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GROWTH IN E-BANKING AS A MAJOR OF PERFORMANCE EVALUATION IN BANKING INDUSTRY

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ABSTRACT

Renovation in Indian banks is taking place from all aspects and is being refined as time proceeds and the products of the banking industry are enthusiastically modifying the face of banking. Digitalisation accounting systems and information technology can play an important role in the banking sector. Banks using manual banking systems cannot adopt themselves in the changing business environment and cannot provide quick and efficient services to their customers. On the other hand, banks working with computerized accounting / banking system can provide better, efficient and faster services to their customers through them. Advancement in technology and globalization has brought a very high competition within the banking industry. The desire for foreign investment opportunities due to less stringent regulations in the financial sector coupled with regional economic integration has forced most local banks to modernize. This paper defines the way the banking sector is affected and the use of IT products that have changed the face of the banking sector in India. It tells about the current scenario of the banking industry; And the factors leading to change in the industry; And how have these factors contributed to the development of banking. This paper shows how banks have now flourished in one-stop supermarkets. Their focus is flowing from wholesale banking to class banking with the introduction of value-added and customized products. It also presents how the digitization of accounting of banks has helped to compare the differences between computerized accounting systems and manual accounting / banking systems and erase many problems in the banking sector. Technology helps banks create what looks like a branch in the lobby of a commercial building without having to hire manpower for manual operations These branches are functioning 24 x 7 which have become possible due to ATM, Tele banking, Internet banking, e-banking and mobile banking. The technology determined the distribution channels used to reach the maximum customers in the most effective way and at the lowest cost. The glory of these banking novelties is that it puts both the customer and the banker in a win-win situation The need is to design a system to promote marginal efficiency of investment in technology and to widen the gap between marginal benefits and marginal costs involved in banking innovation with special reference to technological upgrading. Paper surveys on the use of several e-channels and related issues have also been shown.

KEYWORDS: *Banking Industry, Computerization Accounting System, Manual Banking System.*

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Introduction

Improvements in technology employ innovations in a rapid speed in our daily life. After the introduction economic reform in the form Liberalization, Privatization and globalization, there is increase in growth of service sector in India. There is rapid increase in service sectors like banking, insurance, transportation, communication etc. But before 1991 the number of accounts holders in the various banks in both rural and commercial banks were very few The use of the manual banking system made it

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uncomfortable to serve customers in more diverse ways as the immediate demand for information coupled with the reconciliation of financial statements of various institutional customers was very difficult. But with the introduction of computerized accounting system, more tedious banking tasks have reduced through the use of manual banking system. The use of computerized accounting systems in various banks is changing the way banking activities are organized. Electronic commerce is now considered a panacea for the new commercial revolution taking place in the advance world which in one way or the other is lacking in India and by offering proper banking products and services to customers; Indian banks had to adopt computerized accounting system. Recent improvements in the country's infrastructure have made the banking sector to adopt this technology to improve its services for its customers as the increasing competition in the banking sector and the increasing demand of customers to provide their services online to banks Forcing it. One of the major users of communication and information technology in business life is the banking industry and technology has changed the face of banking industry through computerization. As the Indian banking and financial system continues to develop and integrate with international equal markets, computerization and networking have become indispensable. Banks in India are gearing up to adopt IT based systems based on the work done by banks in other parts of the world. The Reserve Bank of India appointed a committee on computerization under the chairmanship of Dr. C Rangarajan, the then Governor, RBI, in 1983 to look into the modalities of drawing up phased plan of computerisation for the banking industry covering the period 1985 to 1989. The committee submitted its report in 1984, recommending computerization of the branch and controlling offices of banks. RBI in 1988 to prepare a perspective plan for computerization in banks and specifically to suggest to implement on-line computerization at branch-level, application areas such as money transfer, electronic mail, BANKNET To indicate, swift, atm etc. The Committee was expected to assess requirements of trained personnel as well as training needs, to indicate for introduction of bilingualisation. The committee submitted its report in 1989, and recommended that for the next five years the emphasis of bank-computerization should be for computerization of 2000 to 2500 large branches located in high activity centers, RO / ZO / HO (Regional Office / Zonal) Computerization of Office / Head Office), BANKNET is used for many intra-bank and inter-bank applications like fund transfer, credit and authentication. C, and strategic locations, such as cash-dispenser and established small network of ATMs strategic locations such as airports/railway-stations etc. on shared basis by banks.

The Committee also recommended the 'Single Window Concept', 'all bank credit cards', credit-clearing/GIRO system, office automation, etc.

Innovations in Banks

In late 1980's and early 1990's there was arrival of card- based payments- debit card, credit cards. In late 1990's Electronic Clearing Service (ECS) was introduced. Electronic Fund Transfer/ Special EFT (EFT/SEFT) was introduced in the early 2000's,Introduction of Real Time Gross Settlement (RTGS) in March 2004, Introduction of NEFT (National Electronic Funds Transfer)as a replacement for EFT/SEFT in 2005/06 ,In 2007 plan for implementation of cheque truncation system as a pilot program in New Delhi. 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
- 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 centre creates problems.

History of Banking Industry

The Indian banking industry has gone through many changes since independence and the Indian banking industry is no longer the same as before. The change in the system is large and vivid in all its forms, be it qualitative, approach or structural. The expansion of globalization and the transformation of new technologies forced banks to launch new channels to achieve a competitive environment, reduce costs, enhance customer databases and improve their financial services Important changes in India's banking industry were changes in financial markets, institutions and products. In the early 1970s the banking industry was using a traditional system such that they had to record data by following a database, wasting their time in recording that database.

- **Previously Computation**

The first two main functions of the banking industry were primary and secondary. Primary functions included giving loans and advances and accepting deposits. Secondary functions were providing foreign exchange facilities to the customers, safe guarding of valuables, important documents, securities by issuing demand drafts and order of payment, valuables, locker or locker. While doing these activities, the banks as well as the customers had to face many problems such as not having a large number of queues, a large number of files to record data manually and causing heavy wastage of time. Despite these problems, Indian banks also faced difficulty in competing with international banks in terms of customer service without the use of technology.

- **After Computerization**

The use of computerization and modern innovation in the Indian banking sector has increased manifold after economic liberalization as the country's banking sector has been exposed to the world market. In 1984, a committee on mechanization in banking industry was formed by RBI, headed by RBI Deputy Governor Dr. C. Rangarajan was.

An electronic laser posting machine was installed under mechanization which included a type of writer keyboard, a printer, two floppy disk drives and a video screen. The machine was used to prepare statements on accounts for customers, maintain primary producers and make transaction entries in them. In 1989, the report was submitted by the committee and computerization began in 1993 with the agreement between the bank administration and the bank employees union. A committee in the banking industry was established in 1994 to address issues related to payment systems, security arrangements and check clearing, which emphasized the electronic fund transfer system.

Table: Changes in Banking Technology

Transformation Banking	Modern Banking
Sell product	Meet customer needs
Product research	Customer research
Product sale & profitability target sale	research Customer segment sale & profitability
Introduce new offering every few months/years	Introduce customer specific new offering every week/day
Banking hours only	Any time banking
Personal contacts	Personnel and electronic contacts
Focus-Customer acquisition	Focus-deepen existing customer Relationship

Milestones in Indian Banks and it Transformat

- **MICR (Magnetic Ink Character Recognition):** During the years 1986-88 MICR was introduced. MICR technology was used principally by the banking industry to smooth the progress of the processing of cheques and develops the routing number and account number at the bottom of a cheque. This allowed computers to translate information (like account numbers) off printed certificates. From the late nineties all branches started handling government business to perform their functions using technology for facilitating computerization of government business.
- **IDRBT (Institute for Development & Research in Banking Technology):** In 1996 a committee was formed by RBI in Hyderabad to upgrade technology in payment system. IDRBT was thus established as a result of recommendation of committee. ϖ Under the Information Technology Act, 2000; IDRBT ensured that e-banking transactions will get requisite legal protection with the commencement of Certification Authority (CA) functions.
- **IS Audit (Information Systems Audit):** Its purpose is to determine systems internal control design and effectiveness which included security protocols? Guidelines related to it were made and circulated to ensure IS audit in banks.
- **ATM's (Automated Teller Machines):** Enabling IT channels which enhances customer service at banks in areas such as cash delivery through card based transaction settlements, Automated Teller Machines (ATMs).etc.
- **e-Banking (Internet Banking):** E-Banking allows financial institution customers to conduct a secure financial transaction on website to have personal access to internet a customer must register for the service to the institution and some password will be set-up for verification of customer.

- **RTGS (Real Time Gross Settlement):** It is a transfer system for funds where money is being transferred from one bank to another bank on gross and real time basis. When there is no waiting period for payment transaction the settlement is in "real time". One to one basis settlement of transaction without clustering or mesh with other transaction is "gross" settlement.

Technology Used

- **Automated Clearing House (ACH)**

To handle cheques in clearing house computers are used. It is difficult to clean up, substitute and establish transactions within many banks. A deficient computer is used in the cleaning house to enhance the process and to quickly wipe the operation. ACH allows a large number of credit and debit transactions in batches.

- **National Automated Clearing House Association (NACHA)**

National Automated Clearing House Association (NACHA): It helps in transfer of debit to check point-of-purchase negotiation. ACH payment is being implemented by both the commercial sector and the government. Business is also improving by using ACH to collect online payments from customers, compared to accepting debit or credit cards. The NACHA and the Federal Reserve established rules and legislation to operate the AAC network.

- **Electronic Clearing Services (ECS)**

ECS uses the services of a cleaning house to transfer funds from one bank account to another. It is used for large transfers from one to several accounts or vice versa.

Types of ECS: Two types of ECS are ECS (Credit) and ECS (Debit)

- **ECS (Credit):** It is used to allow credit to huge number of receivers by raising only one debit to an account like interest, salary payment, pension
- **ECS (Debit):** It is used to inflate debits to a huge number of accounts of customers or account holders for honouring a particular institution e.g. utility company's payments like telephone, house tax charges, water tax charges.

National Electronic Fund Transfer (NEFT)

- **NEFT**

It is an online system by which funds of Indian financial institutions are being transferred. Funds below Rs. 2,00,000/ - are mainly transferred by it. Structured Financial Messaging Solution (SFMS) was used as a platform to create NEFT. NEFT was used to maintain security in public safety infrastructure (PKI) technology.

- **Electronic Fund Transfer (EFT)**

It is electronic transfer or exchange of money from one account to another. This exchange of money takes place through computer systems in many financial institutions, allowing banks for them customers from any bank branch account to other branch bank.

- **Cards Transaction**

Debit card is an alternative method of payment of cash when transactions are being *m*ade. While using it cardholder can see available balance in account. Debit cards are widely used to withdraw cash from ATM, to purchase online on internet, making bill payments, transferring funds, etc. during opening of account banks provide free of cost debit cards. From 1 January 2011, RBI announced that the user would have to enter the password at the ATM for every transaction with a debit card.

- **Core Banking**

To adopt Core Banking Solution (CBS), computerization in branches of banks is closely related with technological development.

- **Automatic Tele Machine (ATM)**

ATM is used for many functions of banks, such as withdrawing cash, printing bank statements, transferring funds, reservation of train tickets, payment of premium.

- **Infinet**

Many components like servers, connecting networks, communication channels etc. are required for working of e-banking. Various service providers were established and connected in India by RBI to control and monitor e-banking. Some service of provider is INFINET which stands for Indian Financial Network. Services which are provided by INFINET are e-mail, transmission of inter-city cheque realization advices, electronic clearing services-debit and credit.

Table: Pros and Cons of IT Technology

Dimensions of IT innovation	Limitations of electronic-only retail commercial banking	Potential for electronic-only retail commercial banking
Innovation in Service Offering	• Each new technological innovation accounts for (proportionally) smaller reductions in price differentials. • Bank customers remain unwilling to pay for interfaces for the new technology. While merchants expect to share the revenue of new payment through lower commission charges. • Defection rates remain low, thanks to the inertia of bank customers, which has been historically high.	• Greater price transparency • Greater convenience to consumers. • Each customer segment interacts with the bank through the most cost effective distribution channel. • Innovations such as smart cards and digital cash. • Creation of new customer segments and improved relationship banking
Operational Functional Innovation	• The possibilities of scale economies make it very hard for potential entrants to catch up, even with technically better systems. • Continued importance of contextual non-standard sable Elements to assess risks. • More specialized labour force.	• Enhanced financial performance due to reductions in overhead expenses. • Standardised of activities in payment and lending services eliminates uniqueness of proven expertise and ability to control losses from payment activities efficiently.

Threats

By far the biggest fraud, which is considered to be a secure method of crime involving no physical damage, is technical fraud in banks. Since 1994, computerization of banks started in India. The local area network and working area for a wide area was developed by the Reserve Bank of India by setting up unique microwave stations for safe and quick money transactions. The main functions performed by the computer in banks are to preserve the debit-credit records of accounts, transfer of electronic funds, operating automated teller machines, making periodic balance sheets, printing of accounts details, etc.

- **Risk Factors**

Internet facilities of computers have changed the transfer data of interest regarding money transfer and banking to international banking. and to perform other functions of banks and by giving different passwords and pin numbers. Some of the negative effects of computers are classified as:

- **Computer Frauds**
- **Computer Crimes**

Computer CRIMES Computer frauds are those in which misuse or disregard is accomplished by altering the data records of computers or programs, etc. whereas computer offenses are those which are committed with a computer i.e. where the computer acts as a standard. The three most common are:

- **Cheque Frauds:** The rapid growth of paper cheques have been joined with easy availability of the most recent technology, resulting in a staggering increase in check fraud in banks in India. It is fascinating to note that inquiry as a payment method still holds a prominent place in both developing and developed countries. Hard work is being done by banks to discourage customers from using paper cheques. Additional cheque-related problems are manually inbuilt such as the handling process, the high cost of transportation between the parties, the handling process. The concept and magnitude of cheque fraud are several ways to classify cheque fraud. One wide distinction is “internal” and “external”. Internal investigation frauds are those in which plans are made by insiders — employees are responsible for creating, processing, and processing the investigation. External cheque frauds are those in which the schemes are made by independent operators or classified gangs. The most familiar forms of external fraud are:
  - Modification of cheque details
  - Creation of fake cheques
  - Forgery of cheques Physical controls of security used is high resolution micro printing, watermarks, security inks and reflective holograms etc.

- **ATM Frauds:** ATM‟s are electronic machines that are connected to the accounts and records of banking institutions. It allows customers to make banking transactions without going to banks. ATM‟s are implicit banks that allows users to withdraw money, pay bills, deposit cash etc. ATM machine is derived with the help of an access drive i.e. a card, code i.e. personal identification number or through other methods of access to account of customer or any combination thereof. Fraud Related to ATMs Commitment of frauds can be by both insiders and outsiders. It is known that number of frauds will rise with the increase in number of transactions. Frauds can occur due to carelessness on part of both the cardholder and part of bank. If the holder of card does not follow preventative measures then is exposed to risk.
    - A cheat may go through the carbons or discarded receipts to find out the card number illegally.
    - A clerk who is dishonest makes an imprint from the charge card or credit card for his personal use.

In addition to all these, E-mail and Internet-related fraud schemes are carry out with the increasing frequency, creativity and intensity.

Fraudsters adopt a number of methods which are as follows:

- **Phishing**

Phishing is a way of sending arbitrary emails, which indicate a clear company coming from a company that is working on the Internet. When customers make an effort, a request to disclose information on a fake website will be handled by them. The information recorded on the fake website is captured by criminals and they use it for their purpose.

- **Skimming**

Fraudsters use skimmers to make fake ATM cards, a swipe-card device which reads consumer's ATM card's information. Scammers swipe information of trusted customers by inserting them into ATMs. They take a blank card and by inserting the card they are able to encode all the information on swiping from the ATM.

- **Spoofing**

The invader makes a misleading reference that makes you a liar in making an inappropriate security-appropriate decision. For example, false ATM machines have been installed. If they have a PIN number, they will have enough information to steal from the account.

- **Credit Card Frauds:** Credit card is made of polyvinyl chloride sheet. The innermost sheet of the credit card is known as the core stock. Personal data is embossed on top of it and the cards are of fixed size. Credit card fraudsters steal credit cards from banks, customers and merchants. Credit card fraud is committed in several ways: (Authentic cards are malformed. (Fake cards are created (Fake cards are taken on duplicate applications to other people's addresses and names. People worry that as e-commerce and Internet facilities expand, fraud on a large scale will increase faster than credit cards.

Suggestions & Recommendations

- **For ATM**
    - Avoid leaving cards at ATM.
    - Watch over the privacy of PIN number as you safeguard hard cash.
    - Never keep ATM card and PIN number together.
    - Don't give your ATM card to anyone and never disclose Pin to other people.
    - Do remember PIN.
- **For Credit Cards**
    - While using the card keep an eye on it.
    - Don't give your credit card information on phone call.
    - Don't reply to „phishing‟ mails.
    - Don't use unsecured websites
    - Immediately sign your credit card as soon you receive it.

Objectives

- Evaluating how computerization takes place in banking sector.
- Estimating the convention of various banking tools.
- Evaluating the usage pattern of various I.T tools in banking industry.
- Estimating the precautionary measures that litigant take against frauds.
- Evaluating preventing measures to be taken against frauds.

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