



**"INNOVATIONS OF INFORMATION TECHNOLOGY (IT) & ITS IMPACT ON INDIAN BANKING SECTOR"**

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**Introduction**

Banking environment has become highly competitive today. To be able to survive and grow in the changing market environment banks are going for the latest technologies, which is being perceived as an ‘enabling resource’ that can help in developing learner and more flexible structure that can respond quickly to the dynamics of a fast changing market scenario. It is also viewed as an instrument of cost reduction and effective communication with people and institutions associated with the banking business. The middle and late 90s witnessed the tornado of financial reforms, deregulation globalisation etc. coupled with rapid revolution in communication technologies and evolution of novel concept of convergence of communication technologies, like internet, mobile/cell phones etc. Technology has continuously played an important role in the working of banking institutions and the services provided by them. Safekeeping of public money, transfer of money, issuing drafts, exploring investment opportunities and lending drafts, exploring investment being provided.

**The New globalisation Era**

The 21<sup>st</sup> century will bring about an all-embracing convergence of computing, communications, information and knowledge. This will radically change the way we live, work, and think. The growth of high speed networks, coupled with the falling cost of computing power, is making possible applications undreamed of in the past. Voice, data, images, and video may now be transferred around the world in micro-seconds. This explosion of technology is changing the banking industry from paper and branch banks to digitized and networked banking services. It has already changed the internal accounting and management systems of banks. It is now fundamentally changing the delivery systems banks use to interact with their customers. All over the world, banks are still struggling to find a technological solution to meet the challenges of a rapidly-changing environment. It is clear that this new technology is changing the banking industry forever. Banks with the ability to invest and integrate information technology will become dominant in the highly competitive global market. Bankers are convinced that investing in IT is critical. Its potential and consequences on the banking industry future is enormous.

**1.Electronic Banking(E-Banking)**

Information Technology enables sophisticated product development, better market infrastructure, implementation of reliable techniques for control of risks and helps the financial intermediaries to reach geographically distant and diversified markets. Internet has significantly influenced delivery channels of the banks. Internet has emerged as an important medium for delivery of banking products and services. IT is increasingly moving from a back office function to a prime assistant in increasing the value of a bank over time. IT does so by maximizing banks of pro-active measures such as strengthening and standardising banks infrastructure in respect of security, communication and networking, achieving inter branch connectivity, moving towards Real Time gross settlement (RTGS) environment the forecasting of liquidity by building real time databases, use of Magnetic Ink Character Recognition and Imaging technology for cheque clearing to name a few. Indian banks are going for the retail banking in a big way The key driver to charge has largely been the increasing sophistication in technology and the growing popularity of the Internet. The shift from traditional banking to e-banking is changing customer’s expectations.

In India E-banking is of recent origin. The traditional model for growth has been through branch banking. Only in the early 1990s has there been a start in the non-branch banking services. The new private sector banks and the foreign banks are handicapped by the lack of a strong branch network in comparison with the public sector banks. In the absence of such networks, the market place has been the emergence of a lot of innovative services by these players through direct distribution strategies of non-branch delivery. All these banks are using home banking as a key “pull” factor to remove customers away from the well entered public sector banks. Many banks have modernized their services with the facilities of computer and electronic equipments. The electronics revolution has made it possible to provide ease and flexibility in banking operations to the benefit of the customer. The e-banking has made the customer say good-bye to huge account registers and large paper bank accounts. The e-banks, which may call as easy bank offers the following services to its customers:

Credit Cards/Debit Cards	AutomaticTellerMachine(ATM)	E-Cheques
EFT (Electronic Funds Transfer)	DeMAT Accounts	Telephone Banking
Mobile Banking	Internet Banking	EDI (Electronic Data Interchange)

## Benefits of E-Banking

### To the Customer

- Anywhere Banking no matter wherever the customer is in the world. Balance enquiry, request for services, issuing instructions etc., from anywhere in the world is possible.
- Anytime Banking – Managing funds in real time and most importantly, 24 hours a day, 7days a week.
- Convenience acts as a tremendous psychological benefit all the time.
- Brings down “Cost of Banking” to the customer over a period of time.
- Cash withdrawal from any branch / ATM
- On-line purchase of goods and services including online payment for the same.

### To the Bank

- Innovative, scheme, addresses competition and present the bank as technology driven in the banking sector market
- Reduces customer visits to the branch and thereby human intervention
- Inter-branch reconciliation is immediate thereby reducing chances of fraud and misappropriation
- On-line banking is an effective medium of promotion of various schemes of the bank, a marketing tool indeed.
- Integrated customer data paves way for individualised and customised services.

## Impact Of Information Technology(IT) On The Service Quality

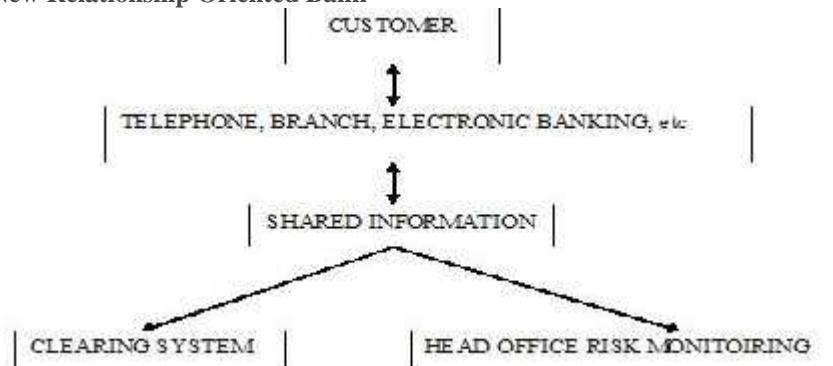
The most visible impact of technology is reflected in the way the banks respond strategically for making its effective use for efficient service delivery. This impact on service quality can be summed up as below:

- With automation, service no longer remains a marketing edge with the large banks only. Small and relatively new banks with limited network of branches become better placed to compete with the established banks, by integrating IT in their operations.
- The technology has commoditising some of the financial services. Therefore the banks cannot take a lifetime relationship with the customers as granted and they have to work continuously to foster this relationship and retain customer loyalty.
- The technology on one hand serves as a powerful tool for customer servicing, on the other hand, it itself results in depersonalising of the banking services. This has an adverse effect on relationship banking. A decade of computerization can probably never substitute a simple or a warm handshake.
- In order to reduce service delivery cost, banks need to automate routine customer inquiries through self-service channels. To do this they need to invest in call centers, kiosks, ATM's and Internet Banking today require IT infrastructure integrated with their business strategy to be customer centric.

## Impact Of Information Technology(IT) On Banking System

The banking system is slowly shifting from the Traditional Banking towards relationship banking. Traditionally the relationship between the bank and its customers has been on a one-to-one level via the branch network. This was put into operation with clearing and decision making responsibilities concentrated at the individual branch level. The head office had responsibility for the overall clearing network, the size of the branch network and the training of staff in the branch network. The bank monitored the organisation's performance and set the decision making parameters, but the information available to both branch staff and their customers was limited to one geographical location.

### The New Relationship Oriented Bank



### **Impact of Information Technology(ITY) On Privacy and Confidentiality of Data**

Data being stored in the computers, is now being displayed when required on through internet banking mobile banking, ATM's etc. all this has given rise to the issues of privacy and confidentiality of data are:

- The data processing capabilities of the computer, particularly the rapid throughput, integration, and retrieval capabilities, give rise to doubts in the minds of individuals as to whether the privacy of the individuals is being eroded.
- So long as the individual data items are available only to those directly concerned, everything seems to be in proper place, but the incidence of data being cross referenced to create detailed individual dossiers gives rise to privacy problems.
- Customers feel threatened about the inadequacy of privacy being maintained by the banks with regard to their transactions and link at computerised systems with suspicion. Aside from any constitutional aspect, many nations deem privacy to be a subject of human right and consider it to be the responsibility of those who concerned with computer data processing for ensuring that the computer use does not revolve to the stage where different data about people can be collected, integrated and retrieved quickly. Another important responsibility is to ensure the data is used only for the purpose intended.

### **Information Technology(It) Technology And Banks Transformation**

Computers are getting more sophisticated. They have given banks a potential they could only dream about and have given bank customers high expectations. The changes that new technologies have brought to banking are enormous in their impact on officers, employees, and customers of banks. Advances in technology are allowing for delivery of banking products and services more conveniently and effectively than ever before - thus creating new bases of competition. Rapid access to critical information and the ability to act quickly and effectively will distinguish the successful banks of the future. The bank gains a vital competitive advantage by having a direct marketing and accountable customer service environment and new, streamlined business processes. Consistent management and decision support systems provide the bank that competitive edge to forge ahead in the banking marketplace.

➤ **Major applications.** The advantages accruing from computerization are three-directional - to the customer, to the bank and to the employee.

#### **For The Customer.**

Banks are aware of customer's need for new services and plan to make them available. IT has increased the level of competition and forced them to integrate the new technologies in order to satisfy their customers. They have already developed and implemented a certain number of solutions among them:

- **Self-inquiry facility:** Facility for logging into specified self-inquiry terminals at the branch to inquire and view the transactions in the account.
- **Remote banking:** Remote terminals at the customer site connected to the respective branch through a modem, enabling the customer to make inquiries regarding his accounts, on-line, without having to move from his office.
- **Anytime banking- Anywhere banking:** Installation of ATMs which offer non-stop cash withdrawal, remittances and inquiry facilities. Networking of computerized branches inter-city and intra-city, will permit customers of these branches, when interconnected, to transact from any of these branches.
- **Telebanking:** A 24-hour service through which inquiries regarding balances and transactions in the account can be made over the phone.
- **Electronic Banking:** This enables the bank to provide corporate or high value customers with a Graphical User Interface (GUI) software on a PC, to inquire about their financial transactions and accounts, cash transfers, cheque book issue and inquiry on rates without visiting the bank. Moreover, LC text and details on bills can be sent by the customer, and the bank can download the same. The technology used to provide this service is called electronic data interchange (EDI). It is used to transmit business transactions in computer-readable form between organizations and individuals in a standard format.
- As information is centralized and updates are available simultaneously at all places, single-window service becomes possible, leading to effective reduction in waiting time.

#### **For The Bank.**

During the last decade, banks applied IT to a wide range of back and front office tasks in addition to a great number of new products. The major advantages for the bank to implement IT are:



- Availability of a wide range of inquiry facilities, assisting the bank in business development and follow-up.
- Immediate replies to customer queries without reference to ledger-keeper as terminals are provided to Managers and Chief Managers.
- Automatic and prompt carrying out of standing instructions on due date and generation of reports.
- Generation of various MIS reports and periodical returns on due dates.
- Fast and up-to-date information transfer enabling speedier decisions, by interconnecting computerized branches and controlling offices.

#### **For The Employees.**

IT has increased their productivity through the followings:

- Accurate computing of cumbersome and time-consuming jobs such as balancing and interest calculations on due dates.
- Automatic printing of covering schedules, deposit receipts, pass book / pass sheet, freeing the staff from performing these time-consuming jobs, and enabling them to give more attention to the needs of the customer.
- Signature retrieval facility, assisting in verification of transactions, sitting at their own terminal.
- Avoidance of duplication of entries due to existence of single-point data entry.

#### **Internet**

The Internet is rapidly becoming the information superhighway of a global electronic marketplace. The rising commercial interests in the Internet are especially evident in "frontend" applications such as electronic catalogs, yellow pages, storefronts, malls, and customer support centers. All these applications are based on the World Wide Web (WWW) -- the fastest growing segment of the Internet. Although "back-end" applications such as electronic data interchange (EDI) are equally important, their adoption has not been as rapid. One major concern is security: the Internet is generally perceived as not secure enough for transmitting sensitive data such as payments. Upon a closer look, however, this view is not warranted, since technologies such as public key encryption and firewalls address essential security concerns. Moreover, such technologies are already available. The only remaining barrier is the lack of real world users of those technologies. The pilot project between Bank of America (BoFA) and one of its large corporate customers involves transporting financial EDI transactions over the Internet. If successful, BOFA expects that this new EDI option will lead to a reduction in telecommunications costs, an improved position with respect to its value-added network (VAN), and valuable learning experience with the Internet environment, which is becoming increasingly important to the bank. The project is also significant beyond BoFA: because it is one of the first large-scale, real-world trials, its outcome will help dispel many uncertainties surrounding Internet-based EDI, and encourage more companies to move in this direction.

**The new Delivery Systems.** The increasing cost of building brick-and-mortar branches, decreasing cost of computers, high delivery costs and slow revenue growth force a relook at the conventional delivery systems. Moreover, growing comfort of technology usage by the customer is rapidly fostering usage of non-branch channels for routine transactions. The new strategy changes the focus of the branch from being a high cost transaction center to a provider of a wide range of services like telebanking, customer service kiosks, ATMs, and remote electronic banking.

**New Marketing Opportunities.** As the new technology is so expensive banks need to use the new systems to do more than deliver information and basic services. Banks need the ability to also sell insurance and investment products to get a better return on this investment. Telephone banking can bring financial services to the home or office, especially if they are affordable screen phones. By noticing how much interest the customer expresses, the bank can market stock quotes and insurance quotes. Interactive videos are new technology that banks can make available to the customer to maintain personal contact while still lowering the expense of delivery service. With an interactive video an expert employee is not needed in each branch. Complex life insurance products, open brokerage accounts, customized product illustrations can be widely available where needed. The interactive videos will be cost effective expertise. The internet is a medium to allow banks to offer products to customers outside the normal customer base of a branch. Banks are aware of the customer's need for these services and plan to make them available before other sources do. The major reasons behind adopting or developing new information systems are:

- Rapid geographical expansion has forced banks to replace their off-line systems by an on-line system linking the branches to the head office through the telecommunications network.



- Restructuring bank's processes in order to reduce staff expenses which constitute a large part of the operating costs and a heavy burden on its operating profitability.
- Incompatibility of the old systems with the strategic necessity of integrating new technologies like ATMs, telebanking, etc. in order to provide the high quality services to the customers and competing on an equal foot with the foreign .

### **Innovative Strategy for the future of banking sector in India**

Banks face a serious challenge. The basic structure of the bank is increasingly in conflict with the changing product, delivery, and service needs of the customers. The future belongs to financial service providers not traditional banks. The vast majority of large banks, will create value networks. Doing so presents tremendous challenges. Banks will have to first develop a comprehensive distribution system that will enable customers to touch them at multiple points. Banks must also create performance measurement systems to assure the mix products and services they offer are beneficial to both the customer and the bank. They must determine whether to deploy new technologies themselves or with other service providers. Nevertheless, technology alone will not solve issues or create advantages. This technology needs to be integrated in an organization, with the change management issues linked to people resisting new concepts and ideas. It also needs to support a clearly defined and well communicated business strategy.

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