INTRODUCTION

Chapter 1

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1.1 INTRODUCTION

The banking system in India has played a critical role in the growth and development of the economy. The Indian banking system has been stable without any major crisis. It is relatively transparent in its operations and follows the internationally accepted best practices of disclosure, asset classification and provisioning norms. During the past three decades India’s banking system has several outstanding achievements to its credit. The most important one is its extensive reach. It is no longer confined to metropolitans or cosmopolitans in India, but also reached even to the remote corners of the country. This is one of the main agents of India’s growth process.

The banking sector is one of the leading users of information technology worldwide. Introduction of information technology has transformed banking system almost beyond belief in the last decade and a half. Most of all, customers have benefited, as have the banks themselves. There have been very significant gains in the efficiency of banks leading to greater potential for higher profitability and consequent benefit to the economy as a whole.

With the advancement of technology and increased competition, banks are in the race of becoming the best in the country. With an eye upon customer satisfaction policy, they are providing best of the best services with the minimum hazards. It may also be observed that the recent past has witnessed new concepts such as 'Anywhere Banking' and 'Any Time Banking' being adopted by Indian banks, which are but offshoots of technology implementation by banks. With the introduction of Automatic Teller Machine
(ATM)s customers can even go to any networked branch or networked ATMs, and carry out many banking transactions. With e-banking, many banking activities are carried out from within the customer's home. Such innovations have had a positive impact on customer service- besides the benefit that is derived by banks in terms of reduced costs of operation.

Information technology has also resulted in a major attitudinal change revolutionizing the concept relating to treatment of customers of banks; with the end of geographical distances, banks need to treat the customer as a customer of the bank and not as a customer of any particular branch. This is now possible because of the usage of IT on a large scale whereby centralized data base information are possible in a bank with decentralized access. Another option to achieve this objective is to have clustered solutions in a bank with data of customers residing in these systems. Banks need to constantly look for innovative services which offer customers the convenience of transacting from anywhere, at any time, and using delivery channels that are suitable for them. These are frontiers which would add value to the services offered to customers and at the same time act as a means for increasing the profits for banks too.

Indian banking industry is adopting technology at very fast rate to keep pace with the changing environment. It has embraced many new features like internet banking, mobile banking, ATMs, credit cards, debit cards etc. ATM is one of them which is widely accepted among the people and very much popular. It is the extension of banking services outside the banking premises.

Today, banks have to focus on smaller deposits and smaller advances and improve their operating efficiency substantially. Multiple banking choices have empowered the customer. Today most customers of the bank do not enter the branch premises for their basic transaction needs. Transactions are done through delivery channels such as ATMs, over the internet and even over the mobile. Today customers want banking services 24 hours a day, so, many banks have introduced extended business hours such as '8 to 8' banking and 'Sunday Banking'. Customers do not want to carry cash and this has led to the usage of various forms of plastic cards such as credit cards, debit cards and smart cards. Few banks have introduced world ATM card to make travelers across the globe more safe and secure.
1.2. THE BANKING SYSTEM'S DOMINANCE

Across the world, in every economy, banks and capital markets have both played a critical role in connecting savers with investors and thereafter allocating resources among competing users efficiently. However the relative importance of the two has varied. In countries such as the United Kingdom, the United States and Australia, the capital market has been the main driver of the intermediation process, while in Germany, Japan, India and a few other countries, it is the banking system that have played a dominant role.

Despite all the commendable achievements of the capital market in India, its role in the intermediation process continues to be far smaller than that of the banking system. The banking system in India has been the traditional provider not only of working capital but of term loans also. In India as well as in other emerging economies the banking system is better equipped to protect the saving class because of its superior database about the borrowers.

Perhaps the most important reason for its dominance is that the household sector, which contributes the most to gross domestic savings, has been showing a marked preference for bank deposits. According to the Reserve Bank of India (RBI) report in 2006, between 2001 and 2006, out of every Rs.100 saved by this sector, bank deposits accounted for almost Rs.41, while barely Rs.3.2 went into shares, debentures and mutual fund instruments.

1.3. IMPORTANCE OF BANK MARKETING

The success of any business including banking depends on customer satisfaction, as customer is the king. Mahathma Gandhi, Father of Indian Nation said, "Customer is the most important visitor in our premises. He is not dependent on us. We are dependent on him. He is not an interruption on our work. He is the purpose of it. He is not an outsider on our business. He is a part of it. We are not doing him a favor by serving him. He is doing us a favor by giving us an opportunity to do so." This is applicable in both manufacturing as well as in service industry including banking. No service sector can exist without customer. Customer satisfaction is a critical factor for survival and growth.
of any banking companies and thus fulfilling its objective of maximization of profit and growth.

Bank marketing is the creation and delivery of financial services suitable to meet the customer’s needs at a profit to the bank. Two important functions of bank marketing are to interact and mobilize deposits on one hand and to attract borrowers and users of services on the other. The need for the application of marketing concept in banks arises due to the intense competition faced by banks, increased sophistication of the bank customers, improvement in work technology and increased cost of meeting customer’s needs.

Customer perception has been regarded as an indicator of the marketing effectiveness of the firm. The success of any marketing strategy lies in the post purchase experience as delivered through the product/service and as perceived by the customers. Many companies now consider customer perception as crucial. To achieve favorable customer perception about bank services and offers, identification of customer’s expectation and actual delivery of services are essential elements of marketing strategy.

1.4. ROLE OF TECHNOLOGY IN BANKING

Over the years, organizations around the world have experienced a huge transformation in the way in which business is done. This is because of the ubiquitous phenomenon called technology. To respond to the rapidly changing external environment all industries have turned to technology to improve their productivity and competitiveness. The adoption of technology in the services industry is becoming a significant trend as service providers are now being urged to invest in technology as a way of making their future secure.

The banking industry in India is no different from any other service industry in terms of deployment of technology. The constructive and progressive measures taken by the Government of India and the growth of telecommunication infrastructure helped banks to build robust data communication networks.

Commercial banking is undergoing rapid change, as the international economy expands and advances towards institutional and market completeness. A major force behind these developments is technology, which is conquering geographical, industrial
and regulatory barriers, creating new products, services and market opportunities, and developing more information-and systems-oriented business and management processes. Effective customer service would imply that a bank should attract a customer to its services and then retain him/her there. To do this, a bank has not only to identify and understand the customer's requirements but also to render services to meet those requirements. In other words, a bank has not only to be aware of the divergent needs of its customer, but has to be sensitive to them. It should be properly understood that in the wake of opening of market economy and deregulation, the needs of Indian customers are no longer different from the needs of the bank customers the world over. The needs are assurance of safety, error free entries, ability to access funds wherever required, at low costs and with some amount of personalised attention.

In a tight competitive environment where banks are making a thrust towards technology to provide superior services, customers stand to gain the most. The customers are now in an enviable position where he can demand superior services at competitive prices. Those banks that have been able to realize the importance of technology in the day to day operations, have witnessed a sharp increase in their overall performance. Given the online communication explosion in the recent past years, it is increasingly apparent that banks and other financial services firms will have to adjust to a rapidly changing competitive environment in which technology will play a critical role.

1.4.1. History of Adoption of Banking Technology in India

The Information Technology (IT) revolution had a great impact in the Indian banking system. The use of computers had led to introduction of online banking in India. The use of the modern innovation and computerization of the banking sector of India has increased many fold after the economic liberalization of 1991 as the country's banking sector has been exposed to the world's market. The Indian banks were finding it difficult to compete with the international banks in terms of the customer service without the use of IT and computers.

The RBI in 1984 formed a Committee on Mechanization in the Banking industry under the chairmanship of Dr. C. Rangarajan, the then Deputy Governor, RBI. The major recommendation of this committee was introducing MICR (Magnetic Ink Character
Recognition) technology in all the banks in the metropolis in India. This provided use of standardized cheque forms and encoders.

In 1988, the RBI set up a committee on computerization in banks headed by Dr. C. R. Rangarajan which emphasized that settlement operation must be computerized in the clearing houses of RBI in Bhubaneshwar, Guwahati, Jaipur, Patna and Thiruvananandapuram. It further stated that there should be National Clearing of Inter-city Cheques at Kolkata, Mumbai, Delhi, Chennai and MICR should be made operational. It also focused on computerization of branches and increasing connectivity among branches through computers. It also suggested modalities for implementing on-line banking. The committee submitted its reports in 1989 and computerization began from 1993 with the settlement between Indian Bank’s Association and bank employee’s association.

In 1994, a committee was set up on Technology Issues relating to Payment System, Cheque Clearing and Securities Settlement in the Banking Industry under the chairmanship of Shri. W. S. Saraf, Executive Director, RBI. It emphasized on Electronic Funds Transfer (EFT) system with the banknet communications network as its carrier. It also said that MICR clearing should be set up in all branches of all banks with more than 100 branches. Electronic banking refers to doing banking by using technologies like computers, internet, and networking, MICR, Electronic Fund Transfer so as to increase efficiency, quick service, productivity and transparency in the transaction.

During the recent years, the pace and quality of banking was changed by the technological advancements made in this area. Computerization as well as the adoption of core banking solutions was one of the major steps in improving the efficiency of banking services. The new private sector banks and most of the foreign banks which started their operations in the mid nineties were the front runners in adopting technology. For old private sector banks and public sector banks, adoption of technology was an arduous job because of the historical records and practices. However, it is important to note that presently almost 98 per cent of the branches of public sector banks are fully computerized, and within which almost 90 per cent of the branches are on core banking platform.
1.5 ELECTRONIC BANKING

Electronic banking is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution. Terms like ATM banking, personal computer (PC) banking, Internet banking, virtual banking, online banking, home banking, remote electronic banking, phone banking and mobile banking refer to one form or another form of electronic banking. PC banking and Internet or online banking are the most frequently used designations. It should be noted, however, that the terms used to describe the various types of electronic banking are often used interchangeably.

Hours of waiting in a long queue to get to the counter, filling and signing a lot of documents to make a deposit or withdrawal or to get a cheque book or Demand Draft (DD), waiting weeks or months to get an urgent loan were the inevitable features of the Indian banking till recently. Now, with the large scale integration of technology, banking is possible by a few clicks of mouse in the PC of the customer. This is the kind of transformation taking place in the banking sector. This modern concept of banking with broad support of latest technology is popularly called ‘hi-tech banking’. The invasion of banking by technology has created an information age, and efficient banking services. E-banking is becoming more and more popular today, as is banking via digital television. Beyond doubt, a substantial part of the future of banking business lies in a banking environment that is less and less branch based and where customers are able to access banking services remotely.

India is still in the early stage of growth and development of e-banking. Competition and changes in technology and lifestyle in the past few years have changed the face of banking. Electronic banking is likely to bring a host of opportunities as well as unprecedented risks to the fundamental nature of banking in India.

Most of the Indian banks have been retail banks in their business composition. The term retail banking encompasses various financial products, different type of account, housing, consumer auto and other type of loan accounts demat facility, insurance, Mutual funds, Credit and Debit cards, ATMs, stocks broking, payment of utility bills and other technology based services addressed to individuals and households. Banks has evolved from Ugly Duckling to the Golden Goose. This paradigm shift in the
role of banking sector is evident from the focus of banks on customer centre innovations in the Bankers Kitty. A customer is no more a Customer of the branch; he is the customer of the bank. The new definition of customer has become irrelevant without the advent of AAA (any time, any where, anyhow banking) banking catering to diverse customer groups, simply speaking, it take care of diverse banking needs of an individual.

A decade before, it was tough to belief that banking sector will be at a finger tip. Now it is possible. A mobile hand set with a connection is the only instrument needed to make a gateway to your banking transaction, the latest innovation of technology.

Apart from the Mobile Banking, including of Short Message Service (SMS) Banking, Net Banking and ATMs are the major steps taken by the banks in India towards modernization. With all these devices and systems, there is a complete freedom to experience.

Check your account, transfer your fund, make payments and what more, do anything of everything what has been followed in physical banking since ages. But this time no standing for hours in front of cash counter and no time boundation in withdrawing your own money.

PC banking is a form of online banking that enables customers to execute bank transactions from a PC via a modem. In most PC banking ventures, the bank offers the customer a proprietary financial software program that allows the customer to perform financial transactions from his or her home computer. The customer then dials into the bank with his or her modem, downloads data, and runs the programs that are resident on the customer’s computer. Currently, many banks offer PC banking systems that allow customers to obtain account balances and credit card statements, pay bills, and transfer funds between accounts.

The following developments in the Indian banking system have made it possible to use electronic technology to each banking transaction like cash receipts, cash payments, transfer of funds, payment of utility bills and payment of dividend and interests etc:

1. Automated Teller Machine
2. Electronic Funds Transfer
3. Electronic Data Interchange (EDI)
4. Electronic Clearing System (ECS)
5. Shared Payment Network System (SPNS)
6. Debit Cards/Credit Cards
7. Telephone Banking
8. PC Banking
9. Internet Banking
10. Mobile Banking

1.5.1. Automated Teller Machine

ATM is designed to perform the most important function of bank. It is operated by plastic card with its special features. The plastic card is replacing cheque, personal attendance of the customer, banking hours restrictions and paper based verification. There are debit cards. ATMs used as spring board for Electronic Fund Transfer. ATM itself can provide information about customers account and also receive instructions from customers- ATM cardholders. An ATM is an Electronic Fund Transfer terminal capable of handling cash deposits, transfer between accounts, balance enquiries, cash withdrawals and pay bills. It may be on-line or off-line. The on-line ATM enables the customer to avail banking facilities from anywhere. In off-line the facilities are confined to that particular ATM assigned. Any customer possessing ATM card issued by the Shared Payment Network System can go to any ATM linked to Shared Payment Networks and perform his transactions.

ATM has been playing a vital role in enhancing the service level of commercial banks. It has simplified the work of both the banker and the customer, and almost all the banks are concentrating on providing competitive ATM services to their customers.

An ATM is the terminal of bank’s computer network which is available to the customer for various operations such as withdrawal of cash, deposit of cash, balance enquiry, mini statements, cheque book request, bill payment etc. ATM has given the bank customers the facility of round the clock banking.

The customers are issued ATM cards while opening their accounts. Name of the account holder and account number is magnetically recorded on the card. Apart from the card, the customer is given a personal identification number that is known only to him/her and without it ATM service cannot be availed.
History of ATM

Internationally, the first ATM was installed on June 27, 1967 by Barclays Bank, London. The invention of ATM by John Shepherd Baron has helped the banks to provide high quality and timely services to their customers. The availability of online technology has helped the banks to further simplify their task of providing efficient ATM services.

In India, HSBC was the first bank to offer ATM facilities to its customers in 1987. By the end of 1990, Indian private and public sector banks have come up with their own ATM network under the initiative of Indian Banks Association in Mumbai. The Bank of Baroda is the first nationalized bank to provide ATM facilities to the customers in Mumbai. ATMs have brought about a great change in the quality of service and gaining popularity among customers. The number of ATMs is increasing rapidly and these have now made in-roads even into the comparatively smaller towns and villages in the country. ATMs have gained prominence as a delivery channel for banking transactions in India. Banks have been deploying ATMs to increase their reach. From first day of April 2009 onwards, entire ATM network is now available to the customers from any bank for transactions for no fee at all for the first five transactions in a month, irrespective of the banks in which they have their accounts. Now customers will not be levied any fee on cash withdrawals (up to five transactions in a month) using ATM and debit cards issued by other banks. This will in turn increase usage of ATMs in India. More people are now moving towards using ATMs for their banking needs. According to a survey conducted by Banknet India, 95% of people now prefer this modern channel to traditional mode of banking. Almost 60 percent of people use ATM at least once in a week.

In 2010-11 the number of ATMs witnessed a growth of 24 per cent over the previous year. However, the percentage of off-site ATMs to total ATMs witnessed a marginal decline to 45.3 per cent in 2010-11 from 45.7 per cent in 2009-10. More than 65 per cent of the total ATMs belonged to the public sector banks as at end March 2011. During 2010-11, the number of debit cards grew at the rate of 25 per cent over the previous year. In sync with the trend observed in case of ATMs, nearly three fourths of the total debit cards were issued by Public Sector Banks (PSBs) as at end March 2011. The share of PSBs in outstanding debit cards witnessed an increase during the recent
years, while that of new private sector banks and foreign banks witnessed a decline over the same period. However, in absolute terms, the number of outstanding debit cards witnessed an increase for new private sector banks during the recent years.

As per the report of National Payment Corporation of India, the number of ATMs in India covered the margin of one lakh in June 2012. Exactly 1,01,400 ATMs are operating in India. During the first half of the year 2012, more than 10,000 ATMs were started in different parts of the country. State Bank Group tops with 27,778 ATMs, followed by AXIS bank with 10729 ATMs, House Development Financial Corporation (HDFC) bank with 10079 banks, and Investment Credit and Industrial Corporation of India (ICICI) bank with 9406. Average number of daily transactions done through ATMs is nearly 60 lakh, out of this about 45 lakh transactions are done for the withdrawal of cash. Nearly 1500 crore rupees were withdrawn through ATMs daily. Average amount of daily cash withdrawal is Rs. 3286. The other major transactions are taking mini statements, changing PIN and balance enquiry.

As per the Report of RBI, in June 2012, Maharashtra has the highest number of ATMs with 12,133 followed by Thamilnadu with 10524, and Karnataka with 8516.

These statistics witnessed the tremendous growth of ATMs in India which proves that the Indian bank customers have embraced this technology wholeheartedly which has high growth prospects in the near future. The number of ATMs, Credit Cards and Debit Cards issued by scheduled commercial banks in India is given in Report of RBI 2011 (Table are given in appendices).

1.5.2. Internet Banking

Internet banking is the use of internet as a delivery channel for the banking services, including traditional services, such as opening an account, or transferring funds among different accounts, as well as new banking services such as electronic bill presentment and payment, which allow the customers to pay and receive the bills on a bank’s web site.

There are two ways to offer internet banking. First, an existing bank with physical offices can establish a web site and offer internet banking in addition to its traditional delivery channels. Second, a bank may be established as a ‘branchless’, ‘Internet only’,
or 'virtual' bank. The Reserve Bank of India constituted a working group on Internet Banking. The group divided the internet banking products in India into 3 types based on the levels of access granted. They are:

i) **Information Only System** - General purpose information like interest rates, branch location, bank products and their features, loan and deposit calculations are provided in the banks website. There exist facilities for downloading various types of application forms. The communication is normally done through e-mail. There is no interaction between the customer and bank's application system. No identification of the customer is done. In this system, there is no possibility of any unauthorized person getting into production systems of the bank through internet.

ii) **Electronic Information Transfer System** - The system provides customer-specific information in the form of account balances, transaction details, and statement of accounts. The information is still largely of the 'read only' format. Identification and authentication of the customer is through password. The information is fetched from the bank's application system either in batch mode or off-line. The application systems cannot directly access through the internet.

iii) **Fully Electronic Transactional System** - This system allows bi-directional capabilities. Transactions can be submitted by the customer for online update. This system requires high degree of security and control. In this environment, web server and application systems are linked over secure infrastructure. It comprises technology covering computerization, networking and security, inter-bank payment gateway and legal infrastructure.

Internet banking, sometimes called online banking, is an outgrowth of PC banking. Internet banking uses the Internet as the delivery channel for conducting banking activity. For example, transferring funds, paying bills, viewing and checking the savings account balances, paying mortgages, and purchasing financial instruments and certificates of deposit. An Internet banking customer accesses his or her accounts from a browser— software that runs Internet banking programs resident on the bank's World
Wide Web server, not on the user's PC. Net Banker defines a "true Internet bank" as one that provides account balances and some transactional capabilities to retail customers over the World Wide Web. Internet banks are also known as virtual, cyber, net, interactive, or web banks.

The Indian banking system too can boast of internet banking. India has more than one million active internet banking users, representing about 15% of the internet-user population in the country. The ICICI bank was the first to kick off online banking in 1996. Since then, other private sector banks started offering internet banking facilities to their customers. Public sector banks lagged in the race for adopting internet banking facilities. SBI took the lead in introducing internet banking facilities in 2001 while others also launched their services during the same time.

To date, more banks have established an advertising presence on the Internet—primarily in the form of informational or interactive web sites—than have created transactional web sites. However, a number of banks that do not yet offer transactional Internet banking services have indicated on their web sites that they will offer such banking activities in the future.

Although Internet banks offer many of the same services as do traditional brick-and-mortar Banks, analysts view Internet banking as a means of retaining increasingly sophisticated customers, of developing a new customer base, and of capturing a greater share of depositor assets. A typical Internet bank site specifies the types of transactions offered and provides information about account security. It also offers high efficiency at lower cost than traditional brick- and-mortar banking.

1.5.3. Credit Card

The Credit Card holder is empowered to spend wherever and whenever he wants with his Credit Card within the limits fixed by his bank. Credit Card is a post paid card. Debit Card, on the other hand, is a prepaid card with some stored value. Every time a person uses this card, the Internet Banking house gets money transferred to its account from the bank of the buyer. The buyers account is debited with the exact amount of purchases. An individual has to open an account with the issuing bank which gives debit card with a Personal Identification Number (PIN). When he makes a purchase, he enters
his PIN on shops PIN pad. When the card is slurped through the electronic terminal, it
dials the acquiring bank system - either Master Card or VISA that validates the PIN and
finds out from the issuing bank whether to accept or decline the transactions. The
customer can never overspend because the system rejects any transaction which exceeds
the balance in his account. The bank never faces a default because the amount spent is
debited immediately from the customers’ account.

Outstanding number of credit cards declined

The issuance of credit cards facilitates transactions without having to carry paper
money. Despite the decline in the number of outstanding number of credit cards, the
volume and value of transactions with credit card recorded a growth of 13 per cent and 22
per cent, respectively in 2010-11. New private sector banks and foreign banks accounted
for more than 80 per cent of the total outstanding credit cards as at end March 2011.

1.5.4. Smart Card:

Banks are adding chips to their current magnetic stripe cards to enhance security
and offer new service, called Smart Cards. Smart Cards allow thousands of times of
information storable on magnetic stripe cards. In addition, these cards are highly secure,
more reliable and perform multiple functions. They hold a large amount of personal
information, from medical and health history to personal banking and personal
preferences.

1.5.5. Mobile Banking

The internet and the mobile technologies are transforming the banking industry in
terms of nature of core products and services and the way these are offered, delivered and
consumed. Subsequently, consumer’s adoption of mobile banking has received
tremendous attention from theorists as well as practitioners. Driven by competition and
transaction cost control, banks too have been effectively embracing the new technology
viz. mobile commerce to attract new business and sustain customers.

With mobile technology banks can offer a wide range of services to their
consumers viz. Wireless Application Protocol (WAP) banking, SMS-banking, Subscriber
Identification Module (SIM)-toolkit and facilities like fund transfer while travelling, receiving online updates of stock price or even performing stock trading while being stuck in traffic. The net banking introduced by most of the banks requires access to website of the banks; mobile banking on the other hand offers ease and convenience. It is this value proposition of anywhere, anytime access provided by cell phone that is believed to trigger adoption. Since there has been an explosive growth in mobile phone with its number reaching 800 million, the mobile handset has emerged as an invertible accessory not only for entertainment, but also for doing online transaction, which includes banking. Over the last few years, the mobile and wireless market has been growing at a rapid pace and has opened new opportunities for the banking sector. Mobile banking is a subset of electronic banking wherein the customer uses mobile communication techniques in conjunction with the mobile devices. This does not include notebooks, which are easily transportable, but whose use is typically stationary.

As the mobile technology is evolving, banks can offer increasingly sophisticated mobile banking services like smart phone devices, which are available in developed countries. A smart phone is a device that can take care of all handhold computing and communication needs in a single small package. Smart phone allows individual users to install, configure and run an application, making it feasible to initiate transaction while online as well as offline. It can be observed that the market for mobile banking is still in its nascent stages in India. None of the technologies can provide a mobile banking solution that works completely without problems and satisfies the customer.

1.6. BANKING IN KERALA

Kerala boasts of a well developed banking infrastructure. With progressing time, Kerala banking system has attained a high growth with a number of nationalized, commercial and new generation banks. In addition to this a large number of Gramin banks have also sprung up within the state. In fact, there was a surge of banks following the nationalization of the banks in 1969. The State Bank of India (SBI), Canara bank and Syndicate bank are the principal nationalized banks in Kerala. Apart from them, private commercial banks like Federal bank, South Indian bank, Catholic Syrian Bank, Dhanalakshmi Bank and new generation banks like ICICI, HDFC; etc also offer
commendable financial intermediation facilities. Besides there are about two thousand Primary Agricultural Credit Co-operative Banks in Kerala.

The great exodus of Keralites to the Gulf Countries during the 1970s oil boom was to a large extent possible because of the benefits these workers had gained from growing up in Kerala (better health and education, and more awareness of opportunities beyond their state). The money they send back today makes up 25% of the state budget, and one third of all remittances to India. It has not only helped to stimulate consumption levels of the people of Kerala, which are among the highest in country, but it has also kick-started the boom in the tertiary (or service) sector of industry –IT, tourism, banking, private health care, etc. that has been the driving force behind Kerala’s economic growth spurt. While neither the manufacturing industry nor agriculture has experienced any significant growth over the past decade, the service sector now makes up something like 65% of the state economy, and has since 1986 until today gone from a growth rate of 3.25% to 7.5%. The remittances also probably served to underestimate Kerala’s economy throughout the financial dark ages, since they do not count directly towards the GDP.

Kerala has its share of banking and financial institutions. Besides the PSUs, a number of leading private banks such as HDFC Bank, ICICI Bank, ABN Amro Bank etc have set up a network of retail branches and ATMs for the residents of the state. Besides traditional products these offer a plethora of financial services especially Non-Resident Indians (NRI) services owing to the extent of Malayali Diaspora. Mutual funds, financial lending institutions and other such services are easily available in the state.

Total number of commercial bank branches in Kerala was 3479 in September 2004 which was increased to 4220 in March 2010 and 4527 in March 2011. Last year witnessed an increase of 300 bank branches in the state. Of the 4527 branches, 348 are rural branches, 3048 are semi urban branches and 1131 are urban branches. Kerala has the largest number of semi urban branches compared with the other 14 major states in India. It’s per bank branch population is 8820. If co-operative branch network is taken into account there were only 5362 persons per branch of the bank in the state.

Total deposits in Kerala banks during the period 2010 to 2011 increased by Rs.19928 crores from Rs.150619 crores to Rs.170547 crores. State Level Bankers
Committee (SLBC) report reveals that the annual growth rate of deposits in commercial banks in Kerala during 2011 was 12.66% with a total deposit of Rs.161562 crores.

Kerala is experiencing better growth economy in the banking sector which has an enviable credit – deposit ratio of 75.5% in March 2011 which is 67.63% in March 2010.

Keralites now enjoy a better standard of living. Its economy is progressing to greater heights. A key contributor towards this progression is the increased number of NRIs in the state. Kerala’s total number of emigrants increased from 1.36 million in 1998 to 1.83 million in 2003 and among them, close to 90% is in Middle East. A lion’s share of their savings is deposited in banks here. The non-resident deposits increased to Rs.32955 crores constituting 38.42% of the total deposits of the banks in the state. With an abundance of NRI deposits, the mobilization of home deposits seems to have taken a back seat.

The states poverty ratio is now 12.72% down from 60% in the early seventies. Its per capita income is at Rs.22000, exceeds the national average. If remittance income is included per capita income is 60% above the national average.

1.7. BANKING HABITS OF THE PEOPLE OF KERALA

Kerala has a long history of strong banking habits. The repayment culture in Kerala is very good compared to that of other states. The response to ATMs, even from rural folk and those like autorikshaw drivers has been amazing.

Kerala achieved the status of a ‘Total Banking State’ in the year 2011. This means that every household in the state has at least one bank account and would be eligible for a rural purpose loan up to Rs.25000.

Palakkad in Kerala has made history; the district is in the record book with a unique banking initiative that has made it possible for every household here to have its own Savings Account. Palakkad has become the first district in the country to achieve cent percent financial inclusion. Having successfully reached out to a large number of poor families that previously were out of banking purview, the district now proves that banking will no longer be the exclusive right of the privileged. Palakkad’s five lakh families now enjoy the benefits of a bank account.
Tremendous changes are being taken place in the savings patterns of the people of Kerala. Earlier people were 'debt shy' i.e., they saved and bought a two wheeler or a car or a house. But now people buy first and pay Equated Monthly Instalment (EMI)s later i.e., they have become 'debt loving'. That is the main difference. While it was infrading to borrow earlier, today, there is hardly anybody without a loan. The first the youngsters do when they get a job is to take a loan and buy a vehicle. When all their essential needs are met, they start saving. That is why, banks are targeting the youth now. Conventional banks are also changing to fit into the scene by opening some branches till 8pm, to face the competition from new generation banks.

1.7.1. E-Banking Habits of the People of Kerala

Technology is sweeping the banking sector in the state, bringing more efficient services to its customers. The marriage of information technology with the age old business in money has produced waves after waves of changes. Using IT as a strategic tool, banks in Kerala are providing inter-connected branches, anywhere banking, internet banking, tele-banking, mobile banking and mobile alerts. Federal bank was the first Kerala based bank which introduced electronic banking in the state and bagged the prestigious Indian Bank Association (IBA) award for the best use of IT in retail banking for the two consecutive years. The bank also has the unique distinction as the first traditional bank to network all its branches and attach 100 percent connectivity. Kerala based banks offer almost all new banking products in all their branches. In fact, the robust business practices and steady growth have made Kerala based banks darlings of the stock market and targets of takeover tycoons. Most of the branches of commercial banks in the state are connected to the Real Time Gross Settlement (RTGS) mechanism, which allows an account holder to transfer money instantly to any other account which is connected to the network. Federal bank is the first bank in the country to implement RTGS facility in all the branches.

For one, the new technology has de-clogged bank counters. Students, industrialists, traders and housewives have welcomed the changes for the convenience they provide. Technology is driving new services in everything from salary disbursals to utility bill payments. Non Resident Indians find the new technology just tailor made for
them. Money transfer does not even take a fraction of the time it used to take five years ago. Global debit cards, Credit Cards, Kisan cards and facilities to pay bills without leaving ones home are forcing bank customers to think differently.

The acceptance of the new technology is fast turning Kerala into one of the fastest growing ATM user societies outside the metros. The proliferation of ATMs and the increasing acceptance of the concept of anywhere banking make some ponder over the very future of branch based banking. It is the State Bank of India which introduced the first ATM in Kerala at Munnar on August 2000. Kerala’s number of ATMs is also a record. The state had close to 1600 ATMs in 2007. Now it has been increased to 4516 ATMs in June 2012 which is very high as compared to other states in the country. Federal Bank has the largest number of ATMs in Kerala covering almost all towns.

Kerala has discovered that new generation banking, helped by technology, is very convenient. Youngsters come to the bank riding on a bike, park it by the side of the bank, withdraw Rs.100 and rush back. It has become a fashion statement of sorts. At least 15% of bank transactions in certain bank branches are for just Rs100, the lowest possible amount.

Most banks, especially the new generation banks, have integrated themselves with the fast changing banking technology and deliver faster products to customers. It is the customer care that has forced bankers to embrace technology. For old generation banks technology was the only drawback but now they have almost caught up with the new in that area. Transition phase, though tough, is inevitable. Driven by the challenges of competition, rising customer expectations and shrinking margins, banks have been using technology to reduce cost and enhance efficiency, productivity and customer conveyance. Technology-intensive delivery channels like internet banking, tele-banking, mobile banking, ATMs etc; have created a win-win situation by extending greater convenience and multiple options for customers while providing tremendous cost advantages to the banks.

Internet banking is a recent phenomenon in Kerala. The spread of internet banking culture depends on the facilities offered by banks. Greater facilities can always attract more customers. In this matter it can always be seen that private banks are ahead of public sector banks. ICICI bank introduced internet banking in Kerala in the year
1997. Federal bank started offering internet banking services in the year 2000 through Fednet. It was the first Kerala based bank to offer internet banking services in the state. In Cochin the pioneers in offering internet banking services are the ICICI and the Federal bank. Among the PSBs, SBI and State Bank of Travancore (SBT) are the leading bankers. SBI provides online banking services through Online SBI. It has started functioning in the year 2004. As compared to new generation and Kerala based banks, nationalized banks have few online banking customers.

Mobile banking is the recently introduced e-banking delivery channel in the state. It is the new generation banks who are the pioneers in providing mobile banking services. SBI, SBT, Federal bank and South Indian banks are now providing mobile banking services in the state. Other banks are in the process of making this service available to their customers as fast as possible.

Customers coming to the banks in Kerala now are quite different, compared to the one in the past. They expect quality service, respect, courtesy and elegance. The customer knows more about banking, he knows about his alternatives, he is more demanding, he is aware of his bargaining capacity. Loyalty to a particular bank is a thing of past. Expectations of different types of customers are varied and are ever increasing. The customer is more conscious of quality services; they are expecting speed, convenience at low cost. Some of the customers know that they can get better service from private and foreign banks. Banks offer tangible services but which cannot satisfy the customers, who need intangible services, which could be experienced like behavior and efficiency of staff, speed of transactions and the ambience. When the customer experience the widening gap between the expectations and experience, the result is raising customer complaints about the banks. While computerization has been made instrumental in achieving a higher level of probity, accountability and transparency in their operations, banks have adopted computers basically to secure improvement in the level and quality of services rendered by them to their customers.

1.8. SIGNIFICANCE OF THE STUDY

The pace of change in banking sector is getting faster day by day. The most important change is the introduction of modern technology in banking sector. In order to
make this change sustainable and contribute to the growth process of the nation, we have
to understand the perception of people toward this change. This study focuses on examining
the level of awareness and adoption of selected electronic bank delivery channels such as
ATMs, internet banking, mobile banking, and credit cards. The driving force behind the
use of technology in banking relates to the ever-increasing expectations of the customers.
Today's bank customers are more demanding and are also more techno-savvy compared
to their counterparts of the yester years.

The present-day customers demand instant, anytime and anywhere banking
facilities. Unless the banks recognize this and reorient themselves, they will have no
future. It is information technology which enables banks in meeting such high
expectations of the customers. A detailed study is highly imperative to identify how far
technology has influenced the banking habits of the people of Kerala. For the banking
sector also, it is very essential to know whether there is a gap between adopters and non
adopters of e-banking delivery channels introduced by them, if so what is its width? This
study is more relevant as it makes an in-depth examination of the demographic
characteristics of the adopters and non-adopters of e-banking delivery channels. Further,
it also reveals the perceptual differences between these two groups which also exert great
influence on the adoption of e-banking delivery channels. The user's degree of
satisfaction and experiences regarding the above-mentioned delivery channels were also
analyzed in this study.

1.9. SCOPE OF THE STUDY

The scope of the study is confined to an in-depth analysis of the banking
habits of the selected household bank customers belonging to three districts; Kozhikode,
Ernakulam, and Pathanamthitta of Kerala state. The present study started with an analysis
of the general banking habits of the respondents. Later, it focused its attention on the
electronic banking habits of the respondents. Even though a variety of multiple e-banking
delivery channels are operating in the state, the scope of the study is confined to four
popular e-banking delivery channels namely; ATMs, internet banking, mobile banking
and credit card.
1.10. RESEARCH PROBLEM

Technological advancements have brought about various changes in the way in which banking products and services are delivered to the customers by the banks. Technology has resulted in the computerization of the bank branches and has given rise to electronic banking channels like ATMs, internet banking, mobile banking, telephone banking, debit cards, credit cards etc. The modern banking has become wholly customer-driven and technology-driven. During the last decade, technology has been dramatically transforming the banking activities in the state. It extends greater convenience and multiple options for customers.

Electronic banking services are still in their infancy while traditional banking services are more mature. It seems that only a small subset of consumers has adopted certain e-banking channels. Non-adopters still comprise the majority of the bank customers. Awareness of e-banking delivery channels is an essential pre-requisite for the adoption of the same. So there is a need to identify the awareness, reasons for the adoption, non-adoption and rejection of these multiple e-banking delivery channels. Again it is necessary to find out whether there is a wide gap between users and non-users of various e-banking channels.

There are a number of factors which influence the customer adoption of bank delivery channels such as demographic and psychographic variables. There is a need to investigate which factors are more influential in taking the decision whether to adopt or not to adopt different banking channels.

After having identified the level of adoption and usage of e-banking channels, it is essential to study whether the users are satisfied with these delivery channels or not. It is also necessary to explore the difficulties faced by the users of e-banking delivery channels.
1.11 OBJECTIVES

The main objectives of the present study are,

1. To study the role of technology in encouraging the banking habits of the people of Kerala.

2. To find out the level of awareness of bank customers regarding various e-banking delivery channels such as ATMs, credit cards, internet banking and mobile banking and the variability of awareness according to type of bank, age, education and income.

3. To examine the level of adoption of various technology-driven banking channels such as ATMs, credit cards, internet banking and mobile banking and the variability of adoption according to type of bank, age, education and income.

4. To analyze the significant differences between users’ and non-users’ perception of e-banking delivery channels and list out the reasons for why some consumers are not using e-banking facilities.

5. To examine the influence of perceptual factors on the adoption of multiple bank delivery channels.

6. To study the consumer preferences of various banking channel attributes and to evaluate the level of satisfaction of customers and to enumerate the reasons for their dissatisfaction, if any, and

7. To assess the difficulties faced by the users of e-banking delivery channels and to make suitable suggestions.

1.12 HYPOTHESES

Based on the objectives set for this study, the following hypotheses have been formulated and tested in this study.

1. Bank customers in Kerala has a reasonable degree of awareness about various technology driven banking channels and the level of awareness is independent of type of bank which they maintain account, their age, education and income.
2. Bank customers in Kerala has adopted various technology driven banking channels at a reasonable rate and the level of adoption is independent of type of bank which they maintain account, their age, education and income.

3. The period of association with multiple bank delivery channels is independent of the type of bank, age, education and income.

4. The usage frequency of multiple bank delivery channels is independent of the type of bank, age, education and income.

5. There is no difference between users' and non users' perception of various technology driven banking channels.

6. There is no association between perceptual factors and the adoption of multiple bank delivery channels.

7. Users' different experiences regarding e-banking delivery channels are independent of the type of bank which they maintain account, their age, education and income.

8. Users have a reasonable degree of satisfaction of branch banking and various e-banking delivery channels and the level of satisfaction is independent of type of bank, age, education and income.

1.13. METHODOLOGY

This study is designed as a descriptive one based on both secondary and primary data.

1.13.1. Secondary Data

Secondary data necessary for the study has been gathered from the published sources such as quarterly and annual reports of RBI, SBI, various Commercial banks, reports of the Finance Ministries of Central and State governments, findings of the State Level Banker's Committees, newspapers, magazines, business journals, e-journals, reports of Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) and websites of RBI and other banks operating in Kerala. Some of the important secondary sources used are as follows:
1. RBI report on Trends and Progress of Banking in India—various issues.
3. Reports of Internet and Mobile Association of India.
10. Indian Journal of Banking and Finance—various issues.

1.13.2. Primary Data

The study mainly used primary data for drawing inferences. The population of the study is the bank account holders of Kerala. Primary data was collected from 360 sample customers of selected banks operating in Kerala state. Customer perception was gathered through a detailed survey, using structured and pre-tested questionnaire. A good deal of information was also collected through direct personal interviews made with the top authorities of the prominent banks in Kerala. Discussions were held with scholars and experts in the field of banking to collect relevant information.

1.13.3. Sample Design

As this population is quite large and spread throughout the state of Kerala, it is not possible to conduct a population survey. Hence a sampling study has been conducted. Multi stage Sampling Technique was used in this study. In the first stage of sampling, the entire state is divided into three geographical regions such as Northern, Central and Southern regions. Northern region consists of six districts namely; Kasargod, Kannur, Wayanad, Kozhikode, Malappuram and Palakkad. Central region covers four districts namely; Trissur, Ernakulam, Alappuzha and Kottayam and Southern region covers Idukki, Kollam, Pathanamthitta and Thiruvananthapuram districts. Three districts, Kozhikode district from Northern region, Ernakulum from Central region and
Pathanamthitta from Southern region were selected randomly. In the second stage, banks in each district were divided into three groups such as Nationalized banks, Kerala based Scheduled banks and New generation banks. From each group, one bank was selected using simple random sampling technique applying lottery method. Accordingly, from Kozhikode district, State Bank of India, Federal bank and ICICI bank were selected. From Ernakulam, Canara bank, South Indian Bank (SIB) and Axis bank were chosen. Syndicate bank, Catholic Syrian bank (CSB) and HDFC bank were selected from Pathanamthitta district. In the last stage, 20 customers each were chosen from among the two bank branches of each banks using convenience sampling technique. Sampling design is diagrammatically presented in figure-1.
Figure 1.1. Sample Design

KERALA STATE

North (Kasaragod, Kannur, Wayanad, Kozhikode, Malappuram, Palakkad)

Kozhikode

SBI FEDERAL ICICI

CUSTOMERS CUSTOMERS CUSTOMERS

Branch 1 (20) Branch 1 (20) Branch 1 (20)
Branch 2 (20) Branch 2 (20) Branch 2 (20)

Central (Thrissur, Ernakulam, Alappuzha, Kottayam)

Ernakulam

CANARA SIB AXIS

CUSTOMERS CUSTOMERS CUSTOMERS

Branch 1 (20) Branch 1 (20) Branch 1 (20)
Branch 2 (20) Branch 2 (20) Branch 2 (20)

South (Kollam, Pathanamthitta, Thirivanandapuram, Idukki)

Pathanamthitta

SYNDICATE CSB HDFC

CUSTOMERS CUSTOMERS CUSTOMERS

Branch 1 (20) Branch 1 (20) Branch 1 (20)
Branch 2 (20) Branch 2 (20) Branch 2 (20)
1.13.4. Tools of Data Collection

A structured pre-tested questionnaire was used for collecting data from the selected bank customers. Firstly, a detailed questionnaire covering all aspects of the study was prepared in consultation with experts in the field and bank officials. Some customers were also contacted for this purpose. The questionnaire has two parts with a total of 26 questions. The draft questionnaire was pre-tested by way of conducting a pilot study among the selected bank customers. After the pre-test, questionnaire was modified by way of adding some relevant questions and deleting some unwanted questions. Finally, the questionnaire contains 22 questions.

1.13.5. Variables Used in the Study

The demographic and perceptual variables used in the study are listed below in Table 1.1.
<table>
<thead>
<tr>
<th>No</th>
<th>Variables used</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Banks associated with Age Education</td>
<td>To analyse the three groups of bank customers’ awareness, adoption, experience and satisfaction of the selected e-banking delivery channels.</td>
</tr>
<tr>
<td>2</td>
<td>Age</td>
<td>To analyse the different age groups’ awareness, adoption, experience and satisfaction of the selected e-banking delivery channels.</td>
</tr>
<tr>
<td>3</td>
<td>Education</td>
<td>To analyse the different education category’s awareness, adoption, experience and satisfaction of the selected e-banking delivery channels.</td>
</tr>
<tr>
<td>4</td>
<td>Income</td>
<td>To analyse the different income groups’ awareness, adoption, experience and satisfaction of the selected e-banking delivery channels.</td>
</tr>
<tr>
<td>5</td>
<td>Convenience</td>
<td>To analyse the users’ and non users’ perception of convenience of using ATMs, internet banking and mobile banking.</td>
</tr>
<tr>
<td>6</td>
<td>Accessibility</td>
<td>To analyse the users’ and non users’ perception of accessibility of ATMs, internet banking and mobile banking.</td>
</tr>
<tr>
<td>7</td>
<td>Ease of use</td>
<td>To analyse the users’ and non users’ perception of ease of use ATMs, internet banking and mobile banking.</td>
</tr>
<tr>
<td>8</td>
<td>Usefulness</td>
<td>To analyse the users’ and non users’ perception of usefulness of ATMs, internet banking and mobile banking.</td>
</tr>
<tr>
<td>9</td>
<td>Perceived risk</td>
<td>To analyse the users’ and non users’ perceived risk of using ATMs, internet banking and mobile banking.</td>
</tr>
<tr>
<td>10</td>
<td>Perceived need</td>
<td>To analyse the users’ and non users’ perceived need of ATMs and internet banking.</td>
</tr>
<tr>
<td>11</td>
<td>Personal contact</td>
<td>To analyse the users’ and non users’ perception of the importance of personal contact in banking.</td>
</tr>
<tr>
<td>12</td>
<td>Cost effectiveness</td>
<td>To analyse the users’ and non users’ perception of cost effectiveness of internet banking.</td>
</tr>
<tr>
<td>13</td>
<td>Reliability</td>
<td>To analyze the users’ and non users’ perception of reliability of using ATMs and internet banking.</td>
</tr>
<tr>
<td>14</td>
<td>Knowledge</td>
<td>To analyze the users’ and non users’ knowledge level of the way of using e-banking delivery channels.</td>
</tr>
<tr>
<td>15</td>
<td>Informativeness</td>
<td>To analyze the users’ and non users’ informativeness with respect to e-banking delivery channels.</td>
</tr>
</tbody>
</table>
1.13.6. Scaling Techniques

Most of the information required for the study is qualitative in nature. A Five point Likert continuous scale technique was used for quantifying various qualitative information necessary for the study such as the degree of awareness, experience of use, level of satisfaction of customers, customer's perception of the selected electronic banking delivery channels provided by the selected banks in Kerala.

1.13.7. Method of Data Collection

For the purpose of collecting primary data from the selected bank customers an undisguised personal interview method had been used. Informants were clearly given the information relating to the objectives of the study, purpose of it and given an undertaking that the information given by them will not be used for any purpose other than the research work.

1.13.8. Pilot Study

To test the reliability, variability and efficiency of the research instrument developed, a Pilot study was conducted among 35 selected bank customers of Kozhikode district. In this study information was gathered about the demographic characteristics of the respondents, their banking habits, awareness and adoption of e-banking channels. All the 84 scaled statements used to analyze the respondent's perception of the selected e-banking services were also tested to know the reliability of the scale used in the research instrument.

1.13.9. Reliability Analysis

In order to check the internal consistency of the scaled statements, reliability analysis using Cronbach's Alpha Reliability Test was done. Cronbach's Alpha for these 84 scaled statements was 0.9953 which is higher than the standard Cronbach's Alpha of 0.7. Hence it is proved that internal consistency of the scale as a whole is high and the questionnaire can be considered as highly reliable.
1.13.10. Determination of Sample Size

In this study sample size is determined on the basis of the following equation:

\[ n = \frac{Z^2 \sigma^2}{e^2}. \]

Here, \( n \) = size of sample.

\( Z \) = the value of standard Normal Variable at a given confidence level (It is 1.96 for 95% significance level),
\( \sigma \) = standard deviation of the population (Here standard deviation of the variable which has the greatest variance has been taken),
\( e \) = acceptable error (it is assumed as 0.14),

and \[ n=(1.96)^2(1.328422)^2/(0.14)^2=359.12. \]

Therefore sample size is 360.

1.13.11. Classification and Analysis of Data

The collected primary data has been classified on the basis of:

a. Type of the bank which the respondents maintain account.
b. Age of the informants.
c. Education level of the informants.
d. Annual income level of the informants.

1.13.12. Tools of Analysis

The Classified primary data has been summarized by using simple mathematical measures like mean and standard deviation, percentages and averages. To test the statistical difference between mean values, chi-square test, t-test and F-test were used. Factor analysis was conducted to identify the factors influencing the adoption and usage of ATMs and internet banking. Regression analysis was also applied to identify how these factors affect the adoption of ATMs and internet banking. A bird eye view of the statistical tools used and the purpose for which it is used is presented in the following Table 1.2.
Table 1.2 Tools Used for the Study

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Tools Used</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mean</td>
<td>To identify the average level of awareness, adoption, experience and satisfaction of various technology driven banking channels according to type of bank, age, education and income.</td>
</tr>
<tr>
<td>2</td>
<td>Standard Deviation</td>
<td>To identify the dispersion of awareness, adoption, experience and satisfaction of e-banking delivery channels from their mean values according to type of bank, age, education and income.</td>
</tr>
<tr>
<td>3</td>
<td>Chi-square</td>
<td>To check the dependence of selected variables on the adoption of e-banking delivery channels.</td>
</tr>
<tr>
<td>4</td>
<td>t-test</td>
<td>To test the equality of the mean values of user’s and non user’s perception of e-banking delivery channels.</td>
</tr>
<tr>
<td>5</td>
<td>F-test</td>
<td>To test the equality of the mean values of awareness, adoption, experience and satisfaction of various technology driven banking channels according to type of bank, age, education and income.</td>
</tr>
<tr>
<td>6</td>
<td>Factor Analysis</td>
<td>To identify the major factors influencing the adoption of e-banking delivery channels.</td>
</tr>
<tr>
<td>7</td>
<td>Regression Analysis</td>
<td>To test the degree of relationship between factor variables and adoption of e-banking delivery channels.</td>
</tr>
</tbody>
</table>

1.14. PERIOD OF THE STUDY

This study covered a period of five years from 2007-08 to 2011-2012. Data collection period was from the month of September 2009 to February 2010.
1.15. LIMITATIONS OF THE STUDY

The study has the following limitations.

1. Most of the information required for the present study is qualitative in nature. For quantifying the qualitative data, scaling techniques have been used. Hence all the limitations of the scaling techniques are applicable in this case also. However care has been taken by the researcher to reduce such errors by selecting the most scientific scale used in social researches.

2. Most of the informants do not keep records for the number of e-banking transactions made, number of times visited etc. All the information supplied by the informants is from their memory by ‘Recall’ method. So the data is subject to the Recall errors. However, the researcher has made serious efforts to reduce such recall errors by cross-checking the information given by the informants by asking questions in different ways.

3. Many bank branches are operating in Kerala state. But, due to time and cost constraints, only 18 bank branches were selected for the present study. However, the researcher has been very careful in ensuring the representativeness of the sample bank branches by way of adopting multi-stage sampling technique. This ensures that bank branches representing the three regions of the state as well as the three major categories of banks are included in the sample branches selected for the study.

4. Most of the Co-operative banks and Regional Rural banks operating in the state have not yet introduced e-banking delivery channels. Hence these banks were excluded from the study. Foreign banks were also not considered as they are not widely accepted among the bank customers in Kerala.

5. The e-banking delivery channels selected for this study is limited to ATMs, internet banking, mobile banking and credit card. Due to time and cost constraints, all other e-banking delivery channels were avoided for the present study. However, the study does not lose its significance as the most popularly used channels were selected for an indepth study.
6. During the period of the study, certain banks had not introduced mobile banking services. Hence the rate of adoption of mobile banking is very low which exerts a limit on studying factors affecting mobile banking adoption. However, the researcher has taken necessary care to include important variables for studying its effect on mobile banking adoption.

1.16. CHAPTERISATION

This study has been structured in the following manner.

**Chapter 1. Introduction**

Chapter 1 deals with the theoretical overview of the development of e-banking, research problem, objectives, significance of the study, research methodology and limitations of the study.

**Chapter 2. Review of Literature**

Chapter 2 deals with a review of the literature in the development of e-banking delivery channels. Relevant literature related to the awareness and adoption of e-banking, factors influencing their adoption, user's experience and satisfaction of e-banking is reviewed in detail.

**Chapter 3. General Banking Habits of the People of Kerala**

Chapter 3 deals with the profile of sample population. Further, banking habits of the respondents, reasons for their bank visit and factors affecting the selection of banks were also analyzed and interpreted using appropriate mathematical techniques.

**Chapter 4. Electronic Banking Habits of the People of Kerala**

Chapter 4 consists of analysis and interpretation of awareness of e-banking products and services, its adoption, satisfaction of e-banking customers and customers experience of using e-banking product and services by applying appropriate mathematical and statistical tools and techniques.
Chapter 5. Summary, Findings, Suggestions and Conclusions.

Chapter 5 deals with the summary of the present study, major findings of the study, the researcher's suggestions and conclusion.
REFERENCES

8. A survey report on Banking Technology (2010), Banknet India.
10. A report on trends and progress on banking in India (2011-12), Reserve Bank of India.