**A Critical Study On Concept Of E-Banking And Various Challenges In It With Special Reference To Rbi’s Role In The Safe Banking**

**MEET PRIYA KHALSA**

Student

 INDORE INSTITUTE OF LAW

**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**: banking, information technology, traditional banking, cyber crime, credit card fraud.

**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.

**E-banking Evolution**

Modern scenario projects that E-banking is shaping the financial services industry. Henceforth, it is imperative to understand comprehensively the evolution of E-banking. A brief history and trend analysis of the evolution of E-banking industry globally using document analysis reveals the major barriers, impediments and boosters for the rapid transition of the banking sector and uptake of E-banking.[[1]](#footnote-1) Document analysis is the systematic analysis of a particular topic, using documents such as newspapers, annual reports, employment records, published and unpublished articles, industry and consultancy reports, ongoing academic working papers, government white paper reports and white papers[[2]](#footnote-2). In a broader perspective, electronic banking is defined as the provision of banking services via means other than traditional physical branches[[3]](#footnote-3). Electronic banking offers its financial services to its prospective customers through various forms such as:

1. Automated Teller Machines (ATM)

2. Telephone Banking

3. Home Banking

 4. Internet Banking

5. Mobile Banking

SERVICES OF E-BANKING

**Automated Teller Machines (ATM)**

ATM is designed to perform the most important function of bank. It is operated by plastic card with its special features. The plastic card is replacing cheque, personal attendance of the customer, banking hours restrictions and paper based verification. There are debit cards. ATMs used as spring board for Electronic Fund Transfer.

**Credit Cards/Debit Cards**

 The Credit Card holder is empowered to spend wherever and whenever he wants with his Credit Card within the limits fixed by his bank. Credit Card is a post paid card. Debit Card, on the other hand, is a prepaid card with some stored value. Every time a person uses this card, the Internet Banking house gets money transferred to its account from the bank of the buyer. The buyers account is debited with the exact amount of purchases.

**Bill Payment Services**

Payment of electricity and telephone bills, mobile phone, credit card and insurance premium bills can be easily facilitated as each bank has tie-ups with various utility companies, service providers and insurance companies, across the country.

**National Electronic Fund Transfer**

National electronic fund transfer is a nation-wide payment system enabling one to one fund's transfer. Under this system individuals and corporates can electronically transfer funds from any bank branch to any individual, corporate having an account with any other bank branch in the country participating in the scheme. For being a part of the NEFT funds transfer network, a bank branch has to be National electronic fund transfer enabled. Any individuals, firms who holds saving bank accounts with a bank branch can receive or send funds through the NEFT scheme hence it is necessary for the customers to have an account with NEFT enabled bank branch. There is no maximum limit on the number of funds that could be transferred using NEFT.

**Real Time Gross Settlement**

 It is defined as the continuous settlement of funds transfer separately on an order by order basis. Real-time means processing of orders at the time they are received rather than at some later time, Gross settlement means the settlement of funds transfer instructions take place individually (on an instruction by instruction basis). Considering that the fund's payment takes place in the books of the RBI, the payments are ultimate and irrevocable. RTGS is mainly meant for large value transactions. The lowest amount to be settled through RTGS is Rs. Two lakhs and there is no upper limit for RTGS transactions. The banks have to transfer the funds from one account to another on a realtime basis, which the customer can receive the amount within thirty minutes from receiving the fund's transfer message. The RTGS service for customer’s transactions is available to the bank from 9:00 AM to 16:30 PM on working days.

**Mobile Banking**

 It is the act of performing banking transactions on a mobile device like cell phones, tablet etc. mobile phones as a medium for covering banking services, and have reached greater significance because of their pervasive nature. Banks are allowed to offer mobile banking services through SMS, USSD or mobile banking application after obtaining necessary permission from the department of payment and settlement systems. Mobile banking services are to be made available to bank customers irrespective of the mobile network. Banks which are licensed and have a physical presence in India, only banks who have implemented Core banking solutions are permitted to offer mobile banking

**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 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.[[4]](#footnote-4)

**Challenges For India In Adopting Electronic 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

**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.[[5]](#footnote-5)

**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.

**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.

Cyber crime related with banking sector-

**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)[[6]](#footnote-6) that there was a instance of ATM fraud. The court held that some security protocols to preventing ATM frauds.

 In Manager axis bank ltd vs Sai sandeep bhosale (2017)[[7]](#footnote-7) , 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.

**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.

**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.

In Harimohan Shivhare @ Rinku @ .. vs The State Of Madhya Pradesh (2016)[[8]](#footnote-8), 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)[[9]](#footnote-9), 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 punish 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.

**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 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, it is important to check the Secure Sockets Layer (SSL) certificate issuing authority and validity period via the 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’s 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.

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 unauthorized 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.

**Conclusion**

The new generation of the electronic banking transactions created a bundle of opportunities as well as challenges to the existing banks, financial institutions and consumers in India as well globally. It is visible from the extant documentary analysis that almost all the major banks irrespective of the level of country’s advancement have rapidly introduced innovative E-banking technologies. Thus, it is clear that in newly industrialized nations, electronic banking is gaining its momentum as the banks operating globally have declared E-banking as one of the core strategies for future development. There exists a potential scope to gear on the opportunities related to the electronic banking channels with a particular emphasis on the developing nations. Banks should work in conjunction with the government to improve the security, safety and privacy issues and maintaining the confidentiality of their prospective consumers would enhance the uptake of E-banking in India. Moreover, the success or failure of E-banking in India largely depends on several dimensions such as consumers’ trust in a particular bank, service quality offered by the bank, consumer preferences and their ultimate satisfaction. Therefore, banks should continuously strive to meet the consumers’ expectations, demands and requirements in order to maintain their own identity.

However, with regard to the developing nations like India poor infrastructure in conjunction with low levels of internet penetration is a serious problem. Internet service providers and banks should provide certain incentives and subsidize the surfing cost. It would be beneficial for the consumers’ if free training sessions and mock demonstrations about the use of internet and E-banking are provided by the banks and service providers.

Multiple access facilities combining telephone, internet, mobile and ATM would likely motivate more number of consumers’ to adopt and use E-banking. Provision of proper authentication facilities and assurance by the banks to maintain consumers’ identity and confidentiality would essentially initiate the uptake of E-banking by many. Government intervention is essential and appropriate particularly in India. Government should work in conjunction with the banks to improve the infrastructure facilities as well as regulate and supervise the economic policies periodically. [[10]](#footnote-10)

Often intervention of the government would create positive attitudes among the consumers’ who might be motivated to use E-banking.

Marketing communications is an effective tool and banks should properly utilize the appropriate marketing techniques to reach the large mass of consumers. Marketing communications should also devise a specific plan that strategically incorporates E-banking service delivery channel promotion. Personal online help should be provided continuously which would substantially eliminate the consumers’ fear associated with the E-banking and often encourages them to use complex products and services provided by the banks.[[11]](#footnote-11)

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10. Ultrascan AGI is a subsidiary of Ultrascan Research Services, an International Research Organization that focuses on (internet) crimes such as Advance Fee Fraud (419), Corporate Identity Fraud, Credit Card Fraud etc. [↑](#footnote-ref-10)
11. The Associated Chambers of Commerce & Industry of India [↑](#footnote-ref-11)