

**IMPACT OF INFORMATION COMMUNICATION AND
TECHNOLOGY (ICT) IN INDIAN BANAKING INDUSTRY
- A STUDY ON EMERGING TRENDS IN BANKING, INSURANCE AND
TOURISM**

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ABSTRACT

This research paper focuses on the impact of technology in Indian banking sector. Without information technology and communication, we cannot think about the success of banking industry, it has enlarged the role of banking sector in Indian economy. Indian banking industry is in midst of ICT revolution. Banking industry is backbone of Indian financial system and it is affected by many challenging forces. One such force is revolution of information technology. In this Globalized era, technology support is very important for the successful functioning of the banking sector. Information technology refers to the acquisition, processing, storage and communication of all types of information by using computer technology and telecommunication system. Information technology is an integrated framework for acquiring and evolving of ICT to achieve certain strategic goal. For creating an efficient banking system, which can respond adequately to the needs of growing economy, technology has a key role to play. In past one and a half decade, banks in India have invested heavily in the technology such as Tele banking, mobile banking, net banking, automated teller machines (ATMs), credit cards, debit cards, smart cards, customer relationship management (CRM) software, electronic payment systems and data warehousing and data mining solutions, to bring improvements in quality of customer services and the fast processing of banking operation.

Keywords: ICT (Information- Communication-Technology); Banking Industry; CRM; ATM.

INTRODUCTION

Information Communication Technology (ICT) in banking sector refers to the use of sophisticated information and communication technologies together with computer science to enable banks to offer better services to its customers in a secure, reliable and affordable manner and sustain competitive advantage over other banks. Banks are no longer restricted themselves to traditional banking activities, but explore newer avenues to increase business and capture new market by implementing the new technology. The significance of technology is greatly felt in the financial sector in view of the competitive advantage for banks resulting in the efficient customer service.

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. Banking sector always stand at the forefront of the economy and innovation has paramount concern to the application of modern technical devices. Electronic delivery channels, ATMs, variety of cards, web based banking, and mobile banking are the names of few outcomes of the process of automation and computerization in Indian banking sector.

Transformation of Indian Banking System:

Indian banking has undergone a total transformation over the last decade. Moving seamlessly from a manual, scale-constrained environment to a technological leading position, it has been a miracle. Such a transformation takes place in such a short span of time with such a low cost. Since, independence Indian banks have undergone through various phases which can be categorized as Emerging Trends in Banking, Insurance and Tourism Pre-Reform Period: A period of consolidation of banks up to 1966. A period of historic expansion in both geographical and functional terms from 1966-1980. A period of consolidation of branches

from mid 1980-1991. These above changes were policy induced but not driven by market force.

Post- Reform Period:

Entry of technology in Indian banking industry can be traced back to the Rangarajan committee Report, way back in the 1980s but during the 1990s, the banking sector witnessed various liberalization measure. One of the major objectives of Indian banking sector reforms was to encourage operational selfsufficiency, flexibility and competition in the system and to increase the banking standards in India to the international best practices. The second phase of reforms began in 1997 with aim to reorganization measures, human capital development, technological up-gradation, structural development which helped them for achieving universal benchmarks in terms of prudential norms and pre-eminent practices. With the ease of licensing norms, new private & foreign banks emerged-equipped with latest technology. Deregulation has opened up new opportunities for banks to increase revenues by diversifying into investment banking, insurance, credit cards, mortgage financing, depository services, securitization, etcThe role of banking is redefined from a mere financial intermediary to service provider of various financial services under one roof acting like a financial supermarket.

OBJECTIVES:

1. To analyze the role of IT in Indian banking industry.
2. To examine the extent of use of services especially the IT enabled services in Indian banking.
3. To assess various aspects of IT services provided by Indian banks.
4. To review the implementation of IT in Indian Banking industry.

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.

Technological Evolution of IT in Indian banking industry:

The technological evolution of the Indian banking industry has been largely directed by the various committees set up by the RBI and the government of India to review the implementation of technological change. No major breakthrough in technology implementation was achieved by the industry till the early 80s, though some working groups and committees made stray references to the need for mechanization of some banking processes. The early 1980s were instrumental in the introduction of mechanization and computerization in Indian banks. This was the period when banks as well as the RBI went very slow on mechanization, carefully avoiding the use of computers" to avoid resistance from employee unions. However, this was the critical period acting as the icebreaker, which led to the slow and steady move towards large scale technology adoption.

Emerging Trends in Banking, Insurance and Tourism Important events in evolution of ICT:

The introduction of MICR based cheque processing - a first for the region, during the 1986-88. Arrival of card-based payments- Debit/Credit card in late 1980s and 90s. Introduction of Electronic Clearing Services (ECS) in late 1990s. In 1994 RBI constituted a committee for technical up gradation of bank Based on the recommendations of the committee the Institute for Development and Research in Banking Technology (IDRBT) was established in 1996. In 1999 the collaborative efforts of IDRBT and RBI developed a satellite based wide area network known as Indian Financial Network (INFINET). The network is restrictive to be used by banks and financial institutions only. 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. Truncation System (CTS) or Image-based Clearing System (ICS), in India, is a project undertaken by the Reserve Bank of India (RBI) in 2008, for faster clearing of cheques.

Recent IT Trends of Indian banks

The banking industry is going through a period of rapid change to meet competition, challenges of technology and the demand of end user. Clearly technology is a key differentiator in the performance of banks. Banks need to look at innovation not just for product but for process also. Today, technology is not only changing the environment but

also the relationship with customers. Technology has not broken many barriers but has also brought about superior products and channels. This has brought customer relationship into greater focus. It is also viewed as an instrument of cost reduction and effective communication with people and institutions associated with the banking business.

Some of the recent IT devices described as below:

Electronic Payment and Settlement System- The most common media of receipts and payment through banks are negotiable instruments like cheques. These instruments could be used in place of cash. The inter bank cheques could be realized through clearing house systems. Initially there was a manual system of clearing but the growing volume of banking transaction emerged into the necessity of automating the clearing process. In order to strength the institutional framework of electronic & clearing system, RBI constituted a board for regulation and supervision of payment and settlement system (BPSS) in 2005. The Payment and settlement system act was passed on 2007 which empowered the RBI to regulate & supervise the payment and settlement system and provide a legal basis for multilateral netting and settlement.

Important innovation in payment & settlement system introduced by RBI are below:

Use Of MICR Technology- Among the most important improvement in paper based clearing system was the introduction of MICR (Magnetic Ink Character Recognition) in the mid 1980s. MICR overcomes the limitation of clearing the cheques within banking hours and thus enables Emerging Trends in Banking, Insurance and Tourism the customer to get the credit quickly. These are machine-readable codes added at the bottom of every cheque leaf which helped in bank and branch-wise sorting of cheques for smooth delivery to the respective banks on whom they are drawn. This no doubt helped in speeding up the clearing process, but physical delivery of cheques continued even under this partial automaton. - CTS (Cheque Truncation System)- The CTS was launched on pilot basis in new Delhi in 2008 with the participation of 10 Banks. Truncation means stopping the flow of the physical cheques issued by a drawer to the drawee branch. The physical instrument is truncated at some point en route to the drawee branch and an electronic image of the cheque is sent to the drawee branch along with the relevant information like the MICR fields, date of presentation, presenting banks etc. This would eliminate the need to move the physical instruments across branches, except in

exceptional circumstances, resulting in an effective reduction in the time required for payment of cheques, the associated cost of transit and delays in processing, etc., thus speeding up the process of collection or realization of cheques. Electronic Clearing Services (ECS) - The ECS introduced by RBI in 1995 which is similar to automated clearing houses that are operational in other countries like US. The ECS was the first version of "Electronic Payments" in India. It is a mode of electronic funds transfer from one bank account to another bank account using the mechanism of clearing house. It is very useful in case of bulk transfers from one account to many accounts or vice versa. ECS facility available at more than 74 Centers in India. The beneficiary has to maintain an account with the one of bank at ECS centre.

There are two types of ECS (Electronic Clearing Service)

ECS-Credit - ECS credit clearing operates on the principle of „single debit multiple credits and is used for transactions like payment of salary, dividend, pension, interest etc

ECS-Debit CS debit clearing service operates on the principle of „single credit multiple debits" and is used by utility service providers for collection of electricity bills, telephone bills and other charges and also by banks for collections of principal and interest repayments.

Electronic Fund Transfer (EFT) - The EFT System was implemented in 1995 covering 15 centers where the Reserve Bank managed the clearing houses. Special EFT (SEFT) scheme, a variant of the EFT system, was introduced with effect from April 1, 2003, in order to increase the coverage of the scheme and to provide for quicker funds transfers.

Real Time Gross Settlement (RTGS) - RTGS was launched by RBI in 2004 which enabled a realtime settlement on a gross basis. 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. Core Banking Solutions (CBS) - Computerization of bank branches had started with installation of simple computers to automate the functioning of branches, especially at high traffic branches. Core Banking Solutions (CBS) is the networking of the branches of a bank, so as to enable the customers to operate their accounts from any bank branch, regardless of which branch he



opened the account with. The networking of branches under CBS enables centralized data management and aids in the implementation of internet and mobile banking. Besides, CBS helps in bringing the complete operations of banks under a single technological platform. The major and upcoming channels of distribution in the banking industry, besides branches are internet banking, mobile and telephone banking and card based delivery systems. Automated Teller Machine (ATM) - ATMs were introduced to the Indian banking industry in the early 1990s initiated by foreign banks. It is perhaps most revolutionary aspect of virtual banking. The facility to use ATM is provided through plastic cards with magnetic strip containing information about the customer as well as the bank. In today's world ATMs are the most useful tool to ensure the concept of "Any Time Banking" and "Any Where Banking". The total number of ATMs installed in India by various banks as of end June 2012 was 99,218. The new private sector banks in India have the most offsite ATMs, followed by off-site ATMs belonging to SBI and its subsidiaries and then by nationalized banks and foreign banks, while on-site is highest for the nationalized banks of India. Bank Type Nationalized Banks State Bank of India Old Private Sector Banks New Private Sector Banks Foreign Banks TOTAL No. of Branches 33,627 13,661 4,511 1,685 242 53,726 On Site ATMS 38,606 28,926 4,761 12,546 295 85,134 Off Site ATMs 22,265 22,827 4,624 26,839 854 77,409 Total ATMs 60,871 51,753 9,385 39,385 1,149 162,543 Sources: Wikipedia

Phone Banking- Customers can now dial up the banks designed telephone number and he by dialing his ID number will be able to get connectivity to bank's designated computer. By using Automatic voice recorder (AVR) for simple queries and transactions and manned phone terminals for complicated queries and transactions, the customer can actually do entire non-cash relating banking on telephone: Anywhere, Anytime.

Tele Banking-Tele banking is another innovation, which provided the facility of 24 hour banking to the customer. Tele-banking is based on the voice processing facility available on bank computers. The caller usually a customer calls the bank anytime and can enquire balance in his account or other transaction history. Tele banking is becoming popular since queries at ATM's are now becoming too long.

Internet Banking-Internet banking enables a customer to do banking transactions through the bank's website on the Internet. It is a system of accessing accounts and general information on bank products and services through a computer while sitting in its office or home. This is also called virtual banking. Mobile Banking-Mobile banking facility is an



extension of internet banking. Mobile banking services are provided to the customers having the credit card accounts with bank. In mobile banking, the services are provided by the association of banks and cellular service providers through SMS or WAP enabled mobile instruments. Customer Relationship Management (CRM) - (CRM) refers to the methodologies and tools that help businesses manage customer relationships in an organized way-finding, getting and retaining customers. CRM processes that help to provide employees with the information they need to know their customers' wants and needs and build relationships between the company and its customers. ATMs,

CONCLUSION:

Information Technology offers enormous potential and various opportunities to the Indian banking sector. It provides cost-effective, rapid and systematic provision of services to the customer. The efficient use of technology has facilitated accurate and timely management of the increased transaction volumes of banks which comes with larger customer base. Indian banking industry is greatly benefiting from I.T. revolution all over the world.

Another concept i.e. Virtual banking or Direct Banking is now gaining importance all over the world. According to this concept Banks offer Products, services and financial transaction through only through electronic delivery channels generally without any physical branch. This concept already has been tested in advanced countries such as U.S and Europe. Owing to lower branch Maintenance and manpower cost such banks are able to offer competitive pricing for their product and services as compared to traditional banks. In India also the technology -savvy bank will adopt this concept. To be competitive with this globalized era Indian banks should also adopt this concept. As the Indian banking is in transition phase from direct banking to the virtual banking two things stand out: Using Less Paper Doing Transaction Wirelessly By designing and offering simple, safe and secure technology, banks reach at the doorsteps of the customers with an objective of "delight customer satisfaction". In fact Information technology has succeeded in creating a win-win situation for all concerned segments in India.

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