CHAPTER-I

INTRODUCTION AND DESIGN OF THE STUDY

1.1 INTRODUCTION

Banking is an important segment of the tertiary sector and acts as a backbone of economic progress. Banks play very important role in the economic life of the nation. The health of the economy is closely related to the soundness of its banking system. Although banks create no new wealth but their borrowing, lending and related activities facilitate the process of production, distribution, exchange and consumption of wealth\(^1\). The Banking sector is the center of commercial activity and reflects the economic health of a country. If this sector is healthy, the economy of the country is also healthy, while on the other hand, if it is sick, the economy of the country would also be in the depression. The post nationalized period has witnessed a radical change in the structure, approach, aims and objectives of the Indian banking system.

The banking systems which constitute the core of the financial sector, plays a critical role in transmitting monetary policy impulses to the entire economic system. Money and finance are an important and necessary substitute for real resource and it had a crucial role in the economic development of the country.

The importance of commercial banks in the process of economic development has been recognised by all. The commercial banks play an important role in all economies. The role becomes more important in planned or developing economy like India. Banking industry is the blood vascular system of our economy. It has positive role to play in the economic development of the country as repositories of people’s savings and purveyors of credit, especially as the success of economic development depends on the mobilization of the resources and their investment in an appropriate manner.

In a country like India, constitutionally committed to socialistic pattern of society—banks have important role to play i.e. in the reduction of regional disparities, which is an important objective of the economic planning. A very significant measure to reduce regional and state wise disparities would be to reduce the imbalances in the credit-deposit ratios in the various states. The banking system is one of the few institutions that impinge on the economy and affect its performance for better or worse. They act as a development agency and are the source of hope and aspirations of the masses\(^1\).

Modern banks have diversified their activities with their entry into new non-traditional areas of business. These new areas include mutual fund, merchant banking activities, portfolio management, corporate counseling, project counseling, hire purchase finance, equipment leasing, venture capital and factoring services. These new activities by banks and their subsidiaries result in the development of industry and trade in the country. Briefly, it can be said that it constitutes the very life blood of economic society.

In the present scenario, banking as an important service of the financial sector, has also gone under a tremendous metamorphosis known as transformation. Through transformation all known parameters like HRM, IT, Capital Markets, Work Culture etc. have been completely changed. The process of transformation due to liberalization, privatisation, globalization and World Trade Organisation has taken everything in its grip, where IT plays a crucial role to manage this transformation efficiently. New delivery channels like Automated Teller Machines (ATMs), Electronic Fund Transfers (EFTs), Credit/Debit Cards, Smart Cards etc. and on the other hand internet banking, mobile banking, tele banking, core banking etc. have made this sector more competitive. The core issues faced by banks today are

on the fronts of customer's service expectations, cutting operational costs, and managing competition. Technology can help banks in meeting these objectives.

**Indian Banking – A Historical Perspective (Mile Stones)**

The earliest Indian banking was the Bank of Hindustan set up in 1770. Then in the 19th century the presidency banks (Bank of Calcutta in 1806 Bank of Bombay 1840 and Bank of Madras in 1843) were set up under a charter. In 1921 these banks were amalgamated to form the Imperial Bank of India. In 1935 the Reserve Bank of India (RBI) was constituted as the apex bank.

Up to 1949, RBI was a private ownership bank and then with the passage of the Banking Regulation Act 1949, it came under Government control. The Banking Regulation Act came into force on March 16, 1949. The provisions of this act are in addition to the provisions of the Indian Companies Act 1956, which are also applicable to banking companies.

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. SBI came into being as result of the implementation of the recommendation of the Committee of Directors of the All India Rural Credit Survey appointed by the RBI in 1951.

On July 19, 1969, fourteen major banks each having deposits of more than Rs. 50 crore and having between themselves aggregate deposits of Rs. 2,632 crore with 4,130 branches were Nationalised and taken over by the Government.

After eleven years of the first phase of banks’ nationalization, an ordinance was promulgated on April 15, 1980 by the President of India for the acquisition and transfer of undertakings of six more private banking companies. Thus from April 15, 1980, the number of public sector banks increased to 28, including the SBI and its 7 subsidiaries and excluding Regional Rural Banks.
First Banking Sector Reforms: In 1991, the Government of India appointed a committee to examine the structure, organization and functions of financial systems under the chairmanship of Shri. M. Narimham. Main recommendations of the committee-I were:

- Improving the financial viability of the banks
- Increasing their autonomy from Government directions
- Restructuring unviable banks
- Allowing a greater entry of the private sector in banking
- Liberalizing the capital market
- Further improving the operational flexibility & competition among the financial institutions
- Setting up of proper supervisory system.
- In accordance with financial sector reforms adopted in 1991, New Private sector banks have been permitted to be set up.

Second Banking Sector Reforms: Second Banking Sector Reforms committee was constituted under the chairmanship of Shri. M. Narimham. The second report was submitted on 23 April, 1998, which sets the pace for the second generation of banking sector reforms. These include:

- Merge strong banks, close weak banks and unviable ones
- Two or three banks with international orientation, 8 to 10 national banks and a large number of local banks.
- Increase capital adequacy to match enhanced banking risk.
- Rationalize branches and staff, review recruitment
- De-politicize Bank Boards under RBI supervision.
- Integrate NBFCs activities with banks.
Information Technology Act, 2000 was passed in the year 2000 which came into force on Oct. 8, 2000. India had reached another significant milestone on the information super highway. This Act had paved path for implementing the e-banking products and services by the Indian banks.

The role of central banking in India is looked by the Reserve Bank of India, which in 1935 formally took over these responsibilities from the then Imperial Bank of India. Reserve Bank was nationalized in 1947 and was given broader powers. In 1969, 14 largest commercial banks were nationalized followed by six next largest in 1980. But with adoption of economic liberalization in 1991, private banking was again allowed.

The commercial banking structure in India consists of: Scheduled Commercial Banks and Unscheduled Banks. Scheduled commercial Banks constitute those banks, which have been included in the Second Schedule of Reserve Bank of India (RBI) Act, 1934. RBI includes only those banks in this schedule, which satisfy the criteria laid down vide section 42 (6) (a) of the Act.

Indian banks can be broadly classified into public sector banks (those banks in which the Government of India holds a stake), private banks (Government does not have a stake in these banks; they may be publicly listed and traded on stock exchanges) and foreign banks.

**E-Banking: The Indian Scenario**

Technology innovations have become both a challenge and opportunity for Indian banks to gain strength in domestic market as well as increase their presence in global market. New concept of banking has changed from business dealing with money transaction to business dealing in financial interactions i.e. information’s and transactions. Revolutionary developments in information technology, global pressure and better informed customer demand Indian banks to adopt information technology tools in their services, which can assure efficient delivery system with
lesser cost and time thereby maintaining its reliability. As a result, Indian baking sector changed its way of operational activities with passage of time and now they are reengineering their traditional system into electronic banking.

E-banking, introduced in the end of last decade, has completely changed the shape of Indian banking sector. E-banking means “delivering of banking services to a customer as per his convenience using information technology”. Technology plays a crucial role in satisfying business requirements by improving productivity, profitability and easy accessibility. Thus, information technology in banking sector has emerged as key differentiator of performance. Using e-banking banks are expanding their customer base with the help of multiple delivery channels like automated teller machine, internet banking, phone banking, EFTs, web trading, e trading etc. E-banking is becoming a driving force behind Indian banking progress and helping them in exploring business opportunities along with their traditional business of accepting deposits and giving loans.

Indian banks are well on their way to achieve global benchmark. Changes in banking sector through e-banking assure achievement of twin objectives i.e. stability and growth. At its infancy stage, e-banking was introduced in very raw form through application of Advanced Ledger Posting Machines (ALPMs) in early 80’s. Despite of its introduction, Indian banks were facing lot of challenges including availability of inexperienced skills, lack of technology innovations, resistance from banking staff etc.

Second phase of restructuring was initiated in late 80’s with the concept of Total Branch Automation (TBA). However, redefined shape of e-banking emerged in early 90’s when Government adopted policy of liberalization and privatisation which led to new banking models where centralized banking system was adopted in the form of Core Banking Solutions (CBS). Indian Financial Network (INFINET) introduced in 1999 assured fast connectivity with in inter-bank and intra-bank transactions.
Arrival of foreign banks and private sector banks in Indian financial market forced Indian banks to adopt e-banking, as it was the question of survival because of increased competition. These foreign and private banks that were working on the strategy of global banking pushed Indian banks to restructure their services if they were to retain their market share. Recent developments in Indian banking system has made it possible to use electronic technology to various banking transactions like cash dealing, fund transfer, payments of bills, online instruction to the banks for various services which assured fast services as per customer requirements.

Types of E-Banking Products and Services Offered in India

The following are the important up-to-date E-banking products and services offered by the Indian banks:

- Automated Teller Machine (popularly known as “ATM”)
- Credit Card/Debit Card/Smart Card
- Internet Banking
- Mobile banking
- Phone Banking
- Tele Banking
- Utility Bill Payment and other regular periodical payment facilities
- Electronic Funds Transfer (NEFT / RTGS/ MICR )
- Electronic Clearing Services
- E-Commerce Transactions
- MICR/OCR Clearing System
- Pre-Paid Instruments
- Truncation of Cheques System
1.2 STATEMENT OF THE PROBLEM

The core issues faced by banks today are on the fronts of customer’s service expectations, cutting operational costs and managing competition. For this, banks are exploring new financial products and services that would help them to grow without losing existing customers. And any financial product or service that a bank offers will be intrinsically related to technology. Only technology can help banks in meeting these objectives.

Under the regime of banking sector reforms, information technology (IT) Act, 2000 gave new dimensions to the Indian banking sector. IT has created transformation in banking structure, business process, work culture and human resource development. It affects the productivity, profitability and efficiency of the banks to a large extent.

From various studies, it is observed that with the more and better use of technology along with the efficient employees, the efficiency of the banks going better and they started to compete successfully in the foreign markets too. The future of e-banking is bright but still there are some difficulties that interrupt the working of the banks. It is also observed that there is a significant difference in the profitability performance of fully-computerized and partially-computerized banks. This significant difference is due to the best performance of internet using and fully computerized banks in India. Technology is a crucial factor affecting the banks performance and making them capable to earn more through new opportunities.

E-banking is the outcome of technological innovations and competitions. Banks are using an electronic distribution channel to market and sell their products to wholesale and retail customers. The devices used by the banks are telephones, personal computers, automated teller machines, mobile phones and internet. E-banking has also affected the customer’s expectations as they prefer to deal with

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the banks offering better, efficient and innovative services. To face and survive in this cutting edge competition, banks have to deliver better quality services to the customers because it is only a customer who can evaluate quality of services. Hence, the service quality is offering services to customer’s specifications and expectations. The banks must know what type of services the customers expect to have and then accordingly serve them the products and services that meet their expectations. The banks should not be adamant to accept changes. Otherwise their survival will become very difficult in the emerging competition. Therefore, there is a need to evaluate the customer’s perceptions regarding the recent e-banking services too, which will help to further improve the services if they are not satisfied with their services.

Despite all their efforts in developing better and easier e-banking systems, these still remain largely unnoticed by the customers and certainly underused in spite of their availability. No doubt the main draw back in the banking scenario in India has been lack of awareness about e-banking and lack of willingness to accept and adapt the changes by the customers.

In this background, it becomes essential to know the answers to the following questions:

Is there any improvement in the performance of the banks due to the introduction of technology in banking transactions?

Whether the customers are aware about the various products and services offered by the Indian banks or not?

What are the factors contributing for the growth and development of e-banking in India?

What are the problems faced by the bankers and customers in utilizing e-banking services?

This study is proposed to find out the answers to the above questions.
1.3 REVIEW OF LITERATURE

Review of literature is considered as a significant part of any research. The role of a good literature review is to find and present the pertinent work from the primary literature in a logical, organized manner and to bring the reader as up-to-date as possible. Here, the research of works done by various authors relating to the current study have been presented in a brief and understandable manner.

Das, Abhiman (1997)\(^1\) examined the efficiency of public sector banks since nationalization using longitudinal data. The findings indicated that banks of SBI group are more efficient than the nationalized banks. The main source of inefficiency was found to be technical in nature than allocative. It has been concluded that inefficiency in public sector banks is mainly due to underutilization or wasting of resources rather than incorrect input combinations.

Rao (1999)\(^2\) explained the role of IT in the financial services industry. Technology is bringing about important evolutionary changes in the investment industry, giving portfolio managers greater control of their activities & even more time to spend on developing insights into the stock they own.

Rao (2000)\(^3\) analysed the impact of new technology on banking sector. The advent of technology both in terms of computers and communications has been changing totally the ways and doing banking business. Technology has opened new vistas and in turn brought new possibilities every day for doing the same work differently and in most cost-effective manner. Tele banking and internet banking are making forays such that branch banking may give to home banking. In order to protect their profitability, the banks need to address urgently the following emerging areas:

\(^{1}\)Das, Abhiman (1997), “Technical, Allocative and Scale Efficiency of Public Sector Banks In India”, Reserve Bank Of India occasional papers, Vol.18,Nos.2&3, pp. 279-301

\(^{2}\)Rao, P.K. (1999), “ IT in Financial Services Industry: Innovations and Implications,” Chartered Secretary, (Sep.)

* Product development and marking skills.
* Modern credit management skills.
* New risk management practices.
* Skills for operating in electronic environment.
* New internal skills audit skills in a changing business environment.
* New focus on customer and his needs.

Nair (2000)\(^1\) the technological advancements achieved very recently in the field of computerisation have unfolded many areas of innovations in our living styles. The world of banking is first shedding its ancient image and entering from ‘brick-and-mortar’ model to ‘click’ model. The virtual banking is rising in a total revolution in the banking transactions. The author realized that those banking and financial service providers who switch over to the electronic environment in the quickest possible time frame alone will be able to survive. The introduction of cyber law is also expected to boost the e-commerce and e-banking further in the days to come and the writing on the wall rather on the net is clear for the Indian banking Industry: E-Banking has come to stay.

Vageesh (2000)\(^2\) highly appreciated the NPSBs which have adopted IT. The NPSBs, with their state-of-the-art technology and grandiose plans to make in-roads into e-banking, are now darlings of the stock markets. Banks like HDFC & ICICI are foraying in to net banking which offers great convenience to the customers on one hand and results in lower transaction costs for the banks on the hand.

Verma (2000)\(^3\) analysed the impact of IT on PSBs & NPSBS in his article ‘Banking on change’. The IT is a threat for the PSBs. It has to be a complete face off for the PSBs. With the business per employees, even for the front-run PSBs, a mere fraction of that of NPSBs, the PSBs have to do a lot on improving their

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productivity and efficiency. NPSBs are fully computerised and providing services on internet. Especially ICICI bank, HDFC bank is very active on this front and is concentrating on internet and e-commerce to offer their clientele a whole range of products under one roof. New banks like GTB, BOP, IDBI and UTI banks are not lagging behind. While some them concentrating on expansion and modernisation, some are focusing on mergers and acquisitions for their growth.

Niranjan (2000)\(^1\) studied the changing business dimensions of banks due to the introduction of IT. The internet is taking banks in directions other than loans & deposits. Banking in India will never be the same again. E-banks have started e-commerce & many banks are entering in insurance sector.

Saha, Asish and Ravisankar (2000)\(^2\) rated 25 public sector banks using data envelopment analysis for the period of 1991-92 to 1994-95. It is found that barring few exceptions, public sector banks have in general improved their efficiency over the study period. UBI, UCO bank, syndicate banks and central bank of India were found to be at lower end of the relative efficiency scale. Also, Corporation bank, OBC, SBI, Canara bank, bank of Baroda and Dena bank were found to be consistently efficient banks.

Saxena (2000)\(^3\) analysed the importance of IT in the banking sector. According to him, the future promises to be even more exciting, interesting and challenging. The internet has enables us to talk to each customer as an individual, with different needs and requirements. This IT will affect the productivity and profitability of the banks.

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\(^1\) Niranjan, (2000), “Internet Banking is Here,” Business World, 3\(^{rd}\) April.


Pathrose (2001) in his study found that banking the world over is undergoing a rapid and radical transformation due to the all pervasive influence of IT and breath taking developments in the technology of telecommunications and electronic data processing. The winds of change are blowing in India too. The IT which implies the integration of information system with communication technology has radically altered the traditional ways of doing banking business and allowed banks to wipe out the difference in time as well as distance. It is in this context his article attempts to trace the present status of hi-tech banking in India, visualize its prospects and look at the challenges and problems in the tracks to be traversed. He concluded that in the scenario of severe competition and escalating expectation of customers for newer products and alternative delivery channels, the outline of banking are being redefined. The key to survival of banks therefore is retention of customers loyalty by providing them with value added services tailored to their needs, using state-of-the-art IT. There is no way a bank can remain lukewarm to hi-tech and yet hope to grow. It is a choice between survival and extinction.

Shastri (2001) analysed the effect and challenges of new technology for banks. Technology has brought a sea-change in the functioning of the banks. The earlier manual system of preparation of vouchers, etc. is slowly being automated thereby saving a lot of time & effort. The use of ATM is more than in the past, especially in the post- VRS scenario.

Das (2001) in his study evaluated the performance of public sector banks with respect to priority sector credit and the expansion of banking services to the un-banked areas during pre and post-reform period. It is observed that the percentage share of the priority sectors in total bank credit has been found

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3 Das, Hem Chandran Lal, “Priority Sector lending by Public Sector Banks under Financial Sector Reforms in India”, Banking and Financial Sector Reforms in India, skylark publication, pp. 246-263.
increasing but at a decreasing rate in the post-reform period. It is concluded that the impact of financial sector reforms on regional equalities and the priority sector lending has been much adverse.

Adhaivarahan (2001)\(^1\) in his article attempted to have a bird’s eye view of the provisions of the IT Act and the pros and cons of the provisions of the act with particular reference to the activities of banks. The study concludes that the number of incidents of e-fraud and on-line breaches is the highest in India. Therefore cyber crimes in banking sector have to be treated with more care. For this purpose, a statutory body similar to “Internet fraud center” should be formed in India.

Avasthi and Sharma (2001)\(^2\) advances in technology are set to change the face of the banking business. Technology has transformed both the delivery channels used by banks in retail banking. It has also greatly impacted the whole markets of banks. Both the authors explored the challenges that the banking industry and its regulators face.

Kannan and Aditya Narain (2001)\(^3\) made an attempt to identify the factors influencing spreads of scheduled commercial banks in India. The study revealed that size does not necessarily imply higher spreads. Secondarily, higher non-interest as a share of total assets (fee) enables banks to tolerate lower spreads. With regard to regulatory requirement variables, it was found that capital plays an important role in affecting spreads of the public sector banks. Non-performing assets were found to be consistency relevant across all the bank groups in influencing spreads.


Black et al. (2001)\(^1\) found that previous experience with the computer or Internet is one of the strongest influencing factors that affect Internet banking adoption.

Ndubisiet et al. (2001)\(^2\) found that the various factors include prior experience, data intensity, staff support, computer training, technical support and external influence were used as drivers to investigate whether or not the technology acceptance model is valid for entrepreneurs.

Wahab (2001)\(^3\) has analysed the performance of the commercial banks under reforms. He also highlighted the major issues need to be considered for further improvement. He concluded that reforms have produced favourable effects on performance of commercial banks in general but still there are some distortions like priority sector advances, low profitability etc. that needs to be reformed again.

Kaveri (2001)\(^4\) studied the non-performance assets of the various banks and suggested various strategies to reduce the extent of NPAs. In view of the steep rise in fresh NPA advances, credit should be strengthening .RBI should use some new policies and strategies to prevent NPAs.

Nayak (2001)\(^5\) made an attempt to compare liquidity, productivity and profitability of foreign banks in India during 1985-86 to 1996-97. The results revealed that productivity in terms of labour, branches and profitability was higher in foreign banks than the domestic banks. Foreign banks are least involved in socio-economic policies of the government, on account of they registered higher profits.


Swamy (2001)\(^1\) studied the comparative performance of different bank groups since 1995-96 to 1999-2000. During this period, IT, new competition, deregulation took place. He studied three important aspects: 1) what has been the impact of financial sector reforms on the structure of the Indian banking system? 2) What are the advantages reaped by some of the new Indian private and foreign banks vis-à-vis PSBs? 3) Whether new competition has enhanced the overall efficiency of the banking system? An attempt is made in this paper, in the context of financial sector reforms, to identify factors which could have led to changes in the position of individual banks in terms of their share in the overall banking industry. He analysed the share of rural bank branches, average branch size, trends in bank’s profitability, share of PSAs, share of wages in expenditure, provisions and contingencies, net non-performance assets in net advances, spread, has been calculated. He concluded that in many respects NPSBs much better than PSBs, even they are better than foreign sector banks.

Ram Mohan (2002)\(^2\) in his paper documented and evaluated the performance of the public, private and foreign banks since deregulation in absolute and in relative terms and attempts to understand the factors behind their improved performance. It was observed that the efficiency of the banking system as a whole measured by declining spreads has improved. The performance of public sector banks has improved both in absolute and relative terms. He alludes the banking industry for its ability to keep its head above water log after deregulation. Further, he takes up the issues of trade-off between efficiency and stability in banking. It is observed that efficiency should not be at the cost of stability. He cautions that Indian experience so far suggests that government ownership might conduce to such trade off.


Shveeta and Satish Verma (2002)\(^1\) analysed the inter-temporal profitability behavior of SBI group, other nationalised and foreign banks in India. They empirically estimated the factors influencing the profitability of banks. They concluded that priority sector advances (in case of PSBs), spread and burden (for all categories of banks) were the major and significant factors that influence the profitability of banks.

D’ Souza, (2002)\(^2\) in his study evaluated the performance of public sector banks, private sector banks and foreign banks during the period 1990-1991 to 1999-2000. The efficiency of the banking system was measured in terms of spread/working fund ratio and turnover/employees ratio. The analysis reveals that the profitability of the public sector banks in late nineties improved relatively to that of private and foreign banks.

Singh (2003)\(^3\) analysed the profitability management of banks under the deregulated environment with some financial parameters of the major four bank groups i.e. public sector banks, old private sector banks, new private sector banks and foreign banks, profitability has declined in the deregulated environment. He emphasised to make the banking sector competitive in the deregulated environment. They should prefer non-interest income sources.

Chang (2003)\(^4\) examined behaviors of firms (banks) and consumers (bank’s consumers) in the event of a new technology (internet banking) introduction. The determinants of consumer adaptation of internet banking are characterised using survey data from Korea in both static and dynamic frameworks. I find evidence that adaptation of internet banking is influenced by sex, age, and marital

status, degree of exposure to internet banking and the characterized of the banks. A duration analysis shows no evidence of first mover advantage (order effects) in internet banking whilst the largest bank (rank effects) in commercial banking remains dominant in internet banking. The results imply that social norm effects dominate the internet banking adoption.

Hasanbanu (2004)\(^1\) studied customer services in rural banks. He found that the rural customers are not aware of the purpose for which the loans are available and how they can be availed. Customers do not know the complete rules, regulations and procedures of the banks as the bank personnel do not take interest in educating the customers.

Kumar (2006)\(^2\) studied the bank nationalization in India marked a paradigm shift in the focus of banking as it was intended to shift the focus from class banking to mass banking. Internationally also efforts are being made to study causes of financial inclusion and designing strategies to ensure financial inclusion of the poor disadvantaged. The banks also need to redesign their business strategies to incorporate specific plans to promote financial inclusion of low income group treating it both a business opportunities as well as a corporate social responsibilities. Financial inclusion can emerge as commercial profitability business.

Uppal (2006)\(^3\) with a sampling of 500 bank customers explained the impact of computerisation on the satisfaction of customers of all bank groups and concluded that customer services are quite better in fully computerized banks and further in e-banks as compared to that in partial or non-computerized banks. The study is only concerned with the urban sector of Punjab.


Hroff (2007)\textsuperscript{1} gave a summary of how Indian banking are evolved over the year. The paper discusses some issues faced by these systems. The author also gives examples of comparable banking system for other countries and the lesson learnt. Indian banking is the threshold of the paradigm shift. The application of technology and product innovations is bringing about structure change in the Indian banking system.

Subbarao (2007)\textsuperscript{2} in his study concluded that the Indian banking system has undergone transformation itself from domestic banking to international banking. However, the system requires a combination of new technologies, well regulated risk and credit appraisal, treasury management, product diversification, internal control, external regulations and professional as well as skilled human resource to achieve the heights of the international excellence to play its role critically in meeting the global challenge. This paper mainly concentrates on the major trends that change the banking industry world over, viz, consolidation of players through mergers and acquisitions, universal banking and human resource in banking, profitability, rural banking and risk management Banks will have to gear up to meet stringent prudential capital adequacy norms under Basel I and II, the free trade agreements. Banks will also have to cope with challenges posed by technological innovations in banking.

Singla (2008)\textsuperscript{3} examined that how financial management plays a crucial role in growth of banking. It is concerned with examining the profitability position of the selected sixteen banks of banker index for a period of six years (2001-06). The study reveals that the profitability position was reasonable during the period of study when compared with the previous years and bank which is in better position to deal with and absorb the economic constant over a period of time.

Premkumar and Esthen granapoo (2008)\(^1\) studied on the topic “E-Banking the essential and of today”. It was found that the current trends are quite comforting for customer. But it does pose threats and problems to banks. As we find information technology invading the banking sector, only banks, which used the right technology, could come out with success. Banks are required to restructure, re-invert and re-engineer themselves to meet the necessary performance improvement and get the competitive edge due to the introduction of information technology. E-Banking being an important output of information technology, it has ushered in an era which is transforming the entire functioning of banks. The tilt in the banks from traditional to modern e-banking service has been welcomed due its advantages, but banks in India are taking time to get rooted. Banks are slow but are going to offer in further more e-banking services to keep pace with the evolving pattern of customers’ demand.

Ajanta Borgohain Rajkonwar and Kaberi Bezbarua (2010)\(^2\) analysed the Bank Employees’ Perception Towards E-Banking in State Bank of India Branches in Guwahati and found that most of the senior members still prefer the traditional system as technology is fast changing and the employees feel that unless all the customers are fully educated about the new ways of banking, cent per cent success of e-banking is not possible.

Bhawna Narang and Niti Prabhakar (2011)\(^3\) undertook a study to measure the profitability of 27 commercial banks for a period of ten years (2000-2009) with the help of some ratios like index of interest income to total Assets, index of interest expended to total assets, index of spread to total assets, interest of non-interest income to total assets, index of non-interest expenditure to total assets, index of burden to

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total assts, index to net profit to total assets. The study reveals that some banks like SBM, OBC and PSB achieved excellent performance with regard to index of interest earned to total assets ratio. SBP achieved a excellent performance level in five out of seven indexed namely interest paid to total assets, spread to total assets, non-interest expenditure to total assets, burden to total assets and net profit to total assets and obtained a fair performance in case of interest income to total assets and non-interest income to total assets.

1.4 IMPORTANCE OF THE STUDY

The review of the literature on the subject indicated that the introduction of Information Technology (IT) is very vital for the present banking system. After the introduction of the IT in banking, profitability performance of banks has certainly been improved. No doubt that some articles in the leading newspapers, magazines and journals have highlighted the importance of IT in banking industry. Hence, there is a need to examine the profitability performance of banks during electronic era which in turn will help the banks to lay its progress in the right path.

Now all the banks have realized that technology, like e-banking, is at the foundation of all its functions and operations and to have end to end integrated paperless systems and process. High awareness of customers on e-banking products and services is good for banks which will enable them for decision-making, planning, managing expenses and increasing business. Hence, the study is conducted to know the awareness level of customers of banks.

Whenever a new technology is adopted, it does not mean that all new technology implementation would improve the process and the system suddenly brings positive results. Major obstacles and risks are associated with innovative technology. Hence, the major problems faced by the banks and customers while using e-banking are discussed with a view to help the concerned authorities to avert it in near future.
Identifying the important factors contributing for the adoption of e-banking by the banks and the factors influencing the customers for using e-banking for their bank transactions will help the respective authorities to give much importance for improving quality of services and enlarge the e-banking services. Against this backdrop, the present study has been undertaken.

1.5 SCOPE OF THE STUDY

The main aim of the study is to assess the profitability performance of the commercial banks in India during the electronic era. Efforts have been made to identify the factors determining the profitability performance of the banks. The effect of each variable on Bank group profitability is also discussed.

The study also highlights the level of awareness of the customers regarding the various e-banking products and services. This study is also extended further to cover the influence of socio-economic variables on the awareness level of the customers. Moreover, e-banking product-wise awareness level of the customers has also been studied.

E-banking products and services are electronic oriented and dynamic one. So, an attempt has also been made to provide the up-to-date e-banking products and services offered by the Indian banks. It is ensured that the study is also focusing on finding out the factors influence the banks and customers to choose e-banking services.

While adopting new technology in the banking process, it is inevitable to encounter the problems both by the banks and customers. By keeping this in mind, the study also spotlights the problems faced by the customers and bankers.
1.6 OBJECTIVES OF THE STUDY

The following are the main objectives of the study:

1. To evaluate the performance of commercial banks in India in the electronic era.

2. To highlight the various important e-banking products and services offered by Indian banks.

3. To assess the awareness level of e-banking users regarding the products and services offered by Indian banks.

4. To identify the factors contributing the growth of e-banking in India and the factors influence the customers to choose e-banking services.

5. To analyse the problems faced by the bankers and customers while using e-banking.

6. To offer valuable suggestions for providing better e-banking products and services to the customers and improving the profitability of banks.

1.7 HYPOTHESES

The following hypotheses have been formulated by considering the objectives of the study, the researcher’s theoretical knowledge, discussions and deliberations with experts and from other research studies. These hypotheses are subjected to appropriate statistical tests.

1. There is no significant association between the profitability parameters (such as Interest Earned, Interest Expended, Spread, Non-Interest Expenditure, Non-Interest Income, Burden, NPA, Fixed Deposits, Savings Deposits, Current Deposits, Total Credit, Provisions and Contingencies etc.) and the profitability of the banks.
2. There is no significant association between socio-economic variables of sample customers (such as age, gender, native place, type of family, educational level, occupation, marital status, annual income, type of account, number of years of having account with bank, frequency of visit to the bank, income tax assessment) and their awareness level on e-banking.

3. The average awareness score of the different groups of sample customers (on the basis of the variables such as age, gender, native place, type of family, educational level, occupation, marital status, annual income, type of account, number of years of having account with bank, frequency of visit to the bank, income tax assessment) is the same.

1.8 OPERATIONAL DEFINITIONS

Customer

Customer refers to a person who is utilizing one or more of the e-banking products and services provided by the bank.

Customer Service

Customer service is a series of activities designed to enhance the level of customer satisfaction i.e. the feeling that a product or service has met the customer expectation.

Banking Products and Services

It refers products and services provided by banks for customers, such as statements, direct debits, standing orders, ATM, Mobile Banking, Internet Banking, Payment Systems, Credit Cards etc.

Awareness

Awareness is the state or ability to perceive, to feel, or to be conscious of events, objects or sensory pattern. It is the state or quality of being aware of e-banking products’ features.
**E-banking**

E-banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels.

**RTGS**

RTGS, stands for Real Time Gross Settlement, 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.

**NEFT**

NEFT, stands for National Electronic Funds Transfer, is a nation-wide system that facilitates individuals, firms and corporates to electronically transfer funds from any bank branch to any individual, firm or corporate having an account with any other bank branch in the country.

**ECS**

It is a mode of electronic funds transfer from one bank account to another bank account using the services of a Clearing House.

**ECS (Credit)**

ECS (Credit) is used for affording credit to a large number of beneficiaries by raising a single debit to an account, such as dividend, interest or salary payment.

**ECS (Debit)**

ECS (Debit) is used for raising debits to a number of accounts of consumers/ account holders for crediting a particular institution.
Payment Systems

It is a financial system supporting transfer of funds from suppliers (savers) to the users (borrowers) and from payers to the payees, usually through exchange of debits and credits among financial institutions. It consists of a paper-based mechanism for handling checks and drafts, and a paperless mechanism (such as electronics funds transfer) for handling electronic commerce transactions.

Internet Banking

A system that allows individuals to perform banking activities through the internet.

Mobile Banking

It refers a financial transaction conducted by logging on to a bank’s website using a cell phone, such as viewing account balances, making transfers between accounts or paying bills.

Profitability

Profitability is a relative concept and indicates net profit as percentage of working funds. It shows the efficiency with which a bank deploys its total resources to optimize its profits and thus serve as an index to the degree of asset utilization and managerial effectiveness.

Independent Variables

The term refers to the socio economic characteristics of the customers such as age, gender, native place, type of family, educational level, occupation, marital status, annual income, type of account, number of years of having account with bank, frequency of visit to the bank, income tax assessment in primary data analysis and profitability parameters such as Interest Earned, Interest Expended, Spread, Non-Interest Expenditure, Non-Interest Income, Burden, NPA, Fixed Deposits, Savings Deposits, Current Deposits, Total Credit, Provisions and Contingencies etc. in secondary data analysis.
1.9 METHODOLOGY

Data Collection

The study is based on both primary and secondary data. The required primary data were collected from the respondents by using well-structured questionnaires. The validity of any research is based on the systematic method of data collection and analysis. The required primary data were collected from 600 sample respondents. The Reserve Bank of India brings out number of issues relating to banking business. The required secondary data were collected from the RBI website, RBI Bulletin and RBI Annual Reports. Besides, leading journals and magazines relating to banking industry were also referred for this study.

Sampling Design

The ATM card holders of both the public sector and private sector banks of all the five taluks in Erode District were considered as population of the study. There are 40 banks in Erode district namely 3 SBI groups, 17 nationalised banks and 20 private sector banks (old and new) with a total of 152 branches. Also there are 207 ATM centres in Erode district.

Initially, it was decided to collect data from 800 respondents. The list of customers of each branch of the public sector banks and private sector banks could not be obtained from the branch managers as they did not want to disclose the names of the customers due to their obligation to maintain the confidentiality of customer’s account. So, it was decided to adopt convenience sampling method for selecting the sample respondents. The required data have been collected from the sample respondents in front of the ATM centres (which is considered as an opt place) with the help of well-structured questionnaires. On an average, 15-20 minutes were required to fill up questionnaire. The doubts and queries raised by the respondents were properly clarified at the time of filling up of data. Out of 800 questionnaires distributed, only 692 questionnaires have been collected from the respondents. After deleting 92 questionnaires owing to incomplete and inconsistent
answers, the remaining 600 questionnaires were used for analysis and this constitutes the sample size of the study.

**Pilot Study and Formation of Questionnaire**

In order to prepare a well-structured questionnaire, a pilot study was conducted with a sample of 50 customers. In this pilot study, the questionnaire was pre-tested and then refined for use in the final study. Many additions and deletions of questions were made in the final questionnaire based on the response in the pilot study. The final questionnaire thus prepared for data collection has been given in the Appendix.

The questionnaire was divided into four parts. The first part deals with socio-economic information about the customers such as age, gender, native place, type of family, educational level, occupation, marital status, annual income, type of account held, number of years of having account with bank, frequency of visit to the bank type of e-banking services availed and income tax assessment status.

The second part deals with the statements relating to awareness level of customers on e-banking products and services. It consists of 100 statements eliciting the customers’ awareness relating to ATM, Internet Banking, Debit Card, Credit Card, Phone Banking, Mobile Banking, Real Time Gross Settlement System (RTGS), Electronic Funds Transfer (EFT), National Electronic Funds Transfer (NEFT) and Electronic Credit and Debit Clearing Systems (ECS).

The third part deals with the statements relating to the factors influencing the customers to choose the e-banking products and services in general and product-wise. The statements such as low cost, convenience, time saving, awareness, easy to use, flexibility, multiple uses, security etc.

The fourth and last part deals with the statements relating to the problems of customers while using e-banking products and services. The statements such as
lack of technical knowledge, lack of awareness, lack of security, network problem, operational difficulties, inconvenient location etc.

**Data Processing and Analysis**

The questionnaire thus filled up by the respondents was thoroughly checked to ensure accuracy, consistency and completeness. The collected data were edited and tabulated. For the analysis of the data, statistical tools such as Chi-square test, Z test, F test, Average, Standard Deviation, Co-efficient of variation, Correlation co-efficient matrix and R² were used. The statistical package SPSS 16.0 was used to analyse the data.

**Period of the Study**

The secondary data required for analysing the profitability performance of banks have been taken for a period of eight years from 2001-02 to 2008-09. Reviewing the relevant literature and conceptual framework took one year. The data collection from the primary sources took eight months from December 2009 to July 2010. Preparing the master table, data analysis and interpretations took about five months. Report preparation took another two months.

**1.10 LIMITATIONS OF THE STUDY**

The following are the limitations of the present study.

1. The sample respondents might have failed to reveal true information regarding their income due to fear and not having proper records and due to which the results might have been affected.

2. The study is restricted to only 600 sample respondents.

3. The study is confined to Erode district only.

4. Only individual customers are considered in the study. The Institutional customers are excluded from the study.
5. The study focused only from customers’ point of view and not from the bankers’ point of view.

6. The conclusions are based on the response obtained from the respondents through the questionnaire. Though extreme care is taken to elicit correct information, an element of bias cannot be ruled out.

7. The sampling method & statistical tools used in this study have their own limitations.

8. At the time of data analysis, the various information required for analysing the profitability of bank groups were available only up to the financial year 2008-09.

9. The accuracy of the secondary data used in the study is purely relied upon the reliability of the secondary sources used such as RBI Bulletin, RBI Annual Reports and RBI Website.

1.11 CHAPTER SCHEME

This study consists of six chapters based on the objectives along with Tables and Annexure to support the analysis and findings of the study.

- **Chapter-I Introduction and Design of the Study**
  
  The first chapter deals with introduction, history of Indian banking, E-banking in Indian scenario, statement of the problem, review of literature, scope of the study, objectives of the study, hypotheses, methodology, collection of data, analysis of data, limitations of the study and chapter scheme.

- **Chapter-II Profitability Performance of Commercial Banks**
  
  The second chapter deals with measuring the profitability performance of commercial banks in India. Trends in profitability, factors affecting major bank groups, empirical estimates of bank profitability and Regression analysis-R2 were also studied.
Chapter-III Various Products and Services of e-banking

The third chapter explains the various e-banking products and services offered by the Indian banks. The various products and services were highlighted with latest data.

Chapter-IV Awareness Level of customers on e-banking

Awareness level of respondents on e-banking products and services collectively and product-wise were analysed. The relationship of socio-economic variables with awareness level is also dealt with.

Chapter-V Factors Influence the Customers to Prefer e-banking Services

In this chapter, an effort has been made to identify the factors contribute for the growth of e-banking in India and the factors influence the customers to prefer e-banking services. Besides, problems faced by the bankers and customers while using e-banking have also been studied.

Chapter-VI A Summary of Findings, Suggestions and Conclusion

This chapter deals with a summary of the findings, suggestions and conclusion.