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# **CYBER CRIME IN BANKING SECTOR**

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## **1. ABSTRACT**

Banking is today an integral part of our everyday life, At home; at school at office, at business, on travel everywhere we counter some aspect of banking. The significance of banking in our day to day life is being felt increasingly. Banking Industries is the backbone for any economy & is the key indicator to see and analyze the level of development of a country. With the paradigm shift of Information Age, Computers have become the instrument through which criminal acts are carried out as Technology enabled crimes via internet. Net crimes are high-tech crimes as web connects people and devices across globally. As technology grows, security on money is also a question mark. Artificial Intelligence paves the way in fraud detection and banks should upgrade technology to combat cybercrimes. Banks rely on digital networking for their ample business scope. This in turn, aggravates the risk of banks and innocent customers to become victims of cybercrimes. Very common types of cybercrime include online bank data theft, identity theft, online predatory crimes and unauthorized computer access.<sup>1</sup>

Cyber-crimes in the 21st Century has emerged to be one of the most lethal revengeful weapon that any person can use to threaten or cheat someone. The active internet users as per the latest reports of January 2021 were around 4.66 billion and this growth has led to the increase in the chances of a user being trapped in this malicious method of crimes which has been in surge during the past few decades. Cyber-crimes pose a major challenge in light of the fast-changing environment and the significant contribution of the IT industry.<sup>2</sup>

**KEYWORDS:** E-banking, Cyber-Crime, Banking Sector, Fraud, Prevention.

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<sup>1</sup> Pasricha, Pooja, A Comparative Study On Cyber Crime In Indian Banking System <https://shodhganga.inflibnet.ac.in/bitstream/10603/312535/8/chapter%201.pdf> (Last visited on 20, March 2023)

<sup>2</sup> Dr. A. Thilaha Dharmarajan, Cyber Crimes in Banking Sector - An Evaluation, <https://ahalia.ac.in/wp-content/uploads/2021/07/aijast-issue-2-10-15.pdf> (Last visited on 20, March 2023)

## 2. INTRODUCTION: -

The banking system is considered almost as old as civilization and has existed in varied forms, and the banking system in India is no exception to that. Before we deep dive into the evolution of banking in India, let's take a look at the banking scene in the world. The banking system of a country upholds its economic development. Considering the economic condition of people, the need for financial services and the advancements in technology that followed, the banking sector in India has gone through major transformations over the past five centuries. There you must understand the different types of banking systems in India. Banking in India forms the base for the economic development of the country. Major changes in the banking system and management have been seen over the years with the advancement in technology, considering the needs of people.<sup>3</sup>

## 3. EVOLUTION OF BANKING SECTOR

The banking sector development can be divided into three phases:

**Phase I:** The Early Phase which lasted from 1770 to 1969

**Phase II:** The Nationalisation Phase which lasted from 1969 to 1991

**Phase III:** The Liberalisation or the Banking Sector Reforms Phase which began in 1991 and continues to flourish till date.

Before the establishment of banks, the financial activities were handled by money lenders and individuals. At that time the interest rate were very high. Again there were no security of public savings and no uniformity regarding loans. So as to overcome such problems the organized banking sector was established, which was fully regulated by the govt. The organized banking sector works with in the financial system to provide loans, accept deposits and provide other services to their customers.<sup>4</sup>

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<sup>3</sup> Hlodha , An Overview of Cyber Crimes In Banking Sector, <https://www.legalserviceindia.com/legal/article-7694-an-overview-of-cyber-crimes-in-banking-sector.html> (Last visited on 20, March 2023)

<sup>4</sup> History of Banking in India, <https://byjus.com/history-banking-india> (Last visited on 22, March 2023)

## 5. MEANING AND DEFINATION OF BANKING:

Banking can be defined as the business activity of accepting and safeguarding money owned by other individuals and entities, and then lending out this money in order to earn a profit. However, with the passage of time, the activities covered by banking business have widened and now various other services are also offered by banks.

### Indian Banking companies Act:

“Banking companies is one which transacts the business of banking which means the accepting for the purpose of lending or investment of deposits money from the public repayable on demand or otherwise and withdraw able by cheque, draft and order or otherwise”<sup>5</sup>

## 6. FUNCTIONS OF THE BANK & IT'S THE IMPORTANCE :-

- To provide the security to the saving of customer.
- To control the supply of money and credit.
- To encourage public confidence in the working of the financial system, increase savings, speedily and efficiently.
- To avoid focus of financial powers in the hands of a few individuals and institutions.
- To set equal norms and conditions (i.e. rate of interest, period of lending etc) to all types of customers.

In simple words, bank refers to an institution that deals in money; this institution accepts deposits from the people and gives loans to those who are in need. Besides dealing in money, bank these days perform various functions, such as credit creation agency job and general service.<sup>6</sup>

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<sup>5</sup> Terry Turner, Banking, <https://www.annuity.org/personal-finance/banking/> (Last visited on 07, April 2023)

<sup>6</sup> Himanshu Arora, Banking in India and its Function, <https://www.civildaily.com/banking-in-india-definition-functions-and-types-of-banks/> (Last visited on 22, March 2023)

## 4. STRUCTURE OF INDIAN FINANCIAL SYSTEM:

A Financial system functions as an intermediary between savers and investors. It facilitates the flow of funds from the areas of surplus to the areas deficit. It is concerned about the money, credit and finance. These three parts are very closely interrelated with each other and depend on each other.

A financial system may be defined as a set of institutions, instruments and markets which promotes savings and channels them to their most efficient use. It consists of individuals (savers), intermediaries, markets and users of savings (investors).

### a. Financial Institutions:

Financial institutions are the intermediaries who facilitate the smooth functioning of the financial system by making investors and borrowers meet. They mobilize savings of the surplus units and allocate them in productive activities promising a better rate of return. Structure of Indian Financial System also provides services to entities (individual, business, government) seeking advice on various issues ranging from restructuring to diversification plans. They provide whole range Of services to the entities who want to raise funds from the markets or elsewhere. The financial Institutions is very important for the function of a financial system.

Types of Financial Institutions Financial institutions can be classified into two categories

- Banking Institutions
- Non-Banking Financial Institutions.<sup>7</sup>

### b. Financial Markets

Financial markets may be broadly classified as negotiated loan markets and open The negotiated loan market is a market in which the lender and the borrower personally negotiate the terms of the loan agreement, e.g. a businessman borrowing from a bank or from a small loan company. On the other hand, the open market is an impersonal market in which standardized securities are treated in large volumes. The stock market is an example of an open market. The financial markets, in a nutshell, the credit

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<sup>7</sup> Commerce Mates, Structure of Indian Financial System, [https:// old.amu.ac.in/ emp/ studym/ 100017188.pdf](https://old.amu.ac.in/emp/studym/100017188.pdf)(Last visited on 24, March 2023)

markets catering to the various credit needs Of the individuals, links and institutions. Credit is supplied both on a short as well as a long On the basis of the credit requirement for short-term and long term purposes, financial markets are divided into two categories.

Types of the financial market

- Money Market
- Capital Market. <sup>8</sup>

### **c. Financial Instruments/ Assets/ Securities**

This is an important component of the financial system. Financial instruments are monetary contracts between parties. The products which are traded in a financial market are financial assets, securities or other types of financial instruments. There is a wide range of securities in the markets since the needs of investors and credit seekers are different. Financial instruments can be real or virtual documents representing a legal agreement involving any kind of monetary value. Equity-based financial instruments represent ownership of an asset. Debt-based financial instruments represent a loan made by an investor to the owner of the asset.

Types of Financial Instruments

- Cash Instruments
- Derivative Instrument <sup>9</sup>

### **d. Financial Services**

It consists of services provided by Asset Management and Liability Management Companies. They help to get the required funds and also make sure that they are efficiently invested. They assist to determine the financing combination and extend their professional services up to the stage of servicing of lenders.

Types of Financial Services

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<sup>8</sup> Byjus, Indian Financial System, <https://byjus.com/govt-exams/indian-financial-system/> (Last visited on 25, March 2023)

<sup>9</sup> Universal Adu, Structure of Indian Financial System, <https://edurev.in/t/109682/> (Last visited on 25, March 2023)

- Banking
- Wealth Management
- Mutual Funds
- Insurance

The Structure of Indian Financial System is about A financial system is a system that system which allows the exchange of funds between investors, lenders, and borrowers. Indian Financial systems operate at national and global levels. They consist of complex, closely related services, markets, and institutions intended to provide an efficient and regular linkage between investors and depositors.<sup>10</sup>

## 8. TYPES OF BANKS:

### a. Commercial Banks

Any banking organisation that deals with the deposits and loans of businesses is referred to as a commercial bank.

Commercial banks issue bank checks and drafts and accept term deposits.

Through instalment loans and overdrafts, commercial banks also serve as moneylenders.

Commercial banks also provide a variety of deposit accounts, including checking, savings, and time deposits.

These institutions are run for profit and are owned by a group of people.

### Commercial Banks are further divided into the following:

a. Public Sector Banks - These are banks in which the Government of India owns a majority stake. SBI, Bank of India, Canara Bank, and other public sector banks are examples.

Private Sector Banks - The majority of a bank's share capital is held by private individuals. These banks are set up as limited-liability corporations. Private sector banks include ICICI Bank, Axis Bank, HDFC, and others.

b. Regional Rural Banks - Regional Rural Banks were established in accordance with the provisions of an Ordinance promulgated on September 26, 1975, and the RRB Act, 1976, with the goal of ensuring adequate institutional credit for agriculture and other rural sectors.

RRBs can only operate in the areas that have been designated by Gol as covering one or more districts in the state.

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<sup>10</sup> Ashoka H L, Indian Financial System , [http://tumkuruniversity.ac.in/oc\\_uug\\_comm\\_IFS%20FINAL.pdf](http://tumkuruniversity.ac.in/oc_uug_comm_IFS%20FINAL.pdf) (Last visited on 26, March 2023 )

RRBs are jointly owned by Gol, the relevant State Government, and Sponsor Banks; the issued capital of an RRB is divided among the owners in the proportions of 50%, 15%, and 35%, respectively.

c. Foreign Banks - These banks are registered and have their headquarters in another country, but they have branches in our country. Foreign banks in India include HSBC, Citibank, Standard Chartered Bank, and others.

## **b. Small Finance Banks**

The Small Finance Bank (SFB) is a private financial institution that primarily undertakes basic banking activities such as deposit acceptance and lending to unserved segments such as small business units, small and marginal farmers, micro and small industries, and unorganised sector entities, but without any geographical restrictions, unlike Regional Rural Banks or Local Area Banks.

## **c. Payment Banks**

A payment bank is a distinct type of bank that performs only the limited banking functions permitted by the Banking Regulation Act of 1949.

Acceptance of deposits, payments and remittance services, internet banking, and acting as a business correspondent for other banks are examples of some of the activities.

They are initially permitted to collect deposits of up to Rs 1 lakh per individual.

They can help with money transfers as well as sell insurance and mutual funds. Furthermore, they can only issue ATM/debit cards, not credit cards.

They are not permitted to establish subsidiaries to provide non-banking financial services. More importantly, they are not permitted to engage in any lending activities.

## **d. Co-operative Banks**

A cooperative bank is a financial entity that is owned and operated by its members, who are also its customers.

Co-operative banks are frequently formed by people who belong to the same local or professional community or who share a common interest.

Co-operative banks typically offer a wide range of banking and financial services to their members (loans, deposits, banking accounts, etc).

It is further divided into:

- a. Urban Cooperative Banks
- b. Rural Cooperative Banks <sup>11</sup>

## 9. CYBER CRIME:

Cyber crime refers to the use of a computer to advance illicit activities like fraud, the trafficking of child pornographic material and other intellectual property, identity theft, privacy invasions, etc. It entails spreading viruses, downloading files unlawfully, engaging in phishing schemes, and stealing personal data like bank account numbers, etc. Thus, a crime can be identified as a “cyber crime” if “computer” and “internet” are among its primary components. Because of this, computer crimes are frequently used to refer to cyber crimes. The majority of cyber attacks fall under the category of “economic crimes,” which are typically carried out by highly organized criminals and employ the most cutting-edge technologies.

The number of cases of financial fraud has risen along with the rate of innovation. Different methods are being used by cyber criminals to gather bank information and conceal their funds. The banks have employed a number of specific procedures to protect against these frauds, yet the problem persists. This is explained by the fact that the security measures currently available through banks are also available in public or in other places where they can be exploited by cyber criminals who can simply breach security measures.

Banking sector has suffered an impact of cyber crimes. RBI has defined bank fraud 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.”

<sup>12</sup>

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8. <sup>11</sup> Dr. Priyanka Dixit , Banking & Financial Institutions , <http://www.rdscollege.ac.in/studymaterial/1594611988.pdf?uid=>(Last visited on 22, March 2023)

<sup>12</sup> Ms. Neeta, Cyber Crimes In Banking Sector, <https://www.aiirjournal.com/uploads/Articles/2019/05/Ms.Neeta%20&%20Dr.%20V.K.Bakshi> (Last Visited on 03, April 2023)

## 10. ELECTRONIC CRIME IN BANKING SECTOR:

Banking system is the lifeblood and backbone of the economy. Information Technology has become the backbone of the banking system. It provides a tremendous support to the ever – increasing challenges and banking requirements. Presently, banks cannot think of introducing financial product Int. Electronic crimes are illegal activities committed by means of computer end of the criminal activity can be either a computer, network operations. Electronic crimes are genusof crimes, through computers and its networks. Electronic crime is a crime that is committed onlinein several areas with e-commerce.

### Computer is working as an instrument of the crime –

Banking criminals are using various electronic medium such as internet, e-mail, and flashencrypted messages etc to commit crime. This crime through computer network takes place in the banking sector. They are

- Fraudulent use of Automated Teller Machine (ATMs) cards and accounts
  - Credit card frauds
  - Frauds involving electronic funds transfers (EFTs)
  - Telecommunication frauds
  - Frauds relating to E-commerce and EDI

### Actor of the Banking Fraud

#### a. Money Mules:

As per the definition given by OECD report (2007), money mules are individuals recruited wittingly and often unwittingly by criminals, to facilitate illegal funds transfers from bank accounts.

#### b. Victims:

Victims, according to OECD (2007), in the banking sector can be categorized into twocategories; banks and users of these banks. The users or customers can be individuals, SMEs,or large multinational organizations. The most negative externality among the legitimateactors is created byindividual users and SMEs who do so by not employing risky online behavior or by not employing security measures during transactions.

### c. Security Guardians:

They are the most important actor of this system as they improve the existing banking system and help in removing the vulnerabilities and development of systems so that banking fraud can be mitigated. The security guardians in case of banking sector could be the bank itself or the some third party hired by the bank in order to ensure security from such threats.<sup>13</sup>

## 11. TYPES OF BANKING:

Banking is described as the business carried on by an individual at a bank. Today, several forms of banking exist, giving consumers a choice in the way they manage their money most people do a combination of at least two banking types. However, the type of banking a consumer uses normally based on convenience. These are different types of banking through which consumer can attach to it-

(a) Walk-in-Banking It is still a popular type of banking. As, in the past, it still involves bank tellers and specialized bank officers. Consumers must walk into a bank to use this service normally, in order to withdraw money or deposit it, a person must fill out a slip of paper with the account and specific monetary amount and show a form of identification to a bank letter.

The advantage of walk in Banking is the face to face connection between the banker and a letter. Also unlike drive thru and ATM banking, a person can apply for a loan and invest money during a walk in.

### a. TM Banking:

It is very popular because it gives a person 24 hour access to his bank account. Walk in and drive thru banking does not offer this perk. In order to use an ATM, a person must have an ATM card with personal identification number (PIN) and access to an ATM machine. Any ATM machine can be used, but charges apply if the ATM machine is not affiliated with the bank listed on the ATM card. By sliding an ATM card into an ATM machine, it is activated and then through touching buttons on the machine, a consumer is able to withdraw or deposit money.

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<sup>13</sup> Viktor L ase, Cybercrime In The Banking Sector in Digital Era, [https://www.academia.edu/36766879/CYBERCRIME\\_IN\\_THE\\_BANKING\\_SECTOR\\_IN\\_DIGITAL\\_ERA](https://www.academia.edu/36766879/CYBERCRIME_IN_THE_BANKING_SECTOR_IN_DIGITAL_ERA) (Last Visited on 20, March 2023)

**b. Online Banking:**

It allows a person to get on the internet and sign into their bank. This process is achieved with the use of a PIN, different from the one used for the ATM card. By going website of a bank and entering it, a consumer can get into his account, withdraw money, deposit money, pay bills, request loans and invest money. Online banking is growing in popularity because of its convenience. These different types of banking give a consumer the power of choice and also give them a comfortable banking system that gives them a convenient choice. Competition and the constant changes in technology and lifestyles have changed the face of banking. Now days, banks are seeking alternative ways to provide and differentiate amongst their varied services. Customers, both corporate as well as retail, are no longer willing to queue in banks, or wait on the phone, for the basic banking services. They demand and expect a facility to undertake their banking activities where and when they wish to do.

**c. Real Time Gross Settlement System (RTGS):**

RTGS is a system where funds are transferred from one bank to another on „real time“ and on „gross basis“. RTGS transactions are carried through either interbank or it can be between customers through bank accounts. 'Real Time' means the processing of instructions at the time they are received rather than at some later time; 'Gross Settlement' means the settlement of funds transfer instructions occurs individually (on an instruction by instruction basis). The transactions are settled individually in RTGS.

**d. Mobile Banking:**

The importance of mobile phones for providing banking services has increased. We have become dependent on our mobile phones these days. Because of the growth of mobile phone subscribers in India, banking services have been extended for the customers to be availed through their mobile phones. Mobile banking is when transactions are carried out using a mobile phone by the customers that involve credit or debit to their accounts.

**e. Credit card and Debit Card :**

Banks issue debit cards that are linked to a customer's bank account. Debit Cards can be used to transfer funds only for domestic purposes from one person to another person. At present, a customer can use his Debit Card to withdraw money, know the monthly statement etc by using another bank's ATM, not

being the ATM of the bank which issued such debit card.<sup>12</sup>

## **12. CYBER CRIMES THAT ARE RELATED TO THE BANKING SECTOR:**

### **a. HACKING**

Hacking is a crime, which means an attempt to bypass the security of the banking sites or accounts of the customers. The Hacking offence 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.

Canara Bank's ATM servers were the subject of a cyberattack in 2018. Several bank accounts saw the clearing of twenty lakh rupees. Sources claim that 50 people were victims altogether as a result of cybercriminals having access to more than 300 individuals' ATM information. Hackers used equipment known as skimmers to obtain debit cardholders' personal information. The value of transactions containing stolen data ranged from Rs. 10,000 to Rs. 40,000.

### **b. SPYWARE**

The most common method of stealing internet banking passwords is spyware. Fake "pop up" advertisements requesting users to download software are used to install it. Such software is identified and removed by antivirus programmes, typically by preventing its download and installation before it can infect the machine.

### **c. VIRUS**

A virus is a piece of software that corrupts an executable file and causes it to behave strangely afterward. It spreads by affixing itself to executable files, such as those used by operating systems and application programmes. The executable file can spread the infection by being run. Worms, on the other hand, are programmes that can duplicate themselves; they don't change or remove any files, instead, they just grow and spread copies of themselves from the victim's computer to other computers.<sup>14</sup>

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<sup>14</sup> Dr. Vijayalakshmi P, Impacts\_Of\_Cyber\_Crime\_On\_Internet\_Banking , [https://www. Researchgate](https://www.Researchgate)

#### **d. CREDIT CARD FRAUD**

Online credit card fraud occurs when customers use their credit card or debit card for any type of online payment and another person, with malicious intentions, uses such card details and password by hacking and misusing it for online purchases using the customers' hacked card details, or when a fraud is committed by a hacker. When electronic transactions are not secure, the hacker can abuse the credit card by pretending to be the cardholder.

#### **e. DNS CACHE POISONING**

By caching previously received query results, DNS servers are put on a company's network to increase resolution response performance. By taking advantage of a DNS software weakness, poisoning attacks are launched against DNS servers. Due to this, the server improperly verifies DNS replies to guarantee they are from reliable sources. Incorrect items will eventually be cached locally by the server, which will then serve them to subsequent users who submit the same request. An attacker may utilise a server controlled by criminals to serve malware to victims of a banking website or to trick bank clients into giving their login information to a fake version of a legitimate website. If a hacker uses a specific DNS server to spoof an IP address and DNS entries for a bank website.

#### **f. KEYSTROKE LOGGING OR KEYLOGGING**

Key logging is a technique used by scammers to keep track of real keystrokes and mouse clicks.

The "Trojan" software packages known as keyloggers aim at the operating system and are "installed" by use of a virus. These could be especially risky because the scammer records the username, password, and account number, as well as any other inputted characters.

#### **g. PHARMING**

Pharming is related to "farming" and "phishing." In phishing, an attacker takes control of a bank's URL so that when a customer logs in to the bank website, they are forwarded to a different website that is fake yet appears to be the real website of the bank. Pharming takes place online, and ATMs can also be used for skimming.

A bank management trainee was engaged to be married and the couple communicated via email on the company's computers. This is the Bank NSP Case. After some time, they separated, and the young woman created some fictitious email addresses, like "Indian bar associations," and used them to send emails to the boy's overseas clientele. She utilised the bank's computer for this. The boy's firm suffered significant customer losses and sued the bank in court. Because the emails were sent through the bank's technology, the court decided to hold the bank accountable.<sup>15</sup>

### 13. LEGAL PROVISIONS

Banking fraud in India is not recognized as a separate offence, under the Indian Penal Code, 1860. Rather, different provisions of the Indian Penal Code, 1860 are interpreted depending upon the facts of each case, which includes Section 403 which deals with the dishonest misappropriation of property, Section 415 that deals with cheating, Section 405 that deals with criminal breach of trust, Section 463 that deals with forgery and Section 477A that deals with the falsification of accounts. Other statutes that contain provisions relating to Banking Fraud in India are:

- The SARFAESI Act, 2002
- The Negotiable Instruments Act, 1881
- Banking Regulation Act, 1949
- Insolvency and Bankruptcy Code, 2016
- Fugitive Economic Offenders Act, 2018.<sup>16</sup>

### LAW AND POLICY RELATED TO BANK FRAUDS

Both the Reserve Bank of India and the Government of India can devise a number of ways to combat the threat of banking fraud. These techniques can only be effective if they support the creation of a more effective financial system. In reality, inside the banking system, fraud is one of the areas that need rapid attention.

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<sup>15</sup> Adv. Rajas, Cyber Crimes in Banking Sector, <https://netlawgic.com/cyber-crime-banks/> (Last Visited on 28, March 2023)

<sup>16</sup> Rajdev Singh, Banking Fraud In India: Challenges And Measures For Prevention, <https://ksandk.com/banking/banking-fraud-in-india-challenges-measures/> (Last Visited on 20, March 2023)

Banking fraud can be simply defined as an action including a combination of civil and criminal components that harms the public interest, public money, and the state exchequer.

## **THE INDIAN CONTRACT ACT, 1872**

The term 'fraud' is defined under Section 17 of the Indian Contract Act, 1872. Any of the following activities undertaken by a contracting party, their connivance, or their agent with the purpose of deceiving or encouraging another party or their agent to join into the agreement are considered fraud.

The situations leading to fraud have been provided hereunder:

- The assertion as fact of something that is not true by someone who does not believe it is true.
- The deliberate hiding of a fact by someone who knows or believes it.
- A commitment made with no intention of following through.
- Any other conduct that is designed to deceive.
- Any act or omission that is expressly declared fraudulent by the law.

## **THE INDIAN PENAL CODE, 1860**

Even though 'fraud' is not defined explicitly in the Indian Penal Code, 1860, provisions for cheating (Sections 415 to 420), concealment (Sections 421 to 424), forgery (Sections 463 to 477A), counterfeiting (Sections 489A to 489E), misappropriation (Sections 403 to 404), and breach of trust (Sections 405 to 409), sufficiently cover the same.

Legal remedies and punishment for the offence of fraud

### **i. Cheating**

Section 419 of the Indian Penal Code, 1860 provides an imprisonment of either description for a term which may extend to three years, or with fine, or with both, as the deterrent for the offence of cheating.

Offence of cheating is cognizable and non bailable. The trial is done by a magistrate of first class.

FIR or Application can be filed under Section 156(3) and in case of private complaint under Section 200 of the Code of Criminal Procedure, 1973.

## ii. Concealment

Section 421 of the Indian Penal Code, 1860 provides that dishonest or fraudulent removal or concealment of property to prevent distribution among creditors will be accompanied by imprisonment of either description for a term which may extend to two years, or with fine, or with both.

The offence is non-cognizable, bailable, triable by any Magistrate and compoundable by the creditor who are affected thereby with the permission of the court.

## iii. Forgery

Section 465 of the Indian Penal Code, 1860 provides an imprisonment of either description for a term which may extend to two years, or with fine, or with both, for the offence of forgery.

## iv. Counterfeiting

Counterfeiting of bank notes or currency notes under Section 489 A of the Indian Penal Code, 1860, can cost the offender with an imprisonment for life, or with imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine. The RBI Master Circular on the same can be referred.

## THE INFORMATION TECHNOLOGY ACT, 2000

The Information Technology Act of 2000 was adopted by the Indian government to make ways for punishment and penalties for computer-related frauds. In the case of unauthorised acts committed in respect of another person's computer system, such as access, downloads, or making copies of the information or data stored, the introduction of a computer contaminant or computer virus, damages to the computer or its system, etc., Section 43 of the said Act provides for hefty damages up to rupees ten lakhs payable by the offender to the person affected. Furthermore, the aforementioned Act makes tampering of computer source documents and hacking computer systems punishable by up to three years imprisonment.<sup>17</sup>

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<sup>17</sup> Kalpna, Banking frauds in India, <https://blog.iledu.in/banking-frauds-in-india/> (Last Visited on 25, March 2023)

## 14. REASONS FOR ELECTRONIC CRIME:

Computers are exposed, therefore, the law is mandatory to protect and safeguard them against cyber crime or electronic crime. The reasons for the exposure of computers may as follows:

### a. Competence to accumulate data:

The computer has exclusive characteristic of storing data in a very comparatively small space this makes the user more comfortable to steal the data either physically or virtually through any electronic medium.

### b. Unproblematic to Approach:

The trouble encountered in guarding a computer system from unauthorized access is that there is every opportunity of breach due to the complex technology. By secretly implanted logic bomb, key loggers that can steal access codes, advanced voice recorders; retina imagers etc that can fool biometric systems and bypass firewalls can be utilized to get past many a security system.

### c. Complex:

The computers effort on operating systems and these operating systems in turn are composed of millions of codes. Human mind is fallible and it is not possible that there might not be a lapse at any stage. The cyber criminals take advantage of these lacunas and penetrate into the computer system.

### d. Negligence:

Negligence is directly associated with human behavior. While protecting the computer system it is possible there might be any negligence, which change direction provides of the cyber criminal to gain access and control over the computer system.

### e. Loss of Proof:

Loss of evidence facts & figures is a very common obvious problem as all the data are normally destroyed. This loss of evidences leads to paralyses of the entire computer system.<sup>18</sup>

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<sup>18</sup> Darshnik, Cyber Frauds In The Indian Banking Industry, <https://www.legalserviceindia.com/legal/article-3073-cyber-frauds-in-the-indian-banking-industry.html> (Last Visited on 27, March 2023)

## 15. IMPACT OF CYBERCRIME ON BANKS

Finances the banking industry across the globe is facing a challenging situation which is thought provoking due to the geopolitical and global macro-economic conditions. The banking sector is forced to evaluate its current practices in order to analyze and manage their risks effectively. Technology-driven approaches have been adopted for the management of risk. Due the growth of Information and Technology (IT), penetration of mobile networks in everyday life, the financial services have extended to masses. Technology has made sure that banking services reach masses asit made these services affordable and accessible (KPMG, 2011).However, this has also increased the risk of becoming targets of cyber attacks Cyber criminals have developed advanced techniques to not only cause theft of finances and finances but also to espionage businesses and access important business information which indirect impacts the banks finances. In order to fight these cybercrimes, the banking sector needs to collaborate with global authorities and watchdog organisations so that a model can be developed which can help in controlling. There are many frauds and cyber crime digital era made in banking sectors and dealing with such threats. The main issue of concern here is that there is absence of effective compilation service in the banking sector which can identify the trends in cyber-crime and compile a model according to it.

The spread of mobile networks and the advancement of information and technology (IT) have both led to the expansion of financial services to the general public. However, technological innovation has increased the potential of being a target of cyberattacks while also making banking services more accessible and affordable.

In addition to using advanced tactics to steal money, cybercriminals are now able to spy on businesses and obtain crucial company data, which has an indirect impact on the bank's profits. Furthermore, cybercrime in the banking sector would violate the privacy of the customers. Anyone,i.e., any hacker can misuse the identity of people and threaten them to do illicit activity and steal their money.<sup>19</sup>

## 16. PREVENTION OF CYBER-CRIME

- Implementing strong corporate policies that ensure proper protection of customer data.
- Ensuring employee safety regulations and implementing proper checks, including user account

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<sup>19</sup> Suman Acharya, Impact Of Cyber-Attacks On Banking Institutions In India, <https://archives.palarch.nl/index.php/jae/article/download/1714/1708> (Last visited on 30, March 2023)

verification, user login monitoring and password security to bring in accountability.

- Assigning a separate user to each staff and prohibiting the exchange of secure information.
- Prohibiting employees from downloading and implementing any unauthorized software.
- Ensuring proper approval protocols are implement.
- Increasing tech support ensuring proper firewall protection for all devices. This would block contacts from any unauthorized domains.
- Employee training: needless to say, at the end of the day, the processes are to be followed by the general employees of the bank, and therefore continuous training focused on improving the know-how and possible legal implications are vital.<sup>20</sup>

## 17. CASE LAW RELATED TO CYBER-ATTACKS IN INDIA

### A. Cosmos Bank Cyber Attack in Pune

Cosmos Bank in Pune was the target of a recent cyber-attack in India in 2018, when hackers stole Rs. 94.42 crores from Cosmos Cooperative Bank Ltd situated in Pune, it rattled the entire banking industry in India. Hackers gained access to the bank's ATM server and stole the personal information of rupee debit cardholders and visas in large number. Money was wiped out, and hacker gangs from as many as 28 nations withdrew the funds as soon as they were notified. It can be avoided by hardening surveillance measures and assisting approved individuals.<sup>21</sup>

### B. ATM System Hacked

The ATM servers of Canara Bank was targeted in 2018 for cyber-attack. Twenty lakh rupees were cleared from numerous bank accounts. According to sources, cyber criminals had access to ATM information for more than 300 users, resulting in a overall 50 victims. Hackers used skimming machines to capture information from debit cardholders. Transactions involving stolen information varied in amount from Rs. 10,000 to Rs. 40,000. It can be avoided if the protection mechanisms in ATMs can be

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<sup>20</sup> Hassan Elhais, Prevent Cybercrimes In The Banking Sector, <https://www.mondaq.com/financial-services> (Last visited on 03, April 2023 )

<sup>21</sup> Express News Service, Cosmos Bank Malware Attack: Interpol Issues Red Corner Notice Against Prime Suspect Traced in Foreign Country Indian Express, <https://indianexpress.com/article/cities/pune/cosmos-bank-malware-attack-interpol-issues-red-corner-notice-against-prime-suspect-traced-in-foreign-country> (Last Visited on 30 March, 2023)

improved to avoid data misuse.<sup>22</sup>

### C. RBI Phishing Scam

The Reserve Bank of India was not spared by the fraudsters in a bold phishing attempt of its kind. The phishing email, which purported to come from the RBI, promised the recipient prize money of Rs.10 lakhs within 48 hours if they clicked on a connection that took them to a website that looked exactly like the RBI's official website, complete with the same logo and web address. After that, the user is asked to disclose personal details such as his password, I-pin, and savings account number. The RBI, on the other hand, issued an alert about the fake phishing e-mail on its official website.<sup>23</sup>

### D. The Bank NSP Case

In this particular case a bank management trainee was hitched to be married. Using the company's computers, the couple exchanged numerous emails. They had broken up their marriage after sometime, and the young lady made some fake email ids, such as "Indian bar associations," and used them to send emails to the boy's international clients. She did this via banks computer. The boy's business lost a large amount of customers and went to court against the bank. The court decided and made the bank liable because the emails were sent using the banks system.<sup>24</sup>

## 18. CONCLUSION:

Banks are the engines that propel the financial sector's activities and an economy's growth. With India's burgeoning banking industry, bank fraud is on the rise, and fraudsters are getting more clever and cunning. While it is impossible for banks to operate in a fraud-free environment, proactive measures such as risk assessments of operations and policies can assist them to mitigate the risk of fraud-related losses. As a result, the time has come to address the banks' security concerns on a priority basis. Poor hiring procedures and a lack of adequate employee training are common issues that banks are

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<sup>22</sup> Ranjitha S, 4 Biggest Cyber Security Threats for Indian Banking Sector (Great Learning, 24 March 2021) < <https://www.mygreatlearning.com/blog/biggest-cyber-security-threats-indian-banking> (Last Visited on 30 March,2023)

<sup>23</sup> Vivek Kumar Verma, Phishing (Indian Case Law, 16 July 2014) < <https://indiancaselaw.in/phishing> (Last Visited on 30 March,2023)

<sup>24</sup> Animesh Sarmah, Roshmi Sarmah, Amlan Jyoti Baruah, A brief study on Cyber Crime and Cyber Laws of India (2017) 4(6) IRJET 1636 (Last Visited on 30 March,2023).

encountering, along with overworked employees, weak internal control systems, and low compliance levels among bank managers, offices, and clerks. However, technology may help governments, regulatory bodies, and banks battle the increasingly sophisticated form of fraud by means of proactive forensic data analysis and data mining techniques.

Cybercrimes know no barriers and evolve at a pace at par with emerging technologies. The unprecedented growth of cybercrime and its disastrous consequences is a very potent threat to banking and financial institution. It aims at building a vibrant security preparedness among financial institutions, including banks. The unprecedented dependence on e banking technologies at multifarious levels by billions pose a great challenge before cyber experts in formulating a dependable cyber security protocol. During the continual improvement of the technologies used at the financial institution's backend, certain critical aspects were ignored, which now require immediate attention. Cybercrime has its own range of appealing characteristics that have increasingly begun to overshadow conventional crimes. Cybercriminals are attracted to the level of anonymity, global victim reach, and quick outcomes, to name a few. Cyber criminals' job is made easier by the lack of/inadequate awareness campaigns. Owing to a lack of knowledge about the most recent attack methodologies and documented preventive steps, unaware customers are easily fooled.

With the growing influence of cybercrime, it is becoming increasingly clear that local law enforcement agencies lack the requisite skills and resources to investigate incidents involving cybercrime. Using trained cyber security experts takes it a step further in terms of obtaining faster and more accurate cybercrime investigation results.

It is believed that after ensuring and estimating upon the proper checks on all the problems and involving all the stakeholders to solve this major problems relating to the technological growth in the developing countries like India, these kind of risks as mentioned in the research work can be minimised to a certain extent and we can in a way ensure India to be digitally safe and secure.

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- <https://indiancaselaw.in/phishing>

### **Books**

- Prevention Of Cyber Crimes And Fraud Management
- Cyber Crimes And Fraud Mangement
- Digital Banking