

# Embryonic Inclinations of Cyber Crimes and Privacy Dimensions: Digital Governance Revolution

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**Abstract**—It is the E revolution and development of IT infrastructure that made the services 24x7 accessible. Within this last few years millions of people who were earlier not the part of system has become the part of this drastic change. There is a huge competition among the Banks, Service, and mostly the E-wallet companies which is taking over the market very rapidly. The individual security has always been at risk with the advancement of these technologies. The case of baffling AADHAR, DIGITAL LOCKER, and biometrics are few examples that are in conflict with the government policies.

E-Commerce includes several issues relating to Organizational Management Commercial Negotiations and Contract, Legal and Regulatory Frameworks, Financial Settlement Arrangements, Taxation and many others. Internet provides opportunities to make online execution of commercial transaction which may include either business to business or business to consumer or inter-organizational. The present government's goal of Make in India and Digital India making 100 cities across the country is an ambitious goal searching inputs around the globe. The sustainable and optimum use of resources resulting in effective and efficient use of it thus becomes a priority. It is, therefore, the growth of E-Commerce has equally needed an effective regulatory mechanism. This regulatory mechanism falls under the domain of cyber law. Cyber law is still an evolving process.

This Present paper following a doctrinal research will deal with the problem of rectification, exploration and advent needed in the E-Development goals policy regulation and commercial players in the industry ensuring the use of Policies for effective transaction to the renaissance we are searching for making a sustainable futuristic growth.

**Key words:** E-Commerce, Cyber Jurisdiction, Digital India, E-Banking, E-Development, Modern emerging cybercrimes.

## Introduction

Banking system is one of the important part of the any country's economy. Today banks operate in a very highly liberalized and globalized manner. There is a very healthy competition among private and public sector banks. Internet has made people's life easy and fast. Now people don't want to stand in queue, they now want fast transactions with the help of technology. Internet and development of the IT

infrastructure makes the banking system sound and more effective. In India electronic banking is gaining popularity as an important distribution channel to provide banking services. With the help of e-banking banks are providing convenience of Anytime Anywhere Banking. With the rapid growth of information technology and other internet services, cybercrimes are increasing day by day. Bank customers have the fear of losing their confidential details and of becoming the victim. Cyber security has become a huge challenge for both banks and government. There is a need of proper approach to fight against the fraudsters, cyber criminals, hackers by making proper execution of laws and working on the loopholes.

## E-Banking

E-banking stands for electronic banking. E-banking is a process of delivery of banking services through electronic channels such as mobile phone, internet, automated teller machine (ATMs), debit card, credit card, smart card etc. The Information Technology Act, 2000 provides legal recognition to electronic transactions. E-banking came into being in 1920s in USA and UK. In India from early 1990s E-banking has become popular. After opening up of Indian economy in year 1991 many foreign banks enter Indian economy and they bring new technology with them. There are most of the banks at present who offer internet banking such as State Bank of India, ICICI Bank, HDFC Bank, AXIS Bank, Dena Bank, Union Bank, Bank of India etc. In India now electronic transactions are done on large scale. The Reserve Bank of India has also established National Payment Corporation of India (NPCI) to oversee Retail Payment System (RPS) in India which began operating from year 2009.

## Services Under E-Banking in Title

### 1) The Automated Teller Machines(ATMs):-

Facilities under ATMs are cash withdrawal, balance enquiry, mini statement of account, PIN (personal identification

number) change etc. For availing this facilities customers inserts a debit plastic card, which is encoded with information on a magnetic strip and have to choose their preferred language from options available. Customers have to enter 4 digit PIN for availing any of the service under ATM. PIN are confidential. Sharing of PIN among friend or any other person can create a trouble. Depending upon the bank and nature of account there are different rules and limits for transaction. Example- Dena Bank maximum ATM cash withdrawn limit from saving account is 20 thousand per day.

## 2) Debit Cards:-

The debit cards are used for withdrawal of cash from ATM, purchase of goods and services, domestic and international fund transfer from one person to another. In recent few years use of debit card for mobile recharge, bills payment, payment at online stores as increased for getting a cashback offers and discounts. Debit card examples: - ATM card, Rupay card, Visa Card.

## 3) Credit Cards: -

It is card issued by bank that can used to buy products and services on credit. Bank charge interest on credit card use. Credit card are primarily used for short term financing. Almost every store allows for payment of goods and services through credit cards. Credit card is convenient substitute for cash and cheques.

**4) Smart Card: -** Smart Card also known as an **Integrated Circuit Card (ICC)** is a plastic card about the size of debit and credit card, with an embedded microchip that can be loaded with data, used for electronic cash payments, they can be used to pay for many public transportation services, this has many benefits when the person goes to acquire health care facilities, they can be used as identification proof in many countries around the world and it can be periodically refreshed for additional use.

## 5) Internet Banking through Bank Website :-

Presently internet banking services intends to provide following online services:-

**Account Summary: -** Customers account which are internet banking enabled can check the current balance, total balance, unclear balance etc. of their saving/current/overdraft/term deposit/loan accounts.

**Overdraft Details: -** Limit and drawing power of OD accounts, repayment schedule for loan accounts may be viewed.

**Transaction Details: -** User may view, download and print of the last transactions or for specified period of selected account.

**Online Requests: -** User may request for issue of cheques book, stop payment for a particular cheques or range of cheques. User can also make change or send request for change of email address, phone number etc.

**Fund Transfer between own Accounts:-** User may transfer funds from one account to his/her another account to the extent of fund transfer limit fixed by the bank from time to time.

**Adding of Account in Beneficiary List: -** If the amounts are frequently transferred to a particular account, then the facility of adding that account in beneficiary list is available and there is also the option of providing a nick name to that account. User can view all the beneficiary that have been added and can also modify the details of a beneficiary by selecting that beneficiary.

**Fund transfer to third party account: -** User can transfer fund from his/her account to any other third party account to the extent of fund transfer limit fixed by the bank.

**Standing Order: -** User can give standing order for transfer of funds from one account to another to be executed on a predefined time e.g. daily, monthly. User can amend or cancel the standing order given in the manner prescribed by bank.

- **E-payment facilities: -** User can use E-payment facility for payment of Direct (CBDT) and Indirect (CBEC) taxes, bills, fees of institutions etc.
- **TDS Details: -** User can view the TDS (Tax Deducted at Source) details.
- **Other options: -** User can view address details, change login password, change transaction password, view login history etc.

## 6) Mobile Banking: -

It is a system that allows customers of a bank to conduct a number of financial transactions through a mobile phone. Facilities such as:-

- Fund Transfer in self-linked accounts and third party transfer.
- Account Summary
- Account Statement
- Recurring Deposits Summary
- Cheques Status
- Stop Payment of Cheques
- Locate Branch and ATMs
- Bill Payment and Recharge.

## 7) BHIM (Bharat Interface for Money) Application:-

Bharat Interface for Money (BHIM) is an application developed by NPCI (National Payment Corporation of India) to enable secure, fast and reliable cashless payment through UPI (Unified Payment Interface) platform.

Through this application user can:-

- Choose their preferred language
- Send, receive and request for money.
- Check balance of account
- View transaction history of BHIM application.
- Add beneficiaries using UPI id, AADHAR, Account number/ IFSC code of the party. UPI id is ten digit mobile number.
- **Example-** 123456789@UPI.
- Add payment reminder
- Generate QR code
- Use facility of scan and pay.
- Block and spam users who are sending collect request from illicit sources
- Add custom payment address in addition to phone number and make it as primary address.

**Example-** A person whose name is Rahul. He can add custom payment address as- sandeep@upi, sandeep@upi etc., based upon the availability of name.

Transaction limits are per transaction maximum limit of Rs.10 thousand and per day maximum transaction limit of Rs.20 thousand.

Raise complaint, send feedback and view FAQs (Frequently Asked Questions).

## Reforms Of Banks

### National Electronic Funds Transfer (NEFT):-

It is a system that facilitates individual, firms and corporates to electronically transfer funds from any bank branch to any individual, firm or corporate having an account with any other bank branch in the country.

Even such individual, firms or corporates who do not have a bank account can also deposit cash at NEFT enabled branch with instruction to transfer funds using NEFT. There is no limit either minimum or maximum on the amount of funds that could be transferred using NEFT.

### Real Time Gross Settlement System (RTGS):-

RTGS system is a fund transfer mechanism for transfer of money from one bank to another on a 'Real Time' and on 'Gross Basis'. This is one of the fastest money transfer system through banking channel.

Here settlement in '**Real Time**' means payment transaction is not subject to any waiting period. The transaction are settled as soon as they are proceed. '**Gross Settlement**' means the transaction is settled on one to one

basis without bunching with any other transactions. RTGS is primarily meant for large value of transaction. The minimum amount to be remitted through RTGS is **2 lakhs**.

### Indian Financial System Code (IFSC):-

IFSC is an alphanumeric code that identifies a participating bank and branch in electronic fund transfer.

It is an **11 character code**. The IFSC code is used by NEFT, RTGS and IMPS finance transfer system.

Reserve Bank of India (RBI) has direct the banks to print IFSC code on passbooks. **Example-** BKDN0123456

The first four character representing bank code, fifth character is zero, reserve for future use and last six character is for branch code.

### Magnetic Ink Character Recognition (MICR) CODE:-

MICR code is a system for ensuring the safety and security of negotiable instruments, to facilitate the processing of the cheques. MICR code of **9 digit number**, the first three digit represent the city, next three represent the bank and the last three digit represent the branch. MICR code is written with a special magnetic ink, thus fraud cases can be easily identify through check done by the magnetic scanner. This code can be found in all the cheques at the bottom white line which is known as **MICR Band**. MICR code can be used for international transactions as well. **Example-** MICR code- 321456123 (321 city, 456 bank, 123 branch).

### Electronic Clearing Service (ECS):-

The Electronic Clearing Service is a retail payment system that can be used to make bulk payment. Its aim is to decrease volumes of paper instruments in MICR clearing and improve customer service by ensuring prompt and secure interest/dividend payment to the beneficiaries. It is a system that is cost effective and which serve as an alternative method of bulk, low value and recurring payment transactions.

The **ECS-Credit** enables companies to pay interest or dividend to large number of beneficiary by direct credit of the amount to their bank accounts.

The **ECS-Debit** is mostly used by utility services like telephone and electricity companies to receive the bill payments directly from customer bank accounts.

### Know Your Customer (KYC):-

As per the RBI (Reserve Bank of India) guidelines issued on July 23<sup>rd</sup> 2013, banks are required to periodically update their **customer's identification document**. In this connection customer (including joint account holder customer) are require to submit latest photograph, self-attested copy of identity proof and address proof along with a duly filled **Customer Updation Form**. As per the RBI, the KYC formalities must be fulfilled in the following format:-

- **High risk** customer- once in **2 years**.
- **Medium risk** customer- once in **8 years**.
- **Low risk** customer- once in **10 years**.<sup>i</sup>

### Recent Trends in Banking

#### 1. One hundred banks joined National Financial Switch Network as direct members:-

The NFSs is the largest interoperable ATM network in the country and it manages more than 95% of the domestic interbank ATM transactions. Till date, NFS network comprises of 745 members which include 100 direct members, 645 sub members including Regional Rural Banks (RRBs) and White Label ATM operators (WLAOs). The network now has 2.3 lakhs ATMs.

The NPCI (National Payment Corporation of India) said on December 7, 2016 that 100 banks have joined the NFS network as direct members. Direct members are those banks that directly participate in clearing and settlement with NPCI. Direct member bank can also act as a sponsor bank.<sup>ii</sup>

#### 2. Launching of digital offerings by banks :-

The State Bank of India (SBI) on the occasion of **61<sup>st</sup> State Bank Day**, launched a social media banking platform for Facebook and Twitter users, called **SBI Mingle** which help the customers with a host of banking services on their social media accounts at their own convenience.<sup>iii</sup>

Banks through their social media i.e. Facebook, Twitter and Instagram promote their products and services. They tie-up with e-commerce company and bring the exciting offers for their customers. With the usage of their debit card, credit card etc purchaser get a cashback or discount. **For example:-** Instant discount of 10% at **Luxehues.com** with SBI debit card, offer validity from **August 1, 2017 to January 31, 2018** this is one of the promotion done by SBI in their official Instagram account.<sup>iv</sup>

#### 3. E-wallet companies:-

E-wallet companies like **Paytm, Freecharge and PhonePe** have extended their business in millions and there is a cutthroat competition among them. E-wallet companies attract their customer by giving **cashbacks**. After the demonetization on November 8<sup>th</sup>, 2016 small shops and customers who were not using E-wallets have also started receiving and making payment via E-wallets. Services provided by them are making mobile phone recharge, DTH recharges, landline bill payment, water bill payment, electricity bill payment, payment of institution fees, gas refill payment, and transfer of money from one wallet to another wallet and wallet to bank account, payment of insurance premium, donate in various NGO, train tickets booking etc.

#### 4. Schemes by the government:-

##### (A) Pradhan Mantri Jan Dhan Yojana (PMJDY) :-

This scheme was launched on August 28, 2014. Under this scheme main aim of government was to bring every Indian in the rural or urban sector to connect with banking system. This

scheme offers an account holder to open account with **no minimum balance**, life cover of Rs.30 thousand, accidental insurance of Rs.1 lakh, beneficiaries of government schemes will get direct benefit transfer in these accounts, after satisfactory operation of the account for 6 months, an overdraft facility will be permitted, overdraft facility up to Rs.5000 is available in only one account per household, preferably lady of the household.<sup>v</sup>

##### (B) Direct Benefit Transfer (DBT):-

This scheme is one of the most important scheme. Direct Benefit Transfer scheme is an attempt by government of India to change the mechanism of transferring subsidies to people. Under this scheme amount of subsidy is directly transfer to people's bank account directly by government.

##### (C) Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA):-

By Ministry of Electronics and Information Technology, Government of India this scheme is launched on October 7, 2017 at IIT Gandhinagar, Gujarat. This aims to:-

Impart **digital literacy to six crore citizens in rural India**, provide access to information, knowledge, education, healthcare and livelihood generation, **enable financial inclusion through use of digital payments**, train to avail various government schemes and citizen centric services, empower women and marginalized communities through digital inclusion.<sup>vi</sup>

##### 5. Linking of bank account with AADHAR number:-

AADHAR is biometric identification system. AADHAR number is 12 digit number issued by UIDAI (Unique Identification Authority of India). As per the amended **Prevention of Money Laundering Act, 2002 rules (PML rules)** till **December 31<sup>st</sup>, 2017** every bank account holder as to link their account with AADHAR card number.

### RECENT DATA OF FRAUD CASES:-

**3.2 million Debit Cards details leaked and unauthorised usage done in October, 2016<sup>vii</sup>** this was the one of the biggest ever breaches of financial data in India. People reported that their cards were unauthorised used from China. Out of 3.2 million debit cards 2.6 cards were Visa and Master-Card, 6 lakh cards were RuPay Card. The cards were of **State Bank of India (SBI), HDFC Bank, ICICI Bank, Yes Bank and Axis Bank**. The breach is said to have originated in **malware** introduced in systems of Hitachi Payment Services, enabling fraudsters to steal information and to steal funds. Hitachi, provides ATM, point of sale (PoS) and other services.

**Technology related frauds** in country like India the cybercrimes are increasing day by day as the number of users of E-banking are rapidly increasing. People and companies are using E-banking services like internet banking, mobile banking for fast services, enhancing efficiency and cost-cutting. But while banks customers have become tech-savvy and started using online banking services and products,

evidence suggests that even fraudsters are devising newer ways of perpetrating frauds by exploiting the loopholes in technology system and processes. Innocent peoples are being targeted by hackers and fraudsters. Bank group wise detail of the number of technology related fraud cases with the amount involved therein over four years is as under following table:-<sup>viii</sup>

### Suggestions

For providing the additional security for customers, banks should focus on adopting **Multi-Factor Authentication (MFA) system**.

Encryption plays a crucial role in online security. All banks keeping in mind the security issues should upgrade their online portal to **256-bit SSL** (Security Socket Layer) from 128-bit SSL.

Banks like SBI (State Bank of India) has already upgraded.

The use of same password for a long time is not secure. Bank should make compulsory rule regarding change of ATM PIN, internet login and transaction password etc. after a specified period.

Banks should educate people regarding use of genuine sites and give security tips regarding payment via credit card, debit card etc.

By all banks, access to internet banking should be allowed only after entering **OTP (One Time Password)** which comes in registered mobile number.

All banks should register alternate mobile number of customers and it should also be printed on the passbook along with primary mobile number.

**Biometric ATM machines** can also be used to prevent hacking of password and to make easy for illiterate people.

All banks should follow the **KYC (Know Your Customer) norms** and other guidelines given by apex bank (Reserve Bank of India).

There should be timely joint **meetings** of all banks (public sector, private sector) headed by RBI.

Government of India with the cooperation of state government, RBI and other banks connect all citizens of India with banking system.

Government with the cooperation of banks must start a **Certificate Program** for college and school student on 'Digital Payment'.

There is need to increase number of ATMS for cash deposit and cash withdrawal.

E- Banking is related with internet connectivity. In India internet connectivity and its speed is very poor. TRAI should take steps for **strengthening telecom sector**. Most of the time

we don't get messages from bank due to the poor service/network of Telecom Company.

Strong action should be taken against the **hackers and frauds**. After every successful and unsuccessful transaction via internet banking, mobile banking and cards banks should provide their customer **option of sending feedback** and that feedback should also be send to RBI.

### Conclusion

We can conclude that in 21<sup>st</sup> century, life of people has become very fast and banking system being the very crucial part of economy need a lots of improvement. Now people don't like to stand in queue in banks, they prefer doing electronic transactions. E-banking is helpful in controlling corruption in our country. As we have discuss above our Indian banking system is facing lots of problems and challenges. There is a need for IT sector development, balanced regional development in banks and look after the cyber security matters. There is also need to aware people about the risk involved in financial transaction through E-banking. People are having unnecessary insecurity in their mind while doing transaction using ATM, internet banking and mobile banking. Steps are being taken by RBI and government but they are not sufficient, we need more improvement.

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