



E-Banking Trends and Challenges in Banking Sector

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Abstract

The buzzwords people are familiar with these days are E-commerce, E-marketing and E-banking. These words themselves indicate the extensive use of technology in their respective fields. A strong financial sector plays a pivotal role in the economic development of the country. Banking sector of a country and economic growth is a dependent phenomenon. Banking in India originated in the last decade of the 18th century in modern scene. The traditional concept is changing in the banking sector as it is changing in other prospective of life through the use of technology. Technology is harnessed to improve the product, services and efficiency in the banking sector.

With extensive use of technology banking is more dependent on the technology in these days. The use of technology in banking sector not only benefited the banks but also to the consumers. By taking into consideration the benefits and competition, the banks all over the globe has led to the use of internet banking and automation in the banking industry. The usefulness and acceptance of internet banking and government policies share a significant relationship.

In this paper we going to study the various recent trends on the name of banking such as Mobile banking, internet banking, phone banking. On the other hands various issues which is commonly known as cyber threats taken into consideration which become the barrier in the rapid growth of the banking sector.

Keywords: - E-banking, Challenges, Security and Privacy, Technology

Introduction

E-banking is the latest in the series of technology that wonder the recent past of banking system. It refers to the use of technology and communication system to perform the banking transactions electronically without visiting the bank physically. The banking industry is growing at the rapid pace to meet the competition, technology and demand of the end user in the market. Bank of Bengal established in 1784, introduce the cheque system in India. ICICI Bank to provide the internet banking facility and HSBC (Mumbai) in 1987 introduces ATM. Central Bank of India



the first public bank to introduce the credit card system. The widespread use of technology in the banking operation has totally replaced the traditional system of confining banking activities to the bank branches only. E-banking assist the customers to enjoy the facilities like anywhere banking and anytime banking.

As we look at the security prospective of e-banking it is not free from the defects in the form of cyber crime and threats. As per “Security software firm Symantec” reports 2018, in terms of cyber attacks India ranked third in the list of countries where the highest number of cyber threat are detected and second in targeted attack in 2017. The United States led the pack followed by the China at second spot as per company internet security threat report (ISTR).

As per the report on February 2019, Bengaluru registered most number of cyber crime cases in 2018.

According to Gartner, due to rise in the cybercrime there is noticeable increase in the expenditure in product and services which was more than \$80 billion in 2016. Global expenditure on cyber security predicted to be exceed \$1 trillion from 2017 to 2021.

Microsoft estimated that by 2020, 4 billion people will be online as human having moved ahead of machines in digital world.

Today, information technology not confined to facilities automation and data processing instead it provides the value addition to the banking sector. The Biggest change in the Indian banking took place when the NDA government forced many Indian to get bank account when Narendra Modi demonetized 86 percent of India’s cash overnight on November 2016. The banking system struggled to keep that up the gain were proved temporary. Nearly half of Indian bank account were inactive in 2017, means there were not used at all in previous twelve months-the highest share in the world as per World Bank report.

Banking in India

The first bank of India “Bank of Hindustan” was established in 1770 and liquidates in 1829-1832. The General Bank of India established in 1770 but failed in the year 1791.

The largest and the oldest bank that still exist Indian banking sector is State Bank of India. In the first-half of the 19th century, the foundation for the modern banking laid down by the East India company by establishing three presidency bank namely; Bank of Bengal(1809), Bank of Bombay(1840), Bank of Madras(1843). All these banks established under the Charters from the British East India Company. The presidency bank acted as Quasi-central bank for many banks.



In 1920, the Imperial bank of India act was enacted to amalgamate the three presidency Banks. In year 1921, the banks were emerged to form “The Imperial bank of India”. This becomes the state bank of India in 1955. On the recommendation of banking enquiry Committee, The Reserve bank of India Act was enacted in 1934 to constitute Reserve bank of India 1935. In 1948, RBI Act was passed to nationalize the reserve bank. In 1949, banking regulation act was enacted which empower the reserve bank of India to regulate, control, and inspects the banks in Indian banking system.

Nationalization of banks

In year 1969, first ever Indian government nationalized 14 major private banks

The following banks were nationalized in 1969:

- Allahabad Bank
- Bank of Baroda
- Bank of India
- Bank of Maharashtra
- Central Bank of India
- Canara Bank
- Dena Bank
- Indian Bank
- Indian Overseas Bank
- Punjab National Bank
- Syndicate Bank
- UCO Bank
- Union Bank
- United Bank of India



In 1980, 6 more banks were nationalized.

The following banks were nationalized in 1980:

- Punjab and Sind Bank
- Vijaya Bank
- Oriental Bank of India
- Corporate Bank
- Andhra Bank
- New Bank of India

Types of Banks

The Commercial banks are classified into various categories. The criteria of classification could be

- A. As per Second Schedule of RBI Act
 - i. Schedule Banks
 - ii. Non-schedule Banks
- B. On the basis of Domicile
 - i. Foreign Banks
 - ii. Domestic Banks
- C. On the basis of Ownership
 - i. Public sector Banks
 - ii. Private sector banks
 - iii. Co-operative Banks
- D. According to Functions
 - i. Commercial banks
 - ii. Industrial Banks
 - iii. Agriculture Banks
 - iv. Exchange Banks
 - v. Indigenous Banks



Review of Literature

Kumari, Nidhi. (2016), analysis that financial innovation in form of ATMs, credit and debit cards, RTGS, NEFT etc. have changed the face of Indian banking system. It also changed at the banker's level such as the approaches took place paradigm shift from "conventional banking to convenience banking" and "mass banking to class banking". There is increase in the degree of accessibility of common man as per his need and requirement.

Zahoor, Zarka. Ud-Din, Moin. Sunami, Karuna. (2016) in their study they explain the dependency of banking sector has increased on information technology. Due to increase in the cyber crime they are facing the privacy and security risk to their valuable assets. They conclude that banks should not left behind in term of advancement in technology in terms of security issues. The Eagle eye should be kept on vulnerable present in banking system and tricks and techniques used by hackers to bypass banking security system.

Sharma, Geeta. Malviya, Surendra. (2014) this study was conducted in Indore City (Madhya Pradesh) to examine the relationship between service quality and customer satisfaction in internet banking. The empirical result show the direct relation between these two variables and allows bank managers and policy makers to direct efforts and resources in most effective and efficient way to increase bank business in long run and to increase the adoption of e-banking.

Kumar, Krishan. Mittal, Mohit. (2013) the study focus on the high degree of acceptance of the e-banking among the Indian customer and their opinion regarding the security and privacy issues. They stated the strategies that should be followed to enhance e-satisfaction and e-loyalty with respect to online banking system.

Zahid, Nauman. Mujtaba, Asif. Riaz, Adnan. (2010) the study took place in Pakistan in two cities in the light of technology acceptance model added with two other variables. This study was conducted with 221 respondents of three universities. The study proposed that the acceptance of online banking is influenced by the usefulness, quality of the internet and security and privacy. Moreover, in this study the perceived usefulness was found significant variable with the acceptance of online banking whereas quality of internet, security and privacy were two insignificant variables in acceptance of online banking.

Ezeoha Ebeh, Abel. (2005) in this study "Problem and challenges in regulating internet banking in Nigeria" stated that the regulating deficiencies are the rising case of internet related fraud which makes the online banking system very complex. The banking industry is not at present enjoying that level of global integration and public confidence that can guarantee effective



internet banking services. The deficiencies in existing electronic banking guideline and lack of proactive measures in banking regulation in the country, the right environment for internet banking remains presently not in existence.

Need of the study

In the modern era the term e-banking is well known to everyone. Generally all banks provide the facility of e-banking to their entire client base. The services provided by the banks in the form of e-banking are not limited to any geographical region.

The utility of the e-banking services are more depend on the awareness about these services to the customer. As e-banking provide greater control on managing of their finance. The evolution of banking sector has gone through various phases in India which is pre-independence phase, post-independence phase, phase after 1991 and the current scenario.

In the digital world, things take place differently as it used to be. In this paper we going to study the modern era of banking or e-banking and the challenges faced in this modern approach of banking sector.

Research Objectives

- To identify the trends that took place in the form of online banking.
- To find out various challenges faced by banking system.

Research Methodology

This study has been exploratory in nature where pertinent information has been gathered from various secondary sources such as Journals, Newspapers, Books, Websites, and Government of India reports etc.

Various Forms of E-banking

E –banking refers to electronic cash, electronic currency, digital money, digital cash etc. which is exchanged only electronically. This involves the use of computer networks, internet, and digital store value system. Consumer can perform different banking transaction such as balance enquiries, bill payments, transaction histories and transfer of funds without visiting the physical store. Following are the channels



Centralized banking solution (CBS)

It is an inter-branch networking and data sharing platform which helps the customer to operate their account from any city in India having CBS networked branches. This concept changes the “conventional banking into convenience banking” by changing the status of customer from “Customer of the branch” to “Customer of the bank”.

Automated Teller Machines (ATM)

The concept of ATM was introduced in 1987 by The Hongkong and Shanghai banking corporation (HSBC) in Ahmedabad. The total numbers of ATM in the country were 2, 22,318 till June and the highest number of ATM are in the Maharashtra state. ATMs are designed to perform various activities such as deposit, withdrawal, transfer of money etc. without any human interaction. It serves the customer 24*7. These are categorized in on site, off site, white label, green label, orange label and many more as per the specific need and location.

Smart Card

These are the chip-based card. Smart card having the microchip in it and this chip stores the monetary value. It performs all the function of magnetic stripe cards like ATM cards, credit card and debit card. Smart cards are essentially a technologically improved version of credit and debit card and could be used as ATM cards.

Real-time gross settlement service (RTGS)

This system is available at all centralized Banking solution branches of bank. It promotes the e-payments and paperless banking. This system maintained by Reserve bank of India. This is used to transfer money within country with minimum limit Rs. 2 lack and there is no maximum limit. It eliminates the risk of loss of instrument.

National electronic fund transfer system (NEFT)

NEFT is another system to promote e-payment and paperless banking with no minimum or maximum limit. It ensures the remittance of the fund on the same day.

Mobile banking

Mobile banking is concept of banking and financial services with the help of mobile communication device. The services could be in the form of account information, transactions, investment, and support and content services.



NPCI (National payments corporation of India) a non-profit-organization was founded in 2008. It is an umbrella organization for operating and settlement of retail payments. The corporation service portfolio includes Rupay contactless, BHIM, UPI, BharatQR and Aadhar enabled payment system.

UPI (unified payment interface) the idea was developed by National Payments Corporation of India and controlled by RBI and IBA (Indian Bank Association). UPI (unified payment interface) is a real time payment system that helps in instantly transferring of funds between banks through VPA (Virtual payment address), account number and IFSC and QR code. Every bank provides their own UPI for different mobile platforms such as Android, Windows and IOS. This concept is based on 2 factor authentication in the form of MPIN.

Challenges in E-banking

E-banking in India is in its emerging stage of development. Online banking has provided ease and speed to customers to manage their banking services. But there are lists of challenges faced by banking industry.

- **Acceptance of Customer**

Understanding the customer is the major aspect of online banking. In the world of fast changing technical scenario and obsolescence of technology the computer literacy is quite low in India.

- **Costly Technology**

At the initial stage acquiring personal computer and other equipments add the start up cost for e-banking. On the other end, there is a cost of maintenance of all equipment in the form of modem, router and network management system which require skilled employees and knowledgeable professionals add on further cost.

- **Legal Issues**

IT Act 2000, provides the security and legal framework for e-commerce and banking transactions. IT Act and RBI guidelines suggest the criteria of Digital signature certificate board for authentication of electronic record and communication.

- **Privacy Issues**

While opting for internet banking system there is always the risk of disclosing private information and fear of identity theft. As per the study consumer are worried about that bank may invade their privacy by utilizing their information for marketing without consent of consumers.

- **Security issues**



The major threat for e-banking is the security issues. These can be in the following forms.

Adware: - these are the ads displayed on our computer. These look lucrative but in real sense these are dangerous.

Malware: - These are the malicious software designed in such a way to access our system secretly.

Phishing: - This technique is used to get the sensitive information like credit card numbers and passwords. It includes the spear phishing (target specific people and departments), Whale phishing (target important people like CEOs), SMiShing (via message) and vishing (via voice phishing).

Sniffing: - Sniffing is the way to grab the unencrypted data using malwares.

Spoofing: - A common way to steal financial information through the fake web sites. The spoofed site is almost the mirror image of the real site and unless the unsuspecting user examines the spoof closely, he/she may inadvertently give out important personal and financial information.

Trojan horse: - Software that pretend to be useful but they are malwares.

There are other names which are virus, zombie, worm, time bomb, key logger, hijackware etc.

- **Protection against security issues**

Various measures could be used to get rid from such securities issues and the sensitive information can be protected.

Use of genuine anti-virus Software: - Anti-virus software helps in detecting the spyware and can steal the sensitivity information. It also protects computer system from phishing, malware and other threats.

Avoid use of public WI-Fi/VPN software: - The public Wi-Fi network is an easy target for the hackers to trace the data without any much effort. They see the unsecured connection as an opportunity.



Strong password and change it regularly: - Creating a strong password refers to including alpha-numeric and special character while setting up a password.

Subscribe for mobile notification: - By subscribing the mobile notification can alert us quickly for any suspicious transactions. It also tells you about unsuccessful login attempt on net banking and last time you visited to the site. It also notifies the daily limit, remaining balance and also messages regarding bank will never ask your confidential information via phone or email.

Update your system: - the operating system should be updated with latest security update. As it bring the system up-to-date with latest drivers, fixing cookies and update security patches.

Avoid using public computer to login net banking: - Using public computer for login means risk of compromising your login credentials is higher. Also, never allow the browser to remember your ID and password.

Always look for suspicious looking equipment: - This is in the case of while using ATM fraudsters install a device on the top of card reader in ATM machine that blend in with the ATM card and store the credit/debit card details. Further this retrieved information is copied onto another blank card's magnetic stripe and used in the name of actual account holder.

Two-Step Authentication: - As part of two-step authentication, NetGuard works along with your access number and password to provide an extra layer of protection when you do your internet banking. NetGuard card has a unique serial number comprise of numbers and letters. You will be prompted to enter three randomly selected keys from your NetGuard card. Only your particular NetGuard card can provide the correct answer in form of keys. Following NetGuard card of BNZ shows the two-step Authentication below.



ABeotel.MSP

	A	B	C	D	E	F	G
1	C	7	M	4	T	0	1
2	2	Y	2	P	3	H	R
3	E	9	3	8	9	4	N
4	R	C	M	3	6	N	W
5	X	Q	2	V	1	1	C
6	C	9	V	F	1	K	J
7	J	Y	K	W	8	X	D

SN: 260409

For Internet Banking
Support call freephone
0800 WWW BNZ
(0800 999 269)
or from overseas
+64 4 494 7153

Entrust

netguard ?

Confirm your current card serial number is:

Enter the three values from the following co-ordinates on your card:

B6 F2 F7



Findings

Consumer feels that internet banking is easier than the conventional banking. Conventional banking lacks in speed especially in public sector banks which push the client base towards the e-banking option available to them.

The performance parameters in the form of accuracy, confidentiality, safety and empathy reveal the significant dissonance between the expectation and actual performance. The mobile banking is highly rated at the current scenario as on the basis of accuracy and safety.

Banks should work on increase the number of user of internet banking and encourage them to go digital. E-banking service should expand its base as much as possible in order to reduce the number of visits of bank hall for customers. Banks can get investment cost advantage than opening bank as the current rent price per year for opening bank hall is much higher than buying an ATM machine.

Unfortunately, the online world is a sketchy place. Many people are there who want to take what is yours and steal what you have worked so hard to save. But don't fall for their traps. Fight back and protect what is rightfully yours by implementing various security measures.

Conclusion

With the paradigm shift from "Conventional banking to convenient banking" e-banking facilitates both the banks as well as the consumers. Various form of innovation and cutting edge services such as ATM, RTGS, NEFT, Smart cards and mobile banking have completely changed the banking scenario.

The security mechanisms adopted by banks are not optimum. There is no doubt about the challenges of securing sensitive information and financial assets of the customers. But this is battle need to be fought against cyber crime at various fronts and execute the plan well, commit fully and exercise rigorously.

Thus banks should tighten up their security measures and take appropriate countermeasures particularly the ones suggested regarding security issues in this paper to ensure safety and privacy to bank's most valuable assets.



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