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## **ROLE OF INFORMATION TECHNOLOGY IN INDIAN BANKING SECTOR**

**Commerce**

**Ms. Richa Aggarwal, Research Scholar, Panjab University Chandigarh**

### **Abstract**

*Revolutions in Information technology had a great impact on the Indian banking sector. Since economic liberalization in the year 1991, use of computers has increased many folds because country's banking sector had been exposed to the world's global market and Indian banks were finding it really very difficult to compete with the international banks in terms of various services, without the use of adequate information technology system. Information technology can be defined as the acquisition, processing, storage and dissemination of all types of information using computer technology and telecommunication systems. The use of computers has led to the introduction of online banking in India. With the use of information technology banks can provides many services to clients like ATMs, Electronic funds transfers, internet banking etc. Use of information technology in banking industry will provides numerous business opportunities at less cost, time and can also place utility. The present paper will focus on the role of Information technology in Indian banking sector.*





**Key Words:** *Information technology (IT), Banking sector, Banking system, Automatic teller machines (ATM) etc.*

## **Introduction**

Ever since liberalization Indian Banking industry has witnessed many changes. Information technology and liberalization has attracted many foreign banks to India, which thereby leads to opening up new markets, new products and efficient delivery channels for the banking industry. Retention and enlarging of the customer base has gained utmost importance for all the banks since the last five to ten years due to the severe threat posed by competitors. This has forced commercial banks to update their functioning and making use of the latest technologies available for the industry. With the help of technology banks will be able to create branches in businesses without even having to hire manpower for manual operations. These branches are running on the concept of new working concept i.e.24 X 7 working, making it possible by the use of Tele banking, ATMs, Internet banking, mobile banking and E – banking etc which extends the business territories from a local banks to a borderless global bank, and also allow efficiencies in the processes. Delivery channels which are technology driven are being used to reach out to maximum number of customers at lower cost and in most efficient manner. The strong impact of these banking innovations is that it puts both customer and bankers in a win- win situation. Efficient and effective use of technology puts a multiplier effect on growth and development.

Many developments in the area of information technology support the growth and inclusiveness of the banking sector by facilitating inclusive economic growth. Information technology will improves various operations like front end operations with back end operations and helps in bringing down the transaction costs for the customers. Some of the important events in the field of IT in the banking sector in India are:

- Introduction of plastic card based payments- Debit/ Credit card in late 1980s and 90s.
- Introduction of Electronic Clearing Services (ECS) in late 1990s.





- Introduction of Electronic Fund Transfer (EFT) in early 2000s.
- Introduction of Real Time Gross Settlement (RTGS) in March 2004.
- Introduction of National Electronic Fund Transfer (NEFT) as a replacement to Electronic Fund Transfer/Special Electronic Fund Transfer in 2005/2006 etc.

### **Objectives Of Study**

Information technology plays an important role in the banking sector as it would not only ensure smooth passage of interrelated transactions over the electric medium but will also facilitate complex financial product innovation and product development. The present study will focus on:

- The role that information technology will play in the banking sector .
- To find out the progress of computerization and innovation in banking industry.
- To identify various challenges in the implementation of information technology in the banking sector of India.

### **Research Methodology**

The study is mainly descriptive in nature. The data is mainly collected from secondary sources like magazines, internet websites, journals and published data from various issues of RBI Various studies on this subject have also been referred in this study.

### **Literature Review**

Hariato and Pennings (1990), estimates, the financial service sector absorbed most of the R&D outlays of the computer industry, rendering them highly sym-biotic. They also reveal that banks have an unabating appetite for new technology.





Abrahamson and Rosenkopf, (1990), Banking parallels other service providing sectors such as telecommunications and transportation. In all these industries, firms have become more proximate because service delivery necessitates inter organizational Coordination. Proximity, whether due to service complementarily or geographic vicinity, is an important inducement for innovation.

KPMG, “Technology enabled transformation in Banking”, The Economic Times Banking Technology, Conclave (2011),The article has concluded that Information technology in banking is fast evolving. From enabling banking services to driving transformation in the industry, Information technology holds a promise to change the face of banking in the next few years. New entrants are looking to leverage their existing strengths in the Indian banking arena. The opportunity available to these entrants through leveraging their understanding of technologies and markets they operate in, promises innovative business models with a focus on delivering customer value. The pace of change aided by regulatory directions, will push banks to direct their strategies to a customer centric focus over the next four years.

Dr. Satish Tanaji Bhosale, Dr. B.S Sawant, “Technological Developments in Indian Banking Sector”, This paper talks about the role of banking sector in the development of Indian Economy. So banks need to optionally leverage technology to increase penetration, improve their productivity and efficiency, deliver cost-effective products and services, provide faster. Efficient and convenient customer service and thereby, contribute to overall growth and development of the country. It highlights that technology allows transactions to take place faster and offer unparalleled convenience through various delivery channels.

## **Findings**

Indian banking industry is in the process of an IT revolution. Due to various regulations and competitiveness, total banking automation has gained increasing importance in the Indian Banking Industry. The banks which are using the effective technology to provide timely information will achieve high productivity and thereby gain a competitive edge. To compete in an open globalised economy, it is essential for the Indian Banks to use the latest technology and modify it to suit their





environment. Information technology offers a chance for banks to build new systems that address a wide range of customer needs including many that may not be imaginable today. The application of IT and e-banking is becoming the order of the day with the banking system heading towards virtual banking.

### **Role Played By Information Technology In Indian Banking Sector**

Information technology plays a very important role in the Indian banking sector which enhances the efficiency in handling of workload and profit earning capacities of banks. Some of the important developments information technologies introduced in banking sector are:

- **AUTOMATIC TELLER MACHINE (ATM)** :Automatic Teller Machine is one of the most popular devices in India, which helps the customers to withdraw their money 24 hours a day 7 days a week. It is the device which allows customer who are having an ATM card to perform routine banking transactions without going to the bank's branch. In addition to cash withdrawal, ATM can also be used for the payment of various bills, deposit of cheques and cash into accounts, funds transfer between accounts, , balance enquiry etc.
- **ELECTRONIC PAYMENT SERVICES - E CHEQUES** : A new technology has being developed in US for introduction of e-cheque, which will eventually replace the conventional paper cheque. In India, the Negotiable Instruments Act has already been amended to include; Truncated cheque and E-cheque instruments.
- **TELE BANKING** : Tele Banking facilitates the customer to do entire non-cash related banking on telephone. Under this devise Automatic Voice Recorder is used for simpler queries and transactions. For complicated queries and transactions, manned phone terminals are used.
- **REAL TIME GROSS SETTLEMENT (RTGS)** : Real Time Gross Settlement system, introduced in India since March 2004. It is an Interlink Research Analysis system with the help





of which electronics instructions can be given by banks to transfer funds from their account to the account of another bank. The RTGS is maintained and operated by the RBI and it provides an efficient means of faster funds transfer among banks facilitating their financial operations. As the name suggests, funds transfer between banks takes place on a 'Real Time' basis. Therefore, money will reach the beneficiary instantaneously and the beneficiary's bank has the responsibility to credit the beneficiary's account within two hours.

- **ELECTRONIC FUNDS TRANSFER (EFT):** Electronic Funds Transfer (EFT) is a system where anyone who wants to make payment to another person/company etc. can go to his bank and make cash payment or give instructions/authorization to transfer funds directly from his own account to the bank account of the receiver/beneficiary. Complete details such as the receiver's name, bank account number, account type (savings or current account), bank name, city, branch name etc. should be given to the bank at the time of requesting for such transfers so that the amount reaches the beneficiaries' account correctly and faster. RBI (Reserve Bank of India) is the service provider of Electronic Funds Transfer (EFT).
- **POINT OF SALE TERMINAL :** Point of Sale Terminal is a computer terminal which is linked online to the computerized customer information files in a bank and on magnetically encoded plastic transaction card which identifies the customer to the computer. During the transaction, the customer's account is debited and the retailer's account is credited by the computer for the amount of purchase.
- **CASH DISPENSERS:** Cash withdrawal is the basic service which is rendered by the bank branches. The cash payments are made by the cashier or teller of the cash dispenses is an alternate to time saving. The operations performed by this machine are cheaper than manual operations and this machine is cheaper and fast than even that of ATM. The customer is provided with a plastic card, which is magnetically coated. After completing the formalities, the machine allows the machine the transactions for required amount.





- **ELECTRONIC CLEARING SERVICE:** In 1994, RBI appointed a committee to review the process of mechanization in the banks and to review the electronic clearing service. The committee has recommended in its report that electronic clearing service-credit clearing facility should be made available to all the institutions whether corporate bodies/Government institutions for making repetitive low value payment like dividend, interest, refund, salary, pension or commission. It was also recommended by the committee Electronic Clearing Service-Debit clearing may be introduced for pre-authorized debits for payments of utility bills, insurance premium and instalments to leasing and financing companies. RBI has been necessary step to introduce these schemes, initially in Chennai, Mumbai, Calcutta and New Delhi.
- **INTERNET BANKING:** Internet banking will enables a customer to do banking transactions with the help of bank's website on the Internet. It is the system through which accounts can be accessed and information on bank's products and services through a computer can also be gathered and accessed even while sitting in office or home. This is also called virtual banking. It is more or less bringing the bank to your computer. While in traditional banking one has to go to the bank's branch in person, to withdraw cash or deposit a cheque or request a statement of accounts etc. but now with help of internet banking has changed the way of banking. But now with the help of information technology and internet one can operate all these type of transactions on his computer through website of bank and all such transactions which are performed online are encrypted by using sophisticated multi-layered security architecture which includes firewalls and filters through which one can be rest assured that one's transactions are safe, secure and confidential.
- **MOBILE BANKING:** Mobile banking facility is an extension of internet banking. The bank is in association with the cellular service providers which offers these services. For these







services, mobile phone should either be SMS or WAP enabled. These facilities are available even to those customers who are having with them only credit card accounts with the bank.

- **ANY WHERE BANKING:** With the expansion of information technology, it is now possible to obtain financial details from the bank even from the remote corners. Basic transaction can be effected from faraway places also. ATMs are playing an important role in providing remote services to the customers. Savings and withdrawals from other stations can be possible due to inter-station connectivity of ATM's. The Rangarajan committee had also suggested the installation of ATM at non-branch locations, airports, hotels, Railway stations, Office Computers, Remote Banking is being further extended to the customer's office and home.
- **VOICE MAIL:** Talking of answering systems, there are several banks mainly foreign banks now offering very advanced touch tone telephone answering service which route the customer call directly to the department concerned and allow the customer to leave a message for the concerned desk or department, if the person is not available.
- **SOCIETY FOR WORLDWIDE INTER-BANK FINANCIAL TELECOMMUNICATIONS (SWIFT):** SWIFT provides rapid, secure, reliable and cost effective mode of transmitting the financial messages worldwide. At present there are more than 3000 banks who are the members of the network. To cater to the growth in messages, SWIFT has upgraded in the 80s and this version is known as SWIFT-II. Banks in India are hooked to SWIFT-II system. SWIFT is a method of the sophisticated message transmission of international repute. This is highly cost effective, reliable and safe means of fund transfer. This network facilitates the transfer of messages relating various services like fixed deposit, interest payment, debit-credit statements, foreign exchange etc. This service is available throughout the year, 24 hours a day and also ensures protection against any loss of mutilation against transmission. It serves almost all financial institution and selected range of other users.





**Important Challenges Faced By Banking Sector:** Information Technology provides many opportunities to the banking sector. But it also brings many challenges like:

- Meeting the customer expectations on various services and facilities offered by the bank on time and on regular basis.
- To ensure customer retention and attraction of new clients to the banks
- Managing the spread and sustain the operating profit.
- By retaining the current market share in the industry and the improving the same.
- Facing the competition from other players in the banking industry.
- There are frequent challenges in technologies used which are focusing upgrades in hardware and software, attending to that implementation issues and ensures timely roll out.
- By managing and handling various risks like technology, security and business risks.
- Enabling system re-engineering. There should be well defined and implemented efficient processes to be able to reap benefits off technology to its fullest potential.
- By upgrading the skills of work force which are spread across the country.
- By ensuring safety and security to clients in all transactions and dealings.

## **Conclusion**

In the present competing era, only a true techno- bank will be able to survive and become the market leader. Banks which are having the adequate number of Multifunctional Banking Machine will be able to attract and impress large number of customer. Banks which are using the Common Banking





Network but also providing differentiated as well as highly customized services in a cost- effective manner will become the future market leader of the banking industry. Awareness and appreciation of Information technology is an essential requirement in banking sector. Whether India will becomes a destination for outsourcing or it becomes a development centre is a matter of debate. But as far as banking industry is concerned, it can be said that although the Indian banks may not be as technologically advanced as their counterparts are in the developed world, they are following the majority of international trends on the IT front. The strength of Indian banking lie in withering storms and rising up to the expectations from all the quarters catching up with all the global trends is a matter of time.

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