A Critical Study on Concept of E Banking and Various Challenges of IT in India with Special Reference to RBI’S Role in Safe Banking Practices

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Abstract

Financial sector plays an important role in the economic development of a country. Banking is the lifeline of an economy. A strong and healthy banking system is important requirement for economic growth. Indian banking industry, today is observing an IT revolution. The implementation of internet in banking organizations has modernized the banks. It has benefited both the consumers as well as banks. E Banking in India has seen a number of changes due to technology and innovation. Arrival of card, introduction of Electronic Clearing Service, introduction of Electronic Funds Transfer and concept of online banking and mobile banking are the various novelties which took place in banking sector. E-Banking is a generic term encompassing internet banking, telephone banking, mobile banking etc. Through E-Banking the bank wants to introduce the core concept of IT based Enabled Services. At the same time it was totally different from traditional banking system. It more convenient to the people to make debit and credit. One of the reasons for e-banking gaining momentum in India is the increasing internet penetration among people. People today prefer using electronic medium for banking because of lot of advantages associated with it. But it has also put forth some issues and challenges that regarding in cyber crime like data theft, phishing, credit card fraud etc. So in this paper, an attempt has been made to give an overview of e banking in India and various issues and challenges facing in the banking industry.

Key Words:E banking, information technology, traditional banking, cyber crime, credit card fraud.
1. Introduction

Banking system always has an important role to play in every country’s economy. It is vital for any nation as it provides for the needs of credit for all the sections of the society. Information Technology has become a necessary tool in today’s organizations. Banks today operate in a highly globalized, liberalized, privatized and a competitive environment. IT has introduced new business paradigm. It is increasingly playing a significant role in improving the services in the banking industry. Indian banking industry has witnessed a tremendous developments due to sweeping changes that are taking place in the information technology. E-banking has numerous advantages attached to its usage. It provides a platform for anytime, anywhere banking. The customers can log on to their account using websites or cards anytime and from anywhere without being concerned about the bank timings or bothering about the long bank queues. so The customers can access the banks easily through internet for viewing their account details. It maintain a good relationship between the bank as well as the customers. Even though e banking faced various challenges and issues due to the technology. In India, Reserve Bank of India outlined the mission to ensure that payment and settlement systems are safe, efficient, interoperable, authorized, accessible, inclusive and compliant with international standards. The Vision is to proactively encourage electronic payment system for ushering in a less cash society in India. Thus the RBI plays an important role to provide various measures by which improve the growth of e banking in india.

2. Aim of the Study

- To identify various E banking services/products adopted by india
- To study about the various challenges and issues faced E banking
- To find out the advantages of E banking to customers and banks
- To analyze the role of RBI to safe banking practices

3. Research Question

Whether E Banking laws in india like IT Act 2000 & RBI Act, 1934 effectively address all the legal and security concerns in banking sector and in comparison to E Banking and Traditional banking?

4. Hypothesis

There is significant legislation India to protect the issues and challenges prevalent in E banking

5. Research Methodology

The research is primarily doctrinal research. Here the data collection is necessarily secondary data which collected from books, journals, articles, law reports, newspapers, e- sources for the purpose of this study.
6. Chapterization

Chapter 1 deals with ‘E Banking - A General overview’

Chapter 2 deals with ‘Cyber crime and its impact on E banking sector’

Chapter 3 deals with ‘comparison between E Banking and Traditional Banking with special reference to RBI role in safe banking practices’

Chapter 1
E Banking- A General Overview

E Banking has turned into an integral part of banking system in India. The idea of e-banking is of fairly recent origin in India. Till the early 90's traditional model of banking i.e. branch based banking was prevalent, but after that non-branch banking services were started. The credit of launching internet banking in India goes to ICICI Bank. Citibank and HDFC Bank followed with internet banking services in 1999. The Government of India enacted the IT Act, 2000 , which provided legal recognition to electronic transactions and other means of electronic commerce. The Reserve Bank is monitoring and reviewing the legal and other requirements of e-banking on a continuous basis to ensure that e-banking would develop on sound lines and e-banking related challenges would not pose a threat to financial stability.¹

Evolution of E-Banking in India

Modern banking is more information based speedy & boundary less due to the impact of E Revolution. Electronic banking, also known as electronic funds transfer, is simply the use of electronic means to transfer funds directly from one account to another, rather than by cheque or cash. The early version of what was considered online banking began in 1981. New York City was the first place in the U.S. to test out the creative way of doing business by providing remote services through banking sector. Evolution Of E-Banking In India as a medium of delivery of banking services and as a strategic tool for business development, has gained wide acceptance internationally and is fast catching up in India with more and more banks entering the fray. India can be said to be on the threshold of a major banking revolution with net banking having already been unveiled. In India, Reserve Bank of India sketched out the mission to guarantee that installment and settlement frameworks are sheltered, effective, interoperable, approved, open, comprehensive and agreeable with worldwide measures. The Vision is to proactively energize electronic installment framework for introducing a less trade society out India . Control is quick to advance development and rivalry with a goal to help installment framework accomplish

¹ Suresh.v, law relating to E banking in India, published in International Journal of current Research, ISSN-0975
E Banking products and services

Indian banks offer to their customers following e-banking products and services:

- Automated Teller Machines (ATMs)
- Internet Banking
- Mobile Banking
- Phone Banking
- Tele banking Electronic Clearing Services Electronic
- Clearing Cards Smart Cards
- Doorstep Banking
- Electronic Fund Transfer
- Electronic fund transfer

Features of E banking in india

- Easy Electronic Fund transfer facility.
- Better efficiency in Customer relationship management.
- Order mini statements
- SMS alert services.(Bank n.d.)
- It introduces virgin & innovative banking products & services.
- It can view of balance of accounts and statements;
- E-banking can bring doorstep services.
- Balance and transaction history search.
- Pay anyone payments Multi Payments.

Opportunities of E Banking

- Undiscovered Rural Markets: Contributing to 70% of the aggregate population in India is a largely untapped market for banking sector. In all urban territory banking services entered but only few big villages have the banks entered. So that the banks must reach in remaining all villages because majority of Indian still living in rural areas.
- Competitive Advantage: The benefit of adopting e-banking provides a competitive advantage to the banks over other players. The implementation of e-banking is beneficial for bank in many ways as it reduces cost to banks, improves customer relation , increases the geographical reach of the bank , etc. The benefits of e banking have become opportunities for the banks to manage their banking business in a better way.
- Increasing Internet Users & Computer Literacy: To use internet banking it is very important or initial requirement that people should have

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2 Anushriya bhargava, ‘e banking opportunities and challenges in india, published on international academic conference, london.ISBN- 978
knowledge about internet technology so that they can easily adopt the internet banking services. The fast increasing internet users in India can be a very big opportunity and banking industry should encash this opportunity to attract more internet users to adopt internet banking services.

• Multiple Channels: Banks can offer so many channels to access their banking and other services such as ATM, Local branches, Telephone/mobile banking, video banking etc. to increase the banking business.3

Benefits of using E banking to customers

• Less waiting time
• Easy and convenient
• 24/7 availability
• Self service claimed
• Save time and money

Challenges of E banking

Privacy risk: The risk of disclosing private information & fear of identity theft is one of the major factors that inhibit the consumers while opting for internet banking services. Most of the consumers believe that using online banking services make them vulnerable to identity theft. According to the study consumers” worry about their privacy and feel that bank may invade their privacy by utilizing their information for marketing and other secondary purposes without consent of consumers.

Customer Awareness: Awareness among consumers about the e-banking facilities and procedures is still at lower side in Indian scenario. Banks are not able to disseminate proper information about the use, benefits and facility of internet banking. Less awareness of new technologies and their benefits is among one of the most ranked barrier in the development of e-banking.9

Security Risk: The problem related to the security has become one of the major concerns for banks. A large group of customers refuses to opt for e-banking facilities due to uncertainty and security concerns. So it’s a big challenge for marketers and makes consumers satisfied regarding their security concerns.

The Trust Factor: Trust is the biggest hurdle to online banking for most of the customers. Conventional banking is preferred by the customers because of lack of trust on the online security. They have a perception that online transaction is risky due to which frauds can take place.

Strengthening the public support: In developing countries, in the past, most e-finance initiatives have been the result of joint efforts between the private and public sectors. If the public sector does not have the necessary resources to

implement the projects it is important that joint efforts between public and private sectors along with the multilateral agencies like the World Bank, be developed to enable public support for e-finance related initiatives.

**Implementation of global technology:** In developing countries, many consumers either do not trust or do not access to the necessary infrastructure to be able to process e-payments.\(^4\)

**Competition:** The nationalized banks and commercial banks have the competition from foreign and new private sector banks. Competition in banking sector brings various challenges before the banks such as product positioning, innovative ideas and channels, new market trends, cross selling ad at managerial and organizational part this system needs to be manage, assets and contain risk.

**Handling Technology:** Developing or acquiring the right technology, deploying it optimally and then leveraging it to the maximum extent is essential to achieve and maintain high service and efficiency standards while remaining cost effective and delivering sustainable return to shareholders. Early adopters of technology acquire significant competitive advances Managing technology is therefore, a key challenge for the Indian banking sector.

**Availability of Personnel services:** In present times, banks are to provide several services like social banking with financial possibilities, selective up gradation, computerization and innovative mechanization, better customer services, internal supervision and control, strong organization culture etc. Therefore, banks must be able to provide complete personnel service to the customers who come with expectations.

### CHAPTER II

**Cyber Crime and its Impact on Banking Sector**

The usage of internet services in India is growing rapidly. It has given rise to new opportunities in every field we can think of – be it entertainment, business, sports or education. There are many pros and cons of some new types of technology which are been invented or discovered. Similarly the new & profound technology i.e. using of INTERNET Service, has also got some pros & cons. These cons are named CYBER CRIME, the major disadvantages, illegal activity committed on the internet by certain individuals because of certain loop-holes.The internet, along with its advantages, has also exposed us to security risks that come with connecting to a large network. Computers today are being misused for illegal activities like e-mail espionage, credit card fraud, spams, and software piracy and so on, which invade our privacy and offend our senses. Criminal activities in the cyberspace are on the rise. Computer crimes are criminal activities, which involve the use of information technology to gain an illegal or an unauthorized access to a computer system with intent of

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Computer crimes also include the activities such as electronic frauds, misuse of devices, identity theft and data as well as system interference. Computer crimes may not necessarily involve damage to physical property.

The frauds in e-banking sector is covered under the types of cyber-deception. Cyber-deception is further defined as an immoral activity which includes theft, credit card fraud, and intellectual property violations. Mostly frauds are committed because of two goals, one, to gain access to the user’s account and steal his personal information and transfer funds from one account to another. Second is to undermine the image of the bank and block the bank server because so that the customer is unable to access his account.

Banking sector has too suffered on impact of cyber crimes. RBI has defined bank fraud has as “A deliberate act of omission or commission by any person, carried out in the course of a banking transaction or in the books of accounts maintained manually or under computer system in banks, resulting into wrongful gain to any person for a temporary period or otherwise, with or without any monetary loss to the bank”.

**Cyber crime related with banking sector**
- Credit card fraud
- Phishing or identity theft
- Viruses on computer
- Hacking
- Keystroke logging
- Spyware

**Credit Card Fraud**

Many online credit card fraud are made when a customer use their credit card or debit card for any online payment, a person who had a criminal intention use such cards detail and password by hacking and make misuse of it for online purchase for which the customers card used or hacked is injured for such kind of attract or action of a fraud made by and evil. The hacker can misuse the credit card by impersonating the credit card owner when electronic transactions are not secured.

**Recent Incident on Credit Card Fraud**

Recently credit card fraud happened on mumbai feb 16, 2018. In mumbai around 30 customers of the vasai branch of hdfc bank allegedly fell victim to debit card cloning between wednesday night and thursday noon of feb 16, when rs 10 lakh was fraudulently withdrawn haryana and delhi. Cash withdrawal was alerted by one of the victim of the fraud. Though its help easily to prevent and find out the criminal.

In Xxx vs State Bank Of India & 2 Ors (2013)\(^5\) that there was a instance of

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\(^5\) Xxx vs State Bank Of India & 2 Ors , AIR 2013.
ATM fraud. The court held that some security protocols to preventing ATM frauds.

In Manager axis bank ltd vs Sai sandeep bhosale (2017)\(^6\), the court held that there is burden of proof lays down on bank incase if it is any fraud was occured on the customers of the bank.

**Phishing or Identity Theft**

Phishing is a scam where Internet fraudsters request personal or private information from users online. These requests are most commonly in the form of an email or message from an organization with which one may or may not do business. In many cases, the email has been made to look exactly like a legitimate organization’s email would appear complete with company logos and other convincing information.

Phishing is only one of the numerous frauds on the Internet, attempting to trick individuals into separating with their cash. In banking sector the fraudster then has admittance to the client's online financial balance available in the bank account and to the funds contained in that account by making the misuse of the detail received from the customer fraudulently.

In the case of Umashankar Sivasubramanian v. ICICI Bank the petitioner used to receive monthly bank account statement under the email ID of the bank, one day received a mail asking for his personal details, which he provided, after which his account was debited with Rs. 5 lakhs. Upon complaint, the bank said that it was a phishing mail against which he approached the adjudicating officer. In this case, the bank was held liable according to Section 43 and Section 85 of the IT Act, 2000.

**Viruses on Computer**

A virus is a program that infects an executable file and after infecting it causes the file to function in an unusual way. It propagates making the executable file may make new copies of the virus. On the other hand there are programs, that can copy themselves, called worms which do not alter or delete any file, but only multiply itself and send the copy to other computers from the victim’s computer. (Virgillito n.d.)

**Hacking**

Hacking is a crime, which means an unauthorized access made by a person to cracking the systems or an attempt to bypass the security mechanisms, by hacking the banking sites or accounts of the customers. The Hacking is not defined in the amended IT Act, 2000. But under Section 43(a) read with section 66 of Information Technology (Amendment) Act, 2008 and under Section 379 & 406 of Indian Penal Code, 1860, a hacker can be punished

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\(^6\) manager axis bank ltd vs sai sandeep bhosle AIR 2017
In Harimohan Shivhare @ Rinku @ .. vs The State Of Madhya Pradesh (2016), The Madhya pradesh high court dealt with cyber crime on net banking. Two Bank accounts of Mahakali Foods Private Limited were hacked through net Banking. Total amount of Rs. 1,91,00,000/- were transferred in the account of different persons in the different accounts. Looking to the aforesaid facts of the case and the nature of the case, without expressing any opinion on the merits of the case, the application is allowed.

In Ostern Pvt.Ltd. & Anr vs State Of West Bengal & Ors ( 2014), calcutta high court dealt with cyber hacking on banking sector. Where the petitioner mail accounts being hacked by substantial sums are stolen by supplying the details of bank accounts. It was controlled by the fraudsters through the system was hacked.such a situation there was no alert message to the customers. The court punis the offenders and additionally held that the main mistake was relied upon the bank officials.

Keystroke logging

It is one kind of method by which fraudsters record actual keystrokes and mouse clicks. Keyloggers are “Trojan” software programs that mainly target computer’s operating system and are “installed” via a virus. It can be particularly dangerous because the fraudster captures user ID and password, account number, and anything else that has been typed.

Spyware

Spyware is the number one way that online banking credentials are stolen and used for fraudulent activities. It works by capturing the information either on the computer while it is transmitted between the computer and websites. Often times, it is installed through fake “pop up” ads asking to download software.

Chapter III

Comparison between e Banking and Traditional Banking with Special Reference to RBI Role in Safe Banking Practices

Internet is considered to be an important piece of electronic banking. With the advantage of internet, the usage of electronic medium in every field, including banking has increased. In India the traditional method of banking was through branch banking. It was in 1991, that with economic reforms, the banking industry also witnessed the new way of banking methods. In Saraf Committee which was constituted by RBI in 1994 that recommended the use of Electronic Fund Transfer System (EFT), introduction of electronic clearing services and extension of Magnetic Ink Character Recognition (MICR) beyond metropolitan cities and branches. It was ICICI bank which became the pioneer of e-banking in India. It was the first bank to introduce online banking services in 1996. Its initiatives were followed by Citibank, IndusInd Bank and HDFC Bank who provided internet banking services in 1999. Various initiatives have been taken

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7 Harimohan Shivhare @ Rinku @ .. vs The State Of Madhya Pradesh , AIR(2016)
8 Ostern Pvt.Ltd. & Anr vs State Of West Bengal & Ors, AIR 2014
by both the government and the Reserve Bank from time to time to smooth the expansion of e-banking in India. (Anon n.d.) The Government of India enacted the IT Act, 2000 which provided legal recognition to electronic transactions and other means of electronic commerce.

Basic Difference between E banking and Traditional Banking (Anon n.d.)

Traditional banking

Physical presence - Banking institutions exist physically for offering services to the customers

Time - It consumes a lot of time as customers have to visit banks personally.

24*7 facility - People have to visit banks only during the working hours.

Security threats - Traditional banking does not encounter security threats.

Expensive - Customers have to spend money for visiting banks.

Cost - Physical presence implies a lot of operating and fixed costs.

Customer Service - In traditional banks, the employees and clerical staff of the bank can attend only few customers at a time

E Banking

Physical presence - Internet banks do not have physical presence as services are provided online

Time - It does not consume time as customers do not have to visit banks personally.

24/7 availability - Internet banking is available at any time and it provides 24 hours access.

Security threats - Security is one of the problems faced by customers in accessing accounts through internet.

Expensive - It is relatively cost effective as customers do not have to spend money for visiting banks.

Cost - Such costs are eliminated as the banks do not have physical presence.

Customer service - In online banking, the customers do not have to stand in queues to carry out certain bank transactions.

Role of Government in Safe Banking Practices

For developing internet banking government of India enacted

- Information technology Act, 2000
- Legal recognition to electronic transactions
- RBI issued various guidelines to safe bank practices especially on internet
Safe Banking Practices/Security Measures

To safeguard the ‘client accounts’, through e banking, most banks have taken measures to ensure that the identity of the account holder (Anon n.d.) is properly authenticated before granting access to their bank accounts online. The common measures include the use of a complex password, at least eight characters in length, consisting of uppercase and lowercase letters, numbers and symbol, and a second-factor authentication such as a token-generated Personal Identification Number (PIN) or one-time PIN sent via Short-Messaging Service (SMS). This ensures that only the account holder who holds these two types of information is granted to access it. In another view that E banking implement encryption to ensure that all information that is transferred through the network cannot be deciphered by a third party. Such websites would have their URL beginning with “https”. To further confirm the validity of the website’s encryption, do check the Secure Sockets Layer (SSL) certificate issuing authority and validity period via your browser. The certificate should be issued by a trusted certifying authority and should not have expired. Most banks also allow their clients to set limits to the funds that may be transferred to other bank accounts through online banking. An SMS alert would be sent to the account holder if a transaction beyond a certain predefined amount had taken place.

RBI role in E Banking

Electronic banking transactions have undergone an unprecedented growth spurt in India, especially after the Government’s demonetization announcement in November 2016. It has been reported that there has been a year on year growth of 200%, 165% and 45% in mobile banking, debit cards and credit cards transaction amounts respectively. This spike in e-banking transactions has been accompanied by an increase in the number of unauthorized or fraudulent transactions.

Under the erstwhile regulations issued by Reserve Bank of India (RBI) on fraudulent transactions, banks had to compensate the customer if the banks were at fault. For third party faults, banks were required to compensate customers as per their customer relations policy. However, the extent of liability and the timelines for compensation were not specifically stipulated in these RBI regulations and customer claims were typically compensated after the banks’ insurance claims were settled.

The RBI Circular mandates the Banks to strengthen systems and procedures to ensure the safety of e-banking transactions. Some of these include having

- a robust and dynamic fraud detection and prevention mechanism,
- a system to assess the risk from unauthorised transactions and resultant liabilities
- measures to mitigate the risks and ensure protection from liabilities, and
- customer awareness.
The RBI Circular also requires the Banks to have in their customer relations policy, a mechanism for compensation of customers in the event of unauthorised transactions. They are also obliged to implement a system to report cases of customer liability to their board of directors or board committees.

**RBI'S New Guidelines for Customers Against any Online Fraud (Anon n.d.)**

The Reserve Bank of India has come out with the concept of 'zero liability' and 'limited liability' making Electronic payments safer for bank customers. With the new initiative, customers will not suffer any loss if unauthorised electronic banking transactions are reported within three days and the amount will be credited to the concerned within 10 days. RBI's circular covers online transactions as well as face-to-face transactions in stores using electronic payments. Here are the final guidelines sought to make online transaction safe:

- A customer will have zero liability in case of third party breach or negligence on the part of the bank. The customer will also not be liable if unauthorised transaction is reported to the bank within three working days.
- In cases loss due to negligence of the customer, like sharing one's password, the customer will bear the entire loss until he reports the unauthorized transaction to the bank.
- The bank has to credit the amount involved in the unauthorised electronic transaction to the customer's account within 10 working days from the date of such notification by the customer.
- If the fraudulent transaction is reported within four to seven working days, a customer's maximum liability will be from Rs. 5,000 to Rs. 25000 depending on type of account.
- In case of fraud is reported 7 working days, the customer's liability will be according to the bank's policy.
- The transactions include internet banking and mobile banking as well as ATM and point-of-sales transactions.
- The banks have to provide a direct link on their website's home page for filing the complaints.
- The RBI has directed the banks to ask their customers to compulsorily register for SMS and email alerts. Such alerts must have a Reply option for customer response so that they can easily notify banks in case of fraudulent transactions.

7. **Suggestion**

Most of the banks have already implemented the e-banking facilities, as these facilities are beneficial to both i.e. banks as well as consumers. The banks are facing many challenges and many opportunities are available with the banks. So the customers can alert any time about their account details. For better protection the account holders create a strong password, secure the computer...
and check into up to date, and monitor the accounts regularly.

8. Conclusion

In India E-Banking is a non-reversible wonder which will acquire more momentum in the coming years. With digitalization of Indian economy and move to transform India into cashless society, e-banking is going to be strengthened. Numerous banks in India including the State bank of India, HDFC, and ICICI etc. are exacting charges on money transactions above a certain limit. Though this is mainly being done to curb cash withdrawals as many banks are still twirling over cash crunch caused due to demonetization in 2016. But this step is surely going to boost online banking and virtual transactions in India. As can be seen from data given above, be it ATMs deployment or issuance of debit card or credit card, they all witnessed an upward increase indicating their growth in recent years. The young generation has already adapted to this change and perceive this changing banking system more as a convenience mode than a challenge. RBI and IT Act, 2000 played a very important role to preventing and securing the E banking practices in India.

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