



## A STUDY ON SECURITY ISSUES IN E-BANKING SERVICES IN INDIA

Ms. Prachiti Dhanaji Garud,

Research Scholar,

Dr. Balaji B Kamble,

Research Guide,

Nirmala Memorial Foundation College of Commerce and Science

**Abstracts:**

*E-Banking, also known as online banking or virtual banking, is an electronic payment system that enables customers to conduct transactions such as transfer of funds, payment of loans and EMIs, deposit, and withdrawal of cash electronically via the internet. It plays a vital role in the present banking functionality. It is a secure and convenient banking facility that allows its customers to undertake online banking services anytime during the day and at any place. A security issue is an unmitigated risk that hackers can use to do damage to data. Online bankers are always concerned about hackers while making online payments or transferring money from one account to another. Most of the banks try to make their sites secure by accepting the latest network security software. Researcher want to focus on the present status of e-banking in India and various security related issues to E-Banking services. It also discusses the effect of security issues on customers' convenience.*

**Keywords:** *E-Banking, Online payments, Hackers, Security issues, Customers*

**Copyright © 2022 The Author(s):** This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial Use Provided the Original Author and Source Are Credited.

**Introduction:**

In a world dominated by computer technology, E-Banking has become a fast spreading service that allows customers to manage their account from a remote location. Due to e-banking the customers do not have to wait in long lines in front of banks to get their simple jobs done this helps them to save time and energy. E-banking helps to do transactions in an easy as well as convenient manner. Due to e-banking, the banks are enjoying advantages like wider and deeper reach to the customers, quicker time to market, ability to introduce new products and services quickly, greater customer loyalty etc.

● **E-Banking in India:**

Since 1997, ICICI is the first bank that offered internet banking services to their customers. Today most new generation banks offer the same to its customers. Internet banking, also known as online banking or virtual banking, is an electronic payment system that enables customers bank or other financial institution to perform a range of financial transactions through the institution's website. under Internet banking, the following services are available in India:

**1. Bill payment:**



Every bank has a tie-up with different service providers to offer online payment of bills (electricity, telephone, mobile phone, etc.). Banks also charge a nominal one-time registration fee for this service.

## 2. Funds transfer:

E-banking enables customers to transfer funds from his account to another account with the same bank or even a different bank. Customers need to login into his account, specify the payee's name, account number, his bank, and branch along with the transfer amount. The transfer takes place within a day or so.

## 3. Investing:

Through e-banking, a customer can open a fixed deposit with the bank. Further, if a customer has a demat account and a linked bank account, he can buy or sell shares online too.

## 4. Shopping :

A customer can purchase goods or services online and also pay for them using his account with an e-banking service. So this made Shopping at their fingertips.

### • Types of Internet Banking:

Banks offer various types of services through electronic banking platforms. These are of three types:

#### Level 1:

It includes the basic level of service about its product and services that banks provide to its customers through their websites. Some banks even receive and reply to the queries through email.

#### Level 2:

This level allows customers to submit applications for different services, check account balance, etc. However, banks do not allow their customers to do any fund-based transactions on their accounts.

#### Level 3:

In this level, banks allow their customers to operate their accounts for funds transfer, bill payments, etc.

### • Issues Involved in E-Banking:

There are several major issues in e-banking :

#### I. Technological Issues:

Following four technology issues needed to be resolved in the area of Security, privacy, authentication and divisibility

##### 1. Security:

The lack of security may result in serious damages.

##### 2. Privacy:

Privacy technology can be strengthened by ensuring the secrecy of sender's personal information and by enhancing transactional security.

##### 3. Authentication:

Encryption may help to provide more secured transactions.

##### 4. Divisibility:

Unlike real money, electronic money may be divisible into several units of currency.

### II. Security Issues:



Security issues can be categorized as Violation with serious criminal intention, Violation by hackers in systems design and set up leading to security violation. E-banking system users face the security risks with unauthorized access. It is extremely important to identify both the sender and the receiver by a trusted third party who holds the identity certificates.

### III. Implementation issues:

In order to deliver the above outlined services e-banking systems designers have to integrate legacy systems and deliver the integrated service across multiple channels, each with different presentation, service management and security capabilities. Each customer interaction must be tailored to the characteristics of the target device and Communications channel.

#### Objectives:

1. To study the present status of e-banking in India.
2. To analyze the security issues in e-banking services.
3. To understand the problems faced by customers while using e-banking services.
4. To know the effect of security issues on customers.

#### Hypothesis:

H0: There is no significant association between male and female with regard to the problem faced by them while using E-Banking services

H1: There is significant association between male and female with regard to the problem faced by them while using E-Banking services

#### Review of Literature:

• **Mrs. Ani Smriti, et al (2021)** in the paper “Present status of E-banking in India: Challenges and opportunities” focused on the present status of e-banking in India and examined the challenges & opportunities of e-banking. With the help of e-banking, the banking sector is gaining customer satisfaction and loyalty. Banks should provide their customers with convenience, offer service through several distribution channels and the availability of online services becomes easier for the customer. The Government of India and various government agencies are making an effort to make e-banking more safe, secure, and reliable with the convenience of digital channels.

• **V Vimala (2016)** in the paper “An Evaluative Study on Internet Banking Security among Selected Indian Bank Customers” have observed that 32% of the respondents were aware about security issues in Internet banking, 64% of the respondents believed that traditional banks were more secure, 94% of the respondents said that Internet banking saved their time, 50% of the respondents face the problems of hacking attacks and phishing attacks.

So, the banks should provide enhanced, new and improved hi-tech security measures such as Internet scam protection, hacking detector and anti-virus protections, etc. These upgrades can provide better options to both existing and prospective Internet banking customers.

• **Pranjal Kumar Cakravarti (2015)** in the research paper titled “An Analysis of Security issues in E-banking” has focused on the analysis and evaluation of security issues in e-banking systems. Banking frauds are the main reason for the people to avoid online banking, as they perceive it as being too vulnerable to fraud. A simple solution is that Consumers can always look for identification that identifies the website that they are safe and secure for payment. These security verification symbols are often located on the first page of a website to let a consumer



know that the site has a safe and secure payment solution.

● **Lilesh Gautam, et al (2014)** in their study “E-Banking in India: Issues and Challenges” have tried to investigate the issues and challenges faced by e-banking in Gwalior region. It is observed that if banks provide proper training and make banking process easy and familiar to the customers it can help to generate customer loyalty towards the banking sector.

● **Mr. Shakir Shaikh, et al (2014)** in the paper “Security Issues in E-Banking Services in Indian Scenario” have focused on various security issues related to E-banking services in India. The study suggested that there is a need for banks to standardize security features. If banks offer E-Banking services with the best security measures, it will definitely lead to reaching the maximum level of customer satisfaction.

● **Deepshikha Jamwal, et al (2009)** in the research paper titled “Internet Banking Systems in India: Analysis of Security Issues” aims to protect customers' privacy and protect them against fraud. It provides a specific focus to identify the security issues in the Indian banking system. It influences Indian Internet users in consuming different services online.

#### Limitations of The Study:

The study is limited to Neral city. It is limited to the customers' perception towards the e-banking services of commercial banks in Neral. The sample size for the study was also limited to 50 customers.

#### Research Methodology:

- The study is conducted to find out the security issues in e-banking services. The study will focus on the problems faced by customers while using e-banking services. The study will also give insight about the present status of e-banking in India. The area covered for the study is Neral City.
- Primary Data is collected with the help of a structured questionnaire. Secondary Data are collected through various material published online viz., websites, journals, articles, etc.
- The sample size of the study is 50 Customers who have experienced the security issues in e-banking services.
- This study is based on Descriptive research. Simple Random sampling technique is used for this research study. The statistical tools used in analyzing the data are Chi square test, Table, Percentage, Diagrams and Charts.

#### Data Analysis and Interpretation:

**TABLE 1: Age Group**

SR.NO	CATEGORY	NO. OF RESPONDENTS	% OF RESPONDENTS
1	21-30	12	24%
2	31-40	24	48%
3	41-50	10	20%
4	Above 50	4	8%

Table 1 shows the majority 48% of the respondents are in the age group 31-40, 24% in the age group 21-30, 20% in the age group 41-50 and 8% in the age group above 50.

**TABLE 2: Gender**



SR.NO.	GENDER	NO. OF RESPONDENTS	% OF RESPONDENTS
1	Male	28	56%
2	Female	22	44%

Table 2 shows the gender of the respondents, where 56% are males and 44% are females

**TABLE 3: Types of Account**

SR.NO.	TYPES	NO. OF RESPONDENTS	% OF RESPONDENTS
1	Saving	36	72%
2	Current	14	28%

Table 3 shows the type of account holder, where the majority 72% of the respondents are saving account holders and 28% respondents are current account holders.

**TABLE 4: Awareness Level of E-Banking Services**

SR.NO.	BECOME AWARE THROUGH	NO. OF RESPONDENTS	% OF RESPONDENTS
1	Advertisements	20	40%
2	News paper	4	8%
3	Relatives & Friends	6	12%
4	Television	9	18%
5	Bankers	9	18%

Table 4 shows that 40% of the people were aware about Internet banking facilities through advertisements; it also reveals that 18% of the people are aware through bankers; 18% of the people are aware through television; 8% of the customers become aware through newspapers and 12% become aware because of relatives and friends.

**TABLE 5: Benefits of Internet Banking**

SR.NO	BENEFITS	SA		A		N		D		SD	
		No	%	No	%	No	%	No	%	No	%
1	Time saving	47	94%	3	6%	-	-	-	-	-	-
2	Any time	41	82%	9	18%	-	-	-	-	-	-
3	Any where	39	78%	9	18%	2	4%	-	-	-	-
4	Easy accessibility	38	76%	10	20%	2	4%	-	-	-	-
5	No Queue	14	28%	36	72%	-	-	-	-	-	-
6	Ease to monitor	5	10%	33	66%	9	18%	3	6%	-	-

(Note: SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD – Strongly Disagree)



Table 5 indicates that 94% of the respondents strongly agree with the benefits of time saving; 82% of the respondents strongly agree with the benefits of any time banking; 78% of the respondents strongly agree with the benefits of anywhere banking; 76% of the respondents strongly agree with the benefits of easy accessibility; 72% of the respondents agree with the benefits of no queue; 66% of the respondents agree with the benefits of ease of monitoring.

**TABLE 6: Factors Influencing Internet Banking**

SR.NO	FACTORS	SA		A		N		D		SD	
		No	%	No	%	No	%	No	%	No	%
1	Convenience	43	86%	7	14%	-	-	-	-	-	-
2	Friends & Relatives	31	62%	18	36%	-	-	1	2%	-	-
3	Popularity of Banks	7	14%	36	72%	7	14%	-	-	-	-
4	Quality of service	7	14%	34	68%	6	12%	3	6%	-	-

(Note: SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD – Strongly Disagree)

Table 6 indicates that 86% of respondents strongly agree with the influencing factor of convenience; 62% of respondents strongly agree with the factor of friends and relatives; 72% of respondents strongly agree with the factor of popularity of banks; 68% of respondents strongly agree with the factor of quality of services.

**TABLE 7: Frequency of Transaction**

SR.NO.	FREQUENCY	NO. OF RESPONDENTS	% OF RESPONDENTS
1	Occasionally	13	26%
2	Frequently	33	66%
3	Never	3	6%
4	Very often	1	2%

Table 7 shows that 26% of the respondents occasionally use the Internet banking; 66% of the respondents frequently use the Internet Banking; 6% of the respondents never use the Internet Banking; and 2% of the respondents very often use Internet Banking.

**TABLE 8: Frequency of Changes In Password**

SR.NO.	FREQUENCY	NO. OF RESPONDENTS	% OF RESPONDENTS
1	Monthly	22	44%
2	Quarterly	15	30%
3	Half Yearly	11	22%
4	Yearly	2	4%





Table 8 shows that 4% of the respondents change their password monthly; 30% of the respondents change passwords quarterly; 22% of the respondents change passwords half yearly; 4% of the respondents change passwords on yearly basis. It is concluded that maximum respondents change their password on a monthly basis.

**TABLE 9: Purpose of Using Internet Banking**

SR.NO	PURPOSE	SA		A		N		D		SD	
		No	%	No	%	No	%	No	%	No	%
1	Online ticket booking	37	74%	11	22%	2	4%	-	-	-	-
2	Online bill payment	37	74%	9	18%	3	6%	1	2%	-	-
3	Balance enquiry	36	72%	11	22%	2	4%	-	-	-	-
4	Insurance premium payment	2	4%	11	22%	6	12%	23	46%	8	16%
5	Online shopping	28	56%	19	38%	-	-	3	6%	-	-
6	Online share trading	9	18%	10	20%	7	14%	15	30%	9	18%

(Note: SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD – Strongly Disagree)

Table 9 indicates the purpose for using Internet banking services. It shows that 74% of the respondents use Internet banking for online ticket booking; 74% of the respondents use Internet banking for online bill payment; 72% for balance enquiry and 56% for online shopping. It was also found that respondents do not use Internet banking for insurance premium payment and online shares trading. It is observed that maximum respondents use Internet banking for online ticket booking and online bill payment.

**TABLE 10: Problems Faced While Using Internet Banking**

SR.NO	PROBLEMS	SA		A		N		D		SD	
		No	%	No	%	No	%	No	%	No	%
1	Lack of security	8	16%	11	22%	10	20%	16	32%	5	10%
2	Legal	3	6%	5	10%	-	-	23	46%	19	38%

	issues										
3	Lack of knowledge	2	4%	1	2%	5	10%	17	34%	25	50%
4	Technical issues	21	42%	17	34%	3	6%	4	8%	5	10%
5	ATM machine out of cash	6	12%	26	52%	13	26%	3	9%	2	4%
6	Too many steps in processing transactions	32	64%	11	22%	4	8%	3	9%	-	-

(Note: SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD – Strongly Disagree)



Table 10 indicates that 32% of the users disagree with lack of security in e-banking service, 46% of the users disagree with the legal issues in e-banking services, 50% disagree with lack of knowledge, 42% strongly agree with technical issues while using e-banking services, 52% agree that the ATM machine are out of cash most of the time and majority 64% of the users strongly agree that there are too many steps in processing transactions.

The researcher has attempted to association relation between male and female with regard to the problem faced by them while using e-banking services

### Gender and problems faced:

#### Interpretation:

From the above analysis, it is inferred that the p-value of 11.07 is greater than  $\chi^2$  (calculated value). Hence, we accept the null hypothesis and reject the alternative hypothesis. This means that there is no significant association between male and female with regard to the problem faced by them while using E-Banking services.

**TABLE 11: Security Issues in Internet Banking**

	Test static/ $\chi^2$	Df	P-Value	Level of Significance
Gender and Problems faced	0.637	5	11.07	0.05

Table 11 shows security issues in Internet banking. Majority of 50% - hacking attacks, 50% - Phishing attacks, 38% - Malware are the issues in e-banking It is concluded that maximum respondents face the problems of hacking attacks and phishing.

#### Findings:

- 40% of the respondents were aware about security issues in Internet banking through advertisement whereas 18% of the respondents were made alert through their bankers.
- It is observed that a maximum of 94% respondents benefited due to time saving through Internet banking.
- It is found that most of 86% of the respondents are influenced by the factor of convenience.
- 66% of the respondents frequently use the Internet banking transaction and majority of them change their passwords monthly.
- Majority of 74% of the purpose of using e-banking services are for online ticket booking and online bill payment.
- Majority of 64% strongly agree that too many steps in processing transactions is a problem in e-banking services.

#### Suggestions & Conclusion:

In today's world of globalization e-banking plays a vital aspect of development for the banking sector by solving major issues, challenges faced by e-banking. E-banking sector can develop customer loyalty towards the banking sector, this can be done by training and development and making the banking process more easy and familiar to customers. . E- banking security issues

have become major concerns of the banks. Banking frauds are the main reason that customers tend to avoid online banking, as they perceive it as being too vulnerable to fraud. A simple solution that users can look for is to always





look for identification that identifies the website that is safe and provides a secure payment solutions program. Technical issues and too many steps in transactions are the major problems in e-banking services. In the years to come, e-banking will not only be an acceptable mode of banking but will be a preferred mode of banking in India.

#### References:

- Mrs. Ani Smriti, et al, 2021, “*Present status of E-banking in India: Challenges and opportunities*”, International Journal of Creative Research Thoughts, Volume 9, Issue 9, ISSN: 2320-2882
- V Vimala, 2016, “*An Evaluative Study on Internet Banking Security among Selected Indian Bank Customers*”, Amity Journal of Management Research, Volume 1, Issue 1
- Pranjal Kumar Cakravarti, 2015, “*An Analysis of Security issues in E-banking*”, International Journal of Management, Information Technology and Engineering Vol. 3, Issue 8, ISSN(Print):2348-0513
- Lilesh Gautam, et al, 2014, “*E-Banking in India: Issues and Challenges*”, Scholars Journal of Economics, Business and Management, v01i02.003, e-ISSN 2348-5302
- Mr. Shakir Shaikh, et al, 2014, “*Security Issues in E-Banking Services in Indian Scenario*”, Asian Journal of Management Sciences 02, ISSN: 2348-0351
- Deepshikha Jamwal, et al, 2009, “*Internet Banking Systems in India: Analysis of Security Issues*”, Proceedings of the 3rd National Conference

#### Cite This Article:

*Ms. Prachiti Dhanaji Garud & Dr. Balaji B Kamble, (2022). A Study on Security Issues in E-Banking Services in India, Electronic International Interdisciplinary Research Journal, XI (V) Sept-Oct, 45-54.*