provider with a fairly exhaustive range of products, including deposit products, loans, credit cards, debit cards, depository (custody services), investment advice, bill payments and various transactional services. These apart, banks have also been entering into the business of selling third-party products such as mutual funds and insurance to the retail customers. To provide their customers greater flexibility and convenience as well as to reduce servicing costs, banks have been investing to computerize their branches and in new delivery channels such as ATMs, phone banking, internet banking and mobile banking.

Modes of Distribution

Banks have been early adopter of technology. They were wise enough to understand the innovative mode for offering services. Private Banks played a major role in reviving the banking spirit in India. It was they who initiated the change. Today banking services can be delivered through following modes:-

1. Internet Banking, Web Banking, PC Banking and e-Banking

Popularity of PC and easy access to internet and World Wide Web (www) has facilitated banks to use internet as a delivery channel and receiving instructions. Today all private banks and most of the nationalized banks are offering web based banking services. It is this form of banking that is generally referred as Internet Banking.

2. Phone Banking / Mobile Banking (M - Banking)

There has been a rapid advancement and acceptance of mobile services in India. Penetration rate of mobiles and landlines have increased considerably. Banks have lapped up these opportunities and are offering mobile banking. Account status can be enquired just by a **SMS** (Short Message Service).

3. Plastic Money – ATM card, Credit card, Debit Card etc. Banks have installed **ATM** that is connected via V-SAT. The customer can perform following operation through **ATM** – cash withdrawal, balance enquiry, mini statement of previous transactions (last 5 to 10 transactions), order cheque books, deposit cash and obtain product information. Nowadays banks are offering value added services too, through **ATMs**. Punjab National Bank (**PNB**) is offering recharge of prepaid mobile card. Often these banks tie with other banks to use their **ATM** like:-

* HDFC and SBI;

* PNB, UTI and Global Trust Bank.

In this manner, the banks increase their '**Point of Cash Delivery**'. Apart from this credit, debit card have are becoming preferred medium of payment. Thus technology has created various delivery channels for bank customers.

Internet Banking

The use of information technology in banking is now inherent in banking industry. A customer can log on banks website and access his account. He can perform following functions online: Balance enquiry, Transfer of funds and online payment. A survey¹¹ done by Booz and Allan has revealed that internet is the most economical way of banking. Internet banking can be categorized in following stages¹² :

I. Information Kiosks: traditional information on banking products and services are available on the website of the bank.

II. Basic I-Banking : Here, bank sets up infrastructure for internet banking and for accessing basic services like opening an account, paying utility bills and checking the balance.

III. Virtual medium : Here internet is taken as an official medium for financial transactions. Buying and selling activities can be undertaken through banks payment gateway technology.

Today most of the banks are having their own functional websites through which banks are serving customers. There are more than 90¹³ banks offering internet banking. Internet banking is now being accepted. For example if we look at the performance of Syndicate bank - Internet Banking users increased over 210%¹⁴ (from 8300 in March 2005 to 17,432 as on 30.06.2006)

Advantages

The advantages of online banking can be encapsulated as:

1. Convenient
2. Unaffected by boundation of operational timings.
3. No geographical barriers
4. Services can be offered at very low cost. As the chart shows results of a survey, cost per transaction through internet banking is the least among all other modes.

Cost Per Transaction In The US: Money Transfer (units in US \$)						
Type	Branch	Cheque	Phone	ATM	PC	Internet
Cost Per Transaction	1.07	0.95	0.45	0.27	0/015	0.01

Insert 1: Cost per Transaction of various modes
Source: Furst, Lang & Nolle (1998), Booz, Allen & Hamilton (Apr.1997)¹⁵

The phase in the last five years may be termed as one devoted to the provision of alternate channels like – ATM, Internet Banking, Telebanking, mobile banking, anywhere anytime banking. Young urban professionals and employees besides high net worth individuals have been using these channels at a satisfactory pace. The era of convenience banking has arrived.¹⁶

Challenges in Internet Banking

Internet banking in India is in its earliest stage of development. Most of them are offering basic services only¹⁷. Limited no. of banks are offering full services and of these most are private banks with HDFC and ICICI leading the market. The deregulation of banking industry coupled with the emergence of new banking technologies is enabling new competitors to enter the financial services market quickly and efficiently¹⁸.

Indian internet banking faces following challenges:

- * **Proper understanding of the customer** - i.e. proper identification of their needs and wants. For this a massive survey must be undertaken may be in collaboration with other banks.
- * There is **need for transparency** in offering services as customers awareness has grown considerably.
- * Breach of privacy: online transactions enter straightaway into the records revealing the identity of customer. Thus black money cannot be transferred with ease.

- * Bandwidth: Though companies claim to offer good speed and high bandwidth, still there are problems in accessing high speed on net. Internet banking can go high only on the wings of proper infrastructure comprising telecommunications and bandwidth.

- * Computer literacy in India is still very low and that is a barrier in fast acceptance of Internet banking.

- * The mindset of the Indian customer need to be changed.

- * Customer has to be **protected against being "net-jacked"** i.e. he needs to be protected from fraud.

Threats¹⁹ can be

- * Cracking login and passwords is a common way of fiddling with the data.

- * Denial of services: Directing millions of queries can block computer network.

- * Data Diddling: Data can be modified in an unauthorized manner. A customer can therefore receive bills of higher amounts than the actual transactions

- * Session hijacking: Hijackers become unauthorized intermediaries between the server and the client; they can then hijack the data and prevent it from reaching the destination.

Most online transactions involve disclosing up of the credit or debit card number. Hackers can very easily track down these numbers. They can thus enjoy the full benefits of the card without being an actual cardholder. RBI has issued some guidelines²⁰ on Internet banking for safety of customers and banks. Some of which are:

- * Application for account opening can be accepted over Internet but account should be opened only after proper introduction and physical verification of the customer (Para 7.2.1).

- * Security procedure adopted by bank, for authenticating user, must be recognized by law as a substitute for signature, from a legal perspective. Information technology Act 2000 in section 3(2) provides for a particular technology (asymmetric crypto system and hash function) as means of authenticating electronic records. Any other method used by bank should be recognized as a source of legal risk. (Para 7.3.1).

- * The secrecy and confidentiality of customers account has to be maintained (Para 7.5.1 – 7.5.4)

- * Consumer Protection Act is applicable to banking services as well (7.11.1)

Information Technology Act 2000 has given legal recognition to creation, transmission and retention of an electronic (magnetic) data to be treated as evidence in court, except in those areas which

continue to be governed by the provisions of Negotiable Instruments Act 1881.

Conclusion

Internet banking is changing the banking industry and is having the major effects on banking relationships. The net banking, thus, "now is more of a norm rather than an exception in many developed countries" due to the fact that it is the economical way of providing banking services. Banking is now no longer confined to the traditional brick and mortar branches, where one has to be at the branch in person, to withdraw cash or deposit a cheque or request a statement of accounts. There is need to scan and analyse the market and respond to the needs of customers and to generate awareness regarding advantages of internet banking.

In true Internet banking, any inquiry or transaction is processed online without any reference to the branch (anywhere banking) at any time. Providing internet banking is increasingly becoming a 'need to have' than a 'nice to have' services.

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