Chapter 5

Impact of Electronic Money on Consumer Behavior
Chapter 5

Impact of Electronic Money on Consumer Behavior

5.1 Introduction: The introduction of Electronic Money marked a milestone in the historical development of the services of E-banking and accommodates its dynamic growth much more effectively. This advantage becomes especially evident when looking at the conditions of its general acceptability. Rather than deriving its status as money from its intrinsic value as a commodity, credit-money involves pieces of paper with promises to pay which a third party, a bank, will comply with as an order. The public accepts these promises, because it trusts the banks to honour them. If any commercial bank ever reneges on the promise and fails to pay, then it will be the central bank which assumes that responsibility.

This triangular arrangement, where a payment obligation of buyer to seller becomes a debt relation between their respective banks settled by the central bank or any other clearing-house arrangement, has made money more trustworthy than it was when still represented by a commodity. With a few exceptional situations of hyperinflation ravaging a nation’s economy, the public has come to trust bank checks and central bank notes to such an extent that their presumed validity is taken for granted. Of course, money works best when anchored in automatically. It is precisely when we do not have to ask ourselves where money comes from, how it circulates and who guarantees it that it has a chance to operate smoothly.
The moment we are forced to wonder about these questions because of unforeseen circumstances, our confidence in whatever money form is currently prevailing will erode without that public trust no money can function effectively. Of course, history is replete with examples where monetary instability or financial crises undermined this presumed automatically or where a degraded money form had to be replaced by a better alternative. The many instances of monetary instability are an indication that the insertion of money into our cash-flow economy is perhaps more problematic and less automatic than we presume. This is indeed the case. When analyzing money as a social institution, we are inevitably struck by two different aspects of money which may be incompatible with each other. On the one hand, money serves as a public good in as much as it’s proper functioning - in terms of the modalities of its creation, its smooth circulation and its stable valuation - yields such large social benefits that you would not want anyone to be deprived of those. It is precisely this quality of money as a public good benefiting us all which justifies the public trust and consensus of general acceptability vested in it. On the other hand, money may also contain elements of a private commodity to the extent that it gets created by agents seeking to benefit contradictory to the extent that the private commodity aspects of engender consequences which undermine the public-good qualities of money. There are at least three such troubling consequences rooted in the private-commodity nature of money:

1. If some market agents were empowered to create money and thereby were in a position to finance their spending with new money, they would gain a decisive advantage over all those market agents unable to do same. Today we have resolved this equal-
access problem by locating the creation of money outside the marketplace, in the banking system. Banks issue mere tokens and then transfer those via credit to borrowers in whose hands the tokens become money as soon as the loan gets spent on goods, services, or assets. We still have a financial-exclusion problem violating the equal-access requirement of money as a public good. Banks continue to deny credit to many businesses considered less creditworthy, particularly the smaller and newer ones, while also depriving the poor of access to checking accounts.

2. Another destabilizing consequence of money’s private-commodity dimension is the tendency for banks to overextend credit during boom periods in pursuit of greater income and then cut back lending sharply amidst the first troubling signs of over extension, such as in response to sudden defaults. This boom-bust pattern of bank lending gives rise to a markedly pro-cyclical money supply which reinforces the business cycle dynamic of ups and downs in our economy. Moreover, the propensity of credit over extension engenders recurrent financial crises which, if left unchecked, have the potential for serious disruption of economic activity.

3. Finally, the private-commodity aspect of money also manifests itself in the fact that in the hands of private issuers, competing with each other for market share and motivated by profit, money itself becomes an object of innovation and product development. Modern money is essentially a matter of contractual arrangements by banks on the liability side and asset side. Monetary innovation mostly involves changes in those contractual arrangements and is
therefore implemented much more easily than innovation in industry aimed at altering tangible products or developing new ones from scratch. Compared to industrial research and development, monetary innovation involves few sunk costs and is less confined by physical limits. Such activity aims not only to lower transaction costs and facilitate exchange, sine qua non conditions for public acceptance without which no monetary innovation can succeed, but also to increase the money-creating capacity of banks seeking to earn more income this way.

To the extent that these private-commodity dimensions of money all threaten its public-goods quality, they have to be kept in check. Otherwise money does not operate efficiency and undermines the stability of the economy. For centuries the dualistic nature of money was managed by its linkage to precious metals which regulated the supply of money and its insertion into the economy. After 1931 the ruthless discipline of gold gave way to a more flexible management of money by the State as the only non market agent capable of counteracting market forces. The State’s monetary authority, typically a central bank, was authorized to manage money’s public-good quality with a combination of monetary-policy tools regulations designed to affect the structure and behavior of banks, lender-of-last-resort mechanisms to counteract financial crises and international monetary arrangements which guide the participation of the national economy in the world economy.

Credit-money is the form of paper tokens, surely one of the great achievements of the new deal, is now being gradually transformed into electronic money. In the 1980s, banks began to experiment with emerging
computer and communication technologies to benefit from the technological revolution under way. Computerized payments systems, run by consortia of commercial banks, could move money transfers beyond the reach of central banks and so undermine their control over the monetary process. Large-volume transfers between businesses were automated through a network of bank-operated Automated Clearing-Houses and Electronic Fund Transfer technology. The banks also tried to push the electronic revolution into retail banking by getting households accustomed to using automated teller machines, paying with plastic cards and conducting their banking transactions at home on the computer.

The accelerating efforts by to develop electronic alternatives to paper money are not just motivated by the desire to take advantage of technological progress. They are also caused by the steady erosion of the post war regime of state-administered credit-money. Electronic money will soon experience an important push forward through its applications on the internet. E-commerce on the internet drives electronic money towards cybercash. This imminent development in the history of money will give us an entirely new type of money, one even more immaterial than paper. Its intangibility as something existing only virtually, as a flow of data over computer networks, will shift the emphasis of public trust from confidence in banks as third party intermediaries making good on the promise to pay to the technology of fund transfers and non bank players getting involved in the monetary process.

5.2 **E-CRM in Banks:** - “A customer is the most important visitor in our premises. He is not dependent on us. We are dependent on him. He is not an interruption in our work. He is the purpose of it. He is a part of it. We
are not doing him a favour by serving him; he is doing us a favour by giving us an opportunity to do so.” These words of Mahatma Gandhi indicate his vision of customer service. These words become more important in a service organization like banks.

Gone are the days when bankers could afford to sit back and wait for business to come to their doorstep. Today the banker is required to go and knock at the door of customer for getting good business on its existing or current and prospective customer. Therefore, in order to retain existing customers and acquire new customers it is better for the banks to maintain good long-term relationship with its customers. This can be done if the bank understands the needs, wants of its customers, and then provide them better services. Therefore, whether a bank is going to succeed or fail, its trade area is determined largely by how well the needs of its customers have been understood and satisfied. Therefore, it is rightly said by Peter Drucker, “The customer defines the business. To satisfy the customer is the mission and purpose of every business.”

E-CRM is the marketing concept. Marketing in terms of banking can be defined as the creation and delivery of consumer satisfying products at a profit to a bank. The new marketing concept revolves around consumer satisfaction. Every business wants to grow day by day. It wants to attain a growth, which knows no ends. It must continue to try to attract customers at all times during its lifetime without a single day’s pause.

If the marketing concept is applied to a bank, it would mean that the bank should continue to create and deliver the existing services to consumers most effectively, and banks marketing must be consumer oriented. It is
critical that the product or the services the bank offers fulfill customer’s needs and wants. Customer Relationship Management in banks can be defined as the ability to understand, anticipate and manage the needs of the customers, interaction and relationship resulting in increased profitability through revenue and growth and operational efficiencies.

E-CRM in banks can be defined as the use of the web and various other electronic channels, technologies that enable automated and electronic management of customers’ relations. E-CRM, on the other hand, refers to other factors like personalization, customization, one to many and many to many transactions. It permits business speed and real time response to customer or markets through the new tools such as e-mail, Internet, telephone, chat facilities etc. that reduces the cost of customer contacts.

To serve more and retain customers, banks in India have changed the old concept of accepting deposits and lending money. Use of technology by banks has increased the productivity very fast through automation of banking operations. The electronic technology instruments adopted by Indian banks are ATMs, Telex, Fax, internet, Tele banking, E-banking, Electronic clearing services, on-line banking, mobile banking, wireless banking services, and electronic funds transfer. With the introduction, implementation and adoption of these techniques by the banks have totally revolutionized the functions, operations, administration, decision-making and management information system. All these techniques or instruments helped the banks in retaining the existing customers, attracting new customers and provide lot of services with the help of these instruments to give them satisfaction.
Automated Teller Machines (ATMs): - An ATM is a machine that can deliver cash to the customers on demand after authentication. This banking service is made available 24 hours a day, 7 days a week and 365 days a year. Besides withdrawal of cash ATMs also provide facility to deposit cash, deposit cheques, prepare drafts, transfer money, mini statement of accounts and shows details of the account. Customer can even ask for new cheque books through ATMs. ATM is a user-friendly system and customer does not require any training to use it. It is totally menu driven which displays step-by-step instructions to operate the transactions.

Phone Banking (Tele Banking): - Technological developments have totally changed the face of banking industry. Phone or Tele Banking means carrying out of banking transaction through telephone. A customer can call up the banks help line or phone banking to conduct transaction like transfer of funds, making payments, checking of account balance, ordering cheque books etc. This also reduces visits of the customers to banks.

Internet Banking- E-Banking: - Internet banking means carrying out banking transactions via Internet. It comprises a variety of projects that aim to improve not only the bank’s efficiency but also customer services. E-banking programme allows customers to use the Internet for basic functions in corporate and retail banking and credit cards. These include making inquiries about account balance and getting statements and real time funds transfers. Thus, the need to visit a branch is completely eliminated by this technology. It also helps in serving the customers better and tailoring products better suited to the customer requirements. Net
banking helps a bank spread its reach to the entire world at a fraction of the cost.

**Mobile Banking:** - Banks can now help a customer conduct certain transactions through Mobile phone with the help of technology like SMS etc. This helps a bank to combine the Internet and telephone services which provide its customers better convenience and facilities.

**Total Branch Mechanization (TBM):** - Dr. Rangrajan Committee suggested TBM as early as 1988. Banks have installed Local Area Network at the major centers of the country to make all the banking services available at single window to their customers.

**Electronic Funds Transfer (EFT):** - Electronic funds transfer has been introduced by the RBI for public sector banks to help them offer their customers money transfer service from any bank’s branch to any other bank’s branch. EFT system presently covers more than 4800 branches of public sector banks in four metro cities as well as in many of large cities.

**Communication Technology (SWIFT):** - Society for Worldwide Inter-Bank Financial Telecommunication (SWIFT) was formed as a cooperative organization by International Banks Foreign Investors. It provides a computerized network amongst international banks in the members’ countries. This technology has made available the fastest banking services to customers who are engaged in international business.

**INFINET and VSAT networks:** - RBI in India to upgrade the country’s payment and settlement system has initiated Indian Financial Network (INFINET), a Closed User Group (CUG) network for banking and
financial sector. INFINET uses VSAT (Very Small Operative Terminal) technology. Some of the major applications of INFINET in banking services are e-mail, any branch banking, treasury management, EFT, and clearing and settlement system for securities.

**Wireless Banking Services:** Wireless Banking Services is an emerging trend in banking. It enables one to manage their accounts with GSM/GPRS WAP mobile phones, any time anywhere. The service uses WAP (Wireless Application Protocol) technology to allow access to accounts in a more convenient, secure and flexible manner. With wireless banking services the following operations can be performed by the customers:–

1. Check account balance and transaction details.
2. Make funds transfer to self or third party accounts.
4. Trade securities.
5. Inquire mutual funds and securities trading account portfolio and account balance.
6. Personalized stock watch list to monitor stock price performance.
7. Inquire free real-time stock quotes.
8. Inquire deposit/exchange/loan rate.

To avail wireless banking services, one just needs to log in the wireless banking service with their existing customer ID and PIN provided for e-banking. In wireless banking all data is secured because all communications generated from the wireless banking services will be strongly encrypted to safeguard customer privacy.
Electronic Clearing Services: - It is simple, reliable and cost effective solution for bulk and repetitive payment transactions like salary, pension, interest, commission, etc. by public or private companies and government departments through banks. Under this system, the companies, which have to make bulk payment to a large number of beneficiaries, prepare the credit instructions on the magnetic media and submit the same to Reserve Bank of India through their banks. RBI processes the data, arrive at inter-bank settlement, provide bank, and branch wise report containing the details of payments to facilitate fast payment to the beneficiaries.

Point of Sales Terminals: - It consists of two key components- computer terminal that is linked on line to computerized customer information files in bank and a plastic magnetically enclosed transaction card that identifies the customer to the computer. During transaction, the customer’s account is debited and the computer for purchase credits the retailer’s account. It may be deduced from the above that the technology in banking has been used in four major ways: -

1. To handle a greatly expanded customer base.
2. To reduce substantially the real cost of handling payment.
3. To liberate the banks from the traditional constraints on time and place.
4. To reduce new products and services.

Gains of E-CRM: - E-CRM if implemented with fullest zeal and favour will delight both customers and the banks.

To the Customers: -

1. No matter where the customer is in the world, on-line banking is just a click away. Balance enquires, requests for services, issuing
instruments, passing instructions, etc. from anywhere in the world are possible.

2. Managing funds in real time and most importantly 24 hours a day and 7 days a week.

3. Convenience acts as tremendous psychological benefits all the time.

4. Brings down the cost of banking to the customer over a period of time.

5. Cash withdrawal from any branch or ATM.

6. On-line purchase of goods and services including on-line payment for the same.

**To the Banks:**

1. Innovative, secure, address competition and presents the bank as technology driven in the modern competitive market.

2. Enable banks to render 24 hour, all the day’s service to customers.

3. Reduces customer visits to the branches and there by human interventions.

4. Excellence in customer services, prompt attention to their needs and quick disposal of grievances.

5. Immediate inter-branch reconciliation thereby reducing chances of fraud and misappropriation.

6. Effective medium of promoting various schemes of the bank.

7. E-banking sites can act as a revenue earner through promotional activities by consumer corporate.

8. Way for individualized and customized services by integrated customer data.

9. Quick decision making at all managerial and executive levels.

10. Faster movement of inventory records.
11. Paper less transactions.
12. Faster realization of money.
13. Better communication, information and coordination.

With the introduction of electronic banking, banks are moving their focus of payment from the physical presence of money to the use of electronic money. Customer can perform banking transactions without having to step into the office or the branch. The bank, which provides value-added services and satisfaction to customers, should be the winner in the market. By way of launching new products, the banks are trying to make the “near” customers to “dear” ones.

5.3 Frauds in Credit Cards Business: - Credit card fraud is one of the biggest threats to business establishments today. In order to combat the fraud effectively, it is important to first understand the mechanisms of executing a fraud. Credit card fraudsters employ a large number of modus operandi to commit fraud. In simple terms, credit card fraud is defined as under:

“When an individual uses another individual’s credit card for personal reasons and while the owner of the card and the card-issuer are not aware of the fact that the card is being used. Further, the individual using the card has no connection with the cardholder or issuer, and has no intention of either contacting the owner of the card or making repayments for the purchases made.”

Credit card fraud can be generally termed as an “Identity Theft”; where a person may use the identity of another person in a manner that amounts to fraud or deception-usually economic in nature. The general definition for
"Identity Theft" and "Identity Fraud" is "Terms used to refer to all types of crime in which someone wrongfully obtains and uses another person's personal data in some way that involves fraud or deception." The term personal data refers to the cardholder's bank account or credit card number and other valuable identifying data.

**Modus-Operandi of Credit Card Frauds:** Credit card is a convenient method of payment, but it does not carry the risk. Despite the precautions taken by the cardholders, credit card or credit card information (personal data) is fraudulently obtained and later on, this credit card information is used to deceive the card-holder, the merchants or the issuing bank. Contrary to popular belief, merchants are far more at risk from credit card fraud than cardholders. While consumers may face trouble trying to get a fraudulent charge reversed, merchants lose the cost of the product sold, pay charge fees back and fear from the risk of having their merchant account closed.

Credit cards frauds are committed in the following ways:

1. An act of criminal deception by use of unauthorized account and / or personal information.
2. Illegal or unauthorized use of account for personal gain.
3. Misrepresentation of account information to obtain goods and / or services.

The methods, which are commonly adopted to comment frauds, are elucidated as under:

**(A)- Theft of Credit card and Stealing Personal Information:** Fraudsters may steal wallet or purse through pick pocketing. They may steal personal information or records, mail, bank and credit card
statements; credit card offers etc. They may look through house waste, the waste of business place or public waste. Global surveys and studies on credit card usage show that one steady source of credit card numbers is the thrown away charge slips. These charge slips have the 16 digit credit card number and the expiry date help the hackers or fraudsters to conduct online transactions. Another method used by the criminals is to get hold of the credit card and take over the credit card account through postal theft. The criminals have agents in the postal services and courier services who will assist them in getting hold of credit cards before they are delivered.

(B)-Credit Card Skimming: - The fraudster may steal credit card number and other credit card related information by capturing the information in a data storage device known as “skimmer”. Credit card skimming is a method by which encoded information from the magnetic strip of a credit card is generated by electronic card reader (skimmer). In the hand of criminals, the electronic reader becomes a handy tool to gather credit cardholder’s information to use in illegal transactions and purchases. Usually, the criminal connects the skimmer to the credit card machine (POS Terminal) or a portable skimmer could be used to swipe the card when one is not looking. At the time of purchase, this information will automatically be stored in the skimmer, which, in turn, will be used by the criminals at a later stage to make unauthorized purchases or encode this information on the magnetic strip of a counterfeit card. Credit card skimming often occurs in business where credit cards are used regularly, such as restaurant and other entertainment venues. In restaurants, one will normally lose sight of his credit card when the waiter takes it to pay the bill.
(C)-Phishing/Bogus Internet website: - “Phishing” also called “carding” or “brand spoofing” is a creation of email message and web pages that replicate existing legitimate site of well-known brands and businesses to trick consumer into divulging personal financial information such as bank or card account number, ATM PIN or other personal identifiers. Phishing occurs from time to time as criminals look for opportunities to steal the information through email or phone by posing as from card issuing bank and claiming that the cardholder has a problem with his account. The stolen data from successful “phishing” activities are then used to commit fraud.

(D)- Counterfeit/ Cloning of Credit Cards: - Some syndicate uses the latest technologies to create more realistic looking credit cards. These counterfeit credit cards will often have a complete hologram and fully encoded magnetic strip. In the counterfeit cards, the hologram is fixed on the top of the card, whereas it is embedded in the plastic during the manufacturing process of genuine cards. These counterfeit cards look like genuine cards with naked eyes.

(E)-Account Takeover: - Once the fraudsters get access to the personal information, they don’t even need your credit card. They call the card-issuing bank and change the address of the genuine cardholder. Then they report to the issuing bank that the credit card has been lost and make request for issue of a new card. The issuer bank then sends the card at the new address and they manage to collect the card by using false identification. The statement of account will be sent to new address and the victim will be unaware of the fraud that is occurring with his card.
Here, the main object of the fraudster is not restricted to usages of the account but to make the best out of it and use every penny available.

**(F)-Frauds through On-line Shopping:** - Most of the frauds are committed through using data, which are obtained while shopping online by the genuine cardholder. Simply punching certain digits in a machine can be enough for a fraudster to memorize and to commit fraud. The sole reason is the growth of technology where a person does not really need to identify himself. A simple example of purchasing air tickets online explains how simple it is to steal someone’s identity. To buy air-tickets, all that a buyer has to do is to put his credit card number in the required place on the website of the air-lines. Any onlooker can simply memorize/note it down and empty the credit card holder’s credit limit and buy as many air-tickets or make as many purchases as the fraudster may like online. No signature is required in this kind of transaction.

**(G)-Third Country Card Misuse:** - Such crimes are rampant in countries like Taiwan and Malaysia. Organized criminals are from third country use counterfeit/fake credit cards; especially in large sized departmental stores. The high value purchase pattern at such stores is done within a day or two and the criminals thereby move out of that country. The merchant establishment suffer huge amount of fraudulent acts.

**Credit Card:** - Credit card is a plastic bearing an account number assigned to a cardholder with a credit limit that can be used to purchase goods and services and to obtain cash disbursements on the credit, for which a cardholder is subsequently billed by an issuer for repayment of the credit extended, at once or on an installment basis.
The following are the terms related to credit card and its personalization:

(1)- **Embossing**: - A system of crediting raised letters and numbers on the face of the card.

(2)- **Encoding**: - A device for recording data on the magnetic strip on the back of the card. The magnetic strip contains data that will tell a reading machine who you are and what your account number is, etc. It is a plastic material with magnetizable power mixed in with it. The strip can be magnetized by exposing it to a strong magnetic field. For security reason, Personal Identification Number (PIN) and account balances are not recorded on the magnetic strip.

(3)- **Chip**: - Chip based credit cards looks the same as traditional magnetic strip cards; but have a microchip embedded. The chip embedded in the card is a security and data storage device programmed to use advanced cryptography to allow components of the payment system, including the terminal and the card issuer, to verify that it is a genuine card and not a counterfeit copy. The chip can store considerable amount of information when compared to the magnetic strip on existing cards.

(4)- **Personal Identification Number (PIN)**: - A Number (confidential in nature) associated with the card that is supposedly known only to the cardholder and the card issuer. This number is used for verification of cardholder identity while transacting business through credit card.

(5)- **Card numbers**: - The numbers found on credit card have a certain amount of internal structure and share a common numbering system.
**ATM Fraud**

Automated Teller Machine is an electronic machine, which is linked to the accounts and records of a banking transaction without visiting bank premises. ATMs are virtual banks, which allows the user to withdraw cash, pay bills, balance inquires, cash deposits etc. The machine is operated with the help of an access device, which is a card, code (PIN), or any combination thereof. Some ATM cards are also called debit cards, which can be used for making purchases. Customers’ account is charged immediately on purchases.

As with my device containing objects of value, ATMs and the systems they depend on to function are the targets of fraud. Fraud against ATMs and people’s attempts to use them takes several forms. They are as follows:

**Fake ATMs:** - The first known instance of a fake ATM was installed at a shopping mall in Manchester, Connecticut in 1993. By modifying the inner workings of a Fujitsu model 7020 ATM, a criminal gang known as the Buckland’s Boys was able to steal information from cards inserted into the machine by customers.

**Operational Fraud:** - In some cases, bank fraud could occur at ATMs whereby the bank accidentally stocks the ATM with bills in the wrong denomination, therefore giving the customer more money than should be dispensed. The result of receiving too much money may be influenced on the card Holder Agreement in place between the customer and the Bank.

There is one case reported by users in Malaysia dated 24 January 2006. ATM behavior can change during what is called “stand-in” time, where
the Bank’s cash dispensing network is unable to access databases that contain account information (possibly for database maintenance). In order to give customers access to cash, customers may be allowed to withdraw cash up to a certain amount that may be less than their usual daily withdrawal limit, but may still exceed the amount of available money in their account, which could result in fraud.

**ATM card fraud:** For a low-tech form of fraud, the simplest is to simply steal a customer’s card. In this scenario, the user’s PIN is observed by someone watching as they use the machine; they are then mugged for their card by a second person, who has taken care to stay out of range of the ATM’s surveillance cameras. However, this offers little advantage compared to simply mugging the victim for their money, and carries the same risks to the offender as other violent crimes.

A later variant of this approach is to trap the card inside of the ATM’s card reader with a device often referred to as a Lebanese loop. When the customer gets frustrated by not getting the card back and walks away from the machine, the criminal is able to remove the card and withdrawal cash from the customer’s account.

The Lebanese Loop could also be combined with the Droplet method of stealing the PIN, where small drops of oil are placed on the PIN pad keys. After a customer used the ATM, one can see which keys were pressed, which makes it easier to guess the entered PIN. A simple counter measure to this attack is to wipe the PIN pad before or after each use. Another simple form fraud involves attempting to get customer’s bank to issue a new card and stealing it from their mail.
Chapter 5

**Cloning:** - The concept and various methods of copying the contents of an ATM card’s magnetic stripe on to a duplicate card to access other people’s financial information was well known in the hacking communities by late 1990.

In 1996 Andrew Stone, a computer security consultant from Hampshire in the UK was convicted of stealing in excess of 1 million pounds by pointing high definition video cameras at ATMs from a considerable distance, and by recording the card numbers, expiry dates, etc. from the embossed detail on the ATM cards along with video footage of the PINs being entered. After getting all the information from the videotapes, he was able to produce clone cards which not only allowed him to withdraw the full daily limit for each account, but also allowed him to sidestep withdrawal limits by using multiple copied cards. In court, it was shown that he could withdraw as much as 10,000 pound per hour by using this method. Stone was sentenced to five years and six months in prison.

By contrast, a newer high-tech modus operandi involves the installation of a magnetic card reader over the real ATM’s card slot and the use of a wireless surveillance camera or a modified digital camera to observe the user’s PIN. Card data is then cloned onto a second card and the criminal attempts a standard cash withdrawal. The availability of low-cost commodity wireless cameras and card readers has made it a relatively simple form of fraud, with comparatively low risk to the fraudsters.

**Combating Stolen Cards and Information:** - In an attempt to stop these practices, countermeasures against card cloning have been developed by the banking industry, in particular by the use of smart cards which cannot
easily be smart cards which cannot easily be copied or spoofed by unauthenticated devices, and by attempting to make the outside of their ATMs tamper evident. Older chip-card security systems include the French carte Blue, Visa cash, Mondex, Blue from American Express and EMV 96 or EMV3.11. The most actively developed form of smart card security in the industry today is known as EMV 2000 or EMV 4.x.

EMV is widely used in the UK (Chip and PIN) and parts of Europe, but when it is not available in specific area, ATMs must fallback to using the easy to copy magnetic strip to perform transactions. This fallback behavior can be exploited.

**Benefits of Electronic-Banking:** E-banking has been helpful for various sections of the society. They are:

**A-To the Customer:**

1. **Anywhere Banking:** Customer can open an account in one part of the country and still have access to his account not only from the branch where he opened account but also from any other part of the world.
2. **Anytime Banking:** Customer can bank at any time (24 hours a day, 7 days a week).
3. Cash/card free banking through PC banking.
4. Avail bank service at cheaper charges since, e-banking reduces cost over a period of time.
5. Cash withdrawal from any branch/ATM.
6. On-line purchase of goods and services including on-line payment for the same.
7. Convenience acts as a marvelous psychological benefit all the time.

(B)- To the Bank:

1. Reduces human intervention by reducing customer visits to the branch.
2. E-banking provides competitive advantage to the bank.
3. E-banking provides unlimited network to the bank through which it can provide banking facility to the customer.
4. Any ATM on the roadside can provide the cash withdrawal needs of the customer.
5. Scope and potential for better profitability through (ATM) better monitored and planned by establishing a centralized data warehousing and using largest data mining tools.
6. Chances to reduce fraud and misappropriation by inter-branch reconciliation.
7. Possibility of effective promotion of various schemes of the bank.
8. Retention of existing customers and attracting potential customers by better customer relationship management, which is possible through e-banking.

Benefits to Making EFT Payments:

1. Allows you to pay your taxes automatically from your bank account.
2. Eliminates the need to write cheques.
3. Simplifies the payment of taxes.
4. Saves your time and money on postage and mailing cheques.
5. Ensures timely tax payments.
6. Deducts tax payments from your account on the day you specify.
7. Eliminates the risk of your payments being lost in the mail.
8. Ensures that payments can be located.
9. Provides security and confidentiality for all transactions.

5.4 Risks of Electronic-Banking:

E-Banking is beneficial to all sections of the society, but there are certain risks which have to be taken care by the management, they are:

(1) Operational Risk: - New technology is helpful to provide bank services through electronic media but it has significant implications on banks’ operations. The operations risk arises from fraud, processing errors, system disruptions, or other unanticipated events resulting in the institutions inability to deliver products or services. This risk exists in each product and service offered. The level of transaction risk is affected by the structure of the institution’s processing environment, including the types of services offered and the complexity of processes and supporting technology. For providing bank services through electronic media requires some changes in the procedures followed by the bank for efficient management of e-banking risks in the areas of security, data confidentiality, data system integrity, system availability and outsourcing.

(2) Reputation Risk: - Banks open themselves to reputational risks if they are unable to practice to provide a consistent, timely, high standard service in accordance with expectations they have set for the customer
base. In addition to system availability and integrity, branches in data confidentiality and any other glitches to the security of operations can damage a bank’s reputation.

(3)-**Legal Risk**: - E-banking does not have boundaries. Virtual banks can expand their business beyond geographical boundaries faster than traditional banks. In some cases the banks might not be fully prepared and lack of sufficient resources to become entirely familiar with the local laws and regulations before they begin to offer services in a new jurisdiction.

(4)-**Security Controls**: - The security challenges to E-banking services are greater than those of conventional banking services. They require more specific attention by bank management.

**Barriers of Electronic-Banking**: -

1. The Lack of proper commercial and legal systems for doing business through the web.
2. The Lack of strong national telecom, hardware and software infrastructure which will make fast, reliable access to the Internet at a lower cost.
3. Lack of policy from the banks regarding the conduction of business electronically.
4. Lack of secure payment system.
5. Lack of system that allows for cross-border E-commerce transactions.
5.5 **Consumer in Banking Sector:**

In order to survive, commercial banks have to seek business by aggressively marketing their products. Product differentiation is often employed as a major technique to survive in competitive market. Since product differentiation on the interest front and service charges is ruled out for Indian banks, it appears that banks have to improve the quality of services.

In order to mobilize more deposits and attract customers to use the services of a particular bank, that bank has to necessarily differentiate its customer services from other banks and to offer better customer service means satisfying the needs of customers, at right time, and in a right manner. It is necessary that bankers tailor their services to the needs of customers and not vice versa. A large portion of customers’ complaints arises because of the disparity between customer expectation and bank services.

Products offered by banks have been changing over years, particularly in recent years. These products are getting refined and revised in the light of customer need, but not promptly enough or adequate and hence dissatisfaction arises. There are abnormal delays in receiving payments and customers have to wait indefinitely without anybody attending to them properly at the counter. Even the issue of cheque book takes twenty to thirty minutes because the officer is always busy with cheques, vouchers and registers. Updating of pass book also takes long time. Delivery system for customer services comprises of five elements i.e. Speed, Timeliness, Accuracy, Courtesy and Concern.
Causes for Customer Dissatisfaction: - There are various reasons caused by customer dissatisfaction. They are:

1. Delay and inaccuracy in putting through transactions;
2. Delay and inadequacies in correspondence;
3. Delayed, faulty and unhelpful decision-making;
4. Absence of elementary discipline;
5. Undue emphasis of staff in observance of rules and procedures;
6. Inconvenience associated with credit apprehension;
7. Lack of uniformity in bank charges;
8. Customers being viewed as a faceless unit; and
9. General attitude of unconcern and apathy for clients.

Reasons for Deterioration in Customer Services: -

1. Since nationalization of fourteen major scheduled commercial banks, have not only extended the branch network to rural and non-banking areas, but also expanded and diversified their business at a dramatic speed by covering a huge number of people even in the remote corners of this vast country. This has caused an enormous strain on banks in terms of manpower facilities, system and procedures and management capabilities leading to customer services falling behind customer expectations.

2. Customer expectations is the most important factor in customer services have increased enormously and in a variety of ways in recent times because of growing awareness among the bank customers, social responsibilities caste on the banks.
3. Attitudes of staff impinge most significantly on the services rendered, but bank employees are not oriented to the desired extent to be helpful to the customers.

4. Management deficiencies have also contributed to unhelpful employees’ attitude and ignored systematic efforts for improvement in customer services through expansion of training and implementation of latest concepts in bank management.

5.6 Core Banking Services of Indian Banks:

Now a day’s banks are more and more zealous for providing Core Banking services in India. From practical point of view there is much to be achieved for implementing international standard as conditions of various Banks are different in nature viz., infrastructure, capital adequacy and human relation norms.

Last year, the aggregate total income of 10 private sector banks increased by 51.7% besides an increase in fee based income by 41.7%, whereas Public Sector Banks could not step to the desired level. Mr. J.N. kapur, President of State Bank of India Shareholder’s Association, suggested remedial measures to the central Board of State Bank for improving efficiency and augmenting profitability.

1. To make the Bank as Global Bank and No. 1 bank of Asia.
2. To increase the profitability of the bank.
3. To increase the value of the shares of the investors by declaring higher dividend, bonus shares and right shares.
4. To eradicate corruption in the Bank
5. To control wasteful expenditure at all levels.
6. To check indecisiveness i.e. policy of ‘Refer & defer’ at various levels of administration.

7. To provide efficient, courteous and speedy customer’s services.

8. To eradicate restrictive practices at various levels of functioning of the Bank.

9. To avoid wasteful and unproductive litigation of all type.

During the course of deliberations Shri Kapur surprised that State Bank of India could not maintain even two digits growth during the years 2005-06, 2006-07. Even the fee based income of State Bank of India decreased by 22.4%, whereas private Bank ICICI Bank showed an increase of 41.8% in fee based income. Shri Kapur further warned about unchecked frauds and suggested to incorporate huge amount of frauds in Annual Reports of the Bank.

While analyzing the grievances of the constituents of the Bank it was felt that it differs from Bank to Bank but the common observed problems are:

- Lack of connectivity during peak hours which means Central Server cannot take full load of Bank’s transactions.
- Customers have to wait and stand in long queues on account of slow rate of disposal.
- Lack of proper technical trained staff at various branches resulting in dislocation of work and delay in service.
- Non-attending of complaints or faults by so called ‘trusted’ assigned agencies at branch level.
- Pass book printers often do not work properly and regularly.
- The untrained officers are posted at the branches as Branch Managers who do not possess required knowledge of modern
system of 'Core Banking', causing day by day problems for the customers. Even fast changes in the CBS system do not reach to the dealing operating staff on time.

Now it is for the Apex Bank i.e. Reserve Bank of India to examine the working of the core banking system in order to bring it at par with International standard.
REFERENCES


