
Emerging Innovations of Information Technology in Banking Sector in India

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ABSTRACT

Digitalization, Liberalization and Information technology has attracted many foreign banks to India, thereby opening up new markets, new products and efficient delivery channels for the banking industry. In the development of Indian Economy, Banking sector plays a very important and crucial role. With the use of technology, there had been an increase in penetration, productivity and efficiency. It has not only increased the cost effectiveness but also has helped in making small value transactions viable. It also enhances choices, creates new markets, and improves productivity and efficiency. It has been noticed that financial markets have turned into a buyer's markets in India. Commercial Banks in India are now becoming a one-stop Supermarket. The focus is shifting from mass banking to class banking with the introduction of value added and customized products. Technology allows banks to create what looks like a branch in a business building's lobby without having to hire manpower for manual operations. The branches are running on the concept of 24 X 7 working, made possible by the use of Tele banking, ATMs, Internet banking, Mobile banking and E - banking. These technology driven delivery channels are being used to reach out to maximum number of customers at lower cost and in most efficient manner. The beauty of these banking innovations is that it puts both banker and customer in a win - win situation. Effective use of technology has a multiplier effect on growth and development.

Key words: Liberalization, Tele banking, ATMs, Internet Banking, Mobile Banking and E-banking.



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The banking industry of India is in the midst of an Information technology revolution. A combination of regulatory and competitive reasons has led to increasing importance of total banking automation in this industry. Information technology has been used under two different avenues in banking. One is communication and connectivity and other is business process reengineering. 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.

Information technology has changed the contours of three major functions being performed by the banks viz. access to liquidity, transformation of assets and monitoring of risks. Further, information technology and the communication networking systems have a crucial bearing on the efficiency of money, capital and foreign exchange markets. The software packages for banking applications in India had their beginnings in the middle of 80s, when the banks started computerizing the branches in a limited manner. The early 90s saw the plummeting hardware prices and advent of cheap and inexpensive but high-powered PCs and servers. The commercial banks went in for Total Branch Automation Packages for computerization. The middle and late 90s witnessed the tornado of financial reforms, deregulation, globalization etc. coupled with rapid revolution in communication technologies and evolution of novel concept of convergence of computer and communication technologies, like internet, mobile/cell phones etc. It changed the face of Indian banking system completely.

TECHNOLOGICAL DEVELOPMENT IN BANKS

Developments in the field of information technology strongly supports the growth and inclusiveness of the banking sector by facilitating inclusive economic growth . IT improves the front-end operations with back end operations and helps in bringing down the transaction costs for the customers. The important events in the field of IT in the banking sector in India are:

- Arrival of 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 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.
- CTS in 2007.

SIGNIFICANCE OF THE STUDY

The use of Information Technology in all spheres of financial and banking sectors is a deep reality. The sector has enabled the banking sector to go beyond its traditional role and is now playing an increasingly important role in its key areas of operation as securitization, risks preference and liquidity among others to which IT helps in a big way. It has assumed such high levels that it is no longer possible for banks to manage their IT implementations on a standalone basis. With I.T. Revolution, banks are increasingly interconnecting their computer systems not only across branches in a city but also to other geographic locations which high-speed network infrastructure and setting up local areas and networks are now exposed to a growing number. The customers have high expectations and have become more demanding now as they are also more techno-savvy as compared to their counterparts of the yesteryears. They demand instant, anything and anywhere banking facilities. Though Reserve Bank of India has formulated many policies on adoption of I.T. in the overall working of the commercial banks in India, yet there is an urgent need to address the issues involved in this respect to compete with the banks at international level. As such, there is a great need to focus more on this aspect. The present study helps a lot in this regard.

OBJECTIVES OF THE STUDY:

- To find out the progress of computerization in all the public sector banks of India.
- To analyze the banking innovations after computerization of public sector banks of India.
- To analyze the ATM progress in the public sector banks of India.
- To identify challenges in the implementation of I.T. solutions in the public sector banks of India.

RESEARCH METHODOLOGY

The present study is based on the secondary data collected from different journals, magazines, sites and published data from various issues of RBI and different Public sector banks. Various studies on this subject have also been referred in this study. The heads and other functionaries have been contacted personally to collect the required data for this study.

ANALYSIS AND FINDINGS

Technology has changed the face of the Indian banking sector through computerization. Though the new private and foreign sector banks have an edge at present, yet public sector banks have also made a significant progress in this regard. The analysis of the data collected from various banks has been done under the following heads:

Computerization in banks :

Among the total number of public sector bank branches, 100 % are fully computerized at the end of March 2017 whereas all branches of SBI are fully computerized.

Banking Innovation

Today we have electronic payment system along with currency notes. India's financial sector is moving towards a scenario, where it can have new instruments along with liquidity and Safety. Migration from cash and cheque based payment system. It has become a necessity to electronic fund transfer system on account of the following reasons:

- Large volumes of transaction on,
- High cost of physical handling and storage of paper instruments.
- Delay in realization is a common feature.

- Finality of payment takes time because the physical movement of instruments in large volumes from branches to and from clearing house, and sorting them according to each bank branch at the center creates problems.

The most common technologies include:

National Electronic fund Transfer (NEFT) :

It is a nation-wide payment system facilitating one-to-one funds transfer. Under this Scheme, individuals, firms and corporate can electronically transfer funds from any bank branch to any individual, firm or corporate having an account with any other bank branch in the country participating in the Scheme. For being part of the NEFT funds transfer network, a bank branch has to be NEFT- enabled.

Real Time Gross Settlement (RTGS)

The acronym RTGS stands for Real Time Gross Settlement. RTGS system is a funds transfer mechanism where transfer of money takes place from one bank to another on a real time and on gross basis. This is the fastest possible money transfer system through the banking channel. Settlement in real time means payment transaction is not subjected to any waiting period. The transactions are settled as soon as they are processed. Gross settlement means the transaction is settled on one to one basis without bunching with any other transaction. Considering that money transfer takes place in the books of the Reserve Bank of India, the payment is taken as final and irrevocable. RTGS volume crossed 0.3 million transactions twice during March 2012 and the necessary resource augmentation was undertaken to handle the high transaction volumes. In view of the increasing volumes, as also other business requirements, the Reserve Bank is in the process of replacing the existing RTGS with NG-RTGS, which provides more functions and facilities. The NG-RTGS is expected to adopt the emerging messaging standards.



E-Lobby

E-Lobby is a facility, which is now provided by banks so that their customers can do their banking transactions as per their convenience 24x7 without any time restriction. E-Lobby provides the facility on bank holidays also. Today people have strict time schedule, whether a businessperson or an employee. It is not possible for many to stand in long queues in banks to get their work done. Therefore, the concept of E-Lobby gives a long relief to these people. Self ATM withdrawals, cash deposits, card-to-card transfers, mobile phone top-ups, railway booking, passbook printing, NEFT, opening of fixed deposit and recurring deposit accounts, SMS alerts, cheque drop box, bill payments, mini statements, etc.

IMPS

In India the Interbank Mobile Payment System (IMPS) was launched – a mobile-based funds transfer service for users registered with participating banks. MNOs and banks collaborated to provide m-banking services all over India including Airtel's (MNO) "Mobile Money Transfer"; and by other banks such as ICICI, HDFC, and State Bank of India (SBI) have launched their own mobile payment services in partnership with several MNOs experiencing varying degrees of success. Despite 40% of Indians currently do not have access to a bank and most of these people belong to low-income rural areas. Starting in 2005, the Reserve Bank of India (RBI) has recommended that banks increase access to banking services for the unbanked population using the mobile payment (m-payment) systems. With nearly 51% of the population carrying a mobile phone, private partners in India developed m-payment systems modelled after the M-PESA system to increase financial outreach by providing deposit and withdrawal services to clients. Safaricom launched M-PESA in 2007.

Biometric

Bio metric ATM are used for wide range of applications like for Banking, Coupons & Self service ATM. Biometrics ATM offer ATM type interface along with at least one Biometrics capture device like Fingerprint Scanner, Iris camera, Palm/Finger Vein scanner, Face recognition camera. They are often called Multi-Biometrics ATM, Wall mount Biometrics ATM, Biometrics Devices /Machine. Most of the ATM in the past have been using ID cards to identify users but with wide acceptance of Biometrics. Punjab National Bank in New Delhi has installed its first biometric ATM at a village in Gautama Budh Nagar. The ATM is

expected to help illiterate and semi-literate customers conduct banking transactions. Customers can access accounts with a fingerprint and withdraw money, make balance inquiries and get mini-statements through voice guidance. PNB says that by 2010 it plans to cover 30,000 villages, 15 million households and 75 million people.

Mobile Banking

Mobile banking is a service provided by bank or other financial institution that allows its customers to conduct financial transaction remotely using a mobile device such as a smart phone or tablet. Unlike the related internet banking, it uses software, usually called an app, provided by the financial institution for the purpose. Mobile banking is usually available on a 24-hour basis. Some financial institutions have restrictions on which accounts may be accessed through mobile banking, as well as a limit on the amount that can be transacted. Transactions through mobile banking may include obtaining account balances and lists of

latest transactions, electronic payment, and funds transfer between a customer's and another's accounts.

Corporate Banking

Corporate banking is a specialized division of a commercial bank that offers various banking solutions, such as credit management, cash management, asset management, and underwriting to large corporations as well as to small and medium-sized enterprises (SMEs). Commercial banks focus on business banking as it is one of their major sources of profit and assign specialized finance professionals, able to assist corporations to meet their business objectives. Unlike what many people think, business banking is completely different from investment banking; however, the terms are often used interchangeably. The Internet has initiated an electronic revolution on in the global banking sector. Its dynamic and flexible nature as well as its ubiquitous reach has helped in leveraging a variety of banking act invites. The Internet has emerged as one of the major distribution channels of banking products and services for banks in the U.S and in European countries.

Retail Banking



Retail banking, also known as consumer banking, is the typical mass-market banking in which individual customers use local branches of larger commercial banks. Services offered include savings and checking accounts, mortgages, personal loans, debit/credit cards and certificate of deposits (CDs). In retail banking, the focus is on the individual consumer. Retail banking aims to be the one stop shop for as many financial services as possible on behalf of individual retail clients. Consumers expect a range of basic services from retail banks, such as checking accounts, savings accounts, personal loans, lines of credit, mortgages, debit cards, credit cards and CDs. Most consumers utilize local branch banking services, which provide onsite customer service for all of a retail customer's banking needs. Through local branch locations, financial representatives provide customer service and financial advice. Financial representatives are also the lead contact for underwriting applications related to credit-approved products.

Home Banking

In the early 1970's home banking was offered through touch-tone telephones for very basic banking transactions. During that era, it was considered "home banking" and not phone banking. In mid-1980's banks offered, more advanced home banking services to customers by installing software in customer's Personal Computers (PC) that enabled them to connect to the bank through a dial up connection. It was a sufficient secure channel; however, it provided a limited range of services. After 1985, this service was not popular anymore and was not widely spread because it required proprietary systems and huge technology investments, so very few banks managed to provide it. In addition to that, the PC was still not widely spread.

Electronic banking

Electronic distribution channels provide alternatives for faster delivery of banking services to a wider range of customers. E-banking is the newest delivery channel of banking services. E-banking can also include internet banking (or online banking), telephone banking ,TV-based

banking ,mobile phone banking ,PC banking (or offline banking). The terms PC banking, online banking, internet banking, telephone banking or mobile banking refer to a number of ways in which customers can access their banks without having to be physically present at the bank branch.

Conclusion

The cut throat competition and increasing expectation of customers had resulted in increased awareness on information technology among the commercial banks in India. The arrival of foreign and new private sector banks with their superior technology based services has also forced the commercial banks in India to switch over to the new technology in their day to day operations. The use of technology in expanding banking sector in India is one of the key focus areas not only for commercial banks but for the policy makers also. The banks in India are using Information Technology not only to improve their own internal processes but also to improvise facilities and services to their customers. The Information Technology Act, 2000 has also provided the much needed legal recognition to the creation, transmission and retention of an electronic or magnetic data which can be treated as a valid proof in a court of law, except in those areas, which continue to be governed by the provisions of the Negotiable Instruments Act, 1881.

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