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CHAPTER-I
INTRODUCTION

In the present era of revolution in information technology, the economic setup of every country has witnessed tremendous changes in their respective working. The banking sector too has not remained untouched and unaffected by these changes. It has introduced several new processes, as E-banking and innovated its day-to-day functioning.

Today’s banking is virtual or innovative banking which denotes the provision of banking and other related services through the extensive use of Information Technology (IT), without direct resource to the bank by customers. The salient features of Innovative Banking are overwhelming reliance on IT and the absence of physical bank branches to deliver banking services to the customers.

E-BANKING

E-Banking refers to performing basic banking transactions by customers round the clock globally through Electronic Media. In other words, E-Banking is the application of IT infrastructure with latest equipment and solutions and integrated networks essentially to facilitate smooth and efficient payment and settlement, improved customer service and the resultant increase in profitability.

Modern banking is more information based, speedy and boundary less due to the impact of Electronic Revolution. Modern banks have to be well-versed in Information Technology - its uses and applications. Banking divisions have to be IT based, with the spread of digital technology. E-banking is more of a science than an art. E-banking is knowledge based and mostly scientific in using electronic devices of the computer revolution. When
most business and commerce enterprises tend to become internet working organizations, banking has to be E-banking in the new century.

### Figure 1: Processing of E-Banking

#### Difference Between Traditional Banking And E-Banking

<table>
<thead>
<tr>
<th>Traditional Banking</th>
<th>E-Banking</th>
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<tbody>
<tr>
<td>1. In Traditional banking the customer has to visit the branch of the bank in person to perform the basic banking operations Viz., accounts enquiry, funds transfer, cash withdrawals, etc.</td>
<td>1. E-banking enables the customers to perform the basic banking transactions by sitting at their office or at home through PC or Laptop. The customers having an access to the banks website for viewing their account details and perform the transactions on account as per their requirements.</td>
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<tr>
<td>2. The brick and mortar structure of a bank is essential to perform banking functions.</td>
<td>2. With E-Banking, the brick and mortar structure of traditional banking gets converted into a click and portal model thereby giving a concept of virtual or innovative banking a real shape.</td>
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<tr>
<td>3. These are confined to Branches with less delivery channels.</td>
<td>3. E-Banking is no longer confined branches. Customers are being provided with additional delivery of channels which are more convenient</td>
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Introduction to E-Banking

Traditional Banking | E-Banking
---|---
to the customers and are cost effective to the banks. These delivery channels include ATM, Tele Banking, Internet Banking, Mobile Banking, Home Banking, etc. | 4. Banking transactions are conducted only in the banking hours and that too in the same building.

4. E-Banking facilities banking transactions by the customers round the clock globally.

5. Traditional banking is an art. | 5. E-Banking is more of a science than art. E-Banking is knowledge based and mostly scientific in using the electronic devices of the computer revolution when most corporate tend to become internet working organizations, banking has to be E-Banking in the new century.

ASPECTS OF E-BANKING

E-Banking means the conduct of banking operations electronically. It calls for elimination of paper based transactions and radical change in the banking operations. E-banking will operate through internet, extranet and internet. E-banking is, therefore, a banking on the information super high ways on the frontier of the internet. E-banking must have the following dimensions.

(i) **Easy Access to Customers:** E-Banking is basically Internet based. Banking products and services such as deposits, remittances, credit cards, etc., as well as all important banking information can be made available with easy access to customers on internet. Thus, E-banking is a customer-to-bank service. Customers can make use of these services with no restricted office hours, no queues, no tellers and no waiting. Several network innovations for E-banking can be visualized such as smart card, electronic data, interchange, etc. Of course, the banking
operations have to be guarded against unauthorized access by intruders.

(ii) **Inter-bank Transactions:** This form of electronic banking is for transacting inter-bank transactions such as money-at-call etc. In other words, it is a bank-to-bank service. This type of E-banking is driving extranets, which is restricted to banks only. Hence, it is well secured and unauthorized access is less.

(iii) **Electronic Central Banking:** Under electronic central banking, all banks, within the purview of a central bank, are interconnected on extranet to facilitate clearing of cheques, management of cash reserves, open market operations, discounting of bills etc. In fact, the Central Bank has to be connected with the government treasury on extranet to carry out its functions as an agent of the government. Again, the central banks of all the countries can be inter-linked with I.M.F., World Bank and other international financial institutions through extranets.

(iv) **Intranet Procurement:** For the transactions that are internal to a bank, between the banks and its branches and subsidiaries, Intranet procurements of banking is required. On the other hand, Extranet permits a bank to have full control over the users of intranet and the information to be transmitted.

**The Extranet-Intranet-Internet relationship** that exists in the process of E-banking has been shown in the following figure:

![Figure 2: Micro Model of E-Banking](image-url)
Extensive work is required to integrate internal and external communication of bank-related information through banking internet and intranet for the development of the financial sector.

**SIGNIFICANCE OF E-BANKING**

E-Banking has the following advantage:

(i) **Convenient Banking:** E-banking increases the customer’s convenience. No personal visit to the branch is required. Customers can perform basic banking transactions by simply sitting at their office or at home through PC or LAPTOP. Customers can get drafts at their doorsteps through email. Thus, E-banking facilitates home banking.

(ii) **Quality Banking:** E-banking opens new vests for providing efficient, economic and quality service to the customers. It allows the possibility of improved quality and an enlarged range of services being made available to customers.

(iii) **Round the Clock Banking:** E-banking facilitates performing of basic banking transactions by customers round the clock globally. Worldwide 24 hours and 7 days a week banking services are made possible. In fact, there are no restricted office hours for E-banking.

(iv) **Service Banking:** E-banking creates strong basic infrastructure for the banks to embark upon many cash management products and to venture in the new fields like E-commerce, FDI etc. Instant credit, one day credit, immediate payment of utility bills, instant transfer of funds etc; would be made possible under E-banking. In short, it adds convenience to the entire banking services apart from widening the range of services.

(v) **Low Cost Banking (Service):** With the coming into existence of E-banking, the operational costs have come down due to technology adoption. The cost of transactions through internet banking is much less than any other traditional mode.
(vi) **Low Cost Banking (Establishment):** Brick and mortar structure of banking gets converted into click and Portal banking. Banks can have access to a greater number of potential customers without the commitment costs of physically opening branches. Thus, there is much saving on the cost of infrastructure. Moreover, requirements of staff at the banks get reduced to a greater extent.

(vii) **Speed Banking:** The increased speed of response to customer requirements under E-banking will lead to a greater customer satisfaction and handling a larger number of transactions at a lesser time. Thus, it increases the customers’ convenience to a greater extent and facilitates better customer retention.

(viii) **Profitable Banking:** The increased speed of response to customer requirements under E-banking vis-a-vis branch banking can increase satisfaction and, consequently can lead to higher profits via handling a large number of customer accounts. Banks can also offer many cash management products for the existing customers without any additional cost.

From the above it is clear that E-banking has showered many benefits to the customers, banking system and others.

**IMPEDIMENTS OF E-BANKING**

Although E-banking has provided many advantages, however, the following factors contribute as major constraints in the smooth implementation of E-banking.

1. **Initial Cost:** Many banks have expressed their concern about the huge initial start-up cost for entering into E-banking. The start-up cost includes the following: (i) The connection cost to the internet or any other mode of electronic communication. The network should be robust, secured, efficient and scalable with inbuilt redundancy; (ii) The cost of
sophisticated hardware, software and other related components including Modem, Routers, Bridges, Network Management system etc.; (iii) The cost of maintenance of all equipments, websites, skill level of employees etc.; (iv) The cost of setting up organizational activities to implement E-banking.

For a successful E-banking, bankers need to develop a coherent perspective of the role of network technologies and advancement of their EFT-departments with a competitive introspection of their banking business.

(2) **Training and Retention of Staff:** The introduction of E-banking involves 24 hours support environment, quality service to end-users and other partners which would necessitate a well-qualified and robust group of skilled persons to meets external and internal commitments. Hence, the bank has to spend a huge amount on their training. In this connection, what is more important is their retention in the organization after imparting necessary training. Moreover, the bank has to outsource certain functions and services to maintain the level of standards and state of readiness. The training and retaining of skilled manpower is a major source of concern.

(3) **Shortage of Skilled Personnel:** It is a well known fact that there is scarcity of web developers, content providers and knowledgeable professionals to route banking transactions through internet. In a fast changing technological scenario, the obsolescence of technology is fast and hence there is always a paucity of skilled personnel.

(4) **Restricted Business:** All the transactions cannot be carried out electronically. Many deposits and some withdrawals require the use of postal services. Some banks have automated their front-end process for the customers, but still largely depend upon manual processes at the backend. For example, the Internet customers receive their statements
online, but paper statements are also sent by mail. Mail and distribution costs are still necessary as the statements, cheques etc. are still mailed.

(5) **Restricted Clientele and Technical Problems:** The user of E-banking needs a computer and time to log on the site. It means that target clientele is restricted to those who have a home PC or can access the ‘Net’ through the office or cyber-cafes. Moreover, phone connections are not always perfect and, on a home PC, the modern connection often breaks off, requiring another tedious log-on. Navigating around websites on home computers is often slow and frustrating. Moreover, local calls are not free generally and so the customer has to pay everytime he checks his balance.

(6) **Legal Issues:** Legal framework for recognising the validity of banking transactions conducted through ‘Net’ is still being put in place. Although initial legal framework has been devised for E-banking activities, it is uncertain as to what legal issues may prop up in future as banking on internet progresses. What may happen if a customer’s sensitive data falls into the hands of a stranger or if his account shows a ‘Nil’ balance all of a sudden without his knowledge? The legal issues should cover unauthorized access, and an unauthorized modification of data, wrongful communication, punishment to be meted out to combat computer crimes. To prevent computer crimes, the country’s banking legislation needs to make suitable provisions with a thorough consultation and discussion among the legal as well as technical experts.

(7) **Appropriate Security:** Many problems of security are involved in paper less banking transactions. A security threat is defined as a circumstansive decision or event with potential to cause economic hardship to data or network resources in the form of destruction, disclosure, modification of data, denial of services, fraud, waste and abuse. There are chances that documents such as cheque, pass book etc. can be modified without leaving any visible trace. Distortion of
informations are also possible. Providing appropriate security may require a major initial investments in the form of application encryption techniques, implementation of fire walls etc. Inspite of implementation of several security measures, the possibility of a security breach cannot be ruled out.

(8) **Destruction of Pricing Mechanism:** It may be possible that the Internet may destroy the basic business pricing models. The internet creates perfect market conditions where prospective consumers have access to more information and can more readily compare rates and financial products offerings. Now, players in the field have lower costs than old banks. Hence, they can undercut the prices and provide stiff competition to established banks.

Moreover, banks marketing programmes and products are generally based on product or physical location. The web allows customers to easily compare all the products and their prices and sign-up for the products irrespective of location.

From the above description it is clear that there are many hurdles in the successful functioning of E-banking, particularly the start-up cost, expenses on the training of personnel, legal issues etc.

**CORRECTIVE MEASURES**

Most of the problems discussed above are in the nature of teething problems and hence the same can be eliminated over a period of time. However, for venturing into E-banking, the following controls and corrective measures must be ensured:

- **Authenticity Controls:** These are required to verify identity to individuals like password, PIN etc.

- **Accuracy Controls:** These are needed to ensure the correctness of the data flowing across the network.
Completeness Controls: These controls are required to make sure that no data is missing.

Redundancy Controls: These controls are essential to see that data is travelled and proceeded only once and there is no repetitive sending of data.

Privacy Controls: These are needed to protect the data from inadvertent or unauthorized access.

Existence Controls: These controls are required to make sure that ongoing availability of all the system resources will be the same throughout.

Audit Trail Controls: These are needed to ensure keeping chronological role of events that are occurred in the system.

Efficient Controls: It is also desirable to ensure that the system uses minimum resources to achieve desired goal i.e. increase in efficiency.

Fire Wall Controls: These controls are essential to prevent unauthorized users accessing the private network which are connected to Internet.

Encryption Controls: These controls are needed to enable those who possess secret key to decrypt the cyber text.

INNOVATIVE BANKING (E-BANKING AND VIRTUAL BANKING) IN INDIA

In India till the ‘eighties’, the banks were operating in a protective environment characterized by administered interest rates, high level of pre-eminences in the form of reserve requirements and directed credit. Banking sector reforms were initiated in 1992 against the backdrop challenges faced by Indian banks from within and outside the banking system in the country as well as forces of globalizations operating world-wide. The accent to the reform process was to improve productivity and efficiency of the financial system.
Keeping in view this reform process the introduction of Innovative Banking was initiated. Introduction of information technology and communications networking system was set to change the operating environment of the banks drastically. Technology has already enabled some of the banks to introduce innovative products to their customers in the form of ATM facility, tele banking, home banking, ‘any time’ and ‘anywhere’ banking etc. While introducing innovative banking the following efficiency motives have been considered.

- **Organizational Structure:** With a view to reaping full benefits of liberalization, the organizational structure of the banks need to be studied carefully. In this context, the chain of command needs to be shortened with adequate authority delegated to the branches. This would also help to enhance efficiency.

- **Adoption of Proper International Systems:** In addition to the organizational structure, adoption of proper internal systems and methods can greatly help in efficient functioning of the banks.

- **Human Resource Development:** Another issue that assumes importance in improving the efficiency of the banks is the human resource development. Recruiting the right people, training/retraining them on a continuous basis, keeping in view the changing government and increasing complexities and having a remuneration/incentive structure conductive to keeping their moral high, are considered integral part of the process.

- **Consumer Service:** Another significant motive determining the efficiency and competitiveness is the customer service. The realization that customer service satisfaction is essential for survival and growth has dawned on all the banks. The banks that will emerge as the winners in the impending era will be truly customer-centric banks.
Progress: With reference to the above context it may be mentioned that Virtual Banking has made some beginning in the Indian banking system, (i) ATMs have been installed by almost all the major banks in major metropolitan cities, (ii) The shared payment Network system (SPNS) has already been installed in Mumbai and (iii) Electronic Funds Transfer (EFT) mechanism by major banks has also been inititated. (iv) The operationalization of the Very Small Aperture Terminal (VSAT) is expected to provide a significant thrust to the development of Indian Financial-NET Work (INFINET) which will further facilitate connectivity within the financial sector.

The popularity which virtual banking services have won among customers, owing to the speed, convenience and round-the-clock access they offer, is likely to increase in the future. However, several issues of concern would need to be pro-actively attended. While most of electronic banking have built-in security features such as encryption, prescriptions of maximum monetary limits and authorizations, the system operators have to be extremely vigilant and provide clear-cut guidelines for operations. On the larger issue of electronically initiated funds transfer, issues like authentication of payments instructions, the responsibility of the customer for secrecy of the security procedure would also need to be addressed.

MAIN INSTRUMENTS OR FACILITIES PROVIDED BY E-BANKING / INNOVATIVE BANKING

- **Computerization:** Now-a-days almost all banks have computerized their operations. Besides, all banks in different countries are inter-linked with each other through internet. This mechanism has facilitated easy remittance of money not only inside the country but also to any part of the world through the press of button. Money can be transferred from one account in one branch to another account in another branch of the same bank or a different bank.
After the introduction of computers, M.T. (Mail Transfer) and T.T. (Telegraphic Transfer) have lost their significance. It is so because computers have facilitated speedy remittance of funds from one end to another in a moments notice. Thus, it minimizes the loss of interest since money is transferred instantly from one end to another. Moreover, it facilitates transfer of money from one branch of a bank to another branch of a different bank also which is not possible in the case of M.T. or T.T.

Recently arrangements have been made to pass on messages either general or specific through Satellite facility. For instance banks all over the world are inter-linked with satellite maintained by SWIFT (Society for Worldwide Inter-bank Financial Telecommunications) in Europe. In India, Gateway, Bombay, maintained by the computer Maintenance Corporation of India is its agent. Those banks which want to enjoy this satellite facility in India can open SWIFT centres with Gateway, and thus, all the banks in the world are inter-linked with each other. Any general information like foreign exchange rate movements or specific information like remittance of money, or opening of Letter of Credit or making forfeiting arrangements can be passed on to the banks concerned or to all the banks as a whole as the case may be in a moment’s notice through this satellite arrangement.

Banks have also introduced mechanized cheque clearance using magnetic ink character recognition (MICR) technology. Banks are also in the process of setting up exclusive data communication network for banks known as BANKNET. Banks are now switching to Personal Computers (PCs) and LAN/VAN systems. The Reserve Bank has put-in place Electronic Funds Transfer (EFT) system, Delivery Vs. Payment (DVP), Electronic Clearing Services (ECS) and RBINET. It has also taken steps to set up a Very Small Aperture Terminal (VSAT) Network which will cover all banks and financial institutions to serve as a number of tasks like MIS, data warehousing, transaction processing, currency chest accounting, ATMs, EFT, EDT, Smart/Credit cards, etc. It will cover 2,800 centres soon.
ATM Facility: The introduction of Automated Tellers Machines facility is an important step in the banking sector. The leading banks of the country have established ATMs, not only in their head offices but also at the branches, to provide twenty four services to their customers so that they may be able to have transactions in money. The customer, who possesses the ATM card, can go to the ATM branch of the bank and can withdraw any amount from his deposited money. He can also deposit any amount in the bank with the help of ATMs.
**All Day Banking:** Some banks provided the facility of all day banking. Under this scheme the bank remains open for transactions on all the seven day, including sundays and Government holidays. The customers take full advantage of these facilities.

**Anywhere Banking:** This is another facility provided by the banks. Under this provision, the bank customers have the option to have transaction at any branch or place, including branches outside the country. Thus, a person anywhere in the country or in a foreign country can withdraw or deposit his/her money with the branch of the bank, where he has account.

**Net Banking or ‘On Line Banking’:** In the field of information technology, the internet has brought a tremendous revolution all over the world. The banking sector has also not remained untouched by it. The internet has helped the banking sector to provide its services very rapid and fast. This new or changed form of providing this fast service is known as Net Banking or ‘On Line Banking’.

![Figure 5 : Net Banking Technology](image-url)
Under Net Banking, the customer is not required to go to any counter of the bank. He has simply to open his Personal Computer (PC) will click the website of the bank, put down his account card there, do the entry of some of his transactions (deposits and withdrawals) and will do O.K. by pressing enter. Further the bank will do the needful job. Thus, the concerned customer, in this way, will be able to finish his job in minutes rather than in hours and will be able to save his labour and cost.

The Net Banking is not only fast but also cheaper. A study in U.S.A. reveals that the cost of operation of the account in Net Banking one-fifth of a dollar. Further the Net Banking has also broken the geographical boundaries. You can now operate your account anywhere in the world and can transfer your money within no time. Money deposited in a foreign bank in any foreign country can be collected in any city in India through internet or ‘On Line Banking’. Thus, the future of ‘Net Banking’ is Very bright in an underdeveloped country like India.

Net Banking is very popular in European countries and U.S.A., where it started functioning about 15 years back. But in India its origin is recent and it is considered to be the gift of millennium. The banks who have started network, are ICICI Bank, Global Tourist Bank, IDBI, and some other banks. The public sector banks are also preparing themselves to come in this field. So far State Bank of India, Canara Bank, Union Bank, etc. Have initiated their functioning in this direction. Besides the Indian branches of foreign banks have also providing this facility.

**Mobile Banking or M-Banking:** Mobile Banking or M-banking refers to that of banking system where a person, sitting miles away, can enquire and check his saving account and can do transactions with the help of his mobile phone. The beginning of M-banking is a significant step from the side of Innovative Banking.
Here it may be mentioned that a beginning has been made for converting internet portals into mortels for this technological change. The internet service givers, Cellular Operators, Telecommunication companies, E-Commerce Enablers, Mobile Phone Manufacturers and Networking Companies have engaged themselves to shape their basic structure into wireless form. HDFC, IDBI and ICICI have already given a wireless to their infrastructure.

**Operational Process of Mobile Banking:** In M-banking the customer sends his message to the bank through his cell-phone by using short-cut Messaging Service (SMS) technology. Within 12 to 18 seconds the answer of the message is received on the screen of the cell-phone. This service is available both for the credit card holders and bank account. The services included in it are present balance in the customer’s account, order for the stoppage of payment on a cheque and the changes in the credit limit of the account. The
customer has only to type the standard keywords on his cell-phone such as ‘I’ for IDBI bank, ‘CCHQ,’ for cheque book, ‘BAL’ for balance. Suppose your Bank is IDBI, then for knowing your balance you have to type ‘IBAL’ in your cell-phone. Thus, this type of facility is available to a customer during his travel, or without coming over to the bank he comes to know the details of his financial position.

The speedy growth of M-banking is the need of the time. More hopes are also centralized on mobile phones, because mobile phone holders are more in number in the country as compared to Personal Computer (PC) and LAPTOP holders. The other merit of mobile phone is that one can carry it along with him/her, whereas the PC and LAPTOP cannot be carried anywhere and everywhere.

A question-mark which is attached to both the Mobile banking or Online banking is the problem or question of security i.e. the fear of hacking and tempering of data. Secrecy is the essence of banking transactions. The security products both hardware based on application software based, should address the twin issues of taking care of customers interests and also ensure secure funds transfer.

- **Wireless Application Protocol (WAP):** Cellular phone operators are forwarding towards the new technology of wireless Application Protocol. This is an important step towards converting information-based service to transaction based service. Thus, WAP is a technique which helps banking transaction with the help of mobile phone. WAP is such a standard which makes it possible for internet access through WAP-enabled instruments and mobile phone, Palm Top, Personal Digital Assistant, Digital Diary etc. SMS is similar to that of E-mail whereas WAP provides internet on mobile phone. Although SMS is considered to be cheap and slow-speed service yet WAP is more
favourable to customers, because it makes the real transaction possible and graphics can be downloaded in it. In this context ICICI has already started an other interesting banking service known as ‘Bill junction Com’ and the ICICI bank claims it is a first Online Bill presentation and payment service.

The WAP website provides all the account holders of the banks the facility to present their respective electricity, water and telephone bills on the internet and also provides the service of payment: through their bank accounts.

Critics are of the opinion that Online Banking or Net-Banking has the chance of more success as compared to WAP banking. In support of their opinion they are argue that M-banking will consume more time of the consumers and also not more comfortable to the customers because the screen size of the mobile phone cannot be enhanced.

- **Credit Cards:** Banks have recently introduced the credit card system. Credit cards are issued to good customers having a certain minimum income and having current or saving accounts, free of; charge. The credit card enables a customer to purchase goods or services from certain retail and service establishments upto certain limit without making immediate payment. The establishments get paid by the bank operating the plan. The bank assumes the risk and responsibility of collecting the dues from the customers. Here it may be mentioned that the card holder is required to pay neither an interest to the bank nor a higher price for goods purchased; he pays only a fee to the bank for the facility. Thus, through credit cards the banks have found the way of deploying the surplus /unused funds; thereby they have started gaining by interest, service charges etc.
The cost of arrangement is met from the increased sales which result from the use of the credit cards. The card issuing bank pays to the seller as soon as goods are sold but charges the buyer after 30 to 45 days. The bank also bears the risk that the card holder might default. For all this, the bank gets commission from the seller which is about 2.5 to 5 percent of the value of goods sold. The gain of the bank is the extent of commission from the seller minus the risk and interest factors, and administrative and advertising expenses. In addition the banks earn by way of initial, annual, add-on and re-issue fees from the prospective card holders. There are significant differences in the fees charged by different banks. The cards are usually used by elite corporate executives, businessmen, persons belonging to middle income groups and so on. They are usually used to buy consumer durables and certain services at establishments such as shops, hospitals, nursing homes, departmental stores, hotels, railways, petrol stations and so on.
Operational Procedure of Credit Cards: Each credit card bears the specimen signature of the holder and is embossed by the issuing banker with the holder’s name and address. The establishments, on presentation of the card, delivers the goods or provides the services. The supplier places the card in a special ink printer machine to record the holder’s name and number on a sales voucher to which are added the particulars of the transaction. The holders signs the voucher and the signature is compared by the supplier with that on the card. The voucher is then sent to the bank which pays it after deducting its service charges. Once in a month, the bank sends a statement of all the credit purchase in the previous month to the credit holder and the latter has to remit the amount either by cash or by cheque.

Credit through Credit Cards: The competition in the banking industry in marketing cards provides ample opportunity to consumers in making use of credit/debit cards. The opportunity created by this chance contributes to consumers making credit card choices without giving much weightage to the high probability that they will pay interest on their outstanding balances. Consumers pay a little or no attention to the risk involved with credit cards for the sake of ease of use and hope that they will have the time and ultimately the money to pay off their cumulated credit.

Although credit cards are available with interest rates ranging from 9 per cent to 15 per cent, most of the consumers use credit cards with interest rates as high as 18 per cent or more. Another important factor that consumers don’t consider much is that the annual fees/service charges vary from bank to bank. These factors could make a significant difference to the use of the credit cards by consumers. In addition, some customers are ignorant about how to transfer balances from cards with higher rates to cards with lower rates. Consequently, major credit card issuers are persistently earning from three to five times the ordinary rate of return in banking.
Credit Cards Create Credit: Though credit cards replace the use of cash and provide overdraft facility and additional borrowing power, the cardholders can make use of such facilities only if they agree to pay interest and other charges. The spending power of the cardholder depends on the drawing capacity. Credit cards are the key to the opening of bank account for daily payment by the cardholder. Overdraft facility is also available in the range of Rs. 2000 to Rs. 10,000 or more, depending upon the credit worthiness of the cardholder.

OBJECTIVES OF THE STUDY:

- To study and analyze Growth, Trends & Emerging Issues of E-Banking services in India.
- To determine Customer Perception & Employee Perception of selected Public Sector Banks & Private Sector Banks towards E-Banking services.
- To examine the Productivity of selected Public Sector Banks & Private Sector Banks which are providing E-Banking services.
- To assess the Profitability of selected Public Sector Banks & Private Sector Banks which are providing E-Banking services.
- To Calculate the Co-efficient & Correlation between Productivity, Profitability & Customer Satisfaction.
- To prepare a model which contains Micro Economic Variable to enhance the customer satisfaction of E-Banking services.
- To determine usage and reasons for preferring e-banking services.
- To have an insight into the attitudes and behaviors of customers.
- Studying the psychological aspects of Indian customers which stop them from shifting towards internet banking.
- Suggesting ways for making E-Banking in India successful.
RESEARCH HYPOTHESIS

It is indeed essential to emphasize the fact that the Indian culture is different from the countries where previous research was conducted. The researchers predicted that the familiarity and economic benefits of using the Internet has a significant impact on the acceptance of online banking. If the customers are not used to accessing the Internet frequently, and if they do not trust the Internet as a secure environment to conduct financial transactions, then it is nearly impossible for them to accept online banking. Therefore, the following hypotheses were adopted:

Following are the Hypothesis for the study

- H0 = There is no difference in satisfaction level in Public and Private sector Banks.
- H1 = There is significant difference in satisfaction level in Public and Private sector Banks.
- H0 = All the selected attributes effect customer satisfaction equally.
- H1 = All the selected attributes effect customer satisfaction inequally.
- H0 = There is no relationship between age and use of Internet banking can reduce the number of physical visit to bank.
- H1 = There is relationship between age and use of Internet banking can reduce the number of physical visit to bank.
- H0 = There is no relationship between occupation and use of internet banking can reduce the number of physical visit to bank.
- H1 = There is relationship between occupation and use of internet banking can reduce the number of physical visit to bank.
- H0 = There is relationship between education and use of Internet banking can reduce the number of physical visit to bank.
- H1 = There is no relationship between education and use of internet banking can reduce the number of physical visit to bank.
RESEARCH METHODOLOGY
The following are the research method used by the researcher:

Research Design: Descriptive Research.

Sources of Data:

Primary Data- Various banks respondents using e-banking services & the information about the selected bank is gathered from the discussion with the employees of bank. For data collection, observation and interview method is used. Interview of manager can be conduct to get information.

Secondary Data- (Published Data) The secondary data was collected from summary reports, e-mails, circulars, books, notifications of RBI and an annual report of the bank.

Population: E-Banking users of selected Public and Private Sector Banks.

Sampling: Sampling may be defined as selection of some part of an aggregate or totality on the basis of which a judgment or interface about the aggregate or totality is made.

A. Sampling Design: A Sampling design is a definite plan for obtaining a sample given Population. There is different method of the sampling. Here Random & Stratified sampling technique has been used.

B. Sample size: This refers to the number of the items to be selected from the universe to constitute a sample. There are 300 + 300 sample respondent are taken as a sample size who are using traditional & internet banking.

C. Sampling Frame: For study sampling frame includes internet banking users like businessman, professionals, and salaried person etc.

D. Data collection instruments: A data is collected with structured questionnaire.
LIMITATIONS OF THE STUDY
The following are the limitations of the study:

- The proposed study will concentrate only on qualitative aspects.
- Random & Stratified sampling technique likely to be applied in the selection of bank customers.
- E-banking promotes lack of socializing/social contacts.
- Hackers may intercept data and defraud customers.
- Phone bills can increase.
- Customers will be more vulnerable to phishing.
- Customers are compelled to have computers at home, Internet access and computer skills.
REFERENCES


