CHAPTER I
INTRODUCTION

1.1 INTRODUCTION

Financial sector is the backbone of every economy. The readiness of the financial sector to adopt the objectives of economic and social development and to bring about a greater mobility of resources to meet the emerging challenges of the economy is a necessary condition of development. Financial sector comprises Capital sector, Insurance and Banking industry and contributes more than 25 percent in the growth of the economy.

Banking sector plays a very important role in the economic development of all the nations of the world because a developed banking system holds the key as well as serves as a barometer of economic health of the country. The banking sector influences the strength of every nation’s economy in the world economy. The overall development of any economy depends more on a sound banking sector and India is also not an exception in this case. Banks are the most significant players in the Indian financial market also because they are the biggest purveyors of credit and attract most of the savings from the population. Now, banking sector is performing well to make every citizen free from poverty, ignorance, financial problems which had plagued millions of our people from centuries.

Further, the performance of banks is completely linked with the growth of the economy and response to the requirements of changing environment to make our economy more competitive. Because with the globalization trends world over, it is difficult for any nation, big or small, developed or developing, to remain isolated from what is happening around and such isolation is nearly impossible for India also. In response to these dynamic changes, Indian banking system has also brought several types of changes in its working from manual system of work to computerization.

During the pre-LPG (Liberalization, Privatization and Globalization) era, the Indian Banking system was a monopoly of the Government and the banks performed all their functions manually with a very little support from the computers. Since early 1980s, Reserve Bank of India (RBI, Regulator) has been pushing the Indian banks towards computerization as a mechanization of operations. Technology was seen as a key business enabler in various vital areas of banking, viz. augmenting profit pool, operational efficiency, customer management, distribution and reach, product
innovation and efficient payment and settlement system. RBI expected that these developments in the area of housekeeping and decision making will improve customer service levels and productivity, ultimately resulting in better profitability and customer’s loyalty.

In recognition of the need to introduce greater competition with a view to achieve higher productivity and efficiency in the banking system, in 1992, RBI launched banking sector reforms, as per the recommendations made by the Narasimham Committee on financial sector reforms to create a more profitable, efficient and sound banking system. The reforms opened the banking sector for private players.

Private sector banks are divided into two categories: Domestic Private Sector Banks, which are further divided into two parts i.e. Old Private Sector Banks and New Private Sector Banks and Foreign Banks. The Old Private Sector Banks are smaller in size and are regional. In contrast the New Private Sector Banks and Foreign Banks are much larger in size, operating primarily in urban and metros and technologically superior to their counterparts.

In 1999, Liberalization coincided with the Information Technology Revolution. Since then, Information Technology (IT) continues to be the single largest facilitating force behind the successful transformation of transactions and analytical processing of banking business in the country. Developments which have taken place during the last few years all have IT as the pivotal centre-point. The introduction of Core Banking Systems (CBS), Internet Banking, Mobile Banking, Automated Teller Machines (ATMs), multifunctional ATMs, shared ATM services, large scale usage of Real Time Gross Settlement (RTGS) as part of initiatives aimed at financial inclusion are some of the landmark developments aimed at improving customer service facilitation using innovative systems has happened in this period.

Within the Reserve Bank too, there have been many developments using IT which have an impact on the financial sector of the country. The stabilization of the RTGS system has resulted in the entire approach to liquidity management by banks undergoing a sea-change. The introduction of the Online Tax Accounting System (OLTAS) for tax related payments for the Central Board of Direct Taxes and the electronic accounting system in Excise and Service Tax for the Central Board of Excise and Customs have revolutionized the method of tax payment to the Government. Filing of returns by banks through the Online Line Return Filing System
(ORFS), which has commenced, is poised to make the process of submission of data to the Reserve Bank less cumbersome.

The Development of IT has made banking undergone an electronic revolution in their operations known as e-Banking in which the entire banking operations are done electronically with the help of e-delivery channels. Banking sector has undoubtedly been earlier adapter of technology. From computerization to networking to ATMs and now e-Banking, banks have moved up to the value chain. Today most of the banks are dependent on computers and IT even for their basic functions.

New Private Sector Banks started with 100 percent computerization right from the day one of their operation and revolutionized the banking service levels in India by matching even the banks in the developed countries. They used technology as a strategic tool for customers’ acquisition and perceived that the future competition among banks would be essentially based on the technology and developed state-of-the-art technology infrastructure, comparable with that of banks in the developed countries.

This made all government-owned Public Sector Banks (PSBs) and the existing Old Private Sector Banks (OPSBs) to go on defensive to invest in IT to retain their customer's base as New Private Sector Banks gained what Public Sector Banks and Old Private Sector Banks lost. So we can say that the emergence of New Private Sector Banks, expansion by the Foreign Banks, the changing business model of the Nationalized Banks compounded by financial reforms and burgeoning of middle class, has, over the last few years, completely transformed the ways, in which banks in India operate.

With the emergence of e-Banking, customers’ satisfaction from the services of banks has undergone a revolutionary change. On one side, people have to spend lesser time in the banks for their operations. Cash withdrawal by cheques has now becomes an outdated phenomenon. They use ATMs, Debit Cards, and Credit Cards etc. for making payments to others. All these facilities provided by the banks have increased the satisfaction of bank customers to a larger extent as compared to the earlier times. But on the other side, there are some security issues which put a question mark on the efficiency of these services and the satisfaction gained by the customers. So the evaluation of customers’ satisfaction in e-Banking has become a vital issue these days. So that it can be known if the banks are really successful in doing something excellent for their customers. The role of bank employees is also
very significant in making bank customers able to take full advantage of e-Banking services as they are the channel between banks and the customers. So, their role is also evaluated in this changed environment of working.

1.2 STRUCTURE OF INDIAN BANKING INDUSTRY

The banking system occupies an important role in a nation’s economy. A banking institution is indispensable in a modern society. It plays a pivotal role in the economic development of a country and forms the core of the money market in an advance country. In India money market is still characterized by the existence of both the organized and the unorganized segments. Institutions in the organized money market have grown significantly and are playing an increasingly important role. Amongst the institutions in the organized sector of the money market, commercial banks and the commercial cooperative banks have been in existence for the past several decades. The Regional Rural Banks came into existence since the middle of seventies. Thus with the phenomenal geographical expansion of the commercial banks and setting up of the RBIs during the past, the organized sector of money market has penetrated into rural areas as well.

Besides the aforesaid institutions which mainly served sources of short term credit to industry, trade, commerce and agriculture, a variety of specialized financial institutions have been set up in the country to cater to the specific needs of industry, agriculture and foreign trade. It means that Indian banking industry comprises of several type of financial institution each specializing in a particular activity. The following chart shows the structure of Indian banking industry in detail.
According to this Chart, the Indian Banking Structure is explained as below:

1.2.1 Reserve Bank of India

The Reserve Bank of India (RBI) is India’s central banking institution. It was established on April 1, 1935 during the British Raj in accordance with the provisions of the Reserve Bank of India Act, 1934. The share capital was divided into shares of 100 each fully paid, which was entirely owned by private shareholders in the beginning. Following India’s independence in 1947, the RBI was nationalized in the year 1949. It plays an important part in the development strategy of the Government of India. It is the apex bank of India and all the banks works under the guidelines provided by RBI. It works as an agency of note issue, banker’s bank, government’s bank etc. It controls the monetary policy of government of India and is mainly responsible for the proper implementation of this policy and holds the most important place in Indian Banking Industry.
1.2.1.1 Scheduled Commercial Banks

According to RBI Act 1934, a scheduled bank is that bank which has been included in the second schedule of Reserve Bank of India. To be eligible for this concession, a bank must satisfy the following three conditions:

- It must have a paid-up capital and reserves of an aggregate value of at least Rs. 5 lacs.
- It must satisfy the RBI that its affairs are not conducted in a manner detrimental to the interests of its depositors.
- It must be a corporation and not a partnership or a single owner firm.

RBI gives them credit and many other facilities. These banks can also get their hundies rediscounted from the RBI. Commercial banks also have to keep fixed proportions of their demand deposits and time deposits with the RBI. They have to submit deposits of their business to RBI.

1.2.1.1.1 Commercial Banks

Among the banking institutions in the organized sector, the commercial banks are the oldest institutions having a wide network of branches, commanding utmost public confidence and having major share in the total banking operations. Initially they were established as corporate bodies with share-holding by private individuals but subsequently there has been a drift towards state ownership and control. Up to late sixties, they were mainly engaged in financing organized trade, commerce and industry but since then they are actively participating in financing agriculture, small business and small borrowers also. Foreign commercial banks have their branches in India of the joint stock banks incorporated abroad. These banks besides financing the foreign trade of the country, undertake banking business within the country as well.

- Public Sector Banks

Public sector in Indian banking reached its present position in three stages.

- Firstly, the conversion of the existing Imperial Bank of India into the SBI in 1955 followed by the establishment of its seven subsidiary banks. Later on two subsidiaries of State Bank of India, namely State Bank of Saurashtra and State Bank of Indore were merged into State Bank of India in 2008 and 2010 respectively. At Present, there are five subsidiaries of State Bank of India.
- Secondly, the nationalization of 14 major commercial banks on July 19, 1969.
- Thirdly, the nationalization of 6 more commercial banks on April 15, 1980. New Bank of India was later on merged with PNB. Then one more bank, namely IDBI Bank, was also nationalized by the government. Thus 26 banks constitutes public sector in Indian commercial banking system.

Difference between State Bank and Nationalized Banks

- Though all the 26 PSBs are corporate bodies, but the statutes under which they were established are different. The SBI was established under the SBI Act, 1995, the subsidiary banks under the SBI Act, 1959 and the nationalized banks under the banks companies (Acquisition and Transfer of Undertakings) Acts of 1970 and 1980.

- Initially, percent ownership of the 20 nationalized banks vested in the Government of India whereas the SBI was owned, to a large extent by the RBI. There was small private ownership in the share capital of the State Bank. The subsidiary banks are owned by the SBI during recent years. SBI and some of the nationalized banks- OBC, Dena Bank and Bank of India have enlarged their capital by issuing shares to the public.

- The SBI acts as an agent of RBI. According to the Section 45 of the RBI Act 1934, “the RBI shall appoint the state bank as the sole agent at all places in India, where it does not have an office or branch of its banking department and there is a branch of the state bank or branch of a subsidiary bank.” But the nationalized banks have not been conferred with this privilege of acting as agent of the RBI. Since the enforcement of the banking laws (amendment) Act 1983, the RBI has been empowered to appoint any nationalized to act as its agent at all places in India where it has a branch for the following purposes:-
  - Paying, receiving, collecting remitting money, bullion and securities on behalf of government in India.
  - Undertaking and transacting and other business entrusted by the RBI from time to time.

Private Sector Banks

Private Sector Banks are those banks which are owned by the private sector. The private sector played a strategic role in the growth of joint sector banks in India. In 1951, there were in all 556 private sector banks, of which 474 were non-scheduled and 92 were scheduled. But there was not a single private sector bank at that time. Since then, the number of public sector banks is increasing while
those of private sector banks are decreasing. Private Sector banks include Indian and Foreign Banks.

- Indian Private Sector Banks: There are two categories of Indian private sector banks as:
  - Old Private Sector Banks
    The banks, which were not nationalized at the time of bank nationalization that took place during 1969 and 1980, are known to be the old private-sector banks. These were not nationalized, because of their small size and regional focus. Most of the old private-sector banks are closely held by certain communities. Their operations are mostly restricted to the areas in and around their place of origin. Their board of directors mainly consists of locally prominent personalities from trade and business circles. One of the positive points of these banks is that, they lean heavily on service and technology and as such, they are likely to attract more business in days to come with the restructuring of the industry round the corner. Now they are 13 in number.
  - New Private Sector Banks
    The banks, which came in operation after 1991, with the introduction of economic reforms and financial sector reforms are called "new private-sector banks". Banking Regulation Act was then amended in 1993, which permitted the entry of new private sector banks in the Indian banking sector. However, there were certain criteria set for the establishment of the new private-sector banks, some of those criteria are: The bank should have a minimum net worth of Rs. 200 crores, the promoters holding should be a minimum of 25% of the paid-up capital, and within 3 years of the starting of the operations, the bank should offer shares to public and their net worth must increase to 300 crores. Presently they are 7 in number.
- Foreign Banks
  These banks are those incorporated in a foreign country and set up their branches in India. Their principal function is to make credit available for the exports and imports of the country and deal with foreign exchange having their head office in their home country. In India, 43 foreign banks have been established and providing healthy competition to our banks with the use of latest technology in their operations.

1.2.1.1.2 Regional Rural Banks
Regional Rural Banks are the banking organizations operated in different states of India. They have been created to serve the rural areas with banking and financial
services. However, RRB’s may have branches set up for urban operations and their area of operation may include urban areas too. The main purpose of RRB’s is to mobilize financial resources from rural/semi-urban areas and grant loans and advances mostly to small and marginal farmers, agricultural laborers and rural artisans. The area of operation of RRBs is limited to the area as notified by Government of India covering one or more districts in the State. RRB’s also perform a variety of different functions like providing banking facilities to rural and semi-urban areas, carrying out government operations like disbursement of wages of MGNREGA workers, distribution of pensions etc., providing para-banking facilities like locker facilities, debit and credit cards. In 2012-13 they were 64 in number.

1.2.1.2 Non-scheduled Commercial Banks
These are those banks of which the total capital is less than Rs.5 lacs. These banks are not included in the second schedule of the RBI. The RBI has no specific control upon these banks. But they have to send details of their business to the RBI every month.

1.3 PHASES IN INDIAN BANKING SYSTEM
We can identify three distinct phases of Indian Banking Industry:
1.3.1 Pre-Nationalization of Banks (Before 1969)
The first phase is from 1786 to 1969, the early phase up to the nationalization of the fourteen largest Indian Scheduled banks. It was also the traditional or conservative phase of Indian banking. The advent of banking system of India started with the establishment of the first joint stock bank, The General Bank of India, in 1786. After this first bank, Bank of Hindustan and Bengal Bank came to existence. In the mid of 19th century, East India company established three banks, The Bank of Bengal in 1809, The Bank of Bombay in 1840 and Bank of Madras in 1843. These banks were independent units and called Presidency Banks. These three banks were amalgamated in 1920 and a new bank, Imperial Bank of India, was established. All these institutions started as private shareholders banks and the shareholders were mostly Europeans. The Allahabad Bank was established in 1865. The next bank to be set up was The Punjab National Bank Ltd. which was established with its headquarters at Lahore in 1894 for the first time exclusively by Indians. Most of the Indian commercial banks, however, owe their origin to the 20th century. Bank of India, Central Bank of India, Bank of Baroda, the Canara Bank, the Indian Bank, and The Bank of Mysore were established between 1906 and 1913. The establishment of
Reserve Bank of India in 1935 as the Central bank of the country was an important step in the development of commercial banking in India. After that United Commercial Bank was set up in 1943. State Bank of India came into existence and became the Bank of the government of India in 1955 with RBI taking control of the Imperial Bank of India. State Bank of India, in turn took over the shares in the private banks floated in the erstwhile princely states.

The history of joint stock banking in this first phase was characterized by slow growth and periodic failures. There were as many as 1100 banks, mostly small banks, failed during the period from 1913 to 1948. The Government of India concerned by the frequent bank failures in the country causing miseries to innumerable small depositors and others enacted The Banking Companies Act, 1949. The title of the Act was changed as "Banking Regulation Act 1949", as per amending Act of 1965 (Act No. 23 of 1965). The Act is the first regulatory step undertaken by the Government to streamline the functioning and activities of commercial banks in India. Reserve Bank of India as the Central Banking Authority of the country was vested with extensive powers for banking supervision.

At the time of the Independence of the country in 1947, the banking sector in India was relatively small and extremely weak. The banks were largely confined to urban areas, extending loans primarily to trading sector dealing with agricultural produce. There were a large number of commercial banks, but banking services were not available at rural and semi-urban areas. Such services were not extended to different sectors of the economy like agriculture, Small Industries, professionals and self-employed entrepreneurs, artisans, retail trades etc.

1.3.2 Nationalization of Banks (1969-1990)

After the country attained independence, Indian Banking was exclusively under the control of private sector. In addition to the Imperial Bank, there were five big banks each holding public deposits aggregating Rs. 100 Crore and more, viz. The Central Bank of India Ltd., The Punjab National Bank Ltd., The Bank of India Ltd., The Bank of Baroda Ltd., and The United Commercial Bank Ltd. Rest of the banks were exclusively regional in character holding deposits of less than Rs. 50 crore.

The Government first implemented the exercise of nationalization of a significant part of the Indian Banking System in the year 1955, when Imperial Bank of India was nationalized in that year for the stated objective of "extension of banking facilities on a large scale, more particularly in the rural and semi-urban areas, and for diverse
other public purposes" to form State Bank of India. SBI was to act as the principal agent of the RBI and handle banking transactions of the Union and State Government throughout India. The step was in fact in furtherance of the objectives of supporting a powerful rural credit co-operative movement in India and as recommended by the "The All-India Rural Credit Survey Committee Report, 1954". State Bank of India was obliged to open an accepted number of branches within 5 years in unbanked areas. Government subsidized the bank for opening unremunerative branches in non-urban areas. The five banks (earlier seven) now forming subsidiaries of SBI were nationalized in the year 1960. This brought one-third of the banking segment under the direct control of the Government of India.

But the major process of nationalization was carried out on 19th July 1969, when the then Prime Minister of India, Mrs. Indira Gandhi announced the nationalization of 14 major commercial banks in the country. One more phase of nationalization was carried out in the year 1980, when six more banks were nationalized. This brought 80% of the banking segment in India under Government ownership. The country entered the second phase, i.e. the phase of nationalized Banking with emphasis on social banking in 1969-70.

1.3.3 Banking Sector Reforms (1991-2000)

In 1991, the country was caught into a deep crisis. Unprofitable branch expansion, non-performing priority sector lending and loan melas had left large gaps in the banks’ balance sheets. High regulatory requirements had also taken their toll and most banks were completely in the red. The government at this juncture decided to introduce banking sector reforms. The main objective of banking sector reforms was to promote a diversified, efficient and competitive financial system with the ultimate goal of improving the allocative efficiency of resources through operational flexibility, improved financial viability and institutional strengthening. Many of the regulatory and supervisory norms were initiated first for the commercial banks and were later extended to other types of financial intermediaries. While nudging the Indian banking system to better health through the introduction of international best practices in prudential regulation and supervision early in the reform process, the main idea was to increase competition in the system gradually.

In August 1991, the Government appointed a committee under the chairmanship of M. Narasimham, which worked for the liberalization of banking practices. The aim of
this Committee was to bring about ‘operational flexibility’ and ‘functional autonomy’ so as to enhance efficiency, productivity and profitability of banks. The Committee submitted its report in November, 1991 and recommended:

- ‘Reduction in CRR to 8.5 percent and SLR to 25 percent over a period of about five years.
- Deregulation of interest rates structure and decreasing the emphasis laid on directed credit and phasing out the concessional rates of interest to priority sector.
- To raise fresh capital through public issue by the profit-making banks.
- Transparency in Balance sheets.
- Establishment of Special Tribunals to speed up the process of debt recovery.
- Establishment of an Assets Reconstruction Fund with special power of recovery.
- Bank restructuring through evolving a system of a broad pattern consisting of 3 or 4 large banks including SBI, 8-10 national Banks engaged in ‘Universal’ Banking with a network of branches, local banks confined to a specific region and RRBs confined to the rural areas engaged in financing of agriculture and allied activities.
- Abolishment of branch licensing and leaving the matter of opening and closing of branches to the commercial judgment of individual banks.
- Progressive reduction in pre-emptive reserves.
- Introduction of prudential norms to ensure capital adequacy norms, proper income recognition, more stringent recognition of NPAs, classification of assets based on their quality and provisioning against bad and doubtful debts by constituting the special debt recovery tribunals.
- Introduction of greater competition by entry of private sector banks and foreign banks and permitting them to access capital market
- Partial deviation from directed lending.
- Strengthening the supervisory mechanism by creating a separate Board for Banking and Financial Supervision.
- Upgradation of technology through the introduction of computerized system in banks.
- Freedom to appoint chief executive and officers of the banks and changes in the constitutions of the board.
Bringing NBFC’S under the ambit of regulatory framework.
Again with the gradual upgradation of skills, technologies with the high level of globalization, government appointed second Narasimham Committee to further provide banking reforms in the light of changing environment. This committee worked out some new reforms in 1998 for the development of Indian banking industry. The major recommendations of Narasimham Committee-II were:

- In case of capital adequacy, strengthening the banking system through an increase in the minimum capital adequacy ratio (CRAR) from 8 percent to 10 percent by 2002, 100 percent of fixed income portfolio marked-to-market by 2001 (up from 70 percent), 5 percent market risk weight for fixed income securities and open foreign exchange positions limits (no market risks weights previously) and 100 percent commercial risks weight to Government-Guaranteed advances (previously treated as risk free)
- To bring down net NPAs below 5 percent by 2000 and to 3 percent by 2002.
- Reducing the minimum stipulated holding of the Government or RBI in the equity of nationalized banks or SBI to 33 percent
- Merging financially strong institutions and giving a revival package to the weak banks
- Strengthening the operation of rural financial institutions in terms of appraisal, supervision and follow-up, loan recovery strategies and development of bank-client relationships in view of higher NPAs in public sector banks due to directed lending.
- Amendment to RBI Act and Banking Regulation Act

The Government focused on competition enhancing measures by way of granting operational autonomy to public sector banks, reduction of public ownership in public sector banks by allowing them to raise capital from equity market up to 49 percent of paid-up capital; setting of transparent norms for entry of Indian private sector, foreign and joint-venture banks and insurance companies, giving permission for foreign investment in the financial sector in the form of foreign direct investment (FDI) as well as portfolio investment, giving permission to banks to diversify product portfolio and business activities, to prepare a roadmap for presence of foreign banks and guidelines for mergers and amalgamation of private sector banks, public sector
banks and NBFCs, and providing guidelines on ownership and governance in private sector banks. 

The current structure of the banking system which has succeeded is a product of this external and internal change. Progressively over this period, the public sector banks have expanded their branch network considerably and catered to the socio-economic needs of large masses of the population, especially the weaker sections and those in the rural areas. While recognizing the importance and role of public sector banks, there was increasing recognition of the need to introduce greater competition which can lead to higher productivity and efficiency of the banking system. Therefore, a stage has now reached when New Private Sector Banks and foreign banks are allowed to be set up with a view to induce competition and market-oriented system.

1.3.4 Computerization of Banks

Through the 1991 banking sector reforms, foreign and new private sector banks were allowed to enter freely in Indian banking industry with the main objectives of higher profitability and fierce competition. Deregulation allowed banks to flourish their business and enter into new markets with new technologies involving both individual and institutional customer interaction and computerization was the first step to respond to technological advancements. Computerization in banking sector/financial sector dates back to 1963, when Life Insurance Corporation introduced computers for maintenance and processing of insurance policies. Later on Reserve Bank of India and State Bank of India installed computer systems for processing reconciliation of inter-branch transactions, processing statistical data and for research purposes, while the rest of the work was left to be handled easily with the help of calculators, accounting machines and cash registers. A number of working groups were appointed in concern to the computerization of banking sector in 1975, 1981, 1988 etc. There was stiff resistance from bank employees' unions to implement recommendations of these working groups. At last a settlement was reached to permit the banks to use computers for their easy work and database management.

Another landmark in history of computerization was the setting up of Rangarajan Committee on computerization and mechanization of Banking Service in 1983. The committee headed by Dr. C. Rangarajan, Deputy Governor of RBI, was to look into modalities of drawing a phased plan of mechanization in banks in view of further
expansion. It recommended a three-level mechanization structure—branch, regional and head office level. Further in 1988, Reserve Bank of India appointed the second Rangarajan Committee to review the progress made in computerization in view of growing volumes of computer technology and problems associated with implementation of the recommendations of the first committee. The committee submitted its report in 1989 and recommended a thrust of computerization in banks for the next five years by fully computerizing the branches and use of banknet for several inter and intra-bank applications.

In October 1993, settlement on mechanization and computerization was signed between 58 banks under IBA and workmen represented by All India Bank Employees Association. According to the agreement, banks were free to computerize some or all operations in branches, administrative offices, communication and networking, automated teller machines, notes and cash counting machines, signature verification equipment and pass book printers, demand draft printers and terminals at customer location and equity terminals. Since then the process of computerization and mechanization has picked up momentum.

1.3.5 Current Stage of Electronic Banking (Post 2000)

Presently, the banks appear to be on fast track for IT based products and services. Information technology developments in the banking sector have speeded up communication and transactions for clients. The new technology has radically altered the traditional ways of doing banking business. Increasingly, the customers in retail sector are doing business with their banks from the comfortable confines of their homes or offices. Customers can view their accounts, get account statements, transfer funds, purchase drafts by just making a few key punches. Availability of ATMs and plastic cards to large extent avoid customers going to branch premises.

EDI is another development that has made its impact felt in the banking industry. In fact in banking industry, IT is finding its use in five key areas:

- Convenience in product delivery access
- Managing productivity access,
- Product design,
- Adapting to market and customer needs and,
- Access to customer market.

With the introduction of IT Act on October 17, 2000, India had reached the significant milestone on the information super highway. The Act provides legal sanctity to
electronic commerce and lays down penalties for hacking and other crimes. India will become the 12th country in the world to have an IT bill in place for recognizing digital signature and facilitating e-commerce.

1.4 e-BANKING

During the pre-LPG (Liberalization, Privatization and Globalization) era, the Indian Banking system was a monopoly of the Government and banks performed all their functions manually with little support from computers. As their services were labour-intensive, banks had to bear heavy establishment costs which limited the growth of banking in terms of profitability and productivity. But with the dawn of economic Liberalization in 1991 and with the wave of LPG, in 1993-94, the RBI allowed the entry of private and foreign banks into the banking Industry, leading to greater competition and enhanced performance with the aid of technological advancements. As a result, the banks computerized their operations, resulting in reduced paper work, burden of account maintenance and hence improved database management.

With the introduction of IT Act in 2000, banking has undergone an electronic revolution known as e-Banking. E-Banking has enabled banks to compete in the global market with attractive and innovative products and service since the e-Banking system has become a necessity of the current market forces. The move of the public sector banks to step up towards the same has become a matter of survival.

It has introduced new business paradigm and is increasingly playing a significant role in improving services in banking industry. Now concept of banking has changed from business dealing with money transaction to business dealing in financial interactions. Revolutionary development in information technology, global pressure and better informed customer demand enforced Indian banks to adopt information technology tools in their services, which can assure efficient delivery system with lesser cost and time in maintaining its reliability.

In its very basic form, e-Banking can mean the provision of information about a bank and its services via a home page on the World Wide Web. More sophisticated, e-Banking services provide customers’ access to accounts, the ability to move their money between different accounts and making payments or applying for loans via e-Channels. The term e-Banking describes the latter type of provision of services by a bank to its customers. Such customers may be either an individual or business organization. In the context of e-Banking, electronic delivery of services means a
customer conducting transactions using online electronic channels such as Internet. Many banks and other organizations are eager to use this channel to deliver their services because of its relatively lower delivery cost, higher sales and potential for offering greater convenience for customers. But this medium offers many more benefits. A large number of organizations from within and outside the financial sector are currently offering e-Banking which include delivering services using Wireless Application Protocol (WAP) phones and Interactive Television (iTV).

So to conclude, we can say that banking done electronically with the help of e-delivery channels is electronic banking or delivery of bank services to a customer at his office or home as per his convenience using e-technology can be termed as e-Banking. With the use of e-Banking, banks are expanding their customer base with the help of multiple e-delivery channels like Automated Teller Machine, Internet banking, phone banking, EFT, Web Trading, e-Trading etc. E-Banking is becoming a driving force behind the progress of Indian Banking and helping it in exploring business accepting deposits and giving loans.

Some of the important definitions of electronic banking are given as below:

Singh, S. (1996), "Electronic banking refers to the use of technology which allows customers to access banking services electronically whether it is to pay bills, transfer funds, view accounts or to obtain information and advices. It refers to the electronic services that are made available to the customers through phone, personal computers, television and the internet."

Rao, D. (1997), “Electronic banking includes all those banking facilities which includes the contribution of information technology."

Bank for International Settlement (BIS) (1999), “Electronic Banking refers to the provision of retail and small value banking products and services through electronic channels."

Kumar, Y. (2000), "Delivery of bank's services to a customer at his office or home by using Electronic Technology can be termed as Electronic Banking."

1.5 DIFFERENT CHANNELS OF e-BANKING

At first, e-Banking was known for computer-operated systems in the banks. But later on several e-delivery channels were introduced which bring revolutionary changes in the banking system. These e-delivery channels are as below:-

1.5.1 Automated Teller Machine
The growth of technology has changed the payment systems world over during past decades. The introduction of Automated Teller Machines has given facility to the bank customers for banking beyond the banking hours.

An ATM is a device located on or off the bank’s premises to receive cash round the clock. Customers can also use ATMs for obtaining balance inquiry, obtaining mini statement of last few transactions in their account, requesting cheque books, and payment of card bills and for transacting funds from one account to another.

A customer who wishes to utilize the services of ATMs will have access to it only with an ATM card. The ATM card consists of a personal identification number (PIN), which is known only to the customer. A customer who wishes to transact through the ATM will have to place the ATM card in the slot before starting his operations and he will be able to transact his business through interactive visual display unit and the keyboard.

There are two types of ATMs: (1) Exterior ATMs, and (2) Interior ATMs. Exterior ATMs are located in various places like shopping centers, airports, railway stations with or without drive in facility, while the interior ATMs are located within the bank premises. ATMs, which are directly interactive with the bank’s computers, are known as on-line ATMs and the others are known as off-line ATMs. On-line ATMs require the support of effective telecommunication facility.

1.5.2 Credit Card

A Credit card is a system of payments named after the small plastic card issued to the users of the system. A credit card is different from a debit card in that it does not remove money from the user's account after every transaction. In the case of credit cards, the issuer lends money to the consumer. It is also different from a charge card though this name is sometimes used by the public to described credit cards, which requires the balance to be paid in full each month. In contrast, a credit card allows the consumer to revolve their balance, at the cost of having interest charged. Most credit cards are the same shape and size, as specified by the ISO 7810 standard.

A user is issued credit after an account has been approved by the credit provider and is given a credit card with which the user will be able to make purchases from merchants accepting that credit card up to a pre established credit limit.

When a purchase is made, the credit card user agrees to pay the card issuer. The cardholder indicates their consent to pay, by signing a receipt with a record of the card details and indicating the amount to be paid or by entering a Personal
Identification Number (PIN). Each month, the credit card user is sent a statement indicating the purchases undertaken with the card, any outstanding fees and the total amount owed. After receiving the statement, the cardholder may dispute any charges that he or she thinks are incorrect. Otherwise, the cardholder must pay a defined minimum proportion of the bill by a due date or may choose to pay a higher amount up to the entire amount owed. The credit provider charges interest on the amount owed. Some financial institutions can arrange for automatic payments to be deducted from the user's bank account. Credit card issuers usually waive interest charges if the balance is paid in full each month, but typically will charge full interest on the entire outstanding balance from the date of each purchase if the total balance is not paid.

1.5.3 Debit Card

A Debit card is a plastic card which provides an alternative payment method to cash when making purchase physically. The card is an ISO 7810 card like a credit card; however, its functionality is more similar to writing a cheque as the funds can be withdrawn directly from the cash holder's bank account. Depending on the store or merchant, the customer may swipe or insert their card into the terminal, or they may hand it to the merchant who will do so. The transaction is authorized and processed and the customer verifies the transaction either by entering a PIN or, occasionally, by signing a sales receipt.

In some countries, Debit card is multipurpose, acting as the ATM card for withdrawing cash and as a cheque guarantee card. Merchants can also offer "cash back"/ "cash out" facilities to customers, where a customer can withdraw cash along with his purchase. The use of debit cards has become widespread in many countries and has overtaken the cheque and in some instances cash transactions by volume.

1.5.4 Tele-Banking

Tele-Banking is a service provided by a financial institution which allows its customers to perform transactions over the telephone. Most tele-banking uses an automated phone answering system with phone keypad response or voice recognition capability. To guarantee security, the customer must first authenticate through a numeric or verbal password or through security questions asked by a live representative. With the obvious exception of cash withdrawals and deposits, it offers virtually all the features of an automated teller machine: account balance information and list of latest transactions, electronic bill payments, funds transfers
between a customer’s accounts, etc. In addition to this, telephone banking representatives are usually trained to do what was traditionally available only at the branch: loan applications, investment purchases and redemptions, cheque book orders, debit card replacements, change of address, etc. Banks which operate mostly or exclusively by telephone are known as phone banks.

1.5.5 Mobile Banking

Mobile Banking also known as M-Banking is a term used for performing balance checks, account transactions, payments etc. via a mobile device such as a mobile phone. Mobile Banking today is most often performed via SMS or the Mobile Internet but can also use special programs downloaded to the mobile device.

Over the last few years, the mobile and wireless market has been one of the fastest growing markets in the world and it is still growing at a rapid pace. Many believe that mobile users have just started to fully utilize the data capabilities in their mobile phones. This opens up huge markets for financial institutions interested in offering value added services. With mobile technology, banks can offer a wide range of services to their customers such as doing funds transfer while traveling, receiving online updates of stock prices or even performing stock trading while being stuck in traffic.

Mobile devices, especially smart phones, are the most promising way to reach the masses and to create "Stickiness" among current customers, due to their ability to provide services anytime, anywhere, high rate of penetration and potential to grow.

In the last few years, banks across the globe have invested billions of dollars to build sophisticated internet banking capabilities.

1.5.6 Internet Banking

Internet banking is an improvement over PC-banking and tele banking because it is done over a highly accessible public network. Internet/online banking is an electronic consumer interface and an alternative channel of distributions. Internet is an interconnection of computer communication networks spanning the entire globe, crossing all geographical boundaries. It is accessible to anyone using the internet, not just the bank customers and employees and even anywhere in the world. It allows the customers to open account, pay bills, view account balance, calculate interest, funds transfer, stop payments instructions, re-order cheque books, receiving new banking industry news and receive messages from banks through emails, online
demonstration and training system to assist new/potential customers, online share market trading, shopping etc.

Now a days, banks establish their own wed-sites and once they become popular, the banks have ability to exploit new range of revenue rising opportunities like selling products like credit/debit cards, ATMs, small loans etc. Also, internet banking is gaining much importance and preferred as compared to other products of e-Banking, but in India its progress is still slow even capturing more customer market with facility of anywhere anytime banking.

Internet banking has provided numerous benefits like:

- Greater reach to customers
- Quicker time to market
- Ability to introduce new products and services quickly and successfully
- Ability to understand its customers' needs
- Customers are given access to information easily across any location.
- Greater Customer Loyalty

Unfortunately, nationalized banks have been unable to evolve as fast as most private sector and MNC banks. As a result, in many organizations there may be a mix of automated systems and manual systems, with both systems running parallel, and using holy-baked applications created by smaller vendors which run in certain departments. This creates a chaotic scenario.

1.5.7  Real Time Gross Settlement System

Real time gross settlement systems (RTGS) are funds transfer systems where transfer of money or securities takes place from one bank to another on a "real time" and on "gross" basis. Settlement in "real time" means payment transaction is not subjected to any waiting period. The transactions are settled as soon as they are processed. "Gross settlement" means the transaction is settled on one to one basis without bunching or netting with any other transaction. Once processed, payments are final and irrevocable. This "electronic" payment system is normally maintained or controlled by RBI. There is no physical exchange of money; the RBI makes adjustments in the electronic accounts of Bank A and Bank B, reducing the amount in Bank A's account and increasing the amount of Bank B's account by the same.

The RTGS system is suited for low-volume or high-value transactions. It lowers settlement risk, besides giving an accurate picture of an institution's account at any point of time. The implementation of RTGS systems by the RBI is driven by the goal
to minimize risk in high-value electronic payment settlement systems. Settlement is immediate, final and irrevocable. Credit risks due to settlement lags are eliminated. It was implemented by the RBI in March, 2004.

1.5.8 Electronic Fund Transfer

For years, banks have been affecting inter-city transfer of money for their customers through Demand Drafts, Mail Transfers and Telegraphic Transfers. As each of these modes imposes some limitations, The Reserve Bank of India devised an Electronic Funds Transfer (EFT) system to facilitate speedier transfer of funds electronically. Electronic Funds Transfer facilitates transfer of funds from the bank accounts of one customer to the bank account of another customer. In this system, the sender and the receiver of funds may be located in different cities and may even bank with the different banks. Funds Transfer within the same city is also permitted. The scheme has been in operation since February 7, 1996.

The account holders having Savings/Current/Cash/Credit with the bank can use the EFT facility presently available between Mumbai, Kolkata, New Delhi and Chennai. The upper limit for individual EFT transaction is Rs. Five lacs only. All the public sector banks are the participating banks under the EFT system.

1.5.8.1 Special EFTs (SEFTs)

SEFTs was introduced in April 1st, 2003 to provide for transfer of funds electronically across a large number of bank branches in the country as a forerunner to the nation-wide funds transfer system (NEFT), SEFT system with the settlement being centralized at Mumbai and providing for same day funds settlement with multiple settlements during a day. SEFT covers more than 2500 branches of different banks situated in various cities across the country. Transaction through SEFT rose to above one lac which indicates its acceptance and usage by the customers.

1.5.9 Electronic Clearing Services

It has two dimensions as:

1.5.9.1 Electronic Credit Clearing

It is a simple, reliable and cost effective solution for bulk and repetitive payment transactions like salary, pension, Interest, commission, dividend etc. by public or private companies and Government Departments through banks.

Under the said system, companies who have to make bulk payments to a large number of beneficiaries prepare the credit instructions on the magnetic media and submit the same to the Reserve Bank of India through their bankers. RBI processes
the data, arrive at inter-bank settlement and provide bank and branch-wise reports containing the details of payments to facilitate fast payment to the beneficiaries. The said scheme was introduced in Chennai and Mumbai in April 1995.

The institutions who want to avail ECS facility have to get them registered with the sponsor bank. The sponsor bank will forward a copy of the registration form to RBI after allotting a registration number. The institution that has to make payments to a large number of customers has to prepare the payment data on a magnetic media and submit to the bank. Bank would present the payment data to the local clearing house through its service branch in a sealed cover duly encrypted in consultation with RBI. Clearing House debits its account and credit the destination Bank's accounts i.e. the accounts of the banks where the beneficiaries of the transactions maintain their accounts.

1.5.9.2 Electronic Debit Clearing

Electronic Debit clearing covers the payment to utility companies like telephone and electricity bills etc. It was introduced in March 1996 by the Reserve Bank of India. The electricity and telephone consumer are large in number in every city with one or two utility companies to serve them like MTNL etc. These utility companies are collecting their periodical bills from their customers. Under the said scheme, the customer on receipt of the bill from the utility company and having satisfied himself of its correctness can approach his banker and authorize the bank branch to debit his account for the amount of the bill and transfer the amount to the bank account of the utility company. In fact, branch has to prepare a floppy file through a table top MICR Reader of all such transfer advices and this floppy is received by the service branch which would consolidate for onward submission to the Clearing House. The RBI would debit the individual bank and credit the sponsor bank of the utility company.

1.5.10 Electronic Data Interchange (EDI)

It is already taking place in India between the banks and their customers, adding fuel to the need for non-repudiation services for banking traffic. It is the electronic exchange of business documents like purchase orders, invoices, shipping notices etc. in a standard, computer processable, universally accepted format between trading partners. It is also introduced at customer house, various ports in the country resulting in saving time and every of exporters/importers to collect custom duty, shipping charges, payments of duty drawback etc. It can also be used to transmit
financial information and payments in electronic form and hence it can also be defined as financial EDI/EFT.

1.5.11 Electronic Cheques

It is also a new product of e-Banking for internet payments. It is the internet version of FEDI (Financial EDI) systems which allow these functions over VANs. The electronic cheques provide internet websites with the ability to perform various functions like present the bill to payer, provide remittance information, allow payments to be made to new businesses with which the payer has never transacted, allow the payers to initiate payments of the invoice, provide interface with financial management software and transaction processing software. E-cheques provide easy and time saving facilities to the customer through internet. These are safe and no need to carry paper cheques hence no fear of theft etc. Banks are also beneficial from earnings point of view and reduce paper work also.

1.6 IMPORTANCE OF e-BANKING

In the modern working environment, no bank can even think to run its business without e-delivery channels. It has become a matter of survival for the banks to make themselves equipped with all the e-delivery channels in order to make them efficient, productive and profitable on one side and to provide satisfaction to their customers from their banking experience on the other side. Some of the facts that describe its importance are given below:

➢ Choice and Convenience for the Customers

Customers hold the key to success and banks must find out what different customers want and provide it using the best available technology, ensuring that they are acting on the latest, most up-to-date information. In modern banking environment, customers want greater choice in their operations. Electronic banking backed up by data mining technologies can help in better understanding customers’ needs and customizing products/services according to those needs. Offering extra e-delivery channels means wider choice and convenience for bank customers, which is an improvement in customer service. E-Banking can be made available 24 hours a day throughout the year, and a widespread availability of the Internet, even on mobile phones, means that customers can conduct many of their financial tasks virtually anywhere and anytime.

➢ Enhanced Image
E-Banking helps to enhance the image of the bank as a customer focused innovative organization. This was especially true in early days when only the most innovative organizations were implementing this channel. Despite its common availability today, an attractive banking website with a large portfolio of innovative products still enhances a bank’s image. This image also helps in becoming effective at e-marketing and attracting young/professional customer base.

- **Increased Revenues**

Increased revenues as a result of offering e-channels are often reported, because of possible increases in the number of customers, retention of existing customers, and cross selling opportunities. It has also allowed banks to diversify their value creation activities. E-Banking has changed the traditional retail banking business model in many ways, for example by making it possible for banks to allow the production and delivery of financial services to be separated into different businesses. This means that banks can sell and manage services offered by other banks (often foreign banks) to increase their revenues. This is an especially attractive possibility for smaller banks with a limited product range. E-Banking has also resulted in increased credit card lending as it is a sort of transactional loan that is most easily deliverable over the Internet. Electronic bill payment is also on rapid rise which suggests that electronic bill payment and other related capabilities of e-Banking have a real impact on retail banking practices and rapidly expanded revenue streams.

- **Easier Expansion**

Traditionally, when a bank wanted to expand geographically it had to open new branches, thereby incurring high start up and maintenance costs. E-channels, such as the Internet, have made this unnecessary in many circumstances. Now banks with a traditional customer base in one part of the country or world can attract customers from other parts, as most of the financial transactions do not require a physical presence near customers living/working place. In many countries, banks share their resources such as ATMs or use post offices as their main interaction points, with customers for services such as cash and cheques deposits.

- **Load Reduction on Other Channels**

E-Channels are largely automatic, and most of the routine activity such as account checking or bill payment may be carried out using these channels. This usually results in load reduction on other delivery channels, such as branches. This trend is likely to continue as more sophisticated services such as mortgages or asset finance
are offered using e-Banking channels. In some countries, routine branch transactions such as cash/cheque deposit related activities are also being automated, further reducing the workload of branch staff, and enabling the time to be used for providing better quality customer services.

- **Cost Reduction**

The main economic argument of e-Banking so far has been reduction of overhead costs of other channels such as branches, which require expensive buildings and a staff presence. It also seems that the cost per transaction of e-Banking often falls more rapidly than that of traditional banks once a critical mass of customers is achieved.

- **Efficiency in Business**

To implement e-Banking, banks often have to re-engineer their business processes, integrate systems and promote agile working practices. These steps, which are often pushed to the top of the agenda by the desire to achieve e-Banking, often result in greater efficiency and agility. However, radical organizational changes are also often linked to risks such as low employee morale, or the collapse of traditional services or the customer base.

### 1.7 SEGMENT-WISE ADVANTAGES OF E-BANKING

Electronic Banking has a lot of benefits for every one including banks itself, customers etc. Some of these benefits are: -

- **To the Customers**
  - E-Banking provides 24 hours, 365 days a year service to bank customers.
  - Customers can make some of the permitted transactions from their office or from their house or while travelling via mobile telephone.
  - It includes a sense of financial discipline by recording each and every transaction.
  - Greater customer satisfaction by offering:
    - Unlimited access to the bank, not limited by the walls of the branch.
    - Less risk and greater security to the customers as they can avoid travelling with cash.
  - Ease in Utility payments.
  - Convenience acts as tremendous psychological benefit all the time.
  - Cash/Card free banking through PC banking. E-Banking expands the domain of access to banking services.
Brings down "costs of banking" to the customers over a period of time.
On-Line purchase of goods and services including on-Line payment for the same.

➢ To the Banks
- E-Banking provides competitive advantage to the Bank.
- E-Banking provides unlimited network to the bank and is not limited to the number of branches. Any PC connected to modem and telephone having internet connection can provide banking facility to the customer. An ATM on the road-side can provide cash withdrawal needs of the customers.
- By connecting all the branches through WAN (Wide area network), any where banking facility can be provided.
- By connecting ATMs and POS terminals on-Line, risk of over-drawl can be eliminated in case of ATM, Credit and debit cards.
- Load on branches can be considerably reduced by establishing centralized data base and by taking over some of the accounting functions.
- ALM can be better monitored and planned by establishing a centralized data warehousing and using latest data mining tools.
- Scope and potential for better profitability.
- Helps in establishing better customer relationship and retaining and attracting new customers.
- Reduces customer visits to the bank branch and thereby human intervention. This impact tells upon establishment costs of the Bank.
- Inter-branch reconciliation is immediate thereby reducing chances of fraud and misappropriation.
- On-Line Banking - an effective medium of promotion of various schemes of the Bank - a marketing tool indeed.
- E-Banking site can act as a revenue earner through promotion activity by consumer corporates.
- Integrated customer data paves way for individualized and customized services.

➢ To Merchants, Traders etc.
- Increase in business because of increased purchasing power of the credit cardholders and ease with which purchasing can be done.
- Less need for merchant/traders to provide credit facility to their customers.
Making e-commerce a reality in globalizing the trade.
Development of global and loyal client base.
Assured immediate settlement/payment.
Avoid all cost and risk problems involved in handling cash.
Providing services of international standard at low transaction cost.

To Government and Nation
Globalization of Trade through e-commerce.
Providing global market to the national products and services.
Establishment of e-commerce in India will promote exports and increase inflow of foreign exchange.
Promotion of e-commerce and e-Banking will eliminate the risk of carrying heavy cash.
E-Banking and e-commerce will improve transparency in transactions.

1.8 PROBLEMATIC ISSUES IN e-BANKING
The implementation of a successful e-Banking strategy is far from being straightforward, as there are numerous inherent difficulties/barriers. The Internet as a channel for services delivery is fundamentally different from other channels such as branch networks or telephone banking. Therefore, it brings up its own unique challenges that require innovative solutions. Thus, a logical step for the management of banks may be to fully understand the organizational barriers inherent in e-Banking. The Internet has not only created previously non-existent opportunities for cost effective, all time available financial services, it has also increased the significance of a number of risks which did not exist or were not significant in the past.

Furthermore, a number of change management issues usually associated with any new technology implementation are compounded. Here we will discuss some of the most common problematic issues in e-Banking implementation and management. The main focus will be on those issues which pose considerable risks to e-Banking projects and may prevent banks from achieving their desired e-Banking related goals.

1.8.1 Technology Related Problems
1.8.1.1 IT and Telecommunication Infrastructure Issues
At present, the availability of e-Banking is substantially greater in developed countries than in developing economies. Many developing countries like India do not
have the necessary telecommunications, banking, commercial, bureaucratic and legal infrastructures to support the widespread introduction of e-Banking. Access to the Internet is a major problem in the developing world, and presents an obstacle to the growth of e-Banking.

1.8.1.2 Capacity/Scalability Problems

It is difficult to predict the usage of e-Banking on an hourly or daily basis. These ‘scalability problems’ can give rise to a slowing down of the website, or even a website crash (temporary unavailability). Many times, we go to the bank for making transactions and their computers are not working. This can cause many reputation problems and financial damage. Though a number of technical solutions are available to address this problem, but owing to the high cost associated with them, some banks do not implement them.

1.8.1.3 Availability and Systems Integration

One of the basic requirements of e-Banking services is their 24-hour availability. This often requires e-Banking applications’ integration with legacy systems, which were designed to provide services during only specified periods, often with suspension of services at other times for various reasons such as data backups and end-of-day processing. Incompatibility between e-Banking applications and legacy systems means that most banks require middleware to integrate these systems, which can be expensive and may bring its own set of problems. Shortcomings in technological infrastructure are often the biggest hurdle in the implementation of e-delivery channels and their integration with other parts of a business. This type of integration is essential for the success of e-Banking, as an electronic request for a typical financial transaction passes through a number of different systems before an action is complete.

1.8.1.4 Website Design and Operational Functionality

There is considerable weight attached to the appropriate design of e-Banking websites. Poor design of website has been estimated to result in the loss of potential repeat visits. Poor design may include use of inappropriate colours, contrast, font or navigation functions. Lack of proper functionality, excessive use of graphics or other similar factors can also deter customers from coming back to that website. Web usage barriers can also be attributed to vision, cognition, and physical impairments associated with the normal aging process. These factors need to be taken into account when designing a website as aging population in most industrialized
counties means that this segment is increasing in size. These are the people who might need the online services most due to mobility issues. Poor website design can also result in decreased trust in using online financial services as look and feel often creates a lasting impression.

1.8.2 Management Problems

1.8.2.1 Regulatory Issues

As the Internet is a global medium, it creates opportunities for trading on an international basis, but every country has its own laws and regulations concerning the provision of financial services. The issue of preventing money laundering, which is considered to be the main source of finance for terrorism and other related criminal activities, has further complicated the situation. This is one of the major problems in expansion of e-Banking services on a global basis. The Internet is also a major source of consumer intelligence (personal information, buying patterns and behaviour) which raises a number of privacy, security and data protection issues which regulators must address effectively. To do this, new regulations must be put in place more quickly than in the past, leading to constant changes in laws and regulations.

1.8.2.2 Information Management

Good information management enables the banks to become more effective in their operations as it provides the information to the employees, which they need to analyze and conceptualize, thereby adding to the bank's store of knowledge and making their jobs more meaningful and efficient. In online services operations, good information can be a vital difference between success and failure. However, managing information has been a problem for organizations across many industries. This problem is not unique to e-Banking but information management requirements for e-Banking are usually much greater. Therefore if a bank is not good at managing information, their participation in e-Banking simply increases the scale of their problems. Effective e-Banking requires that management has up-to-date and timely information in an understandable format. Any improvements in this area can lead to significant benefits in operations and the marketing of e-services.

1.8.2.3 Outsourcing Problems

Development or implementation of e-Banking systems and other technical tasks such as upgrading and integrating existing legacy systems are very complex. They require very high levels of technical and project management competence to carry
out without outside help. Even the best banks need to recognize the limitations of their expertise and when to outsource certain e-Banking functions.

Many banks outsource all or part of e-Banking related operations owing to a lack of in-house expertise or simply to cut costs. Outsourcing works in some cases but can create a risk of the bank losing control of its critical functions. For this reason, if a bank needs to outsource its e-Banking operations, it should do so with due consideration to outsourcing risks.

1.8.2.4 Security Problems

Security related issues are a major source of concern for everyone both inside and outside the banking industry. E-Banking increases security risks, potentially exposing traditionally isolated systems to the open and risky world of Internet. These threats have potentially serious as financial, legal and reputational risks associated with the bank. This is the only thing which hinders bank customers to use more of these channels for their banking transactions.

In an e-Banking environment, security threats largely fall into the following categories:

- **Login detail disclosure**: This is most basic threat to the financial system. Using a number of means, criminals acquire login details, such as a customer number, PIN, and use it to access the account and steal money from it. This threat could be mitigated through promotion of good practice amongst consumers to keep their login details safe.

- **Computer spy viruses**: These are computer programs which are circulated through email or other means. Once a customer opens a malicious email a program is automatically installed in his/her computer. These programs collect login id or other financial information which is used to conduct a range of criminal activities such as credit card cloning or unauthorized funds transfer.

- **Dummy sites**: Here customers are lured to the dummy or look alike website. These website look very similar to a bank’s website, and when login details are entered, these are recorded and used for criminal activities. Most of these threats can be mitigated by promoting good password practice. Banks, regulators and professional association provide good practice guidelines to customers. Many technical as well as managerial types of solutions are available, and show various degrees of success.
One of the main problems with implementing security solutions is customer resentment against several layers of security which might lead to loss of customers. Another problem is the high cost associated with them; most sophisticated systems can be implemented only for the highest value parts of e-Banking systems. Hackers are not the only security threat, employees or contractors can do as much damage as a hacker can. Therefore security provisions are also necessary for internal threats. In the face of multi-faced, multi-directional security threats, implementing ad hoc security systems may not be the best approach. So, security is no longer an internal issue for a bank, financial sector or regulator; it has become one of the major political/business issues in several counties and needs to be taken very seriously.

1.8.2.5 Loss of Personal Relationship
Another key barrier in e-Banking is a lack of personal contact between customers and banks. Electronic delivery channels erode a direct relationship with customers as compared with traditional over-the-counter banking. E-Banking does not offer face-to-face contact in what is essentially a one-to-one service relationship. To compensate, e-banks must deliver high value products and to cut operational costs to remain competitive, which in turn may further erode the avenues for building personal relationships with customers. The solution to these problems appears to be offering a multi-channel experience which is better than direct competitors.

1.8.2.6 Organizational Structures and Resistance
The introduction of e-Banking can generate conflicts and morale problems as changes required to succeed in e-Banking may have profound effects on the way a bank is structured. Confusions resulting from fast paced changes can also have negative effects on customers and bank personals. Resistance to change constitutes a major barrier to the success of e-Banking system. Change management projects have very poor success rates. Change is a dynamic process encompassing different but interrelated forms of diversity. This diversity might be related to several dimensions such as bank's structure and culture, or the interactions between different dimensions of the bank. Causes of failures can often be found in inefficient interactions of technical and human activities, the bank with its environment, or bank design and management style. Lack of systematic change management methodologies or problems in their implementation is another commonly cited problem.

1.8.3 Trust Issues
Lack of bank customer's trust is a major hurdle in the growth of e-Banking. In the traditional way of doing banking business, there is a direct contact between the bank employees and the bank customers. Whenever bank customers have any problem, they can go to the bank employees for the solution of these or when the bank demands any information from them; they are ready to give the same to the bank as they have faith on the bank. But in online system of banking, there is no direct contact between the customer and the authority. So, they always worried about providing any type of information to the bank as they fear that their information might not misused by someone. This is the basic reason that they hesitate in providing their personal information to the bank which creates a hurdle in the development of electronic system of banking.

1.8.4 Adoption/Acceptance Issues
Within this new set of market possibilities provided by online environment, there are risks as well as opportunities for customers. However, owing to the security and trust issues discussed above, consumer take up of online services including e-Banking has been much lower that many people expected. In addition many customers lack the required IT skills, or access to a computer or the Internet. Even when all of these issues are resolved, there will be people who will simply not use these new ways of conducting business and banks need to provide for them, perhaps keeping physical branches for foreseeable future. From an organizational point of view, failing to successfully adopt e-business initiatives originate from a combination of unclear business vision for e-business and lack of technological expertise amongst some other factors.

1.8.5 Clash with Other Services Delivery Channels
Although e-Banking promises to be more cost effective and efficient than other channels such as branch or phone banking, it may also cannibalize these other channels. In the short term a cheaper channel replacing an expensive one looks attractive, but in the long run it may cost banks an established and loyal customer base. For this reason many banks treat e-Banking as only an extra channel, a factor which could mean that growth of e-Banking is much slower than many expected.

Many banks have invested huge resources in their branch networks and in many ways view it as one of their core competencies. New technologies can enhance these core competencies but at the same time may destroy them. This could mean that entry barriers for new entrants keep coming down and increasing competition
from new and lower cost rivals can erode profits. Banks need to be pro-active regarding new distribution channels, and should allocate resources in order to integrate them in the existing organization.

1.8.6 Change Management Issues
One of the main problems bank encounters when considering e-Banking adoption is organizational change. Technology adoption is usually slow if too much attention is paid to technical aspects, rather than business processes and social issues. High start up cost of e-Banking also deters some banks to delay its implementation. Lack of a well defined e-Banking strategy that is aligned with general business strategy is also one of the most common problems in e-Banking adoption. Adoption of e-Banking initiatives can also be derailed by the absence of clearly defined performance measures.

1.8.7 Ethical Issues
Consideration of the ethics of e-Banking have mainly focused on areas relating to the use/abuse of information collected through analyzing online customer behaviour. In this context the main issues may include security/privacy of information about individuals, accuracy of information, ownership of information and intellectual property, accessibility of information held and what uses of this information are ethically acceptable. These relate to: freedom of choice; transparency; facilitating fraud (ethical/illegal activities of others).

A client’s relationship with a bank or a manager may have developed over years of loyal customer commitment. Reducing this to boxes ticked and computer-generated numbers/models would, according to an ethic of care, result in the loss of the development of individual relationships, the human touch and the use of intuition. Such aspects may be viewed as necessary to the new electronic economy, but human networks are just as important a part of business practice as the efficiencies associated with e-Banking.

1.9 CUSTOMERS' SATISFACTION FROM BANKING SERVICES
Customers' satisfaction, a term frequently used in the banking industry, is a measure of how products and services supplied by the banks, meet or surpass their customer's expectation. Customers' satisfaction is defined as "the number of customers, or percentage of total customers, whose reported experience with the bank, its products, or its services exceeds specified satisfaction goals."
In a competitive marketplace where banks compete for customers, customers' satisfaction is seen as a key differentiator and has increasingly become a key element of their business strategy. Because it is a well known fact that no business can exist without satisfied customers, including banks. So it is critical that banks form a close working relationship with their clients. The achievement of customer's satisfaction leads to businesses loyalty and product repurchase. Therefore, it is essential for the banks to effectively manage customers' satisfaction. Competitors in the banking industry that are prospering in the new global economy recognize that measuring customers' satisfaction is the key to their success. Only by doing so they can hold on to the customers they have and understand how to better attract new customers. The competitors who will be successful recognize that customers' satisfaction is a critical strategic weapon that can bring increased market share and increased profits. But in the field of customer's satisfaction the problem banks face, however, is exactly how to do all of this and do it well. They need to understand how to quantify measure and track customers' satisfaction. Without a clear and accurate sense of what needs to be measured and how to collect, analyze and use the data as a strategic weapon to drive the business, no bank can be effective in this new business climate. Plans constructed using customer satisfaction research results can be designed to target customers and processes that are most able to extend profits.

It is no surprise to find that market leaders in the banking industry differ from the rest of the industry in that they are designed to hear the voice of their customers and achieve customers' satisfaction. In these banks:

- Banking evaluations include not only their own customer satisfaction ratings but also those of their competitors.
- Satisfaction results are made available to all bank employees, so that they can do hard efforts to increase the level of customer's satisfaction.
- Customers are informed about changes brought about as the direct result of listening to their needs.
- Internal and external quality measures are often tied together.
- Customer satisfaction is incorporated into the strategic focus of the bank via the mission statement.

In researching satisfaction, banks generally ask their customers whether their product or service has met or exceeded expectations. Thus, expectations are a key
factor behind satisfaction. When customers have high expectations and the reality falls short, they will be disappointed and will likely rate their experience as less than satisfying. A bank can survive without profits or lack of maximum sales. But it cannot survive without satisfied customers. So, it is essential to make customers satisfied. Here are some useful tips for this:

➢ Top management commitment

Top management, through its actions, must show that customer satisfaction is important to it. This can be done in several ways.

❖ Acknowledging areas where the bank needs to improve,
❖ Allocating appropriate resources for the improvement of customers' satisfaction,
❖ Involvement of management and employees in the development of plans for customer's satisfaction improvement,
❖ Clear and frequent communication with the employees of what is being done to improve customers' satisfaction.
❖ Regular surveys on the customer's needs/feedback to know whether they are satisfied with the efforts of the bank for increasing their satisfaction and to know what are their future expectations from the bank.

➢ Linking of customer satisfaction with employees and incentives

The bank should link its employee's incentives with customers' satisfaction. Incentive programs can be structured so that all employees of the bank receive incentives if the customer satisfaction goals are met. This incentive is not necessarily being given in increments to the employees. Today most banks have a board of honour in their bank premises where every month the name of that employee is written along with the snap that has done maximum efforts in the field of customers' satisfaction. These types of incentives motivate other bank employees also to put their more efforts in this area.

➢ Recognition of employees who contribute to satisfy bank customers

This is an inexpensive way to foster customer satisfaction. The keys to success are:

❖ Making sure that all employees are aware of why a particular employee is being recognized,
❖ Making sure that each employee being recognized is worthy of recognition.

➢ Identification, measurement and tracking of operational variables which drive satisfaction scores
The results of a customer satisfaction survey need to be evaluated to determine what needs to be improved. For example, a survey may find that customer waiting times need to be reduced. The next step should be to quantify actual customer waiting times, and to set goals and strategies for reducing them. Goals should be as specific as possible. It is better to say "we want to reduce waiting times during peak periods from an average of twenty minutes to fifteen minutes by the end of June," than to say "we need to reduce customer waiting times."

- **Customer based improvement goals**

  This is directly related to the previous point. Once banks have identified what needs to be improved, they need to develop a plan for improving each identified area. Such plans need to be based on what customers really need, rather than what bank believes to be a good goal. Using the previous example, if customers really desire waiting times of ten minutes or less, having bank dictate that wait times must be reduced to fifteen minutes will have limited appeal with customers. They may need to do a separate survey with customers to actually set appropriate goals. If this is not economically feasible, at least talk to a number of customers and gain their input before setting a goal.

- **Plans for improving operational variables**

  Once banks have established what needs to be improved, and how much it needs to be improved, plans need to be developed to make improvement happen. The keys to successful planning are to:

  - Involve front-line employees and management in the planning process,
  - Make sure plans are specific,
  - Evaluate the success of plans once they have been put into place. This is done by measuring actual improvement in operations and customer satisfaction.

- **Incorporation of customer satisfaction skills into employee training programs**

  Employee training programs should be modified to include:

  - A description of the importance of customers' satisfaction to the bank,
  - Descriptions of what keeps customer satisfied,
  - A description of customers' satisfaction measurement programs, recognition programs, and incentive programs,
  - Specific employee-performance expectations with regard to keeping customers satisfied.
➢ Encourage face-to-face dealings
It is important to meet customers face to face during the dealings especially when the customer feels some problems with his banking experience because a client finds it easier to relate to and work with someone they have actually met in person, rather than a voice on the phone or someone typing into an email or messenger program. When bank employees meet them, they should be calm, confident and above all, take time to ask them what they need. This make customers feel that they are treating like a boss and they continue their relations and dealings with that bank.

➢ Respond to messages promptly & keep clients informed
In the modern era of technological advancements, every one wants quick updates. So, it becomes the duty of the banks to continuously inform their customers whenever the customers ask for a service or favour from them. It might not always be practical to deal with all customers’ queries within the space of a few hours, but let them know that the bank has received their complaint or message and the bank will contact them about it as soon as possible. Even if bank is not able to solve a problem right away, let the customer know that their message is received and they are shortly informed about the status of their inquiry. If it is not possible to solve a problem right away, let the customer know that the bank is working on it.

➢ Be friendly and approachable
It’s very important for the bank employees to be friendly, courteous and to make the customers feel like every bank employee is their friend and they are there to help them out. It is vital that every bank employee keep a clear head, respond to their customers’ wishes as best they can, and at all times remain polite and courteous. This type of behaviour can win customer’s faith and loyalty for the bank.

➢ Have a clearly defined customer service policy
A clearly defined customer service policy is going to save a lot of time and effort in the long run of the bank. A clearly defined customer service policy means if a customer has a problem, what should they do? If the first option does not work, then what? If they’re not satisfied with any aspect of bank’s service, who should they tell? There’s nothing more annoying for a customer than being passed from employee to employee, or not knowing who to turn to. Making sure the customers know exactly what to do at each stage of their enquiry should be of utmost importance. So make sure that customer service policy is present on the site — and anywhere else it may be useful.
Anticipate client’s needs and help them out

Sometimes this is easier said than done. However, achieving this supreme level of understanding with the customers will do wonders for the working relationship. The customer is heartily impressed, and remarks to his colleagues and friends how very helpful the employees of this bank are. If the bank staff understands the needs of the customers and helps them out of their problems, the customers develop their faith and this would be the most valuable thing for any bank.

Honour Promises

Every bank should honour the promises made by it to the customers. The simple message: when you promise something, deliver. If the banks are able to deliver, what is promised, they can grow at a tremendous speed because they care for their customers. Customers do not like to be disappointed. Sometimes, something may not get done, or banks might miss a deadline through no fault of their own. Projects can be late, technology can fail or any other thing can happen, which results in the non-fulfillment of the promise. In this case a quick apology and assurance can do the work for the bank.

1.10 CUSTOMERS' SATISFACTION IN E-BANKING

From the above discussion about customers' satisfaction, it is clear that Customer's satisfaction is the most important thing which any bank wants to achieve either it will be a public or private or foreign sector bank. If a customer is not satisfied with the working of the bank, the bank's functioning is not said to be as fantastic. A customer can only be satisfied with the working of the bank only and only if the functioning of the bank is according to his convenience and preferences. Every bank customer wants to be considered as a boss and if this requirement of the bank customers is fulfilled, then he will be made satisfied and the efforts of the banks are considered as fruitful.

With the emergence of e-Banking and e-delivery channels, the expectations of the bank customers from the banks have increased to a great extent. Now they demand new channels, new products and new services from the banks in order to fulfill their banking needs. It has become the prime responsibility of the banks to cater these needs of the bank customers in a better way, so that they can maintain their present customer base and also increase it in the future. Today the competition among the banks for increasing their customer base is secondary rather they are competing with each other in order to retain their present customer base because every bank...
fears that if it shows carelessness in its services, its customers will shift to other banks.

This has made every bank to think about providing most advanced products and services to its customers in order to bring efficiency in banking business. With this type of strategy of the banks, customer's satisfaction has increased to a lot because now they are provided with lot of e-delivery channels which help them to fulfill most of their banking needs at home and at their own and they do not have to stand in queues for a long time and to wait for their turn to come. This technology has really contributed a lot in the area of bringing timeliness in banking activities.

With the emergence of e-delivery channels, banks can perform their work faster and with greater accuracy. Now the disputes of bank customers with banks have decreased to a great extent. People have to spend lesser time in the bank for their work. Cash withdrawal by cheques now becomes an outdated phenomenon. They can use ATMs, Debit Card, Credit Card, etc. for making payments to others. All these facilities provided by the banks have increased their satisfaction to a larger extent. This increased satisfaction of the customers with the operations of the banks has also increased the role of banking in their life. Now they are using these banking operations more than they were using in the past.

But security issues related with these e-delivery channels cannot be ignored. On the one hand, where these channels have contributed a lot in increasing customers' satisfaction from their banking experience, on the other hand, they also create problems for them regarding safety of their e-accounts, their password and so many other issues. It is the prime responsibility of the banks to minimize these problems in order to make the customers feel satisfied and secure with their banking operations. Only then, they are able to take full advantage of this new technology.

1.11 BANK EMPLOYEES' PERCEPTION TOWARDS e-BANKING

Whether the banks are public or private the main thing is the success of their business and that depends upon the efficiency, ability and dedication of their employees. In the earlier days of banking business, all the work is done manually by the bank employees which includes a lot of paper work and stress and the chances of committing errors are undoubtedly a lot. So, the bank employees feel their bank job as a tougher one in which they are continuously engaged in work and has not time for innovations.
Now with the introduction of e-delivery channels in the banking system, the working culture is totally changed. The burden of paper work is reduced, database management is improved with lesser strain of work load because most of the banking needs of bank customers are fulfilled by e-delivery channels as today bank customers go to bank for cash withdrawal, getting account balance, getting mini statement of their account etc in least cases. This has reduced per person average time in the bank. So, the bank employees feels themselves free and can spend their saved time on other improvement activities such as bringing innovations in the banking system to make it more effective. This has a clear cut impact on their job satisfaction. Now they take their job as an enjoyable experience because these channels have made their job much easier than before.

With this changed environment of working, they are able to attend their customers in a better way than before as they can quickly complete their work with these channels and can give proper time to their customers which were not possible in the manual system of doing banking business. So, this has also contributed a lot in increasing customer's satisfaction from their banking experience. If the bank employees are not satisfied with their job, working conditions, work culture, management they can never make their customers satisfied with better quality services as the satisfaction of bank customers depends upon the satisfaction of bank employees. So, it is necessary to evaluate bank employees' perceptions towards e-delivery channels as an important determinant of bank customers' satisfaction from these channels as the employees are the one who provide them these channels with which they can fulfill their banking needs.

1.12 NEED AND SIGNIFICANCE OF STUDY

India is still in the earlier stages of e-Banking growth and development as compared to developed countries of the world. The e-Banking facilities provided by the banks in the form of e-delivery channels are not so much advanced in India in the earlier days of its introduction. But competition and changes in technology and life style in the last five or ten years have changed the face of banking in India completely. These changes imposed on banks tough standards of competition and compliance with respect to the provision of banking facilities to their customers. The banks in order to meet this competition introduce more advanced techniques of banking, so that the customers could be made more satisfied with their banking experience.
But the issue here is, “How does this scheme satisfy the customers?” Many global research companies believed that e-Banking adoption in India in the near future would be slow as compared to other major Asian countries. So, after evaluating customers’ satisfaction from e-Banking services and from the security measures adopted by the banks for the safety of their accounts in the present scenario, we can suggest some new patterns, services and security measures for e-Banking and the ways in which they are utilized for the near future. Also after evaluating perception of bank employees about e-delivery channels of their bank, we can suggest some valuable policies that the bank authorities can adopt, so that their employees can become more inclined to work with these e-delivery channels and thus contribute a lot in the area of customers’ satisfaction, so that the rate of development of e-Banking services will not slow down and the customers’ satisfaction can be increased in future as compared to the present.

The study under investigation can be of great help in realizing the performance of public sector banks and private sector banks to increase satisfaction of their customers through their e-Banking services and to motivate their the working of their bank employees with e-delivery channels and their role in determining the satisfaction of bank customers from these e-delivery channels. Hence, the investigator has got tempted for the present study.

1.13 STATEMENT OF THE PROBLEM

Before the introduction of IT in the banking sector, banking operations were done manually with a little support of technology. But the growing and cut throat competition that emerged after the LPG (Liberalization, Privatization, Globalization) policy and second banking sector reforms, made the banks in India to think over their patterns of work and facilities provided by them to their customers as the customers were switching over to technologically advanced banks to gain more satisfaction. This changing scenario gave birth to revolutionary changes in the banking industry in India regarding the adoption of e-delivery channels and to make an attempt to satisfy their customers by the way of providing them more channels and services and make their transactions safe in order to gain and increase their loyalty. So by increasing their customers’ satisfaction, they also on their own part can maximize their profits and profitability. That is why the problem under investigation is entitled as, “EVALUATION OF CUSTOMERS’ SATISFACTION IN e-BANKING—AN EMPIRICAL STUDY OF PUBLIC AND PRIVATE SECTOR BANKS IN PUNJAB.”
1.14 SCOPE OF THE STUDY
As we know that in the pre-LPG period, the services provided by the banks were labour intensive and banks had to bear heavy establishment costs which delimit the growth of banking in terms of profitability and productivity. With the introduction of IT in banking sector of India, banking has undergone an electronic revolution known as e-Banking. Since then, e-Banking system has become a necessity of the current market forces. The move of various banking groups to step up towards the same has become a matter of survival, so that they can assure efficient delivery system and maximize their customers’ satisfaction. This study evaluates the overall trends in customers’ satisfaction in e-Banking services provided by public sector banks and private sector banks and the security measures adopted by these banks for the safety of their e-services. The study also evaluates the role of bank employees as an important determinant of customers’ satisfaction in e-Banking.

1.15 OBJECTIVES
Various research works covered in the literature survey give different opinions and conclusions and could not be generalized across all the markets. Taking that into consideration, the present study is taken in view keeping in mind the following objectives:-

- To explore and evaluate e-Banking infrastructure of public and private sector banks, so that e-Banking products and services are performed and delivered in most effective way to increase customers’ satisfaction.
- To find out the comparative level of customers’ satisfaction through e-delivery channels in public and private sector banks in Punjab.
- ‘To find out satisfaction of bank customers from the security measures adopted in e-Banking regarding financial information available and managed over internet.
- To evaluate bank employees’ perception about the role of e-delivery channels in modern day banking and to increase customers' satisfaction.
- To suggest possible measures to improve e-Banking facilities in order to make customers more satisfied.

1.16 HYPOTHESES
Taking into consideration the above objectives, the present study is taken in view keeping in mind the following hypotheses:-
➢ There is no significant difference between the satisfaction level of bank customers of public and private sector banks with regard to the performance of e-delivery channels.

➢ There is no significant difference in the satisfaction level of bank customers of public and private sector banks regarding security measures adopted for e-delivery channels.

➢ There is no significant difference between the perception of bank employees of public and private sector banks regarding the performance of e-delivery channels of their bank group.

1.17 CHARTER SCHEME FOR THE STUDY

The plan of research report has been framed under six chapters as:-

➢ Chapter-1 Introduction
➢ Chapter-2 Review of Literature
➢ Chapter-3 Research Methodology and Data Base
➢ Chapter-4 Interpretation of e-Bank customers’ perception
➢ Chapter-5 Interpretation of e-Bank employees’ perception
➢ Chapter-6 Summary and Conclusions