“STUDY OF INTERNET BANKING IN INDIA”

IN PARTIAL FULLFILLMENT FOR THE AWARD OF THE DEGREE OF

BACHELOR OF BANKING AND INSURANCE STUDIES.

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PROJECT GUIDE

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CERTIFICATE

This is certify that **MISS. AMEESHA G DHARAMSHI** of **TY.B.B.I – BACHELOR OF BANKING AND INSURANCE STUDIES -- (2011-12)** has successfully completed the project on **"STUDY OF INTERNET BANKING IN INDIA"** under the guidance of **Mrs. SHILPA CHHEDA.**

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DECLARATION BY THE RESEARCH STUDENT

I hereby declare that this project titled **"STUDY OF INTERNET BANKING IN INDIA."** submitted by me is based on actual work carried out by me under the guidance and supervision of Mrs. Shilpa Chheda. Any reference to work done by any other person or institution or any material obtained from other sources have been duly citied and reference. It is further to state that this work is not submitted anywhere else for any examination**.**

M.K.M.P College of Commerce & Science, Signature of student-

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CERTIFICATE FROM THE GUIDE.

This is to certify that **DHARAMSHI AMEESHA GIRISH** has completed the research project on "STUDY OF INTERNET BANKING IN INDIA." under by guidance and supervision, and submitted the project work as laid down by University of Mumbai. The material that has been obtained from other sources is duly acknowledged. It is further certified that the work or its part has not been submitted to any other University far examination under my supervision. I consider this work worthy for the award of the degree of Bachelor of BANKING AND INSURANCE Studies.

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❖ Executive summary:-

Technological developments have been growing at an alarming speed in the international arena. Internet is proudly one of the best in those. So, the banking sector is also making the best utilization of it. In this study based on ONLINE BANKING, it has been observed that the development of online banking has increased by leaps and bounds during the past few years. Concentrating on the Indian economy, the use of online banking is still in the developing stage.

Today in India the scope of online banking is growing by a good decent rise in its usage. The rise in the usage of the Internet is the main criteria for development of online banking.

This project helps us understand the how the online banking came into existence and its need in the modern world. It shows us the insights of the online banking in India. It helps us understand it's various forms, services, pros and cons of internet banking, the opportunities and the challenges, problems and solutions associated with the online banking in India.

❖ Chapter 1

❖ Banking:

Introduction

The world of banking has assumed a new dimension at dawn of the 21st century with the advent of tech banking, thereby lending the industry a stamp of universality. In general, banking may be classified as retail and corporate banking. Retail banking, which is designed to meet the requirement of individual customers and encourage their savings, includes payment of utility bills, consumer loans, credit cards, checking account and the like. Corporate banking, on the other hand, caters to the need of corporate customers like bills discounting, opening letters of credit, managing cash, etc.

Metamorphic changes took place in the Indian financial system during the eighties and nineties consequent upon deregulation and liberalization of economic policies of the government. India began shaping up its economy and earmarked ambitious plan for economic growth. Consequently, a sea change in money and capital markets took place. Application of marketing concept in the banking sector was introduced to enhance the customer satisfaction the policy of privatization of banking services aims at encouraging the competition in banking sector and introduction of financial services. Consequently, services such as Demat, Internet banking, Portfolio Management, Venture capital, etc, came into existence to cater to the needs of public. An important agenda for every banker

today is greater operational efficiency and customer satisfaction. The mew watchword for the bank is pretty ambitious: customer delight.

The introduction to the marketing concept to banking sectors can be traced back to American Banking Association Conference of 1958. Banks marketing can be defined as the part of management activity, which seems to direct the flow of banking services profitability to the customers. The marketing concept basically requires that there should be thorough understanding of customer need and to learn about market it operates in. Further the market is segmented so as to understand the requirement of the customer at a profit to the banks.

❖ Definition of banks:

An organization, usually a corporation, chartered by a state or federal government, which does most or all of the following: receives demand deposits and time deposits, honors instruments drawn on them, and pays interest on them; discounts notes, makes loans, and invests in securities; collects checks, drafts, and notes; certifies depositor's checks; and issues drafts and cashier's checks.

A financial institution that is licensed to deal with money and its substitutes by accepting time and demand deposits, making loans, and investing in securities. The bank generates profits from the difference in the interest rates charged and paid.

A Bank is defined as an institution which collects surplus funds from the public, safeguards them, and makes them available to the true owner when required and also lends sums be their true owners to those who are in need of funds and can provide security.

Banking Company in India has been defined in the Banking Companies act 1949,

"One which transacts the business of banking which means the accepting, for the purpose of lending or investment of the deposits of money from the public, repayable on demand, or otherwise and withdrawal be cheque, draft, order or otherwise."

❖ Types of Banks

There are various types of banks which operate in our country to meet the financial requirements of different categories of people engaged in agriculture, business, profession, etc. On the basis of functions, the banking institutions in India may be divided into the following types:

Types of Banks

Central Bank Development Banks Specialized Banks

(RBI, in India) (EXIM Bank SIDBI, NABARD)

Commercial Banks Co-operative Banks

(i) Public Sector Banks (i) Primary Credit Societies

(ii) Private Sector Banks (ii) Central Co-operative Banks

(iii) Foreign Banks (iii) State Co-operative Banks

Now let us learn about each of these banks in detail.

a) Central Bank

A bank which is entrusted with the functions of guiding and regulating the banking system of a country is known as its Central bank. Such a bank does not deal with the general public. It acts essentially as Government's banker, maintain deposit accounts of all other banks and advances money to other banks, when needed. The Central Bank provides guidance to other banks whenever they face any problem. It is therefore known as the banker's bank. The Reserve Bank of India is the central bank of our country. The Central Bank maintains record of Government revenue and expenditure under various heads. It also advises the Government on monetary and credit policies and decides on the interest rates for bank deposits and bank loans. In addition, foreign exchange rates are also determined by the central bank.

Another important function of the Central Bank is the issuance of currency notes, regulating their circulation in the country by different methods. No other bank than the Central Bank can issue currency.

b) Commercial Banks

Commercial Banks are banking institutions that accept deposits and grant short-term loans and advances to their customers. In addition to giving short-term loans, commercial banks also give medium-term and long-term loan to business enterprises. Now-a-days some of the commercial banks are also providing housing loan on a long-term basis to individuals.

Types of Commercial banks: Commercial banks are of three types i.e., Public sector banks,

Private sector banks and Foreign banks.

(i) **Public Sector Banks**: These are banks where majority stake is held by the Government of India or Reserve Bank of India. Examples of public sector banks are: State Bank of India, Corporation Bank, Bank of Baroda and Dena Bank, etc.

(ii) **Private Sectors Banks**: In case of private sector banks majority of share capital of the bank is held by private individuals. These banks are registered as companies with limited liability. For example: The Jammu and Kashmir Bank Ltd., Bank of Rajasthan Ltd., Development Credit Bank Ltd, Lord Krishna Bank Ltd., Bharat Overseas Bank Ltd., Global Trust Bank, Vysya Bank, etc.

(iii) **Foreign Banks**: These banks are registered and have their headquarters in a foreign country but operate their branches in our country. Some of the foreign banks operating in our country are Hong Kong and Shanghai Banking Corporation (HSBC), Citibank, American Express Bank, Standard

& Chartered Bank, Grindlay's Bank, etc. The number of foreign banks operating in our country has increased since the financial sector reforms of 1991.

c) Development Banks

Business often requires medium and long-term capital for purchase of machinery and equipment, for using latest technology, or for expansion and modernization. Such financial assistance is provided by Development Banks. They also undertake other development measures like Public Sector Banks comprise 19 nationalized banks and State Bank of India and its 7 associate banks. Business Studies

8 subscribing to the shares and debentures issued by companies, in case of under subscription of the issue by the public. Industrial Finance Corporation of India (IFCI) and State Financial Corporation's (SFCs) are examples of development banks in India.

d) Co-operative Banks

People who come together to jointly serve their common interest often form a co-operative society under the Co-operative Societies Act. When a co-operative society engages itself in banking business it is called a Co-operative Bank. The society has to obtain a licence from the Reserve Bank of India before starting banking business. Any co-operative bank as a society is to function under the overall supervision of the Registrar, Co-operative Societies of the State.

As regards banking business, the society must follow the guidelines set and issued by the Reserve Bank of India.

Types of Co-operative Banks

There are three types of co-operative banks operating in our country. They are primary credit societies, central co-operative banks and state co-operative banks. These banks are organized at three levels, village or town level, district level and state level.

(i) **Primary Credit Societies**: These are formed at the village or town level with borrower and non-borrower members residing in one locality. The operations of each society are restricted to a small area so that the members know each other and are able to watch over the activities of all members to prevent frauds.

(ii) **Central Co-operative Banks**: These banks operate at the district level having some of the primary credit societies belonging to the same district as their members. These banks provide loans to their members (i.e., primary credit societies) and function as a link between the primary credit societies and state co-operative banks.

(iii) **State Co-operative Banks**: These are the apex (highest level) co-operative banks in all the states of the country. They mobilize funds and help in its proper channelization among various sectors. The money reaches the individual borrowers from the state co-operative banks through the central co-operative banks and the primary credit societies.

e) Specialised Banks

There are some banks, which cater to the requirements and provide overall support for setting up business in specific areas of activity. EXIM Bank, SIDBI and NABARD are examples of such banks. They engage themselves in some specific area or activity and thus, are called specialized banks. Let us know about them.

i. Export Import Bank of India (EXIM Bank): If you want to set up a business for exporting products abroad or importing products from foreign countries for sale in our country, EXIM bank can provide you the required support and assistance. The bank grants loans to exporters and importers and also provides information about the international market. It gives guidance about the opportunities for export or import, the risks involved in it and the competition to be faced, etc.

Banking

ii. Small Industries Development Bank of India (SIDBI): If you want to establish a small-scale business unit or industry, loan on easy terms can be available through SIDBI. It also finances modernization of small-scale industrial units, use of new technology and market activities. The aim and focus of SIDBI is to promote, finance and develop small-scale industries.

iii. National Bank for Agricultural and Rural Development (NABARD): It is a central or apex institution for financing agricultural and rural sectors. If a person is engaged in agriculture or other activities like handloom weaving, fishing, etc. NABARD can provide credit, both short-term and long-term, through regional rural banks. It provides financial assistance, especially, to co-operative credit, in the field of agriculture, small-scale industries, cottage and village industries handicrafts and allied economic activities in rural areas.

❖ The Functions of Banking

How is money created? Other than the currency and bills that are made in a national mint, the money that our nation uses on a daily basis is actually created by commercial banks in the form of deposits and other things.

A bank depends on the misfortune of its customers to create money. Someone must be in debt to commercial banks in order for money and credit systems to work. When a borrower spends the money he or she has been loaned, the recipient deposits it in another bank. That deposit represents the creation of new money. A bank pays its bills by borrowing if people don't pay their taxes. The interest that a bank charges customers on the loans it gives becomes that bank's profit. A customer's assets and liabilities add up equally. When a bank makes unnecessary profit, it makes for a burden on taxpayers.

The Federal Reserve processes checks and cash. Banks order cash from the Fed when they need it, and ship it cash when they have too much. Checks can even be processed cross-country; for instance, if someone from Los Angeles writes a check in Philadelphia, the Philly bank credits the person's account and sends the check to the Federal Reserve of Philadelphia, then the check is sent to the Federal Reserve of Los Angeles where it goes to the bank of Los Angeles. The Fed processes one third of all checks written in America. Many of them are deposited electronically. High-tech machines

are used for all sorts of transactions. Fedwire is a program that allows money to be transferred over seconds. ACH allows for constant, direct payments. There are also machines designed to detect bill denominations, extent of use, and authenticity.

Banks can borrow money from the Fed as well, although it is considered a last resort lender. It acts to prevent too much borrowing. Types of loans are adjustment credit, for overnight loans or short-term problems; seasonal loans, which are extended up to nine months to help in seasonal swings in deposits and loans; and extended loans, which are prolonged because of financial difficulties if banks have a plan to correct the problems. Banks aren't allowed to take advantage of interest or discount rates and make profits by borrowing, either.

The Fed keeps the banking system competitive by creating new banks and mergers frequently. It examines bank information for security, and the banks themselves for safety. The Fed will fine banks, suspend employees, or pass new laws if they feel the need to.

There are 12 Fed district banks, member banks, and the Board of Governors, which heads the Federal Reserve. Each member of the Board is appointed to 14-year terms so the members are well insulated from outside political pressures. It is financially self-sufficient as a bank; it doesn't rely on Congress appropriations, but rather on interest from large holdings on US government securities.

The Board gives the Treasury the excess of what it took as opposed to what it spent. It sets reserve requirements (a monetary policy tool, along with discount rates and open-market operations); this is important because it

affects the amount of loans and bank money commercial banks have. (Commercial banks are those that take deposits and give loans on an individual basis.) Reserve requirements are percentages of money or credit banks must keep on hand or on deposit at the Federal Reserve Bank.

❖ Chapter 2

❖ INTRODUCTION

Internet banking is a process that has evolved because of the development of technology over the years. So before going into detail on the online we should have a overview of it birth.

❖ INFORMATION TECHNOLOGY

Information technology (IT) is the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numerical information by a micro electronics - based combination of computing and telecommunications. IT (information technology) is a term that encompasses all forms of technology used to create, store, exchange, and use information in its various forms (business data, voice conversations, still images, motion pictures, multimedia presentations, and other forms, including those not yet conceived). It's a convenient term for including both telephony and computer technology in the same word. It is the technology that is driving what has often been called "the information revolution."

IT is the area of managing technology and spans wide variety of areas that include but are not limited to things such as processes, computer software, information systems, computer hardware, programming

languages, and data constructs. In short, anything that renders data, information or perceived knowledge in any visual format whatsoever, via any multimedia distribution mechanism, is considered part of the domain space known as Information Technology (IT). IT provides businesses with four sets of core services to help execute the business strategy. These four core services are broken into business process automation, providing information, connecting with customers, and productivity tools.

IT professionals perform a variety of functions (IT Disciplines/Competencies) that ranges from installing applications to designing complex computer networks and information databases. A few of the duties that IT professionals perform may include data management, networking, engineering computer hardware, database and software design, as well as management and administration of entire systems. Information technology is starting to spread further than the conventional personal computer and network technologies, and more into integrations of other technologies such as the use of cell phones, televisions, automobiles, and more, which is increasing the demand for such jobs.

- **TECHNOLOGY in Banking**

Many of the largest and most successful banks in the world emerged from the technical changes that they are able to recognize at an early stage. India's banking sector has a long way to go before it can compete globally. Situation is especially maintained in the late introduction of ICT in India banks. Our information technology is designed to compete with information technology in the world, and when we are in the area very quickly, it can be difficult for us to benefit from liberalization.

Bank, with the right technology to provide timely information to increase productivity and thus see a competitive advantage. Compete in the economy, which has been opened, it is certainly the Indian banks to comply with the latest technology and adapt to its surroundings. Except that the banks need much improved use of technology to customer-friendly, efficient and competitive in the current authorities and businesses, they also need the technology to newer products and newer forms of service and the increasingly dynamic global environment to offer. Information technology allows banks to build new systems, which bite the needs of many customers that cannot be considered today.

Internet banking, for example, promises customers to conduct banking transactions in a direct access to the core of the bank customer account works. Customers to verify all information, all so far, all the checks, all credit card information.

In the future, the banks freed from the constraints of a delivery channel. They can create, package, market and product niches, and because the tumbling price of the technology, they can do so cost-effectively.

Technology gives banks the opportunity to be closer to customers, to a broader range of services at lower costs, streamline the March belang systems so that all information in one place where it can be used for the trends that can quickly lead into new products. Electronic banking data can be gathered and analyzed. Interactivity allows the consumer to save the settings, directing the development of truly new products.

Internet banking (or E-banking) means any user with a personal computer and a browser can get connected to his bank -s website to perform any of the virtual banking functions. In internet banking system the bank has a

centralized database that is web-enabled. All the services that the bank has permitted on the internet are displayed in menu. Any service can be selected and further interaction is dictated by the nature of service. Once the branch offices of bank are interconnected through terrestrial or satellite links, there would be no physical identity for any branch. It would a borderless entity permitting anytime, anywhere and anyhow banking.

❖ E-Banking

The evolution of electronic banking (e-Banking) started with the use of automatic teller machines (ATMs) and has included telephone banking, direct bill payment, electronic fund transfer and online banking. According to some, the future direction of e-banking is the acceptance of mobile telephone (WAP-enabled) banking and interactive-TV banking. However, it has been forecast by many that online banking will continue to be the most popular method for future electronic financial transactions.

❖ History

- The term online became popular in the late '80s and referred to the use of a terminal, keyboard and TV (or monitor) to access the banking system using a phone line.
- Online services started in New York in 1981 when four of the city's major banks (Citibank, Chase Manhattan, Chemical and Manufacturers Hanover) offered home banking services using the videotex system. Because of the commercial failure of videotex these banking services never became popular except in France where the

use of videotex (Minitel) was subsidized by the telecom provider and the UK, where the Prestel system was used.

- The UK's first home online banking services was set up by Bank of Scotland for customers of the Nottingham Building Society (NBS) in 1983. The system used was based on the UK's Prestel system and used a computer, such as the BBC Micro, or keyboard (Tandata Td1400) connected to the telephone system and television set.
- The system (known as 'Homelink') allowed on-line viewing of statements, bank transfers and bill payments. In order to make bank transfers and bill payments, a written instruction giving details of the intended recipient had to be sent to the NBS who set the details up on the Homelink system. Typical recipients were gas, electricity and telephone companies and accounts with other banks. Details of payments to be made were input into the NBS system by the account holder via Prestel. A cheque was then sent by NBS to the payee and an advice giving details of the payment was sent to the account holder.
- BACS was later used to transfer the payment directly.
- Stanford Federal Credit Union was the first financial institution to offer online internet banking services to all of its members in October 1994.

Today, many banks are internet only banks. Unlike their predecessors, these internet only banks do not maintain brick and mortar bank branches. Instead, they typically differentiate themselves by offering better interest rates and online banking features.

❖ What is e-banking?

Electronic funds transfer (EFT), refers to the computer-based systems used to perform financial transactions electronically. The term is used for a number of different concepts including electronic payments and cardholder-initiated transactions, where a cardholder makes use of a payment card such as a credit card or debit card.

Card-based EFT transactions are often covered by the ISO 8583 series of standards.

A number of transaction types may be performed:

- Withdrawal: the cardholder withdraws funds from their account, e.g. from an ATM
- Deposit: where a cardholder deposits funds to their own account (typically at an ATM)
- Inter-account transfer: transferring funds between linked accounts belonging to the same cardholder
- Inquiry: a transaction without financial impact, for instance balance inquiry, available funds inquiry or request for a statement of recent transactions on the account
- Administrative: this covers a variety of non-financial transactions including Personal Identification Number (PIN) change

EFT transactions require authorisation and a method to authenticate the card and the card

holder. Whereas a merchant may manually verify the card holder's signature, EFT transactions require the card holder's PIN to be sent online in an encrypted form for validation by the card issuer. Other information may be included in the transaction, some of which is not visible to the card holder (for instance magnetic stripe data), and some of which may be requested from the card holder (for instance the card holder's address or the CVV2 security value printed on the card).

❖ Various methods of e-banking include:

- Telephone banking
- Online banking
- Short Message Service (SMS) banking
- Mobile banking
- Interactive-TV banking

Telephone banking

Telephone banking is a service provided by a financial institution which allows its customers to perform financial transactions over the telephone.

Most telephone banking systems use an automated phone answering system with phone keypad response or voice recognition capability. To guarantee security, the customer must first authenticate their identity through a numeric or verbal password or through security questions asked by a live representative. With the obvious exception of cash withdrawals and deposits, telephone banking offers virtually all the features of an ATM.

Usually, there is the possibility to speak to a live representative located in a call centre or a branch, although this feature is not guaranteed. In addition to the self-service transactions, telephone banking representatives are usually trained to do what was traditionally available only at the branch: loan applications, investment purchases and redemptions, chequebook orders, debit card replacements, change of address, etc.

Online banking

Online banking (or Internet banking), allows customers to conduct financial transactions on a secure website operated by their retail or virtual bank, credit union or building society. Online banking offers features such as: bank statements; electronic bill payment; funds transfer; loan applications and transactions and account agggregation that allows users to monitor all of their accounts in one place. It is widely recognised that online banking provides more revenue per customer and costs less per transaction than any other e-banking channel.

SMS banking

SMS banking is a technology-enabled service permitting banks to operate selected banking services over the customers' mobile phone using SMS messaging.

SMS banking services are operated using both Push and Pull messages. Push messages are those that the bank chooses to send out to a customer's mobile phone, without the customer initiating a request for the information. Typically push messages could be either Mobile Marketing messages or messages alerting to an event which happens in the

customer's bank account, such as a large withdrawal of funds from the ATM or a large payment using the customer's credit card, etc. Another type of push message is a One-time password (OTPs).

Pull messages are those that are initiated by the customer, using a mobile phone, for obtaining information or performing a transaction in the bank account. Examples of pull messages for information include an account balance enquiry, or requests for current information like currency exchange rates and deposit interest rates.

The bank's customer is empowered with the capability to select the list of activities (or alerts), that he/she needs to be informed. This functionality to choose activities can be done either by integrating to the Internet Banking channel or through the bank's customer service call centre.

Mobile banking

Mobile banking (also known as M-Banking, mbanking, etc.), or Wireless Application Protocol (WAP) enabled banking is a term used for performing balance checks, account transactions, payments etc. via a mobile device such as a mobile phone or Personal Digital Assistant (PDA). Mobile banking is most often performed via SMS or the Internet accessed through the mobile device, but can also use special programs downloaded to the mobile device.

Interactive-TV banking

Interactive television is a technique that allows viewers to interact with television content as they view it. It is sometimes called interactive TV, iTV or idTV.

As long as the customer subscribes to a satellite or cable television service some banking facilities, such as, checking balances, moving money between accounts, paying bills and setting up overdrafts are made available through a television set. A handful of major banks in the UK have experimented with digital banking services through cable and satellite TV companies.

❖ Features

Online banking solutions have many features and capabilities in common, but traditionally also have some that are application specific.

The common features fall broadly into several categories

- Transactional (e.g., performing a financial transaction such as an account to account transfer, paying a bill, wire transfer, apply for a loan, new account, etc.)
    - Payments to third parties, including bill payments and telegraphic/wire transfers
    - Funds transfers between a customer's own transactional account and savings accounts
    - Investment purchase or sale

    - Loan applications and transactions, such as repayments of enrollments
- Non-transactional (e.g., online statements, cheque links, co browsing, chat)
    - Viewing recent transactions
    - Downloading bank statements, for example in PDF format
    - Viewing images of paid cheques
- Financial Institution Administration
- Management of multiple users having varying levels of authority
- Transaction approval process

❖ Services

Online banking allows us to perform various services with the click of a mouse. You can:

1. Pay a bill.

Electronic bill payment service allows a depositor to send money from his or her online account to a creditor or merchant, for example to a public utility or a department store. There is no need to stand in a long line on a weekend morning to handle your transactions!

The payment is virtually instant, though some financial institutions can wait until the next business day to send out the payment. If it is necessary, the bank can generate and mail a paper cheque or banker's draft to a creditor who is not set up to receive electronic payments.

2. Schedule payments in advance.

Most banks offer customers the ability to schedule a payment on a specified date. Once the amount is entered and the payee is checked off, the funds are automatically deducted from your online bank account.

It is especially useful if you always forget due dates. For example, you can schedule credit card or mortgage payments to make sure that you will not incur late fees and damage your FICO score.

3. Transfer funds.

Do you want to send money quickly and securely? With online banking, you can make money transfers between your own accounts, or send money to a third party account. All you need is recipient/payee information and enough funds in your account. Quite often, the operations are performed in real time.

4. Manage all your accounts in one place.

Online banking is a great time saver because it provides an opportunity to handle several bank accounts (checking, savings, CDs, IRAs, etc.) from one site. Most new accounts you open will be automatically added to online banking.

5. View images of your checks online.

Do you need a copy of a paid check? With online banking, you can view and print scanned images of the front and back of all checks you have written. It is easy and convenient.

6. Apply for a loan or credit card.

Having an account online, you can apply for a credit card or a loan (a car loan, a student loan, a mortgage, a home equity loan, etc.) from the same bank. If you have a good credit score and long relationship history with your bank, your application is likely to be approved.

7. Purchase and manage CD accounts.

If you have some amount of money you want to invest, you can purchase a certificate of deposit from your bank. Online banking lets you compare all available offers and their terms, for example APY or maturity periods. When you confirm the purchase, the funds will be automatically deducted from your account.

8. Order traveler's checks.

You can order American Express Traveler's Cheques online. The bank will typically charge your online account for the amount of the cheques you bought and an express delivery fee.

9. Increase your overdraft.

Going into the red shouldn't leave you red-faced! You can increase your overdraft online. Log in to online banking and click on 'Overdraft' in the menu.

10. Order a cheque book.

Save yourself at least one trip to the bank by ordering cheque book online. You will need to visit your bank once when you get a confirmation message that your cheque book is ready for collection.

11. View up-to-the-minute account statements and balance.

There is no need to wait for the bank statement to arrive in the snail post to check account balances. You can view all transactions and withdrawals every day just by logging in to your online account. In addition, you can immediately notice errors or unauthorized transactions in the statement.

12. View automatically updated spending report.

All your purchases are sorted into familiar categories automatically - no receipts to save, no expenses to enter. It is easy to see where your money goes!

13. Track your payment history.

Online banking gives you an opportunity to search your payments by transaction type, date, description or amount. When did you last pay Company X? When did you buy your computer? To whom did you make your most recent payment? Your bank knows the answers.

14. Integrate the data with personal finance programs.

Online banking lets you import electronic payment data in personal

finance software such as Quicken or Microsoft Money. You will be able to access your online accounts directly from your personal finance program. An Internet connection and online account log in information is required.

15. Change contact details.

Have you moved to a new house? Changed your telephone number? You can log in to your online account and change contact information (e-mail address, telephone number, password, etc.). It is more secure than to send this information by e-mail.

16. Utilize investment research.

You can receive real-time quotes, analytics, news and stock market information to make a more educated decision.

17. Take advantage of online brokerage.

Internet banking lets you invest online. You can place and confirm trades 24 hours a day, seven days a week. Most banks provide a wide range of money market instruments from various issuers.

18. Get alerts.

This service allows you to receive timely e-mail messages from your bank about any critical changes related to your Internet accounts. For example, you can get alerts when you make a withdrawal or change your contact information.

19. Verify terms and conditions.

Did you forget your interest rates or payment due date? You can verify all information about your account online.

20. Chat with your customer assistant department.

If you need help, you can send message to your bank's customer assistant department. They will help you solve your problem.

21. Credit card customers

With Internet banking, customers can not only pay their credit card bills online but also get a loan on their cards. If you lose your credit card, you can report lost card online.

22. Railway pass

This is something that would interest all the aam janta. Indian Railways has tied up with ICICI bank and you can now make your railway pass for local trains online. The pass will be delivered to you at your doorstep. But the facility is limited to Mumbai, Thane, Nashik, Surat and Pune.

23. Investing through Internet banking

You can now open an FD online through funds transfer. Now investors with interlinked demat account and bank account can easily trade in the stock market and the amount will be automatically debited from their respective bank accounts and the shares will be credited in their demat account. Moreover, some banks even give you the facility to purchase mutual funds directly from the online banking system.

Nowadays, most leading banks offer both online banking and demat account. However if you have your demat account with independent share brokers, then you need to sign a special form, which will link your two accounts.

24. Recharging your prepaid phone

Now just top-up your prepaid mobile cards by logging in to Internet banking. By just selecting your operator's name, entering your mobile

number and the amount for recharge, your phone is again back in action within few minutes.

- **25. Shopping**

  With a range of all kind of products, you can shop online and the payment is also made conveniently through your account. You can also buy railway and air tickets through Internet banking.

❖ Chapter 3.

❖ Types of Internet Banking and Security Threats

Getting an idea about the various types of Internet banking products will help examiners review the associated risks. Currently, in the market place, the following three basic types of Internet banking are being employed.

Informational - This is the fundamental level of Internet banking. Typically, on a stand-alone server, the bank has marketing information about the bank's products and services. Since informational systems naturally have no path between the server and the bank's internal network, the risk is comparatively low.

This level of Internet banking can be offered by the bank or outsourced. While the risk to a bank is rather low, the server or Web site may be

susceptible to adjustment. To prevent unauthorized alterations to the bank's server or web site, appropriate controls therefore must be in place.

Communicative - Interaction between the bank's systems and the customer would be allowed by this type of Internet banking system. The interaction may be confined to electronic mail, account inquiry, loan applications, or static file updates (name and address changes).

The risk is higher with this configuration than with informational systems since these servers may have a path to the bank's internal networks.

To prevent, monitor, and alert management of any illegal attempt to access the bank's internal networks and computer systems, appropriate controls required to be in place. In this environment, virus controls also become much more critical.

Transactional - Customers can execute transactions with this level of Internet banking. This is the highest risk architecture and must have the strongest controls, since a path normally exists between the server and the bank's or outsourcer's internal network.

Accessing accounts, paying bills, transferring funds, etc are the customer transactions that would be included.

❖ Pros of internet banking:-

1. Banking around the clock is no longer a remote possibility. But the banks don't have to keep their branches open 24 hours a day to provide this service. This is one of the biggest advantages of Internet banking.

2. One doesn't have to go to the bank's branch to request a financial statement. You can download it from your online bank account, which shows you up-to-the-minute updated figures.

3. It is cost-effective. Thousands of customers can be dealt with at once. There is no need to have too many clerks and cashiers. The administrative work gets reduced drastically with Internet banking. Expenditures on paper slips, forms and even bank stationery have gone down, which helps raise the profit margin of the bank by a surprisingly large number.

4. As far as customers are concerned, their account information is available round the clock, regardless of their location. They can reschedule their future payments from their bank account while sitting thousands of miles away. They can electronically transfer money from their bank accounts or receive money in their bank accounts within seconds.

5. You can apply for a loan without visiting the local bank branch and get one easily. You can buy or sell stocks and other securities by using your bank accounts. Even new accounts can be opened; old accounts can be closed without doing tedious paperwork. Especially with the increasing acceptability of digital signatures around the world, Internet banking has

made life much easier and banking much faster and more pleasant, for customers as well as bankers.

6.An internet banking account is simple to open and use as you have to just answer few questions in a form while sitting at your own home or office. To access your account, you should have security measures such as username and password. To complete the det of your account, you just have to have to print, sign, and send in a form.

7. It is cost less. As there is no book building, and less involvement of salaried persons. Even banks offer free bill paying facility to encourage customers to do their banking online.

8. Internet banking is very easy to handle. Just have to visit to the website of bank and then we can check interest rates and other basic information.

9. Bouncing of cheque (accidentally) should be a thing of the past because you can monitor your account online anytime, day or night.

10. You can keep your account balanced using your computer and your monthly statement. Your bank account information can be downloaded into software programs such as Microsoft Money or Quicken, making is easy to reconcile your account with just a few mouse clicks. The convenience of the data capture online makes it much easier to budget and track where your money goes. Your internet bank account even allows you to view copies of the checks you have written each month.

11. As soon as you log into your account, you will quickly see whether there is anything amiss when you check on your deposits and debits. If anyone writes a check or withdraws funds from your account and you know it wasn't you, you will see it right away. This lets you get started on correcting

the problem immediately rather than having to wait a month to even have a clue it is happening as would be the case with a traditional bank.

12. There are sound reasons why internet banking is growing. The economic advantages have encouraged banks to provide an increasing range of easy to use services via the internet.

13. Customers have found doing business online simple and speedy and have become very comfortable with the arrangement. Internet banking gives people more control over their money in a very convenient way that they find enjoyable and reassuring.

❖ Cons of internet banking:-

1. In word, identity theft is the biggest peril and threat of Internet banking. The loss of bank user IDs, passwords, other private information shared with banks.
2. Internet banking users, despite having the latest anti-virus and Internet security programs installed. Phishing, online fraud, spyware programs related threats make daily headlines.
3. Loss of community engagement with fellow neighbors or friends at physical branches of banks is another drawback for some.
4. There may be a waiting period between signing up for online banking and receipt of the ID and password necessary for account activation.
5. If you choose to pay bills online, make sure that recipients are capable of processing electronic payments. Otherwise, it may take several days for the payment to be credited to your account, which could result in accumulated late charges.
6. Another occasional problem with online banking occurs when the website is down, either for scheduled maintenance or because of technical problems.
7. Each has different fees and benefits that can make a big difference in how much online banking costs you.

❖ Chapter 4

❖ OPPORTUNITIES IN ONLINE BANKING:

➢ Is There a Future in Online Banking?

By this point, no one can dismiss online banking as a fad. However, it is worth considering whether the trend towards online financial transactions is going to slow or reverse in the years to come. There will continue to be people who resist online banking in favor of offline transactions just as there are people who prefer to keep their money in mattresses instead of putting it in banks. Whether these people will exert serious influence on the movement towards online banking can be examined by looking at the needs of modern consumers, and the interests of the banks themselves.

➢ The Move to Online Business

The global connectivity provided by the internet, combined with the fallout from the global financial crisis has encouraged a growing number of entrepreneurs to start their own businesses online. As an increasing number of people look to save themselves from unemployment or augment otherwise insufficient salaries by finding new ways to make money online, they will require new ways to send, receive, and invest their online funds.

➢ The Rise of Mobile Banking

As handheld mobile devices become more sophisticated, users are experimenting with more sophisticated transactions. Moving beyond

ringtone downloads; consumers can now shop online and purchase software upgrades and augmentations through app stores. In addition to this buying and selling, anyone with a web browser on their phone can access their bank's online banking site to move and manage their money in more locations than ever before.

- **Staffing Solutions**

As banks consolidate and grow larger, they are looking for more ways to cut costs, and reducing the number of full-time employees on their payroll is an attractive option. Encouraging customers to do their banking online allows banks to close smaller branches in outlying locations and use economies of scale to develop customer assistance centers in locations where the labor market is more favorable.

- **Physical Footprints**

Online banking is also more attractive to banks because a reduced physical footprint means reduced costs in other areas. In addition to saving the money that would normally be associated with operating and maintaining physical branches, no longer having to print and mail paper statements to customers would be a huge savings for banks. As an added bonus, banks have been able to take advantage of current pro-environment sentiment by marketing online banking as a "green" alternative.

By appealing to more mobile customers and more cost-conscious financial service providers alike, online banking continues to be an attractive option for everyone involved. However, when discussing the internet it is dangerous to assume that everything is going to be moved online; there will

always be individuals, industries, and transactions that are grounded in the real world with no desire to change the way they do business.

➢ Growth of Internet

The increase in the growth of internet usage will definitely help the cause of growth of online banking in India. The following chart shows the growth of internet in India during the past decade or so:

YEAR	Users	Population	% Penetration
1998	1,400,000	1,094,870,677	0.1 %
1999	2,800,000	1,094,870,677	0.3 %
2000	5,500,000	1,094,870,677	0.5 %
2001	7,000,000	1,094,870,677	0.7 %
2002	16,500,000	1,094,870,677	1.6 %
2003	22,500,000	1,094,870,677	2.1 %
2004	39,200,000	1,094,870,677	3.6 %
2005	50,600,000	1,112,225,812	4.5 %
2006	40,000,000	1,112,225,812	3.6 %
2007	42,000,000	1,129,667,528	3.7 %
2009	81,000,000	1,156,897,766	7.0 %
2010	100,000,000	1,173,108,018	8.5 %

Why Banks Encourage Online Banking?

- **OVERVIEW**

Online banking has enjoyed increased popularity, and some banks actually require it. From standard, brick-and-mortar institutions to cloud managed institutions, online banking offers flexibility and convenience for all involved.

- **BANK ADVANTAGES:**

- Each visit to a bank costs the institution money, whether in bank teller wages and benefits to security costs to maintenance costs. Online banking reduces those costs and increases the bank's profit margin.
- Online banking reduces the need for the number of physical locations and services offered within each. Because Customer Service Departments are united into fewer locations, asset sharing within those locations further reduce bank costs.

- **CUSTOMER ADVANTAGES:**

- Online security of financial data has evolved tremendously since the early days of online banking, and often transactions can be even more secure than those conducted in a drive thru lane.

- Online banking transactions require not only a secure login but also require secured password entry. In-person transactions are based on account information and a photo ID, both of which can be obtained "under the radar."Online banking transactions also track the Internet Protocol (IP) address of the computer used in the transaction. The IP can be traced to the method or mode of Internet access, often through an Internet Service Provider who always notes activity, computer, and actions performed under that IP address assigned to the ISP account holder. Whether a dynamic or changing IP address or a static or unchanging IP address is used, the ISP always records what IP address is assigned to what ISP account at any time.

- Comprehensive Help sections on banks' websites often reduce on-location inquiries, further reducing overhead costs for banking institutions. Additional service enrollment or dis-enrollment, address updates, and account status and verification are all time saving activities for both the bank and the banking customer.

- Online Bill Pay processes reduce stolen or counterfeit checks which cost banks billions of dollars every month. Each online bill pay transaction allows for a grace period from the payment order date to the actual check delivery date, which also allows the account holder additional time to preview activity and account status.

➢ **DEVELOPMENT:**

Increasingly, more and more people are switching to electronic platforms for executing financial transactions. The wider usage of cell phone and internet certainly seems to be playing a role in blurring physical boundaries, and unlocking a whole new world of opportunities for banks in tapping newer customer segments and in recording greater volume of transactions.

If latest RBI data on retail electronic payment systems is anything to go by, electronic banking is set to become the catalyst for change in the way money moves. Provisional data show that in FY09 to January, a total of 5,587.85 lakh transactions were executed through the electronic channel, a rise of 234.76 lakh transactions over the previous fiscal.

This growth was facilitated by the introduction of real-time gross transfer (RTGS) and national electronic funds transfer (NEFT), which enabled fund transfers among account holders of the same bank as well as inter-bank transfers.

The growth has also been aided by banks' efforts to offer innovative services and tighten security measures, and the increase in awareness of services available. RBI outlining guidelines on mobile banking, setting up of the National Payments Corporation of India and passage of the Payments and Settlement Act too have given a positive thrust to the growth in electronic payments. The impact of all these measures is likely to be felt in the current fiscal, which may well mean FY10 could become a watershed year for e-banking. While opinions of industry players differ on whether FY10 will indeed prove to be a tipping point, there seems to be consensus that the year would mark a critical phase in the evolution of the payments and settlement

systems in India. "FY10 will certainly herald an important phase for electronic banking in India and an upsurge in internet and ATM transactions," says Ashvin Parekh, partner and national industry leader, financial services, Ernst & Young. "At the same time, traditional fund transfer will continue to hold its own. We are going to witness a co-existence of these two systems. In the regulatory space, there will be huge changes. As and when India Pay, which will eventually settle credit card and ATM transactions, comes into the picture, we could witness a gradual shift away from Visa and MasterCard." The implementation of core banking solutions by all public sector banks has not only helped banks rationalise their costs, but has also allowed them to explore new ways of optimally utilising their resources. Core banking, which facilitates linking up of a bank's branches across the country, has enabled banks to improve their efficiency.

"Now, decisions can be taken remotely and the activities too can be undertaken in a centralised location. This means that branches need not spend time on processing transactions and other back office operations, and rather utilise the time and resources to function as selling outlets. Centralised operations benefit from economies of scale and help in reducing bank costs," explains Janmejaya Sinha, managing director of India operations, Boston Consulting Group.

- **Opportunities in e-banking: ARE WE READY?**

It has always been a chicken-and-egg dilemma in business. Either firms wait for the market to mature until customers are ready for the

products and services. Or, firms can go ahead and offer the products and services, hoping that their customers will catch on soon.

The same is true for new products and services that have emerged and continue to emerge in the world of electronic banking (e-banking). Banking executives interviewed by Business World Online have different ways of resolving the issue. Some would go ahead with new ideas, wanting to take the first-mover advantage. Others would wait in the sidelines, but armed nevertheless just in the case the market take up suddenly increases.

Whether first-movers or latecomers, there is one partner in the e-banking game that is not waiting for the chicken to lay the egg, or wait for the egg to hatch into a chick. Technology providers are always up on their toes, like chicken ready to catch the early worm.

- **CHALLENGES OF ONLINE BANKING**

Information technology analyst firm, the Meta Group, recently reported that "financial institutions who don't offer home banking by the year 2000 will become marginalized." By the year of 2002, a large sophisticated and highly competitive Internet Banking Market will develop which will be driven by

- Demand side pressure due to increasing access to low cost electronic services.
- Emergence of open standards for banking functionality.
- Growing customer awareness and need of transparency.
- Global players in the fray

- Close integration of bank services with web based E-commerce or even disintermediation of services through direct electronic payments (E- Cash).
- More convenient international transactions due to the fact that the Internet along with general deregulation trends, eliminate geographic boundaries.
- Move from one stop shopping to 'Banking Portfolio' i.e. unbundled product purchases.

Certainly some existing brick and mortar banks will go out of business. But that's because they fail to respond to the challenge of the Internet. The Internet and it's underlying technologies will change and transform not just banking, but all aspects of finance and commerce. It represents much more than a new distribution opportunity. It will enable nimble players to leverage their brick and mortar presence to improve customer satisfaction and gain share. It will force lethargic players who are struck with legacy cost basis, out of business-since they are unable to bring to play in the new context.

➢ MAIN CONCERNS IN INTERNET BANKING:

In a survey conducted by the Online Banking Association, member institutions rated security as the most important issue of online banking. There is a dual requirement to protect customers' privacy and protect against fraud. Banking Securely: Online Banking via the World Wide Web provides an overview of Internet commerce and how one company handles secure banking for its financial institution clients and their customers. Some basic information on the transmission of confidential data is presented in Security

and Encryption on the Web. PC Magazine Online also offers a primer: How Encryption Works. A multi-layered security architecture comprising firewalls, filtering routers, encryption and digital certification ensures that your account information is protected from unauthorised access:

- Firewalls and filtering routers ensure that only the legitimate Internet users are allowed to access the system.
- Encryption techniques used by the bank (including the sophisticated public key encryption) would ensure that privacy of data flowing between the browser and the Infinity system is protected.
- Digital certification procedures provide the assurance that the data you receive is from the Infinity system.

Security concerns:

Security fears have served as deterrents to online growth. Of particular concern are threats of pharming and phishing. Phishing is an internet fraud, through which innocent people are enticed to divulge their personal information like user ID and passwords, which are later on used by scammers in unauthorized ways.

The most common method of phishing is sending emails claiming to be from your bank or other financial institutions which are dealing that already has your personal information and you will be asked to confirm the details by clicking a particular link (URL) provided in this fake email. This URL will take you to a fake website which will be similar to your genuine website, and the information provided by the customer in the forms provided in the fake website will be gathered and used for committing fraud in their accounts or withdraw funds unauthorizedly from these accounts.

Pharming is another internet fraud, whereby as many as users as possible are redirected before they reach the legitimate online banking websites they intend to visit and they are lead to malicious ones. The bogus sites to which victims are redirected without their knowledge or consent, will likely looks the same as genuine site. But when users enter their login name or password, the information is captured by criminals.

Chapter 5

- **Internet Banking in India – Guidelines**

Reserve Bank of India had set up a 'Working Group on Internet Banking' to examine different aspects of Internet Banking (I-banking). The Group had focussed on three major areas of I-banking, i.e, (i) technology and security issues, (ii) legal issues and (iii) regulatory and supervisory issues. RBI has accepted the recommendations of the Group to be implemented in a phased manner. Accordingly, the following guidelines are issued for implementation by banks. Banks are also advised that they may be guided by the original report, for a detailed guidance on different issues.

I. Technology and Security Standards:

a. Banks should designate a network and database administrator with clearly defined roles as indicated in the Group's report.

b. Banks should have a security policy duly approved by the Board of Directors. There should be a segregation of duty of Security Officer / Group dealing exclusively with information systems security and Information Technology Division which actually implements the computer systems. Further, Information Systems Auditor will audit the information systems.

c. Banks should introduce logical access controls to data, systems, application software, utilities, telecommunication lines, libraries, system software, etc. Logical access control techniques may include user-ids, passwords, smart cards or other biometric technologies.

d. At the minimum, banks should use the proxy server type of firewall so that there is no direct connection between the Internet and the bank's system. It facilitates a high level of control and in-depth monitoring using logging and auditing tools. For sensitive systems, a stateful inspection firewall is recommended which thoroughly inspects all packets of information, and past and present transactions are compared. These generally include a real time security alert.

e. All the systems supporting dial up services through modem on the same LAN as the application server should be isolated to prevent intrusions into the network as this may bypass the proxy server.

f. PKI (Public Key Infrastructure) is the most favoured technology for secure Internet banking services. However, as it is not yet commonly

available, banks should use the following alternative system during the transition, until the PKI is put in place:

1. Usage of SSL (Secured Socket Layer), which ensures server authentication and use of client side certificates issued by the banks themselves using a Certificate Server.
2. The use of at least 128-bit SSL for securing browser to web server communications and, in addition, encryption of sensitive data like passwords in transit within the enterprise itself.

g. It is also recommended that all unnecessary services on the application server such as FTP (File Transfer Protocol), telnet should be disabled. The application server should be isolated from the e-mail server.

h. All computer accesses, including messages received, should be logged. Security violations (suspected or attempted) should be reported and follow up action taken should be kept in mind while framing future policy. Banks should acquire tools for monitoring systems and the networks against intrusions and attacks. These tools should be used regularly to avoid security breaches. The banks should review their security infrastructure and security policies regularly and optimize them in the light of their own experiences and changing technologies. They should educate their security personnel and also the end-users on a continuous basis.

i. The information security officer and the information system auditor should undertake periodic penetration tests of the system, which should include:

1. Attempting to guess passwords using password-cracking tools.
2. Search for back door traps in the programs.
3. Attempt to overload the system using DDoS (Distributed Denial of Service) & DoS (Denial of Service) attacks.
4. Check if commonly known holes in the software, especially the browser and the e-mail software exist.
5. The penetration testing may also be carried out by engaging outside experts (often called 'Ethical Hackers').

j. Physical access controls should be strictly enforced. Physical security should cover all the information systems and sites where they are housed, both against internal and external threats.

k. Banks should have proper infrastructure and schedules for backing up data. The backed-up data should be periodically tested to ensure recovery without loss of transactions in a time frame as given out in the bank's security policy. Business continuity should be ensured by setting up disaster recovery sites. These facilities should also be tested periodically.

l. All applications of banks should have proper record keeping facilities for legal purposes. It may be necessary to keep all received and sent messages both in encrypted and decrypted form.

m. Security infrastructure should be properly tested before using the systems and applications for normal operations. Banks should upgrade the systems by installing patches released by developers to

remove bugs and loopholes, and upgrade to newer versions which give better security and control.

II. Legal Issues

a. Considering the legal position prevalent, there is an obligation on the part of banks not only to establish the identity but also to make enquiries about integrity and reputation of the prospective customer. Therefore, even though request for opening account can be accepted over Internet, accounts should be opened only after proper introduction and physical verification of the identity of the customer.

b. From a legal perspective, security procedure adopted by banks for authenticating users needs to be recognized by law as a substitute for signature. In India, the Information Technology Act, 2000, in Section 3(2) provides for a particular technology (viz., the asymmetric crypto system and hash function) as a means of authenticating electronic record. Any other method used by banks for authentication should be recognized as a source of legal risk.

c. Under the present regime there is an obligation on banks to maintain secrecy and confidentiality of customers‘ accounts. In the Internet banking scenario, the risk of banks not meeting the above obligation is high on account of several factors. Despite all reasonable precautions, banks may be exposed to enhanced risk of liability to customers on account of breach of secrecy, denial of service etc., because of hacking/ other technological failures. The banks should, therefore, institute adequate risk control measures to manage such risks.

d. In Internet banking scenario there is very little scope for the banks to act on stop-payment instructions from the customers. Hence, banks should clearly notify to the customers the timeframe and the circumstances in which any stop-payment instructions could be accepted.

e. The Consumer Protection Act, 1986 defines the rights of consumers in India and is applicable to banking services as well. Currently, the rights and liabilities of customers availing of Internet banking services are being determined by bilateral agreements between the banks and customers. Considering the banking practice and rights enjoyed by customers in traditional banking, banks' liability to the customers on account of unauthorized transfer through hacking, denial of service on account of technological failure etc. needs to be assessed and banks providing Internet banking should insure themselves against such risks.

III. Regulatory and Supervisory Issues:

As recommended by the Group, the existing regulatory framework over banks will be extended to Internet banking also. In this regard, it is advised that:

1. Only such banks which are licensed and supervised in India and have a physical presence in India will be permitted to offer Internet banking products to residents of India. Thus, both banks and virtual banks incorporated outside the country and having no physical presence in India will not, for the present, be permitted to offer Internet banking services to Indian residents.

2. The products should be restricted to account holders only and should not be offered in other jurisdictions.
3. The services should only include local currency products.
4. The 'in-out' scenario where customers in cross border jurisdictions are offered banking services by Indian banks (or branches of foreign banks in India) and the 'out-in' scenario where Indian residents are offered banking services by banks operating in cross-border jurisdictions are generally not permitted and this approach will apply to Internet banking also. The existing exceptions for limited purposes under FEMA i.e. where resident Indians have been permitted to continue to maintain their accounts with overseas banks etc., will, however, be permitted.
5. Overseas branches of Indian banks will be permitted to offer Internet banking services to their overseas customers subject to their satisfying, in addition to the host supervisor, the home supervisor.

Given the regulatory approach as above, banks are advised to follow the following instructions:

a. All banks, who propose to offer transactional services on the Internet should obtain prior approval from RBI. Bank's application for such permission should indicate its business plan, analysis of cost and benefit, operational arrangements like technology adopted, business partners, third party service providers and systems and control procedures the bank proposes to adopt for managing risks. The bank should also submit a security policy covering recommendations made in this circular and a certificate from an independent auditor that the

minimum requirements prescribed have been met. After the initial approval the banks will be obliged to inform RBI any material changes in the services / products offered by them.

b. Banks will report to RBI every breach or failure of security systems and procedure and the latter, at its discretion, may decide to commission special audit / inspection of such banks.

c. The guidelines issued by RBI on 'Risks and Controls in Computers and Telecommunications' vide circular DBS.CO.ITC.BC. 10/ 31.09.001/ 97-98 dated 4th February 1998 will equally apply to Internet banking. The RBI as supervisor will cover the entire risks associated with electronic banking as a part of its regular inspections of banks.

d. Banks should develop outsourcing guidelines to manage risks arising out of third party service providers, such as, disruption in service, defective services and personnel of service providers gaining intimate knowledge of banks' systems and misutilizing the same, etc., effectively.

e. With the increasing popularity of e-commerce, it has become necessary to set up 'Inter-bank Payment Gateways' for settlement of such transactions. The protocol for transactions between the customer, the bank and the portal and the framework for setting up of payment gateways as recommended by the Group should be adopted.

f. Only institutions who are members of the cheque clearing system in the country will be permitted to participate in Inter-bank payment gateways for Internet payment. Each gateway must nominate a bank

as the clearing bank to settle all transactions. Payments effected using credit cards, payments arising out of cross border e-commerce transactions and all intra-bank payments (i.e., transactions involving only one bank) should be excluded for settlement through an inter-bank payment gateway.

g. Inter-bank payment gateways must have capabilities for both net and gross settlement. All settlement should be intra-day and as far as possible, in real time.

h. Connectivity between the gateway and the computer system of the member bank should be achieved using a leased line network (not through Internet) with appropriate data encryption standard. All transactions must be authenticated. Once, the regulatory framework is in place, the transactions should be digitally certified by any licensed certifying agency. SSL / 128 bit encryption must be used as minimum level of security. Reserve Bank may get the security of the entire infrastructure both at the payment gateway's end and the participating institutions' end certified prior to making the facility available for customers use.

i. Bilateral contracts between the payee and payee's bank, the participating banks and service provider and the banks themselves will form the legal basis for such transactions. The rights and obligations of each party must be clearly defined and should be valid in a court of law.

j. Banks must make mandatory disclosures of risks, responsibilities and liabilities of the customers in doing business through Internet through

a disclosure template. The banks should also provide their latest published financial results over the net.

k. Hyperlinks from banks' websites, often raise the issue of reputational risk. Such links should not mislead the customers into believing that banks sponsor any particular product or any business unrelated to banking. Hyperlinks from a banks' websites should be confined to only those portals with which they have a payment arrangement or sites of their subsidiaries or principals. Hyperlinks to banks' websites from other portals are normally meant for passing on information relating to purchases made by banks' customers in the portal. Banks must follow the minimum recommended security precautions while dealing with request received from other websites, relating to customers' purchases.

2. The Reserve Bank of India have decided that the Group's recommendations as detailed in this circulars should be adopted by all banks offering Internet banking services, with immediate effect. Even though the recommendations have been made in the context of Internet banking, these are applicable, in general, to all forms of electronic banking and banks offering any form of electronic banking should adopt the same to the extent relevant.

3. All banks offering Internet banking are advised to make a review of their systems in the light of this circular and report to Reserve Bank the types of services offered, extent of their compliance with the recommendations, deviations and their proposal indicating a time frame for compliance. The

first such report must reach us within one month from the date of this circular. Banks not offering any kind of I-banking may submit a 'nil' report.

4. Banks who are already offering any kind of transactional service are advised to report, in addition to those mentioned in paragraph above, their business models with projections of cost / benefits etc. and seek our post-facto approval.

Chapter 6

- **FURTHER PROBLEMS RELATING TO NET BANKING IN INDIA**

Given that India is the IT and tech services outsourcing hotspot of the world, it's surprising that Internet banking has not really taken off. Despite the advent of a very tech-savvy and vast consumer class in recent years, a mix of industry issues and unique challenges continue to thwart the expansion of net banking in India. Technology challenges, IT practices, certain cultural issues, industry lethargy, and workplace constraints have affected widespread acceptance of Internet banking.

- **Low Broadband Internet Penetration**

India has one of the lowest broadband connectivity penetration rates in Asia as compared to Japan, Taiwan, Korea and Singapore. While the bigger cities such as Mumbai, Delhi, Chennai, and Bangalore have relatively better broadband penetration rates, PC users in smaller cities and towns still use dial-up options to connect to the Internet. Slow connectivity speeds often dampen the online banking experience for many customers eager to use such services.

- **Banks' Ambivalent Commitment Levels**

Internet banking did take off in India at the turn of the millennium but soon faltered due to lack of takers. In the middle of this decade, multinational and domestic private banks started offering net banking services as a competitive differentiator. Only recently, state-owned and public sector banks have started doing likewise. However, banks' ambivalent commitment levels and their reluctance to allocate huge budgets for net banking branding initiatives, as well as a lack of industry advocacy efforts, have resulted in poor acceptance levels of Internet banking by customers.

- **Customers' Preference for Traditional Branches**

There are thousands of highly active traditional bank branches in India's crowded cities and major towns. Office workers take longer lunch breaks to finish banking activities and transactions at these branches rather than conduct them online. Most customers prefer the personal touch and customized service offered by staff in brick-and-mortar bank branches. Many Indians are also averse to calling call centers and banks' customer contact lines to address issues related to online bank accounts.

- **Fear of Online Threats/Scams**

Ubiquitous and prevalent online threats about hackers, identity theft, stolen passwords, viruses, worms and spyware tend to make customers wary just like in any other country. Conservative Indian bank customers used to years of saving in an erstwhile mixed-socialist economy are always fearful of losing hard-earned savings in online scams. These customers are also not sure about the efficacy of banks' websites and their commitment to allocate

funds for reliable encryption mechanisms and robust back-end technologies and systems.

- **Other Problems**

Workplace constraints and corporate policies about using external websites or pursing personal activities such as online banking have affected its expected fast-paced acceptance among the growing affluent class in India. Cultural issues, such as parents giving priority use of the home PC to their children rather than using it themselves, stifle the potential growth of home access to Internet banking services. Public sector banks with vast customer bases also don't tend to invest money in training personnel for e-banking initiatives, resulting in poor customer service levels.

- **SOLUTIONS:**

Here are some simple tips to prevent you from falling into the trap of cyber criminals. Remember, a simple ignorance or oversight can make a huge dent in your hard- earned savings.

- **Securing your account:** Avoid online banking on unsecured wifi systems and operate only from PCs at home. Never reveal password to anyone. Do not even write it on a piece of paper on diary. Just memorise it. It should be alphanumeric and change it frequently.

Never reply to queries from bank online about account or personal details. The personal information should not be kept in a public computer or in emails.

- **Phishing:** A person's personal details are obtained by fraudsters posing as bankers, who float a site similar to that of the person's bank.

They are asked to provide all personal information about themselves and their account to the bank on the pretext of database upgradation. The number and password are then used to carry out transactions on their behalf without their knowledge.

Phishing involves using a form of spam to fraudulently gain access to people's online banking details. As well as targeting online banking customers, phishing emails may target online auction sites or other online payment facilities. Typically, a phishing email will ask an online banking customer to follow a link in order to update personal bank account details. If the link is followed, the victim downloads a program which captures his or her banking login details and sends them to a third party.

- **Spam:** Spam is an electronic 'junk mail' or unwanted messages sent to your email account or mobile phone. These messages vary, but are essentially commercial and often annoying in their sheer volume. They may try to persuade you to buy a product or service, or visit a website where you can make purchases; or they may attempt to trick you into divulging your bank account or credit card details.
- **Nigerian Scam:** Nigerian or Frauds 409 or 419 are basically the lottery scam in which some overseas persons are involved to cheat innocent persons or organizations by promising to give a good amount of money at nominal fee charges. Their intention is to steal money in the form of fee against the lottery prize.
- **Spyware:** Spyware such as Trojan horse is generally considered to be software that is secretly installed on a computer and takes things from it without the permission or knowledge of the user. Spyware

may take personal information, business information, bandwidth; or processing capacity and secretly gives it to someone else.

"Trojan Horse" scheme unfolds when malicious software (malware) embeds to a consumer's computer without the consumer being aware of it. Trojans often come in links or as attachments from unknown email senders. After installation the software detects when a person accesses online banking sites and records the username and password to transmit to the offender. People using public computers, in places like Internet cafes, are often susceptible to Trojans like malware or spyware.

- **Check sites Url:** Always check the URL of your bank's web site. Fraudsters can lure you to enter your user ID and password at a fake website that resembles your bank. If you see anything other than the bank's genuine URL, it has to be fake.

Never enter your user ID or password or such sensitive information without ascertaining that you are on the right website. Always type the Web address of your bank into the browser address space. Never click on the link in the email.

- **Fool-proof password:** Change your online banking password at regular intervals. Also, avoid easy-to-guess passwords, like first names, birthdays, kid's or spouse's name and telephone numbers. Try to have an alpha-numeric password, one that combines alphabets and numbers.

If you have several bank accounts, never use the same online banking password for all. Never select the option on browser that stores or retains

user name and password. As it can easily be cracked by cyber criminals. Also, never paste your password, always type it in. This little amount of `finger exercise' will go a long way in safety.

- **Always check 'last logged':** Most banks have a 'last logged in' panel on their websites. If your bank has it, check the panel whenever you log in. If you notice irregularities (like you are logging in after two days, but the panel says you logged in that morning!), report the matter immediately to your bank and change your password right away.

Always log out when you exit the online banking portal. Close the browser to ensure that your secure session is terminated. Never exit simply by closing the browser.

- **Keep your system up to date:** Regularly check for security updates for your computer operating system. Most security updates are aimed at reducing risks to your computer, these may be data-related or otherwise. Make sure that your operating system and browser have the latest security patches installed. And, always install these only from trusted websites.

Install a personal firewall to prevent hackers from gaining unauthorised access to your computer, especially if you connect to the Internet through a cable or a DSL modem.

- **Public access can be injurious:** Don't leave the PC unattended after keying in information while transacting on the website. Avoid accessing your bank online at cyber cafes or on a share or public

computer. Also, avoid locations that offer online connections through wireless networks (Wi-Fi), where privacy and security are minimal.

- **Follow Bank instructions:** Banks say that appropriate upgradations are carried out from time to time by their IT departments for risk mitigation. They issue instructions to the customers to manage their accounts through virtual keyboards by way of which the characters typed by them are not identified by hackers. SMS alerts are also an important tool since any transaction carried out on account is reported to the account holder through an SMS.
- **Protection:** Learn the ways to protect yourself from online banking fraud schemes. Detect Trojans that appear on your PC in the form of viruses, spyware or malware through Antivirus Software, anti Spyware, and Adware. Also, learn to keep your cards, documents and passwords safe, and monitor your accounts to safeguard yourself from bank fraud committed through identity theft.

➢ Examples:-

SBI bank: - State Bank of India is India's largest bank with a network of over 13000 branches and 5 associate banks located even in the remotest parts of India. State Bank of India (SBI) offers a wide range of banking products and services to corporate and retail customers.

OnlineSBI is the Internet banking portal for State Bank of India. The portal provides anywhere, anytime, online access to accounts for State Bank's Retail and Corporate customers. The application is developed using the latest cutting edge technology and tools. The infrastructure supports unified, secure access to banking services for accounts in over 13,000 branches across India.

The Retail banking application is an integration of several functional areas, and enables customers to:

- Issue Demand Drafts online
- Transfer funds to own and third party accounts
- Credit beneficiary accounts using RTGS/NEFT feature
- Generate account statements
- Setup Standing Instructions
- Configure profile settings
- Use eTax for online tax payment
- Use ePay for automatic bill payments
- Interface with merchants for railway and airline reservations
- Avail DEMAT and IPO services

- Pay bill of Visa Credit Card issued by any Bank.

The OnlineSBI corporate banking application provides features to administer and manage corporate accounts online. The corporate module provides roles such as Regulator, Admin, Uploader, Transaction Maker, Authorizer, and Auditor. These roles have access to the following functions:

- Manage users, define rights and transaction rules on corporate accounts
- Access accounts in several branches with a single sign-on mechanism
- Upload files to make bulk transactions to third parties, supplier, vendor and tax collection authorities.
- Use online transactional features such as fund transfer to own accounts, third party payments (both Inter and Intra bank), and draft issues
- Make bill payments over the Internet.
- Authorize, modify, reschedule and cancel transactions, based on rights assigned to the user
- Generate account statement
- Enquire on transaction details or current balance

In addition to the above the Internet banking application also provides the following value added services:

- Tax payments to central and state governments through site to site integration.
- Supply Chain Finance(e-VFS- Electronic Vendor Finance Scheme)

- Direct Debit Facility
- E Collection Facilities for:
    - Core Banking Transactions
    - Inter Bank Transactions for incoming RTGS/NEFT Transactions
    - Internet Banking Transactions for SBI & Associate Banks
    - Direct Debit facility where suppliers can directly debit their customer's account through Internet Banking

Products and Services

SBI offers Corporate and Retail Internet Banking Products and Other Value Added Services

- E-Ticketing
- SBI E-Tax
- Bill Payment
- Eztrade@sbi
- RTGS/NEFT
- E-Payment
- Fund Transfer
- Third Party Transfer
- Demand Draft
- Cheque Book Request
- Account Opening Request

- Account Statement
- Transaction Enquiry
- Demat Account Statement
- Donation

IMPORTANT SECURITY TIPS FOR SAFE ONLINE BANKING

1. Access your bank website only by typing the URL in the address bar of your browser.
2. Do not click on any links in any e-mail message to access the site.
3. SBI or any of its representative never sends you email/SMS or calls you over phone to get your personal information, password or one time SMS (high security) password. Any such e-mail/SMS or phone call is an attempt to fraudulently withdraw money from your account through Internet Banking. Never respond to such email/SMS or phone call. Please report immediately on report.phishing@sbi.co.in if you receive any such e-mail/SMS or Phone call. Immediately change your passwords if you have accidentally revealed your credentials.
4. Do not be lured if you receive an e-mail/SMS/phone call promising reward for providing your personal information or for updating your account details in the bank site.
5. Having the following will improve your internet security:
    a. Newer version of Operating System with latest security patches.

b. Latest version of Browsers (IE 7.0 and above, Mozilla Firefox 3.1 and above, Opera 9.5 and above, Safari 3.5 and above, Google chrome,etc.)

c. Firewall is enabled.

d. Antivirus signatures applied

6. Scan your computer regularly with Antivirus to ensure that the system is Virus/Trojan free.
7. Change your Internet Banking password at periodical intervals.
8. Always check the last log-in date and time in the post login page.
9. Avoid accessing Internet banking accounts from cyber cafes or shared PCs.

Now Online SBI is EV-SSL certified

- What is Extended Validation SSL?

  Extended Validation SSL Certificates give high-security web browser information to clearly identify a website's organizational identity. For example, if you use Microsoft® Internet Explorer 7 to visit a website secured with an SSL Certificate that meets the Extended Validation Standard, IE7 will cause the URL address bar to turn green. A display next to the green bar will toggle between the organization name listed in the certificate and the Certificate Authority (VeriSign, for example). Firefox 3 also supports Extended Validation SSL. Other browsers are expected to offer Extended Validation visibility in upcoming releases. Older browsers will display Extended Validation

SSL Certificates with the same security symbols as in the existing SSL Certificates.

What's New

E-Payment of Motor Vehicle Taxes & Fees of West Bengal Govt

SBI Fx Trade: Currency Future Trading

Viewing of Tax Credit Statement (Form 26AS).

Payment of 'National Permit' fee

Request for a Gift Card online.

Open Term deposit accounts online and get e-TDR/e-STDR receipts instantly.

Access your pension slip through enquiry menu.

Enquire about tax deducted on the interest earned by your deposits.

Online NRI e-Z trade 3 in 1 account introduced.

Transfer funds to any Bank from your SBI Account using RTGS/NEFT Facility.

Value Added Services

Online fee collection facility for Staff Selection Commission (SSC) and Union Public Service Commission (UPSC).

Discover a Simple, Secure and Convenient way to pay all your Utility Bills at OnlineSBI.

e-Rail reservation service using SBI accounts.

Mutual Funds investments handled with SBI accounts.

SBI e-Tax:Online payment facility for retail users and corporates.

Credit Card (Visa) Bill Pay.

Use your 3-in-1 account to trade online

- eZ-trade@sbi with MOSL.
- eZ-trade@sbi with SSL.
- NRIeZ-trade@sbi with SSL.

❖ Review of literature:-

Article:-

➢ E-banking clicks over bank visits

Aug 18, 2011

Rahul Mehra (name changed to protect identity), 28, an assistant manager in a corporate doesn't remember the last time he paid a visit to his bank branch although, it is near his residence.

He does all his banking transactions online. Being the preferred customer, he gets constant updates from his relationship manager who can provide him all the banking services at home as and when required.

Traditional visits to banks have declined 15% on an average, whereas, growth in usage of internet and mobile-banking has almost trebled, says a survey done by McKinsey & Company.

The weekly use of internet banking by Indian consumers has risen 130% since 2007, while mobile banking is up 338%, said the survey.

Also, 7% banking consumers have started using the internet banking, which is almost a 7-fold leap from 1% of consumers using internet in 2007.

“We see a marked shift away from using branches as a main channel for interaction in many markets. The scale of the branch network is becoming a less decisive factor than before in capturing customers’ ‘share of wallet’,” says Renny Thomas, partner in McKinsey’s India office, and a leader of McKinsey’s financial services practice in India.

Though there is a drop in the rate at which they earlier visited their branches, around 97% customers still continue to visit the branch, according to McKinsey.

While 95% of Indians appear satisfied with their main banks, they seemed more reluctant to recommend their financial institution to others, indicating declining loyalty and increased tendency to get their services from multiple sources.

“While Indian consumers say they want to consolidate their banking relationships, they continue to shop around because banks are not delivering the products and services, such as frontline services, that can lock them in,” said Thomas.
Loyalty has dropped by approximately 40% since 2007.
The average number of banking relationships rose 19% from 1.4 in 2007 to 1.7 in 2011. Also, the average percentage of people willing to shop around increased 15% in the same time period.

Further, price no longer features in the top five drivers of customer loyalty. Key loyalty drivers now focus around a bank’s customer service and staff quality.

The survey also highlights Indians preference for financial planning and willingness to take risks which has considerably increased 30% and 20%, respectively. Findings further show that, Indians have expressed a preference for localised banking where people who prefer to deal with a local institution rose in India 20% (from 75% in 2007 to 95% in 2011.)

However, despite the positive planning scenario, consumers have contrastingly shown greater dissatisfaction with their financial planners.

❖ Case study

1. Email password Hacking-

One day a lady came to cyber cell office and reported that she and her brothers e-mail ID'S had been hacked by someone she suspected him to be her husband. The lady had already lodged a case against him for dowry and was pending for trial in Bhopal court.

The suspect had hacked lady's and her brother e-mail ID account and copied all the information to his e-mail and produced selected e-mails to claim that . she was happy with him and case of dowry is a false one .

To malign the image of her brother the suspect sent a copy of FIR lodged against him at police station Habibganj. This indicated that the husband of the lady was behind the whole affair but police had not any evidence against him.

Cyber cell started enquiry by an order of IGP and obtained the login logs from rediff.com .The logs indicated that the email IDs password were changed and anonymous emails were sent from the house of lady's husband and sent from his.

Cyber cell registered a case under section 66 IT act and submitted Challan has been filed against the suspect and trial is over.

Court has hold the conviction against the suspect Sabrish Pillai but found that the matter came before the court as Sabrish was having family dispute with his wife and the, act of hacking was not against the society at large, Hence let him free after warning.

2. Internet Lottery Fraud :

MP Cyber police has investigated several case of cheating through Internet lottery offer which is commonly known as Nigerian 419 scam. In this kind of cheating the culprits used to send bulk emails, bulk SMS to millions of users using software, stating that the receiver has won lottery worth thousands of pounds or dollars which comes out to be crores of Indian rupees, in a lucky draw. They used to create fake lottery winning certificate using logo and text from original website, which seems to be original at a glance. This kind of sending bulk emails or SMS is an act of commonly known as Phishing attack. Those who are lured by such offer often tempted to contact them. The culprits then ask the target to fill a form and thus receive all the personal information of the target and asks him to deposit token money in various names to earn the lottery prize. The target who is hoping to earn huge amount of money finds these charges to be minimal. The culprit asks the target to deposit money in the name yellow tag, custom clearance UN anti terrorism certificate, RBI charges or any other name they feel it to suitable to convince the target. The culprits ask the

target to deposit in various bank accounts and once the money is deposited by the target it is withdrawn same day by the suspect.

After losing lakhs of amount people come to know that they are being cheated. In this kind of cheating the contact number are usually taken in the fake names or in the other Indian guys name, account are being opened in the fake names or acquired on the basis of commission by fooling the account holders.

Mp cyber police has investigated the case of Internet lottery fraud and arrested Nigerian national Godspower from Meharauli Delhi with the suspected mobile used for communication, one laptop, printer and box used for black dollar scam.

Mp cyber police has investigated the case of Internet lottery fraud Crime no 07/09 420,468,34 IPC and crime no 05/10 420,468,34 AIPC and arrested Nigerian national Idiiogbe Joseph from Mumbai with the suspected mobile used for communication, laptop, fake Income tax certificate and seals.

Apart from the above MPCP is investigating two more such cases in which suspects are being monitored and efforts are being made to arrest them.

❖ DATA ANALYSIS

A survey was conducted on online banking in India for the primary data among 25 people. The analysis of this survey or data is as follows:-

Q. What kind of banking do you prefer?

POLL out of 25: Traditional – 5 ; Online – 8 ; Both – 12

FINDINGS: This shows us the preference of the people towards the type of banking. They prefer to use the services of both the online and traditional banking rather than a particular type.

Q. Do you think online banking is better than traditional banking?

POLL out of 25: Yes - 13; No - 5; Can't Say – 7

FINDINGS: The people understand that online banking is better than the traditional banking because of its nature. While a few of the people are still not fully convinced.

Q. Do you feel you account is secured in online banking?

Poll out of 25: Yes - 11; No - 7; Can't Say – 7

FINDINGS: Majority of the people think that their Account is secured, but not all. Their security concern should be eradicated. This will attract customers.

Q. How frequently do you use banking services?

POLL out of 25: Weekly - 5; Monthly - 11; Regularly - 2; Rarely – 7

FINDINGS: Most of the people do not need the services of banks regularly or maybe there is no need. They may transact with the bank on monthly basis for most of the time.

Q. How happy are you with services of online banking provided by your bank?

POLL out of 25: Completely - 4; Partially - 9; Fairly - 9; Not at all - 3

FINDINGS: The satisfaction level of people with the online banking services of their banks has a mixed review. This may be due to multiple reasons.

Q. What type of transaction do you make in online banking?

POLL out of 25: Check balances - 11; Payments - 7; Transfer of fund - 2; Other -5

FINDINGS: The utility of the online banking is service is not used to the extent is should be and it is being majorly used for the purpose of checking the balance in the account. The reason for this is the low volume of transaction among the people.

❖ Conclusions and recommendations:-

❖ CONCLUSION:

- People are not confident enough to whether to rely completely on online banking. There is hesitancy in their minds with regards to

preference. So they use both the techniques of banking i.e. Online and Traditional.

- Because of the complexity and the unawareness in the people regarding the online banking, there is less utilization of the online banking services provided by the banks.
- People are not sure whether their account is completely secured in online banking. Security concern is the main and the core reason why people do not tend to use online banking.
- People in India are not aware of the full utility of online banking and the services that can be availed of in online banking.
- Most of the Indian populations are salaries employees who do not have that volume of transaction that can be used for online transaction.

❖ RECOMMENDATION:

After analyzing the entire study on online banking with respect to both the primary and the secondary data, the following recommendations can be put forth:-

- The infrastructure for the development is not being implemented in way that could be beneficial.
- There are various obstacles in the banking scenario with regards to guidelines and issues for functioning. This has led to decline in the usage of the online banking service of the banks.
- The people having accounts can be urged to take up an internet banking facility. They should be motivated rather than just being told that there exists a service of online banking.
- There are more people who are not actually aware of all the benefits that they reap out of the transaction of online banking. They should be proper awareness.
- Most of the people don't count online banking due the problems of security concerns. Proper security software should be developed and people should be convinced that their accounts are secured in online transactions.

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APPENDIX

ONLINE BANKING IN INDIA (Survey)

Q.1 WHICH BANK DO YOU HAVE AN ACCOUNT? ☐
(1 – Private sector bank; 2 – Public sector bank; 3 – Other)

Q.2 WHAT KIND OF BANKING DO YOU PREFER? ☐
(1 – Traditional; 2 – Online; 3 – Both)

Q.3 DO YOU THINK ONLINE BANKING IS USEFUL? ☐
(1 – Yes; 2 – No; 3 – Can't say)

Q.4 HOW FREQUENTLY DO YOU USE BANKING SERVICES? ☐
(1 – Weekly; 2 – Monthly; 3 – Regularly; 4 – Rarely)

Q.5 DO YOU THINK ONLINE BANKING IS BETTER THAN TRADITIONAL BANKING? ☐
(1 – Yes; 2 – No; 3 – Can't Say)

Q.6 DO YOU FEEL ONLINE BANKING HAS A GROWTH POTENTIAL IN INDIA? ☐
(1 – Yes; 2 – No; 3 – Can't Say)

Q.7 WHAT TYPE OF TRANSACTION DO YOU MAKE IN ONLINE BANKING? ☐
(1 – Check balances; 2 – Make payments; 3 – Transfer funds; 4 – Other)

Q.8 DO YOU FEEL YOUR ACCOUNT IS COMPLETELY SECURED IN ONLINE BANKING? ☐
(1 – Yes; 2 – No; 3 – Can't Say)

Q.9 ARE YOU HAPPY WITH THE SERVICES OF ONLINE BANKING PROVIDED BY YOUR BANK? ☐
(1 – Completely; 2 – Partially; 3 – Fairly; 4 – Not at all)

Q.10 FOR ME ONLINE BANKING IS _____

_____

NAME: _____ PHONE: _____

EMAIL ID: _____